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STATE LOAD DESPATCH CENTRE
ODISHA POWER TRANSMISSION CORPORATION LIMITED
GRIDCO Colony, P.O.- Mancheswar Rly. Colony, Bhubaneswar-17, FAX-0674- 2748509
CIN: U40102OR2004SGC007553

CORRIGENDUM – II to TENDER NOTICE NO. SLDC-03/2023-24

TENDER NOTICE NO. SLDC-03/2023-24

“Survey, Design, Development, Supply, Installation, Testing, Commissioning & AMC of PMU based WAMS system in OPTCL, ODISHA system.”

- (A)** Following modifications are made in the following clauses of the Tender Specification;
- i. PART I, SECTION III (LIST OF ANNEXURES), ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY F (ANNUAL MAINTENANCE CONTRACT), Clause (a) & (b).
 - ii. PART-I SECTION – V (TECHNICAL SPECIFICATIONS), Clause 4.0: WAMS SYSTEM HIERARCHY, Fig.-1.
 - iii. PART-I, SECTION–V (TECHNICAL SPECIFICATIONS), JOB-2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT), Clause 1.1 (GENERAL REQUIREMENT), Data Centre Architecture Diagram.
 - iv. PART I, SECTION III (LIST OF ANNEXURES), ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY.
- (B)** Further, the following clauses in the Tender Specification are hereby stands deleted;
- i. Clause No. C.12 of PART-I, SECTION–IV (SCOPE OF THE WORK FOR SURVEY, PLANNING, DESIGN, ENGINEERING, DOCUMENTATION, INTEGRATION, SUPPLY, INSTALLATION, TESTING, COMMISSIONING OF PMU BASED WAMS PROJECT FOR STATE LOAD DESPATCH CENTER, OPTCL, ODISHA)
 - ii. Clause No 2.0 (xvii) of PART-I, SECTION–V (TECHNICAL SPECIFICATIONS).
- (C)** Further, the following clauses have been added in the Tender Specification;
- i. Clause 18 in the PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT).

- ii. Clause 19 in the PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT).

The bidders who have already submitted the tender documents in the tender portal are hereby requested to resubmit the bid as per the revised Techno-Commercial excel workbook and clauses of this corrigendum notice. The bids submitted earlier to publication of this corrigendum shall not be considered for technical bid evaluation.

(A) Modifications in the Tender Specifications:

PART I, SECTION III (LIST OF ANNEXURES) ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY F.(ANNUAL MAINTENANCE CONTRACT (AMC)) Clause a & b

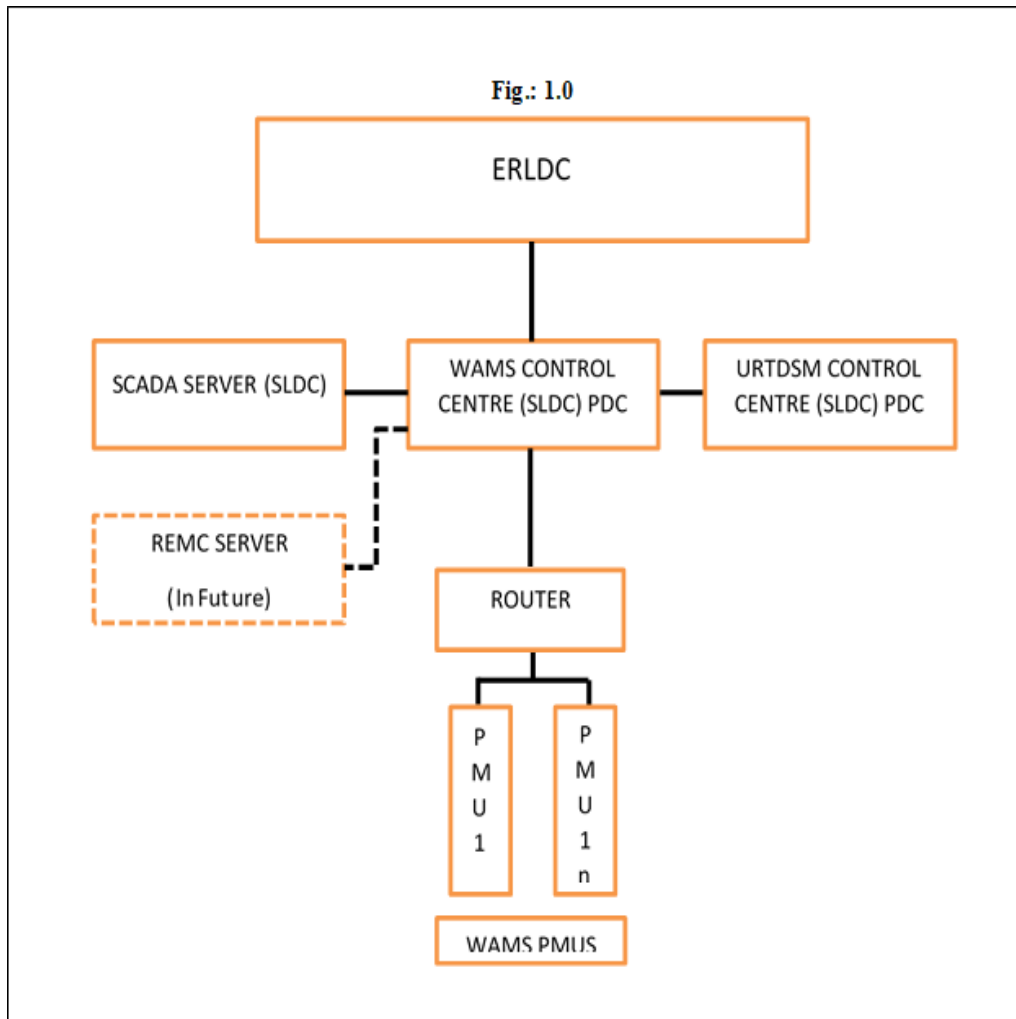
Sl. No. F (a) & (b) (ANNUAL MAINTENANCE CONTRACT) in the Table 7 (Schedule of quantity) under PART I, SECTION III (LIST OF ANNEXURES), ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY is hereby modified as follows;

- i. Clause F (a) is hereby removed from the Tender Specification.
- ii. Clause F (b) shall be read as;

Sl. No.	Name of the Item	Unit	Quantity
F	ANNUAL MAINTENANCE CONTRACT (AMC)		
(b)	Annual Maintenance Contract (AMC) of Complete system supplied for subsequent 5 years, after completion of initial period. The initial period refers to the warranty period which begins from the date of successful Go-live for a period of one year.	Lot	1

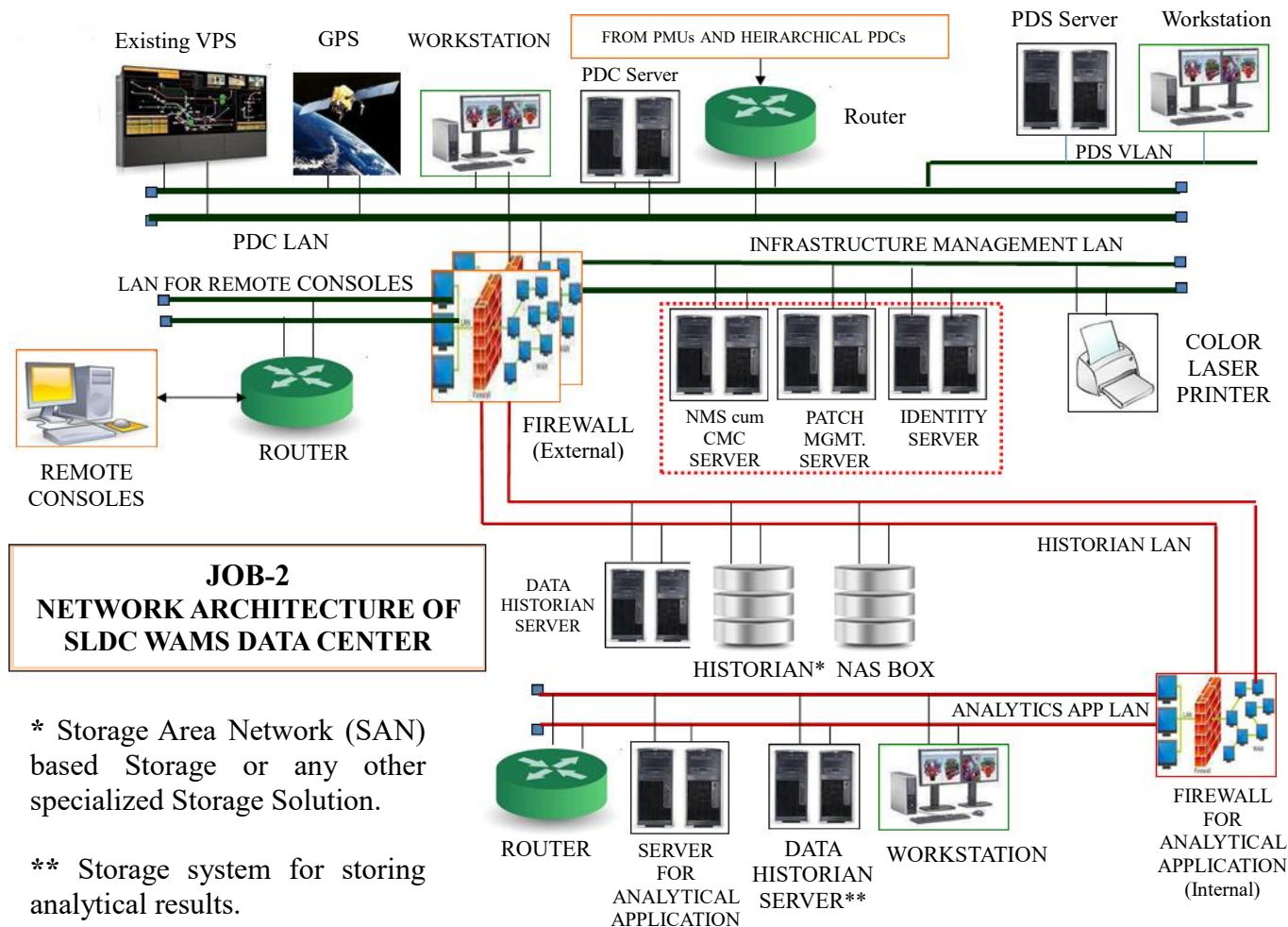
PART-I, SECTION – V (TECHNICAL SPECIFICATIONS) Clause 4.0: WAMS SYSTEM HIERARCHY Fig.-1

Block diagram in the PART-I SECTION – V (TECHNICAL SPECIFICATIONS) Clause 4.0 WAMS SYSTEM HIERARCHY Fig.-1 in the Tender Specification is hereby modified as follows;



PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT) Clause 1.1 (GENERAL REQUIREMENT) Data Centre Architecture Diagram

PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT) Clause 1.1 (GENERAL REQUIREMENT) Data Centre Architecture Diagram is modified as follows;



DATA CENTER ARCHITECTURE

PART I, SECTION III (LIST OF ANNEXURES), ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY

Sl. No. E (1) in the Table 7 (Schedule of quantity) under PART I SECTION III (LIST OF ANNEXURES), ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY is hereby modified and shall be read as follows;

Sl. No.	Name of the Item	Unit	Quantity
E	TRAINING		
1	Training for SLDC- Man days @15 * 6 persons Man days 90	Man-days	90

(C) Clauses added in Tender Specification:

PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2, Clause 18

18. PROGRAMMING AND DEVELOPMENT SERVER (PDS)

1. **GENERAL REQUIREMENTS:** The PDS shall be installed at the control centre for developmental activities. The PDS shall consist of sufficient hardware and software to test the database, displays, and reports that are required for the WAMS system. These data bases, displays, and reports shall be used for factory test.

During installation the development system shall be reconfigured as part of the system with all necessary software upgraded to the same revision level as the newly delivered system and with all necessary databases, displays, and reports transferred from the development system to the WAMS system. Once reconfigured in the field, employer software engineers shall be able to maintain all system software, displays, database, and reports via the resulting WAMS systems.

2. **PDS Functions:** The development systems shall include all functions required to support the generation and testing of the system software, database, displays and reports. The development system shall also include tools to acquire data from PMUs under test mode as a minimum to test the PMUs installation.

3. **PDS User Interface:** The user interface for development system shall provide similar capabilities and features described in Part-I, Section-V, JOB-2 Clause-3.0. Sufficient user interface functionality shall be included to enable employer engineers to perform the following tasks:

- (a) View displays generated on the development system.
- (b) Test linkages between the displays & the database and between the ports & the database.
- (c) Configure PMU
- (d) Test receipt of data from PMU including streaming phasors, notifications etc.

PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2, Clause 19

19. Analytical Applications:

The development of the analytical applications is in the scope of the bid.

The following analytical applications are required which is the minimum requirement. However,

any other advanced applications offered by the bidder will be preferred.

WAMS Standard Applications:

- i. Critical Loads and Generator Monitoring.
- ii. Grid Stress – Phase Angle Monitoring for Wide Area Situational Awareness and Grid Stability
- iii. Event Root Cause Analysis – Automated Event Analyser for Real Time System Vulnerability Assessment
- iv. Model Validation
- v. Frequency Response Analysis
- vi. Automated Grid Performance and PMU Performance Reports
- vii. IBR Ride-Through assessment
- viii. Line Parameter Estimation/ Dynamic Line Rating
- ix. Configurable composite alarms
- x. SCADA measurement validation

WAMS Advanced Real-Time Analytical Applications:

- i. Oscillation Monitoring System – Monitoring, Detection & Source Location.
- ii. Voltage Stability - use of voltage sensitivities
- iii. Islanding Detection and Resynchronization
- iv. Automated System Disturbance Monitoring
- v. Short Circuit Capacity Analysis
- vi. Asynchronous Systems Monitoring
- vii. Fault Location
- viii. Symmetrical Component Analysis
- ix. Validation of Relay performance in case of Zone-3 Protection Tripping

Desirable Optional Applications:

- i. AI/ML based Real Time Disturbance/ Grid Stress event detection and Mitigation Plan Recommendations.
- ii. Web based application for viewing various Reports.

- (D)** The last date and time of online requisition of the bid document, submission of the bid document and opening of Techno-Commercial bid against Tender Notice No-SLDC-03/2023-24 are rescheduled as below.

SL.NO	DESCRIPTION	EXISTING SCHEDULE	REVISED SCHEDULE
1	Online request of Tender document at www.tenderwizard.com/OPTCL	Up to dt: 16-01-2024 (12.30 Hrs)	Up to dt: 20-01-2024 (12.30 Hrs)
2	Last date & time of online submission of bid document	Date: 16-01-2024 (16.30 Hrs)	Date: 20-01-2024 (16.30 Hrs)
3	Date & time of online opening of Techno- Commercial bid	Date: 17-01-2024 (11.00 Hrs)	Date: 20-01-2024 (17.00 Hrs)

(E) Reply of SLDC to the queries raised by the bidders is annexed herewith for information.

Director (SLDC)

Annexure					
Replies to Pre Bid Queries of M/S GE w.r.t Tender Notice No. SLDC-03/2023-24					
S.no	Clause No.	PDF Page	Provision of Bidding Documents	Bidder's Query	Purchaser's Reply
1	Table 7 Section D Services Point 1(a)	77	Integration with existing SCADA/EMS System of Main & backup SLDC.	We request to clarify the following for the integration : a. What are the data to be transferred between the control Centers? b. Which protocol should be applied for integrating data? c. Which way does the data flow?	All the PMU data needs to be integrated with SCADA/EMS system of SLDC. IEC 60870-5-104 protocol. WAMS to SCADA/EMS system.
2	Table 7 Section D Services Point 1(b)	77	Integration of WAMS system with existing VPS	Kindly confirm the resources available in the existing VPS controller. Also confirm the communication details between existing VPS controller and the proposed system. We also understand that the Warranty and AMC of Existing VPS shall be excluded from the scope.	VPS details: LED based 16 quadrants of 70" SXGA + LED lit DLP based video wall , make M/s BARCO Electronics System. System Model: BARCO VIDEOWALL System SW: Ver. OVL X-15 OVL LED Engine-OVL-X15 Controller: Barco NGP-400 LVC Controller, OS: WIN DOWS 10.
3	Table 7 Section F Annual Maintenance Contract	78	a) Annual Maintenance Contract (AMC) of Complete System Supplied for Initial Period b) Annual Maintenance Contract (AMC) of Complete system supplied for subsequent 6 years, after completion of initial period of AMC	Kindly confirm the total project duration (execution /DLP /AMC)	Page 78, 240, 222 (PART-I/Section-VI/Clause-1.0-2) Initial Period is the warranty period which begins from the date of successful Go-live for a period of one year. The period of AMC shall be for 05 years after completion of 01 year warranty period (initial period).
4	Table 7 Section G Annual Maintenance Contract	78	Services for migration from IPv4 to IPv6 for all equipment control center wise	Kindly clarify the requirement and also confirm the list of equipment are to be migrated	All associated equipment in the project.
5	Scope of Work C.12	103	Integration of all the supplied equipment with existing system	Kindly confirm and provide the details of existing systems. Also provide the communication protocol details for the same.	Clause No C.12 of PART-I, SECTION-IV (SCOPE OF THE WORK FOR SURVEY, PLANNING, DESIGN, ENGINEERING, DOCUMENTATION, INTEGRATION, SUPPLY, INSTALLATION, TESTING, COMMISSIONING OF PMU BASED WAMS PROJECT FOR STATE LOAD DESPATCH CENTER, OPTCL, ODISHA) is hereby deleted from the Tender Specification. Please refer Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.
6	Scope of Work C 25	104	Integration and monitoring of new device/ Node on NMS cum CMC including defining configuring/ interfacing /interpreting MIBs.	Kindly provide the sizing details of the NMS system (No of devices to be monitored). We assume that NMS monitoring shall be done for the bidder supplied equipment including the PMUs only.	All associated equipment in the project need to be monitored..
7	2.0 General Term and Condition Point vii (i)	109	Application/Analytic software with the use of PMU data received from PDC after handling will be developed by software developer decided by SLDC- OPTCL the necessary cooperation and help will be require to extend. The API or protocol of the PMU, PDC and other requested by software developer must be extended by bidder and necessary confirmation must be given to SLDC- OPTCL	We assume contractor scope shall be limited to sharing PMU data from PDC to proposed developed system over the standard protocol c37.118.	The development of the analytical applications shall be the responsibility of the bidder. Please refer Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24 for the details of the Analytical Applications. The communication protocol shall be as per the Tender Specification.
8	2.0 General Term and Condition Point x	110	Bidder shall supply life time license required for software used for this total solution.	Kindly confirm the license validity. We assume the same shall be till the end of the AMC period.	The license shall be valid till the end of the AMC period. However, the source code of the software developed exclusively under this project by the bidder shall be the property of buyer.
9	2.0 General Term and Condition Point xii a	110	The Access of PMU must be through password and with log of same shall be maintained	Kindly confirm the duration and location of logs to be maintained	The logs should be stored for a minimum period of 6 months and shall be stored at the PDC server at the control centre.
10	2.0 General Term and Condition Point xvi	110	Bidder shall provide support for firmware up gradation or license version up gradation for adopting new features during AMC period after successfully commissioning of project at free cost.	Our understanding from this para is for the patches only. It is not feasible to modify the version of the application because it depends on the operating system version. Please confirm.	As per Tender Specification
11	Fig:1.0	112	URTDMS Direct PMU data would be reporting to new WAMS system PDC , ERLDC would also be sharing data with for other PMU(indirect) PMU, WAMS PMU would be sharing data to new WAMS System PDC	Kindly confirm whether data for all the PMU would be reported directly as per specified diagram only as Integration of New WAMS system PDC with existing SLDC PDC is not shown. Also confirm Integration with Existing SLDC PDC would only for transferring data from New WAMS PDC to existing SLDC WAMS PDC.	Block diagram in PART-I SECTION – V (TECHNICAL SPECIFICATIONS) Clause 4.0 WAMS SYSTEM HIERARCHY Fig.-1 in the Tender Specification has been modified and uploaded in Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.

12	1.2 Sizing Requirement	141	WAMS phase II PMUs data shall send data at 50 frames/second to PDC. Existing PMU of WAMS Phase-I project and URTDSM Project shall report the data at 25 frames/seconds to PDC, supplied PDC shall have capability to accommodate the same without affecting performance.	Please indicate the quantity of data that will originate from the below sources: 1. WAMS Phase I project 2. WAMS Phase II Project 3. URTDSM Project	Presntly under URTDSM-1, the data from 17 Locations at present are being reported either directly or indirectly to PDC at purchaser control centre at 25 frames/Sec. So the supplied PDC by the bidder should be capable of accommodating the existing data without affecting the performance.
13	Data Center Architecture	141	DATA CENTER ARCHITECTURE	We assume supply of any Hardware /Software specified in the architecture on Analytics App LAN is excluded scope of contractor. Kindly clarify.	The hardware/software required for the analytics App is in the scope of the Bidder. PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT), Clause 1.1 (GENERAL REQUIREMENT): Data Centre Architecture Diagram has been modified and upload in Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.
14	2.0 Phasor Data Concentrator	143	These PDCs shall be used for protection, control and monitoring of the powersystem	Kindly confirm whether Control Command is required from PDC to PMU or not.	Control command shall be required from PDC to PMU.
15	2.8.4 DATA EXCHANGE WITH ANALYTICAL APPLICATIONS	147	The PDCs shall be capable to exchange data with Analytical applications,	Kindly provide the updated architecture as there is no connection shown between these two systems in the provided architecture on page number 142	PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT), Clause 1.1 (GENERAL REQUIREMENT): Data Centre Architecture Diagram has been modified and upload in Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.
16	2.8.5 Output stream of PDC	148	The PDCs shall be capable to give output stream to other PDC, there shall be no limit to define nos. of output stream in each PDCs	An infinite number of output streams cannot be supported by a system. Hence requesting to confirm the number of output stream expected from system to define the hardware sizing requirement.	Minimum 10 number of output streams shall be provided.
17	2.9 PDC Performance Monitoring Point i	148	Both real-time reporting and recorded data for historical assessment. The real-time monitor shall demonstrate that the PDC is currently operating and what the state of operation is. State of operation includes the status of each input and output and recent operating history.	Kindly confirm the duration of logs for data error or communication errors to be maintained	The logs for data error or communication errors shall be maintained for the same period as that of historical data.
18	4.6.1 Firewall	179	Firewalls shall be provided as per BOQ. It is required that both side firewalls (Internal and External) are supplied from two different manufacturers. All firewalls shall be hardware box firewall as per the requirements.	Kindly provide the updated architecture as external firewall is not shown in the provided architecture on page number 142	PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT), Clause 1.1 (GENERAL REQUIREMENT): Data Centre Architecture Diagram has been modified and upload in Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24. However, there are two numbers of firewalls as per TS and one will act as exeternal firewall and other as internal firewall.
19	4.7.1 Storage area network	180	There shall not be any single point failure i.e. there shall be zero down time with single element failure. SAN shall be configured in High Availability (redundant) configuration. In case one SAN failed and after some time it made operational then it shall be synchronized with the available SAN automatically without any manual intervention, even if new SAN machine was installed for failed machine	Please clarify whether redundant SAN storage is required, as single SAN storage is requested in the BOQ.	As per Tender Specification.
20	6.2.2 Operating System	188	The operating system of all the equipment of WAMS system including network equipment shall be latest version released preferably up to six months prior to FAT	We assume Operating system should be determined depending on the compatibility of the latest available WAMS Software, Kindly confirm.	As per Tender Specification.

21	8.10 site acceptance test ii Pre field performance test	216	Install and test SLDC-OPTCL/owner-developed software if any and d. Establish connectivity with WAMS system and other IT application provided by SLDCOPTCL/owner. The Contractor shall be responsible for providing and installing corrections for all variances found during this period prior to the start of the field performance test. Further the contractor shall also train the dispatchers before field performance test starts.	We assume output stream can be defined in new WAMS system to share data with slde-optcl/owner developed application. However, the contractor shouldn't be in charge of installing the application and setting up the connection. Kindly confirm	As per Tender Specification.
22	15.0 APPENDIX-I, PART: A (BOQ)	220	Table of BOQ	Kindly add a line item for Server and Software for the Back-up Solution.	As per Tender Specification.
23	15.0 APPENDIX-I, PART: A (BOQ) Point 4f	221	70" SXGA+ LED Lit video Wall' Cubes 4	Kindly confirm the scope of the bidder against VPS: 1. Supply of New set of VPS with 4 cubes and controller 2. Only 4 Cubes to integrate with existing controller	Supply of VPS item is not in the scope of the Tender. Please refer CORRIGENDUM – I to TENDER NOTICE NO. SLDC-03/2023-24.
24	15.0 APPENDIX-I, PART: A (BOQ) Point 9b	221	WAN Router for Communicating with Super PDCs ,PMUs, SCADA, Remote PDC at RLDCs/NTAMC and Remote Consoles (Minimum 4 x 10 Gbps Fiber Optic Ports and 8 x 1 Gbps Ethernet ports)	Kindly confirm the scope of data exchange with NTAMC	Data exchange between WAMS control centre PDC and URTDSM PDC. For details, please refer Block diagram (Fig.-1) in PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), Clause 4.0 WAMS SYSTEM HIERARCHY in the Tender Specification and uploaded in Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.
25	15.0 APPENDIX-I, PART: A (BOQ) Point C1a	222	Integration of WAMS system at Main SLDCs with existing SCADA/EMS System of Main SLDC.	We believe that the bidder is responsible for configuring the new WAMS system to share data with the existing SCADA/EMS system; however, the employer should be responsible for configuring the current SCADA/EMS system. Kindly Confirm	The bidder is responsible for configuring the WAMS system to share data with the existing SCADA/EMS system. However, the SCADA/EMS end configuration is the responsibility of the purchaser.
26	Pat-I Section IV, Scope work, Point 28	104	All cabling, wiring, and interconnections to the equipment being supplied and to be integrated including communication equipment and power supply.	Whether this involves the communication infrastructure required to connect the PMU panel installed at substations to the SLDC or the same would be provided by OPTCL? If the same would be provided by OPTCL, please provide the complete details.	OPTCL will provide the communication interface ports at substation end as well as Control centre end , the bidder has to make provision for required wiring ,Cabling from the OPTCL ports to their equipment. Similar is the case for Power supply , bidder has to make provision for cabling from OPTCL ACDB and DCDB to their equipment.
27	Pat-I Section V, Technical Specifications, Point i	109	Application/Analytic software.....	Does this mean that the software part at the SLDC would be out of scope of the bidder and the bidder has to only supply the hardware required at the control center as per the technical specifications?	The application and analytic SW with the use of PMU data received from PDC will be developed by the bidder as per the Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24. However, in case the buer/puchaser develops any additional appliction/analytics beyond the scope of this bid by any third party, the API or protocol of the PDC, PMU and other request by the buyer/purchaser for such development of the SW must be extended by the bidder.
28	Pat-I Section V, Technical Specifications, JOB-2	178, 179	4.4.1 APPLICATION SERVERS (PDC, HISTORIAN, ANALYTICS, IDENTITY, NMS SERVERS)	Can the bidder offer PDC with embedded firmware, truly industrial grade IEC61850-3 complaint platform not matching with the hardware specifications mentioned in this section however meeting all other PDC software features/performances expected in this specifications?	The specifications mentioned are minimum, however supply of any higher configuration are welcome subject to no additional cost to the buyer/purchaser.

Replies to Pre Bid Queries of M/S Hitachi Under Tender Notice No. SLDC-03/2023-24				
Sr No	Classes , Page No	Tender Clause/Specification Point	Query/Hitachi Energy	Purchaser's Reply
1	Clause 8, Page 39		<p>RIGHT TO REJECT/ACCEPT ANY TENDER</p> <p>The purchaser reserves the right either to reject or to accept any or all tenders if the situation so warrants in the interest of the purchaser. The purchaser has exclusive right to alter the quantities of Software/ hardware materials/ equipment / services / AMC at the time of placing final purchase order.</p> <p>We understand that it will be + .20% of Quantity asked in tender.Please clarify</p>	As per OPTCL norms, it is +/- 25% of the BOQ.
2	Clause 34 , page no 58	CYBER SECURITY (VAPT) TEST	<p>The bidder shall clear all vulnerabilities detected in the VAPT conducted by a CERT-IN empaneled audit agency before commissioning of the project as per CEA guidelines. VAPT test shall be conducted twice a year by audit agency to ensure its stability and reliability till end of AMC period.</p> <p>Bidder will include the cost of such tests in their offer.</p> <p>Please clarify the scope of work of Bidder against this Audit</p>	The vulnerabilities, threats and recommendations pointed out in the audit should be resolved by the bidder without any additional cost implication to the purchaser.
3	1. Page 76/272 2. Page 220/272 1. Annexure-III: Schedule of Quantity and Delivery, Table 7 – Schedule of Quantity – item A-1-c: Programming Development System (PDS) Software (screenshot below) 2. Section 15.0 Appendix-I, Part: A (BOO) – item A-1-c	PDS	<p>What are the functional requirements for the Programming Development System (PDS)?</p> <p>What are the primary uses cases for the PDS?</p> <p>How many users should the PDS be scoped for?</p>	Please refer Clause 18 in the PART-I, SECTION – V (TECHNICAL SPECIFICATIONS), JOB -2 (SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF CONTROL CENTRE HARDWARE & SOFTWARE UNDER WAMS PROJECT) of Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.
4	Page-78	Training	We assume that 360 mandays is the Total Training required. Per region is not clear. Please clarify.	Modification in the PART I SECTION III (LIST OF ANNEXURES) ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY is hereby modified and uploaded along with the corrigendum-II to Tender Notice No.-SLDC 03/2023-24.
5	Page 78	AMC	What is Initial period ?	Modification made in the PART I, SECTION III (LIST OF ANNEXURES), ANNEXURE-III: SCHEDULE OF QUANTITY & DELIVERY F (ANNUAL MAINTENANCE CONTRACT), Clause (a) & (b) and uploaded as Corrigendum-II to TENDER NOTICE NO. SLDC-03/2023-24.
6	Scope of work Point no 26, page 104	Integration with existing VPS.	Please share details of Existing VPS	VPS details: LED based 16 quadrants of 70" SXGA + LED lit DLP based video wall , make M/s BARCO Electronics System. System Model: BARCO VIDEOWALL System SW: Ver. OVL X-15 OVL LED Engine-OVL-X15 Controller: Barco NGP-400 LVC Controller, OS: WIN DOWS 10.
7	Scope of work Point no 30, page 104		<p>Auditing of Cyber Security implementation by CERT-In empanelled auditors.</p> <p>Please clarify the scope of work of Bidder against this Audit</p>	The vulnerabilities, threats and recommendations pointed out in the audit should be resolved by the bidder without any additional cost implication to the purchaser.
8	Page 110 Point xvii		<p>The bidder should provide demonstration of PMU for integration with existing control center PDC at SLDC (on both protocol TCP and UDP Protocol).</p> <p>We understand existing PDC has ports available to take data from additional PMU.Please share details of existing PDC.</p>	Clause No 2.0 (xvii) of PART-I, SECTION–V (TECHNICAL SPECIFICATIONS) is hereby deleted from the Tender Specification.
9	Page 118 Clause 1.3 xxvi	PMU real-time output reporting latency shall be determined for each reporting rate Fs using at least 1000 consecutive messages.The reporting latency is the maximum of these values. The latency shall be determined to an accuracy of at least 0.0001 s.	As per Standard IEC60255-118-1, Clause 6.7 PMU latency for measurement shall be determined to an accuracy of 0.002 sec. Hence please change the Technical specification in line with this.	As per Tender Specification.
10	Page 119 Clause 1.3 xxvi	Performance Class : M Maximum Measurements reporting Latency (s) : 5/Fs	As per Standard IEC60255-118-1, Clause 6.7 for M class,reporting latency is 7/Fs. Hence please change the Technical specification in line with this.	As per Tender Specification.
11	Page 120 Clause 1.5 Power Supply Failure Indicators	The PMU shall have a status point which shall be set if the power to the PMU has been cycled (off-on) for any reason (including maintenance). The successful transfer of this indication to Control Centre shall reset the power fail status point.	We understand status point is a binary input assigned to dedicated PMU however in case of power failure, the binary input will come to initial position. Please confirm our understanding is right.	As per Tender Specification.
12	Page 121 Clause 2.0 GPS based Time facility	The time receiver shall include propagation delay compensation and shall also include an offset to permit correction to local time to achieve time accuracy of at least ± 0.1 microseconds (µs).	As per Standard IEC60255-118-1 time accuracy requirement of PMU is ±1 microseconds (µs). Hence the specification for GPS should also refer to the same. Please confirm.	As per Tender Specification.

	Tender Clause Number, Reference Number	Original Clause in Tender	Amendment Proposed by Hitachi Energy	
13	22 (c) of ITB	c. In the event of such a termination the Contractor shall be paid compensation, equitable and reasonable, dictated by the circumstances prevalent at the time of termination	<p><i>Bidder requests confirmation on the below clause:</i></p> <p><i>In the event of termination of the Contract under this clause, the Employer shall pay to the Contractor the following amounts:</i></p> <p><i>(a) the Contract Price, properly attributable to the parts of the Facilities executed by the Contractor as of the date of termination</i></p> <p><i>(b) the costs reasonably incurred by the Contractor in the removal of the Contractor's Equipment from the Site and in the repatriation of the Contractor's and its Subcontractors' personnel</i></p> <p><i>(c) any amounts to be paid by the Contractor to its Subcontractors in connection with the termination of any subcontracts, including any cancellation charges</i></p> <p><i>(d) costs incurred by the Contractor in protecting the Facilities and leaving the Site in a clean and safe condition</i></p> <p><i>(e) the cost of satisfying all other obligations, commitments and claims that the Contractor may in good faith have undertaken with third parties in connection with the Contract and that are not covered by paragraphs (a) through (d) above.</i></p>	As per tender condition.
14	10 GTCC	Patent Rights etc	<i>Bidder requests confirmation that no intellectual property shall be transferred under this contract and remain vested with the respective Party. The indemnity of the contract shall not cover any use of the equipment, other than for the purpose indicated by or reasonably to be inferred from the specification.</i>	As per tender condition.
15	54 GTCC	Limitation of Liability	Notwithstanding any provision in this Contract to the contrary and to the maximum extent permissible under the applicable law of this Contract, Contractor shall not be liable under any theory of recovery, whether such liability is based on or arising out any obligation to indemnify or hold harmless, breach of contract or statutory duty, equity, tort or otherwise (including any negligent acts or omissions or strict liability) for any loss of use, loss of data, including any deterioration or corruption of data, loss of profit or revenue, loss of production or power, including costs of replacement of power or purchased power or hydrocarbons, loss of goodwill or reputation, increased costs of operations, interruption of operation or downtime costs, loss of any contract, cost or loss of capital, financing, or banking interests, loss of anticipated savings or profit, loss of business or business opportunities, incurrence of additional financial or loan charges or for any special, incidental, punitive, indirect or consequential loss or damage of any nature. The over all limitation of liability of the Contractor under this Contract shall include its liabilities under indemnity or other contractual and tortious obligations.	As per tender condition.
16	44 GTCC	<p>44.0 JURISDICTION OF THE HIGH COURT OF ODISHA</p> <p>Suits, if any, arising out of this contract will be filed by either Party in a court of Law to which</p> <p>the jurisdiction of High court of Odisha extends.</p>	<p>To be replaced as:</p> <p><i>"Arbitration or Dispute Resolution :</i></p> <p><i>This Contract shall be governed and construed in accordance with the laws of India.</i></p> <p><i>The Parties shall meet each other and settle all or any of the differences, disputes through mutual discussions amicably. The resolution of all disputes, which cannot be resolved through mutual discussions, shall be settled through arbitration as provided under the Indian Arbitration and Conciliation Act 1996 as may be amended from time to time. The arbitration shall be conducted by a sole arbitrator mutually appointed by the Parties. The arbitration proceedings shall take place in at a place mutually acceptable to both the parties and shall be conducted in the English language The Jurisdiction shall be Bangalore, India."</i></p>	As per tender condition.
17	New clause	New Clause- Suspension and Termination by Supplier/Contractor	<p>Suspension by Supplier/Contractor:</p> <p>In case payment of invoices by supplier /Contractor is delayed or in case of any breach of contract committed by the Buyer, the Supplier/Contractor shall be entitled to suspend performance and delivery. Any cost incurred by the Supplier/Contractor in relation to such suspension shall be paid by Buyer. The delivery date shall be extended for a period equal to the time lost by reason of suspension. In the event of the suspension continuing for more than 60 days, then the Supplier/Contractor may terminate the contract by issuing 30 days written notice. Upon such termination, the Supplier/Contractor shall be entitled to the costs of the work already performed until the date of such termination.</p> <p>Termination by Supplier/Contractor:</p> <p>The Supplier /Contractor shall be entitled to terminate the contract for any of the following:</p> <p>a) the Buyer is unable to carry out of its obligation under the Contract for any reason attributable to the Buyer, including but not limited to the Buyer's failure to provide possession of or access to the Site or other areas or failure or delay to obtain any governmental permit necessary for execution and/ or completion of the facilities and the Supplier has issued a notice of default with an opportunity to remedy the default within 30 days from the date of notice and the default remains unremedied.</p> <p>b) the Buyer and/or its holding company is declared bankrupt or is under the process of insolvency resolution or liquidation, or such similar financial restructuring.</p> <p>In the event of termination of the Contract under this Clause, the Buyer/Company shall pay to the Contractor/Supplier the following amounts:</p> <p>a) the Contract Price, properly attributable to the full and/or parts of the facilities executed by the Contractor/ Supplier as of the date of termination.</p> <p>b) Costs reasonably incurred for demobilization of its resources and cancellation of the order."</p> <p>Further, the Buyer shall return all the Performance securities, warranties and guarantees furnished by the Supplier/ Contractor in relation to this Contract.</p>	As per tender condition.
18	22 ITB	Price reduction Schedule for delay in Supply under Purchase Order/Contract	Bidder requests clarity that this clause shall not be applicable for delays beyond reasonable control of the Contractor, and shall be applicable as the sole and exclusive remedy of the Buyer for delays solely attributable to the Supplier.	As per tender condition.
19	17 GTCC	Extension of Time	Bidder requests clarity that Contractor/ Supplier should be entitled to extension of time, if the contractor/supplier is unable to carry out of its obligation under the contract for any reason attributable to the Buyer, including but not limited to the Buyer's delay in issuing drawings approvals, manufacturing clearances or other clearances/certifications/ payments required under this Contract, failure to provide possession of or access to the site or other areas or failure or delay to obtain any governmental permit necessary for execution and /or completion of the facilities. In such events, the reduction in contract price for delay/Liquidated damages shall not apply.	As per tender condition.

20	12 of ITB	Price	Bidder seeks confirmation that, notwithstanding the firm price, benefits of any price variation as a result of changes in law, regulation, ordinance, order or by-law that subsequently affects the costs and expenses of the Supplier/Contractor and/or the Time for Completion, the Contract Price shall be correspondingly increased or decreased, and/or the Time for Completion shall be reasonably adjusted to the extent that the Supplier/Contractor has thereby been affected in the performance of any of its obligations under the Contract.	As per tender condition.
21	16 ITB	Force Majeure	<p>Bidder construes that Force majeure event shall include any of the causes beyond our or our subcontractor's reasonable control including but not limited to acts of God, acts of Government, acts of public enemy, war hostility (including Russia-Ukraine conflict, Israel-Hamas conflict), civil commotion, sabotage, fires, floods, explosions, epidemics/pandemic including COVID-19, strike and lawful lock-out, then provided notice of happening of any such eventuality is given by the affected party to the other party within 10 days from the date of occurrence and cessation of the Force Majeure, the period of Force Majeure shall be excluded accordingly. If the Force Majeure event(s) continue beyond the period of three months, the parties shall hold consultation to chalk out the further course of action. Hitachi Energy India Limited shall be entitled for the following in case of force majeure events:</p> <ul style="list-style-type: none"> • Extension of time for the length of the delay arising from Force Majeure, • Recovery of costs incurred by reason of Force Majeure. <p>Supplier/ Contractor retains the right to terminate the contract if the Force Majeure exceeds, in the aggregate 90 days.</p>	As per tender specification.
22	clause 40.1 (v),page no 60		<p>Bidders must provide third party Safety Certification ("S" mark) Scheme of electronic sector promoted by STQC certification services, Standardization Testing and Quality Certification directorate, Ministry of Electronics and Information Technology, Govt. of India</p> <p>Please clarify specific certificate expected for PMU or PDC</p>	Safety certification ('S' Mark) scheme is a third party certification scheme in Electronics sector promoted by STQC certification services, Standardization Testing & Quality Certification Directorate, Ministry of Electronics & information Technology, GOI.

Replies to Pre Bid Queries of M/S SEL Under Tender Notice No. SLDC-03/2023-24					
S.no	Page no	Clause no	Actual clause	Proposed Clause	Purchaser's Reply
1	39	12.PATENT RIGHTS ETC.	<p>The supplier will indemnify the Purchaser against all claims, actions, suits and proceedings for the infringement of any patent design or copy right protected either in the country of origin or in India by the use of any equipment supplied by the manufacturer. Such indemnity will also cover any use of the equipment, other than for the purpose indicated by or reasonably to be inferred from the specification.</p> <p>patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:</p> <p>a. The installation of the Works by the Supplier or the use of the Works in the country where the Site is located; and</p> <p>b. The sale of the products produced by the Works in any country. Such indemnity will not cover any use of the Works or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, any infringement resulting from the use of the Works or any part thereof, or any products produced thereby in association or combination with any other Equipment/ Materials not supplied by the Supplier, pursuant to the Contract Agreement.</p> <p>iii. If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in (ii), the Purchaser will promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings and claim and any negotiations for the settlement of any such proceedings or claim. If the Supplier fails to notify the Purchaser within thirty (30) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser will be free to conduct the same on its own behalf. Unless the Supplier has so failed to notify the Purchaser within the thirty (30) days.</p> <p>iv. The Purchaser will, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and will be reimbursed by the Supplier for all reasonable expenses incurred in so doing</p> <p>v. Advertising: Any advertising stating the subject of this Contract by the Supplier in India or in foreign countries will be subject to approval of the Purchaser prior to the publication. Publication of approved articles, photographs and other similar materials will carry acknowledgment to the Purchaser.</p>	<p>The supplier shall defend all claims brought against Purchaser or its officers, agents, or employees (collectively "Indemitees") by a third party ("Third-Party Claims") and will indemnify and hold Indemitees harmless for the Purchaser against all claims, losses, damages, judgments, costs, expenses, and fees (including reasonable attorney fees) (collectively "Damages") resulting from Third-Party Claims to the extent that such Third-Party Claims and Damages arise out of actions, suits and proceedings for the infringement by the Supplier of any United States patent design or copyright protected either in the country of origin or in India by the use of any equipment supplied by the manufacturer. Such indemnity will also cover any use of the equipment, other than for the purpose indicated by or reasonably to be inferred from the specification. Supplier shall not be liable or required to indemnify or hold the Indemnified Parties harmless for Damages that are caused by or attributable to the acts or omissions of an Indemitee or a third party.</p> <p>Intellectual Property Rights & Royalties</p> <p>i. Royalties and fees for patents covering Software / Equipment/Materials, articles, apparatus, devices or processes used in the Works will be deemed to have been included in the Contract Price. The Supplier will satisfy all demands that may be made at any time for such royalties or fees and he alone will be liable for any damages or claims for United States patent infringements and will keep the Purchaser indemnified in that regard.</p> <p>ii. The Supplier will, subject to the Purchaser's compliance with (iii) indemnify and hold harmless the Purchaser, his successors or assignees, its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of whatsoever nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any United States patent, utility model, registered design, trademark, copyright or other intellectual property right registered or otherwise existing at the date of the Contract by reason of:</p> <p>a. The installation of the Works by the Supplier or the use of the Works in the country where the Site is located; and</p> <p>b. The sale of the products produced by the Works in any country. Such indemnity will not cover any use of the Works or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, any infringement resulting from the use of the Works or any part thereof, or any products produced thereby in association or combination with any other Equipment/ Materials not supplied by the Supplier, pursuant to the Contract Agreement.</p> <p>b.iii. If a Good or Service becomes, or in Supplier's reasonable opinion is likely to become, the subject of a Third-Party Claim of infringement or misappropriation of an intellectual property right, then Supplier shall, at its sole expense and discretion: (a) exchange the Good or Service with a non-infringing Good or Service; (b) promptly procure for Indemitee the right to continue to use the Good or Service; (c) modify the Good or Service to make it non-infringing, provided that the modified Good or Service meets the specifications and all other applicable requirements under this Agreement; or (d) repurchase the Good or Service from Indemitee for a fair portion of the original price. Supplier shall not be liable for Damages that arise after Supplier offers one or more of the foregoing remedies in good faith.</p> <p>iii. If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in (ii), the Purchaser will promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim. If the Supplier fails to notify the Purchaser within thirty (30) days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser will be free to conduct the same on its own behalf. Unless the Supplier has so failed to notify the Purchaser within the thirty (30) days.</p> <p>v. Advertising: Any advertising stating the subject of this Contract by the Supplier in India or in foreign countries will be subject to approval of the Purchaser prior to the publication. Publication of approved articles, photographs and other similar materials will carry acknowledgment to the Purchaser.</p>	As per Tender Condition.
2	41	14.Dispatch Instructions:	<p>iii. All design document drawings and software source code submitted by the Supplier will be the property of Purchaser. The Purchaser reserves the right to use the same in its future project without any further reference and additional charges to the Supplier for such use. The Purchaser's Design Document, Software Source Code, Drawings, Specification and other information submitted by the Purchaser to the Supplier will remain the property of the Purchaser. They will not, without the consent of the Purchaser, be used, copied or communicated to a third party by the Supplier unless necessary for the purposes of the Contract. Any error in any such Design Document, Source Code drawing/Specification etc. will not absolve the Supplier of his responsibility.</p>	<p>i. The supplier retains all its intellectual property rights. All documents, designs, drawings, plans, specifications, and other work product (collectively "Work Product") prepared by supplier in performing the Project shall not be deemed "works made for hire" for Customer. To the extent that any such Work Product prepared by supplier while performing the Project is integrated into the Project, supplier hereby grants Purchaser a perpetual, worldwide, non-exclusive, non-transferable, personal, revocable, limited license to use, copy and modify such Work Product for internal business purposes only. Supplier's Work Product and/or designs for other projects shall not be used for any purpose except the applicable license without first obtaining the supplier's written consent. Purchaser agrees to indemnify, defend and hold harmless supplier and all related parties from and against any unauthorized use or reuse of Work Product furnished by supplier, and any changes made by purchaser or others relating to design documents produced by supplier. The Purchaser's Design Document, Software Source Code, Drawings, Specification and other information submitted by the Purchaser to the Supplier will remain the property of the Purchaser. They will not, without the consent of the Purchaser, be used, copied or communicated to a third party by the Supplier unless necessary for the purposes of the Contract. Any error in any such Design Document, Source Code drawing/Specification etc. will not absolve the Supplier of his responsibility.</p>	As per Tender Condition.
3	42	18.Guarantee and liability	<p>The Contractor shall warrant that the whole project, in accordance with the Contract documents and free from defects in material/equipment and workmanship for a period of Twelve (12) calendar months commencing immediately upon the satisfactory commissioning of the project and issuance of Site Acceptance Test & Taking over Certificate (TOC). The Contractor's liability shall be limited to the replacement of any defective parts in the equipment of his own manufacture or those of his Sub-Contractors under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at the site and are not in meantime essential in the commercial use of the equipment. Such replaced defective parts shall be returned to the Contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by the Engineer when the equipment is under the supervision of the Contractor's Supervisory Engineer. Whole setup should work smoothly & carry out desired functions without any changes during the warranty period.</p> <p>ii. In the event of any emergency where in the judgment of the Engineer, delay would cause serious loss or damages, repairs or adjustment may be made by the Engineer or a third party chosen by the Engineer without advance notice to the Contractor and the cost of such work shall be paid by the Contractor. In the event such action is taken by the Engineer, the Contractor will be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve the Contractor of his liabilities under the terms and conditions of the Contract.</p> <p>iii. If it becomes necessary for the Contractor to replace or renew any defective portions of the works the provision of this clause shall apply to portion of the works so replaced or renewed until the expiry of twelve (12) months from the date of such replacement or renewal. If any defects are not remedied within a reasonable time, the Engineer may proceed to do the work at the Contractor's risk and cost but without prejudice to any other rights which the Owner may have against the Contractor in respect of such defects.</p> <p>iv. The repaired or new parts will be furnished and erected free of cost by the Contractor. If any repair is carried out on his behalf at the site, the Contractor shall bear the cost of such repairs.</p> <p>v. The cost of any special or general overhaul rendered necessary during the maintenance period due to defects in the equipment or defective work carried out by the Contractor, the same shall be borne by the Contractor.</p> <p>vi. The acceptance of the equipment by the Engineer shall in no way relieve the Contractor of his obligations under this clause.</p> <p>vii. In the case of those defective parts, which are not repairable at site but are essential for the commercial operation of the equipment, the Contractor and the Engineer shall mutually agree to a program of replacement or renewal, which will minimize interruption to the maximum extent in the operation of the equipment.</p> <p>viii. During Guarantee and AMC period it will be responsibility of bidder that Total solution working smoothly and secure with user friendly and bidder is responsible for maintaining it and correct it if required. No additional charges will be paid for the same.</p> <p>ix. At the end of the guarantee period, the Contractor's liability continues till AMC period of 5 year for all defects as per</p> <p>The minimum average annual turnover (MAAT) of the last three years (FY 20-21, FY21-22, FY22-23) for the Bidder will be INR 15.80 Crores</p>	<p>i. SUPPLIER warrants to PURCHASER that Products are free from defects in material and workmanship for ten (10) years after shipment for all SUPPLIER Products, including SUPPLIER-manufactured control enclosure structures and panels. The sole and exclusive warranties for any software are set forth in the SUPPLIER Software License Agreement. This warranty is conditioned upon proper storage and shall be void in its entirety if PURCHASER modifies Products without prior written consent and to subsequent approval of any such modifications by SUPPLIER or uses Products for any applications that require product listing or qualification not specifically included in the SUPPLIER written quotation or proposal. If any Product fails to conform to this warranty, PURCHASER properly notifies SUPPLIER of such failure and PURCHASER returns the Product to SUPPLIER factory for diagnosis (and pays all expenses for such return). SUPPLIER shall correct any such failure by, at its sole discretion, either repairing any defective or damaged Product part(s) or making available any necessary replacement part(s) or Product(s). SUPPLIER will pay the freight to return the Product to the PURCHASER (Carriage Paid to CPT) customer's place of business). If SUPPLIER is unable or unwilling to repair or replace, SUPPLIER and PURCHASER shall negotiate an equitable resolution such as a prorated refund or credit to the PURCHASER's account. Any Product repair or upgrade shall be covered by this warranty for the longer of one (1) year from date of repair or the remainder of the original warranty period. SUPPLIER shall perform the Project in a manner consistent with the degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. SUPPLIER shall reperform (or, at SUPPLIER's option, pay a third party to reperform) any defective services at no cost upon receipt of notice detailing the defect(s) within one (1) year of performance of the original services. TO THE MAXIMUM EXTENT PERMITTED BY LAW, THIS WARRANTY SHALL BE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER STATUTORY, EXPRESS OR IMPLIED (INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE AND WARRANTIES ARISING FROM COURSE OF PERFORMANCE OR DEALING OR USAGE OF TRADE), EXCEPT WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. SUPPLIER shall, whenever possible, pass the original manufacturer warranty to PURCHASER for non-SUPPLIER products. The Contractor shall warrant that the whole project, in accordance with the Contract documents and free from defects in material/equipment and workmanship for a period of Twelve (12) calendar months commencing immediately upon the satisfactory commissioning of the project and issuance of Site Acceptance Test & Taking over Certificate (TOC). The Contractor's liability shall be limited to the replacement of any defective parts in the equipment of his own manufacture or those of his Sub-Contractors under normal use and arising solely from faulty design, materials and/or workmanship provided always that such defective parts are repairable at</p> <p>the site and are not in meantime essential in the commercial use of the equipment. Such replaced/defective parts shall be returned to the Contractor unless otherwise arranged. No repairs or replacement shall normally be carried out by the Engineer when the equipment is under the supervision of the Contractor's Supervisory Engineer. Whole setup should work smoothly & carry out desired functions without any changes during the warranty period.</p> <p>ii. In the event of any emergency where in the judgment of the Engineer, delay would cause serious loss or damages, repairs or adjustments may be made by the Engineer or a third party chosen by the Engineer without advance notice to the Contractor and the cost of such work shall be paid by the Contractor. In the event such action is taken by the Engineer, the Contractor will be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve the Contractor of his liabilities under the terms and conditions of the Contract.</p> <p>iii. If it becomes necessary for the Contractor to replace or renew any defective portions of the works the provision of this clause shall apply to portion of the works so replaced or renewed until the expiry of twelve (12) months from the date of such replacement or renewal. If any defects are not remedied within a reasonable time, the Engineer may proceed to do the work at the Contractor's risk and cost but without prejudice to any other rights which the Owner may have against the Contractor in respect of such defects.</p> <p>iv. The repaired or new parts will be furnished and erected free of cost by the Contractor. If any repair is carried out on his behalf at the site, the Contractor shall bear the cost of such repairs.</p>	As per Tender Condition.
4	53	31.Financial requirements			
5	67	54.Limitation of liability	<p>The final payment by SLDC, OPTCL in pursuance of the Contract shall mean the release of the Contractor from all his liabilities under the Contract except for liabilities under Guarantee period. Such contractual liabilities and responsibilities of the Contractor shall prevail till expiry of the Latent Defect Warranty period even after the final payment is released.</p> <p>Notwithstanding anything to the contrary mentioned herein and to the extent permitted by law, the aggregate liability of Contractor to SLDC, OPTCL, whether in contract, tort or otherwise, will be limited to 100% of the contract value.</p>	<p>The final payment by SLDC, OPTCL in pursuance of the Contract shall mean the release of the Contractor from all his liabilities under the Contract except for liabilities under Guarantee period. Such contractual liabilities and responsibilities of the Contractor shall prevail till expiry of the Latent Defect Warranty period even after the final payment is released.</p> <p>Notwithstanding anything to the contrary mentioned herein and to the extent permitted by law, the aggregate liability of Contractor to SLDC, OPTCL, whether in contract, tort or otherwise, will be limited to 100% of the contract value. In no event, whether as a result of breach of contract, indemnity, warranty, tort (including negligence), strict liability or otherwise, shall the Contractor be liable for any special, incidental, consequential or punitive damages, including without limitation any loss of profit or revenues, loss of use of associated equipment, damage to associated equipment, cost of capital, cost of substitute products, facilities, services or replacement power, downtime costs or claims of SLDC, OPTCL's customers for such damages.</p>	As per Tender Condition.
1	143	2.0 PHASOR DATA CONCENTRATOR R (PDC) 2.1 DATA ACQUISITION (b)	<p>The PDCs shall conform to IEEE C37.118-2011 (Part-1&2) standard streaming protocol for both the phasor data inputs and the combined data output stream.</p>	<p>We understand that C37.118 protocol specify backward compatibility with 2005 protocol, shall be acceptable.</p>	As per Tender Specification.
3	144 145	2.0 PHASOR DATA CONCENTRATOR R (PDC) 2.2 CONFIGURATION CHARACTERISTICS	<p>The PDC shall determine if the configuration has changed, by comparing the newly received configuration with the previously stored configuration. If the configuration has changed, the PDC should take appropriate action based on user defined rules to reconfigure its outputs and communicate the change to all affected output destinations and applications.</p>	<p>We understand this is the optional features and not mandatory.</p>	As per Tender Specification.
5	145	2.0 PHASOR DATA CONCENTRATOR R (PDC) 2.3 Redundant data handling	<p>The PDC shall be able to handle redundant data sent by alternate devices, either in aggregated or time aligned PMU streams. The PDC shall allow the user to designate a preferred source for data to be included in an output stream. The PDC shall also permit the user to designate alternate source(s) for the output stream if the preferred data fails to arrive. PDC shall indicate in the output stream that the alternate data source is used.</p>	<p>We understand that input redundancy is required where PDC will favor primary connection and switch over to back up connection automatically on a loss of availability or quality of the primary connection. However we understand that the flag in output for which connection sourced the data is not mandatory.</p>	As per Tender Specification.
8	148	2.0 PHASOR DATA CONCENTRATOR R (PDC) 2.6 DATA TRANSFER PROTOCOL SUPPORT/CONVERSION	<p>PMU data may be available in different synchrophasor data transfer protocols such as IEEE Std C37.118-2005, IEEE Std 1344-1995, IEC 61850-90-5, etc. PDC shall support multiple synchrophasor data transfer protocols, it should convert synchrophasor data from one synchrophasor data transfer protocol to another to the extent possible.</p>	<p>We understand that all PMUs are complying with C37.118 . So C37.118 protocol is sufficient.</p>	As per Tender Specification.