Consolidated Response to Bidder's Queries

Reference:

1) Tender Enquiry document for BALANCE OF SYSTEM PACKAGE FOR 600 MW SOLAR PV PROJECT At GREAT RANN OF KUTCH, NR. VILL. KHAVDA IN GUJARAT, INDIA. (RfP No: GIPCL /Solar/BOS/2023-24 dtd: 23rd May, 2023)

2) Pre-bid queries received during Pre-Bid Meeting on 08.06.2023 and also through various email(s).

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
1	VOLUME – I & SECTION – 1	TABLE A: IMPORTANT DATES	2.0 - viii	4 OF 13	Bid Validity : Offers shall be valid for a period of 06 (Six) months from bid submission due date.	We (the Bidder) request the employer to please reduce the Bid Validity Period from 180 Days to 120 Days?	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
2	VOLUME – I & SECTION – 1	TABLE B: IMPORTANT AMOUNTS	2.0 - iii	6 OF 13	Security Deposit cum Performance Bank Guarantee (PBG) : The Contractor shall furnish Security Deposit (SD) cum Performance Bank Guarantee (PBG) equivalent to 10% (ten percent) of the EPC Contract Price within 01 month after issuance of LoI. The validity period of PBG should be for a total period up to 30 months from the date of LoI or till the date of successful completion of PG test whichever is later; if required, the PBG shall have to be extended for further 3 months beyond the due date of successful completion of PG test	We (the Bidder) request the employer to please reduce the Security Deposit cum Performance Bank Guarantee (PBG) from 10% of the EPC Contract Price to 3% of the EPC Contract Price	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
3	VOLUME – I & SECTION – 1	TABLE B: IMPORTANT AMOUNTS	2.0 - iv	6 OF 13	O&M Bank Guarantee (O&M BG) : 5% of EPC Contract Price, to be submitted upon completion and acceptance of Performance Guarantee Test as per Clause No. xiv of Table A (Important Dates) above for a period of three (3) years, to the 90 days beyond completion of the O&M Period mentioned in Clause No. xv of Table A (Important Dates) above. This O&M BG shall cover the risk against extended warrantee for equipment up to O&M Period and recovery towards shortfall in NEETG during O&M Period.The O&M Bank Guarantee shall be valid 90 days beyond the O&M Period.	We (the Bidder) request the employer to please reduce the O&M Bank Guarantee (O&M BG) from 5 %of the EPC Contract Price to 3% of the EPC Contract Price	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
4	VOLUME – I & SECTION – 1	TABLE A: IMPORTANT DATES	2.0 - xi	4 OF 13	Schedule date for Commissioning of 600 MW Projects : 15 Months from the date of issue of LoI	We (the Bidder) request the employer to please increase the Schedule date for Commissioning of 600 MW Projects from 15 Months to 24 Months?	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
5	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.1 - a	105 of 179	This Section specifies the minimum requirements for design, engineering, installation, and testing of the PV Plant Scada System. Bidder to note that for each 300 MW (AC) block one dedicated SCADA system is required, which shall be placed in "PV Plant SCADA, Monitoring and Spare room" building.	Client needs to give clarification for both projects PV plant SCADA monitoring location are common or not.	Bidder shall refer to clause number 1.1- a of VOLUME - II PART - 2 (Schedule - III B). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
6	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.11	107 of 179	SCADA system shall support Modbus (TCP/IP, RS-485), RTU, ASCII, IEC 61850, IEC 60870-5-101 & 104, FTPs, Licensed Web based secured remote monitoring (for 4 simultaneous users), standard protocols (Included but not limited to) to communicate with different sub system/Devices. Web based secured remote monitoring shall work on popular web browser without need of additional software. It shall be authorized by user ID and password. User Id and password for remote view can only be changed by SCADA administrator. Internet connection for transferring data to web shall be taken by Bidder in name of GIPCL site for O&M period.	Bidder informs that IEC 60870-5-101 & 104 protocol not applicable for PV plant SCADA. Mainly IEC 60870-5-101 & 104 protocol use for SLDC data sending. However, PSS not in PV Plant vendor scope(Bidder).	Bidder shall refer to PSS-1 DWG NO FCE-171125-CI-DWG-CMS-4100-002. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
7	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.17	108 of 179	Provision for remote monitoring shall be provided at least for 3 numbers.	Bidder inform that for remote monitoring we will provide 3Nos. Web Client license.	Bidder shall refer Amendment -1
8	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.11	107 of 179	SCADA system shall support Modbus (TCP/IP, RS-485), RTU, ASCII, IEC 61850, IEC 60870-5-101 & 104, FTPs, Licensed Web based secured remote monitoring (for 4 simultaneous users), standard protocols (Included but not limited to) to communicate with different sub system/Devices. Web based secured remote monitoring shall work on popular web browser without need of additional software. It shall be authorized by user ID and password. User Id and password for remote view can only be changed by SCADA administrator. Internet connection for transferring data to web shall be taken by Bidder in name of GIPCL site for O&M period.	Bidder propose internet connectivity take care by client for transferring data to web or remote monitoring.	The referred clause mentions, internet connectivity is in scope of bidder. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
9	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA	3.1	75 of 82	Seven (7) nos. weather stations shall be placed in representative locations within the plant including measuring instruments and all necessary software & hardware required to integrate with SCADA to enable availability of data in SCADA. Each secondary weather station shall comprise:	**Below proposal for 300MW project:** Bidder inform that as per IEC-61724-1 we will provide 3 primary wms + 2 secondary wms for 300MW project. Following sensor shall be considered in Primary WMS: • Pyranometer (GHI & POA)-2Nos • Module surface temp sensor-4Nos • Ambient temp sensor-1No • Wind speed & direction sensor-1No • Rain guage-1No • Barometric pressure sensor-1No Following sensor shall be considered in each set of Secondary WMS: • Pyranometer (POA)-1No • Module surface temp sensor-2Nos Following sensor shall be considered in each project 1- set (SLDC requirements): •Direct and Diffused Radiation Sensor-1No •Cloud cover-1No *Same will follow another 300MW project.	Bidder shall refer Amendment -1
10	VOLUME - II PART - 2 (Schedule - III A)	TECHNICAL PARAMETERS	5.0 - 4	80 of 82	Pressure transducer (Barometric Pressure): Accuracy shall be within ± 0.3 to 1 mb. Linearity shall be ± 0.25mb or better. Repeatability shall be ± 0.03 mb or better. Stability shall be ± 0.1 mb per year or better. Response time shall be 500ms or better. Output signal 4 - 20mA.	Bidder proposed below specification: Pressure Range500 to 1100 hPa Temperature Range-40° to +60°C Supply Voltage9 to 28 Vdc Elevation~609.6 m (2,000 ft) below sea level (as in a mine) to 4,572 m (15,000 ft) above sea level Current Consumption < 5 mA (active), 200 µA (sleep mode) Digital OutputSDI-12, RS-232 serial Pressure FittingBarbed fitting for 0.318 cm (0.125 in.) Please check and confirm.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.

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11	VOLUME - II PART - 2 (Schedule - III A)	TECHNICAL PARAMETERS	5.0 - 5	80 of 82	Resistance thermometer (Dry bulb temperature): Duplex type, PT – 100/1000, with accuracy of ± 0.25 deg C, response time 1-2 seconds, Range: 0-100 deg C, operating temperature: 0 to 100 deg C; Spring loaded mineral insulated three (3) wires RTD. IP 65 or equivalent degree of protection for enclosure. Material of accessories (name plate, etc.) shall be SS. Element lead size shall be 18 AWG. The insulation resistance at 540 Deg C shall not be less than 5M ohms. Repeatability over Full range shall be better than 0.02%.	Bidder informs that Dry bulb in the Solar not required. However, kindly follow below proposal: Ambient temperature and humidity sensor specification - Air Temperature Measurement Range-40 to +70°C Accuracy ±0.4°C (over the range -40 to +70°C) ±0.3°C (over the range 20 to 60°C) Long-Term Drift< ±0.03°C per year Reported Resolution0.001°C Repeatability0.04°C Values are 3 standard deviations of 25 measurements at constant temperature. Response Time130 s (63% response time in air moving at 1 m/s) UnitsDegrees Celsius Relative Humidity Measurement Range0 to 100% RH Accuracy ±1.8% (at 25°C, over the range 0 to 80% RH) ±3% (at 25°C, over the range 80 to 100% RH) Additional Errors at Other Temperatures< ±1% RH (over -40 to +60°C) Short-Term Hysteresis< ±1% RH Long-Term Stability±0.5% per year (maximum drift in clean air conditions) Reported Resolution0.001% RH Repeatability0.05% RH Values are 3 standard deviations of 25 measurements at constant humidity. Response Time with Filter8 s (63% response time in air moving at 1 m/s at 25°C)	Bidder shall refer Amendment -1
12	VOLUME - II PART - 2 (Schedule - III A)	TECHNICAL PARAMETERS	5.0 - 9	81 of 82	Data Logger a) Resolution of AI card better than 1 micro amp (16 bits with 1.6 second filter time) b) Linearity of AI card better than 10 micro amps c) Channel speed (min 16channel/sec) d) Serial input (RS-485) connection to be present e) Analog input channel should be protected against short circuit and over current protection f) Input range for current to be (-)28 to +28 mA g) Accuracy to be better than +/-0.1% reading h) The module to be fitted with disconnects to allow isolation of an individual input to allow work on the loop to continue safely i) Update speed of analog input module to be min. 110ms j) Each module shall have channel failure indication ✓ Indication for failure of internal self-diagnostic routine.	Bidder propose below specification for WMS Datalogger: ADC: 24-bit Communication protocol - CPI, PakBus, SDM, SDI-12, Modbus, TCP, DNP3, UDP, NTCIP, NMEA 0183, I2C, SPI, and others Data Storage 4 MB SRAM + 72 MB flash (Storage expansion of up to 16 GB with removable microSD flash memory card.) Digital Inputs: 8 terminals (C1 to C8) configurable for digital input and output. Includes status high/low, pulse width modulation, external interrupt, edge timing, switch closure pulse counting, high-frequency pulse counting, UART, RS-232, RS-485, SDM, SDI-12, I2C, and SPI function. Terminals are configurable in pairs for 5 V or 3.3 V logic for some functions. Analogue Inputs: 16 single-ended or 8 differential (individually configured). Two analog inputs can measure 4 to 20 mA or 0 to 20 mA natively. Four analog inputs can provide pulse/digital I/O functions. Maximum Scan Rate: 1000 Hz Communications Ports: Ethernet, USB Micro B, CS I/O, RS-232, RS-422, CPI, RS-485	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
13	VOLUME - II PART - 2 (Schedule - III B)	TIME SYNCHRONISATION EQUIPMENT	5.1	144 of 179	The bidder can take time synchronization signal from PSS-1 GPS system through Optical Fiber Cable on OPC, for this required hardware/software/cables etc. shall be in scope of bidder.	Bidder propose separate time synchronization unit for PV plant SCADA. Please check and confirm.	Bidder shall refer to clause number 5.2, pg.no. 144 of 179, of VOLUME - II PART - 2 (Schedule - III B). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
14	VOLUME - II PART - 2 (Schedule - III C)	Network Array Storage	3.3	41 of 100	The storage capacity of each NVR/NAS shall be not less than 30 days with 15 FPS per camera. An alarm shall be initiated when storage capacity of any NVR/NAS reaches 80%. On failure of a storage element, transfer to the redundant storage element shall be automatic. The storage system shall have facilities to superimpose camera number and date/time data on the images.	Bidder informs that we will provide NVR with 30days storage backup.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
15	VOLUME - II PART - 2 (Schedule - III C)	Introduction: Closed Circuit Television System (CCTV) (Each for 300 MW)	1.2	38 of 100	The location of the Fixed or PTZ (Pan Tilt Zoom) or combination shall be as follows a) Inverter Stations b) SCADA, Monitoring and store room buildings c) 33kV Switchgear Sheds d) All Entry/Exit Gates e) Security/Guard room f) All gates for entry CCTV Surveillance of periphery of project is recommended. Number of cameras shall be selected based on it.	Bidder proposed below camera quantity location wise : • PV Plant SCADA, monitoring and Spare Building- 2Nos Dome type camera. • Inverter Stations- 1Nos bullet type camera for each ICR. • 33kV Switchgear Stations- 1Nos bullet type camera for 33KV Switchgear Stations. • All Entry/Exit Gates- Each Entry/Exit Gates 1Nos PTZ camera. • Security/Guard room- Each Guard room 1Nos Dome type camera. • All gates for entry into different plots- Each entry into different plots 1Nos Bullet camera. * Client need clarity on CCTV Surveillance of periphery is it really required. Please check and confirm.	CCTV Surveillance of periphery of project is required. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
16	VOLUME - II PART - 2 (Schedule - III B)	HARDWARE & SOFTWARE REQUIREMENTS	3.2.4	116 of 179	Two numbers Operator workstation, One Engineering workstation, one redundant historian server, one OPC Server, one laptop with EWS and OWS programming and two gateway systems (one is main and Redundant) with 24 inch" LED monitor minimum for Engineer work station and 50 inch for operator work station. Both the systems to be connected to redundant servers (24x7). The Systems to be functionally interchangeable. I.e., The function of both Engineering station and operator station shall be possible from both the systems. Operator shall be able to access all control/information related data under all operating conditions including a single processor and computer failure/hardware failure. Bidder shall provide dedicated Laptop configured to work as Operator cum Engineering Workstation.	Below quantity Bidder propose for SCADA monitoring workstation in 300MW project:(Same will be follow another 300MW project) 1. Engineering workstation- 1Nos. 2. Operator workstation- 2Nos. 3. Redundant historian server- 2Nos. Bidder propose that Server PC(EWS)/ Historian server configuration: • Configuration: Raid 5 • Form Factor: Tower • 1 TB Hot Plug Hard Drives 7.2 K: 2 Nos. (or as required) • 16 GB Memory upgradable to 32 GB • Intel (R) Xenon (R) Processor 3.3 GHz, 64 Bit • Graphics Card 4GB External • Dual Network Cards • Dual Hot Plug, Redundant Power Supply • DVD R/W 16 X or Higher • 32" LED display Bidder propose that Client PC(OWS)configuration • Configuration: Raid 1 • Form Factor: Tower • 500 GB Hard Drives • 16 GB Memory upgradable to 32 GB • I5 5th gen. 3.2GHz 64 Bit Processor • Graphics Card 4GB External • Dual Network Cards • DVD R/W 16 X or Higher • 32" LED display Please check and conform.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
17	VOLUME - II PART - 2 (Schedule - III C)	Fire Alarm Panel (FAP	3.1.4 - b	23 of 100	Fire alarm panel shall be provided with integral HMI.	Bidder proposed that conventional type fire alarm system will be provided in MCR & ICRs. However, if ICRs are outdoor type then FAS system not required. Please check and confirm.	Bidder shall refer to clause number 3.1.3, pg. no.: 22 of 100 of VOLUME - II PART - 2 (Schedule - III C). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
18	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE	Note	4	1 of 1	THE ARRANGEMENT TO TRANSMIT DATA REQUIRED BY THE LOAD DISPATCH CENTRE (LDC) FROM SOLAR PLANT TO RLDC/SLDC AS PER EXTANT REGULATIONS AND PROCEDURES FOR GRID MANAGEMENT UPTO 400/765KV PGCIL KPS# AT KHAVDA SOLAR PARK IS IN BIDDER SCOPE.	Bidder understand that substation is not in PV plant vendor scope. However, required PV plant data for SLDC requirement we will provide to substation end through Modbus TCP/IP.	Bidder shall refer to PSS-1 DWG NO FCE-171125-CI-DWG-CMS-4100-002. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.

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19	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE	Note	5	1 of 1	IT SHALL BE POSSIBLE TO MONITOR AND GIVE PLANT GENERATION SET POINT FROM PSS-1 HPCMS	Bidder informs that Plant generation set point will be available in PPC system which is located in PV plant. However, generation set point possible from PV plant location only.	Master PPC is available in PSS-1 and supplied by GIPCL. Bidder has to install slave PPC for 600 MW at PSS-1. Slave PPC shall take generation set point from Master PPC. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
20	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.6	61 of 82	MCS shall have Either Web page monitoring & control or SCADA monitoring & control and dedicated PLC/controller to provide at least the following data on Modbus protocol. a) Pump on-off status. b) Pump on-off control (Remote) c) Water level status. d) Water consumption. e) Discharge Pressure	Bidder informs that MCS system monitoring not in Bidder scope.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
21	VOLUME - II PART -1 (Schedule - I and 2)	The requirement of Comprehensive AMC of Critical Equipment is revised as follows	G.	12 of 13	The requirement of Comprehensive AMC of Critical Equipment is revised as follows Equipment/System Comprehensive AMC* Inverter 10 Years SCADA 10 Years Tracker 10 Years * Starts from date of commissioning of full capacity	Required clarification on Comprehensive AMC For SCADA Is 10 yrs	Bidder shall refer to clause no 3 - jj, pg. no.: 95 of 100 and 5.2, pg. no.: 99 of 100 of VOLUME - II PART - 2 (Schedule - III C). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
22	VOLUME - II PART -1 (Schedule - I and 2)	STATUTORY COMPLIANCE, GRID CONNECTIVITY AND POWER EVACUATION	7.0 - b	7 of 13	Inverter and WMS shall be provided with Dual Master facility.	Bidder proposes that Inverter and WMS considered Single Master in our all Solar projects for data integration to SCADA.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
23	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE				Module Cleaning requirement in SCADA Architecture	Bidder request to need clarity on module cleaning requirements.(DI/DO)	Bidder shall refer clause no.: 3.0, pg.no.: 61 of 82 of VOLUME - II PART - 2 (Schedule - III A). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
24	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE				Master PPC & Slave PPC	Bidder informs that only PV plant PPC is in Bidder scope.	Bidder shall refer tender clause no: 1.13, pg no: 107 of 179 and clause no: 1.24, 1.25 and 1.26, pg no: 109 of 179 of VOLUME - II PART - 2 (Schedule - III B). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
25	VOLUME - II PART - 2 (Schedule - III B)	HARDWARE & SOFTWARE REQUIREMENTS	3.2.2	115 of 179	State of the art microprocessor-based SCADA system for Plant control and monitoring including PV solar plant, BOP systems, Electrical system. In addition, SCADA shall facilitate optimized inverter control. The performance, memory and hard disk of the workstation shall be sufficient to fulfil the requirements specified in this document and supports its activities throughout the lifetime of the plant. Also, one number mini-PLC controller shall be mounted in each Inverter Room.	Bidder proposed below PLC controller for MCR & ICRs room. 1. Redundant PLC Controller with min 2MB PLC programming memory in MCR.(Main PLC) 2. Stand alone PLC Controller with 512KB PLC programming memory in ICRs room.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
26	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 28	8 of 34	SCADA 1. ABB 2. Rockwell 3. Siemens 4. Schneider 5. Honeywell 6. Emerson automation solution intelligent platforms 7. Phoenix Contact Electronics GmbH (Germany)	Bidder requested that please add (ABB / Schneider/Emerson/ Mitsubishi) OEM and system integrator. Please check and confirm	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
27	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 29	8 of 34	26. PPC Controller with IOs 1. ABB, 2. Siemens, 3. Schneider	Bidder requested that please add (ABB / Schneider/Emerson/ Mitsubishi) OEM and system integrator. Please check and confirm	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
28	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 45	10 of 34	Fire & Alarm System 1. Honeywell 2. Siemens 3. UK,Edward 4. Autronica 5. schrack	Bidder proposed Ravel make for FAS system.	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
29	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 48	11 of 34	Wind Sensor 1. Theisclima 2. Met One Inc 3. NRG System 4. Thies Clima	Bidder propose RM Young make for wind sensor	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
30	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 47	11 of 34	Pyranometer 1. Kipp & Zonnen (SMP11)	Bidder proposed Kipp&Zonnen (SMP10) instead of SMP11. (Because SMP11 will be stop in future)	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
31	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 49	11 of 34	Wind Direction (WMS) 1. NRG System 2. Thies Clima	Bidder propose RM Young make for Wind Direction	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
32	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1.0 - 50	11 of 34	Rainfall Sensor 1. NRG System 2. Thies Clima	Bidder propose Campbell Scientific make for Rainfall Sensor	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.

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33	VOLUME - II PART - 3 (Schedule - IV to VI)	SCADA & PPC	C - 1	22 of 34	SCADA & PPC a) Power Supply modules / Cards - Nos.- 2 b) I/O Cards (Each Type) - Nos. - 5% c) Network Cards /Ethernet Switches - Nos. - 5% d) Communication system spares of each type - Nos. - 5% e) Data Bus Cable - Nos. - 3% f) Main Data Bus and Data Bus Controller - Nos. -3% g) Fiber Optic Cable Converter/De-converter Unit (applicable if remote I/O module is supplied) - Nos. - 3% h) Connecting cable (any FRC, OFC Patch Cord) and plugs - Nos. -3% i) Firewall - Nos - 1 j) Each Type of Electronics card for PPC system - No -1 k) All other electronic modules - Nos. - 3% l) All type of converter (RS-232 to RS-485, RS-232 to Ethernet, RS-485 to Ethernet, RS-485 to Optical) each type - Nos - 3% m) Communication SPD for RS-485, Each Type - Nos - 3% n) Ethernet CAT6 (outdoor duty) - Rm - 100 o) RS 485 Cable Armored - Rm - 100 p) Lugs & glands -Various Sizes - Lum Sum - 1 Lot	Bidder propose below spares for 600MW. A) Noted. B) Each type of IO card 1Nos will be provide. C) 1Nos ICR type ETH switch will be provide. D) RS-485 to TCP/IP converter 6Nos will be provide. e) Data Bus Cable same as Ethernet CAT6 cable, which we have considered in below. F) Main PLC controller 1Nos + 1Nos IO communication module will be provide. g) 1Nos. LIU device will be provide. h) FO Patch cords 6Nos will be provide. i) Bidder take deviation for this point.(Firewall will not provide). j) Cards are Not applicable. k) All other electronic modules - electronic modules and IO cards are same, which we have already considered. l) Already considered.(point d) m) Noted. n) Noted. o) Noted. p) Noted.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
34	VOLUME - II PART - 3 (Schedule - IV to VI)	CCTV	C - 2	23 of 34	a) Camera with power supply, Ethernet Switch - Nos. -1 of each kind as complete unit b) Power supply adaptor for CCTV and Media Convertor - Nos. - 5 For each Type of Power Supply requirement c) Cable for Power Supply of CCTV - Mtr -100	Bidder propose below spares for 600MW. A) Bidder propose each type of camera 1Nos. And 1 Nos ETH switch. B) Bidder propose media converter 2Nos. C) Noted.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
35	VOLUME - II PART - 3 (Schedule - IV to VI)	WEATHER MONITORING STATION	C - 3	23 of 34	a) Pyranometer - Nos. - 01 b) SMPS of data logger -Nos - 1 c) Each Type of Electronics Card -Nos -1	Bidder propose below spares for 600MW. a) Noted. B) Noted. C) Bidder propose 16GB 1 Nos industrial grad memory card for WMS data logger.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
36	VOLUME - II PART - 3 (Schedule - IV to VI)	Fire Alarm Systems	G	24 of 34	Electronic Modules, Each Type - Nos - 2 Fire Detector, MCP, Each Type - Nos -20 Hooter - Nos -3	Bidder propose below spares for 600MW. A) Not applicable for conventional type fire alarm system. B) Fire Detector & MCP- 6Nos. C)Hooter- 2 Nos.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
37	General					We have Not considered any Power Trafo loss in PV Plant reactive power calculation or please let us know the losses to be considered till point of interconnection of the equipments in GIPCL scope.	Bidder shall refer "Amendment-1" and "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS" No Change in Tender Conditions except Amendment-1. Bidder shall comply with Tender Conditions.
38	ANNEXURE- 7 TENTATIVE OVERALL SINGLE LINE DIAGRAM OF 400-33 KV GIS PSS-1 SUBSTATION					Capacitor bank used in PSS Please confirm that capacitor bank used in PSS shall be for meeting reactive power of PSS only.	Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1, (sheet 6 of 13)", "Clause no 3.6 of VOLUME - II PART-2 (Schedule-III A) (Sheet 32 of 82)", and "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS". No change in Tender Conditions. Bidder shall comply with tender conditions.
39	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW) WITH PERIPHERAL FENCING					Coordinates for Plot 2,4,6 Provide the coordinates for Plot 2,4,6 as they are not correct	Bidder shall refer Amendment -1
40	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				Plot 1,3,5 and Plot no.2,4,6 Please confirm that Plot 1,3,5 are to be considered as single plot for evacuating 300MW and same thing for Plot no.2,4,6	Bidders Understanding is correct. No change in Tender Conditions. Bidder shall comply with tender conditions.
41	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				SCADA and separate MCR for Left plot(Plot no. 1,3,5) and Right Plot (Plot no. 2,4,6) Please confirm that there shall be separate SCADA and separate MCR for Left plot(Plot no. 1,3,5) and Right Plot (Plot no. 2,4,6)	Bidder shall refer Tender clause no. D10 of Volume II, Part - 2 (D), Sheet 20 of 47. No change in Tender Conditions. Bidder shall comply with tender conditions.
42	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				Plot layout Please provide autocad file of plot layout	AUTOCAD file for Plot Layout uploaded. No change in Tender Conditions. Bidder shall comply with tender conditions.
43	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				Site temperature Please confirm the temperature shall be 50Degree C for design as in official website we have station of Bhuj only	Bidder shall refer Tender clause no. 4.0 of Volume-II , Part- 2(A) sheet 26 of 82. No change in Tender Conditions. Bidder shall comply with tender conditions.
44	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				PV module cable length we assume that length of cable with PV module shall be 1400mm	Bidder shall refer Amendment -1
45	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				33kV Metering system Please confirm that 33kV metering shall be installed outdoor on pole with metering CT and VT	Bidder Shall Refer Clause Number 1.3.2, 1.3.3, 1.3.4 of Volume-II, Part-1 (Schedule-1) (Sheet 4 of 13) No change in Tender Conditions. Bidder shall comply with tender conditions.
46	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				Wind mast is observed in Plot no.1,3,5. Please confirm the location along with height of this wind mast	GIPCL has not installed any wind mast in Plot No. 1, 3 , 5. Bidder is requested to visit site. No change in Tender Conditions. Bidder shall comply with tender conditions.
47	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				Babul tree scope on Plot Please confirm the Babul tree scope of removal	Bidder shall refer Clause no. 1.7 (b) of Volume-II, Part -2 (D) sheet 5 of 47. No change in Tender Conditions. Bidder shall comply with tender conditions.

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48	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WITH PERIPHERAL FENCING	General				Timing of shadow Please confirm the timing of shadow which is to be considered	Bidder shall refer Amendment -1
49	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WITH PERIPHERAL FENCING	General				Watch Tower Watch tower not considered	Watch Tower is not in the scope of Work. No change in Tender Conditions. Bidder shall comply with tender conditions.
50	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA AND TECHNICAL SPECIFICATION	5.11	64 of 82	Battery capacity of Robotic system shall be sufficient for at least 3 cleaning cycles without need of any recharge.	We have considered 1 cleaning cycles without any need of recharge as 3 cleaning cycles will be very high without any need of recharge	Bidder shall refer Amendment -1
51	VOLUME - II PART - 2 (Schedule - III A)	PROPOSED CLEANING SYSTEM	2.0.	61 of 82	The Bidder Shall Install both Permanent Fresh Water based Wet cleaning system and Robotic Cleaning systems.	Please confirm if we have to consider any wet cleaning system as we are already considering Robotic cleaning system	Bidder shall refer Tender clause no. 2.0 of Volume-II Part - 2 (A) sheet 61 of 82. No change in Tender Conditions. Bidder shall comply with tender conditions.
52	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.24	7 of 179	The transformer shall be capable of being loaded in accordance with IEC 60354 / IEC 60076-7 upto a load of 150%. There shall be no limitation imposed by bushings or any other associated equipment.	Please note that transformer shall have overloading capacity as per IS 6600	No change in Tender Conditions. Bidder shall comply with tender conditions.
53	VOLUME - II PART - 2 (Schedule - III B)	Technical Parameters	5.0 - 15	19 of 179	Loading Capability Continuous operation at rated MVA on any tap with voltage variation of +/-10%, also transformer shall be capable of being loaded in accordance with IS:6600/IEC60076-7. As min. requirement, Transformers shall be designed with 110% continuous thermal overloading capability.	Please note that transformer shall have overloading capacity as per IS 6600	No change in Tender Conditions. Bidder shall comply with tender conditions.
54	VOLUME - II PART - 2 (Schedule - III B)	Technical Parameters	4.0 - 13	37 of 179	Short Circuit Withstand capability kA 31.5 for 1 sec	Please confirm that we can consider 25kA/ 1sec	No change in Tender Conditions. Bidder shall comply with tender conditions.
55	VOLUME - II PART - 2 (Schedule - III B)	Technical Parameters	4.0 - 2.11	65 of 179	Battery Backup time Hrs As per latest CEA technical standard	In CEA, same backup time not observed. Hence considering 30 minutes at ICR level and 2 hours in MCR	No change in Tender Conditions. Bidder shall comply with tender conditions.
56	VOLUME - II PART - 2 (Schedule - III B)	Technical Parameters	5.0 - 1.9	101 of 179	Outer Sheath - FRLS/FRLSH as per CEA regulation PVC Compound (ST-2)	Please confirm if outer sheath shall be FRLS or FRLSH	No change in Tender Conditions. Bidder shall comply with tender conditions
57	VOLUME - II PART - 2 (Schedule - III C)	Cable Installation Notes – General	3.5	3 of 100	Cable laying methodology within plant boundary to be decided during detailed engineering based on the soil condition and other associated factors. However, from solar plant periphery to 400/33kv PSS-1 (i.e., park area) cables are to be laid underground in allocated cable corridor. Bidder shall design cable and routing accordingly. The cables specifications / design shall be suitably selected as per laying final philosophy/ methodology decided during detail engineering by the Bidder considering the site environmental conditions etc. Bidder shall submit the final specification with methodology for Owner's Approval	Please confirm if above ground is acceptable	No change in Tender Conditions. Bidder shall comply with tender conditions.
58	VOLUME - II PART - 2 (Schedule - III C)	Illumination Levels	4.0	54 of 100	Average LUX level to be maintained in various areas shall be as under: ……	We understand that no lighting shall be there in Internal roads. Also it is mentioned that 10 lux required at Periphery , please note that no periphery lighting has been considered in Plant.	Bidder Shall Refer Clause Number 5.0 (e) of Volume-II, Part-1 (Schedule-1) (Sheet 6 of 13). No change in Tender Conditions. Bidder shall comply with tender conditions.
59	VOLUME - II PART - 2 (Schedule - III C)	Emergency Light Points	5.1	54 of 100	Emergency Light points with LED lamps of 15-20 W (at 240 V) shall be provided for following areas:……	Emergency lights will be at strategic location. Also, no lux level calculations will be provided for Emergency lighting calculations.	No change in Tender Conditions. Bidder shall comply with tender conditions.
60	VOLUME - II PART - 2 (Schedule - III B)	Cables Laying and Fitting Accessories	3.22 - d	99 of 179	Each 33Kv Transmission Line (from solar generation sub pooling station to 400/33Kv PSS-1) shall be of 3 runs 3Cx500 sqmm aluminium XLPE armoured cables. For every two numbers of 33kv transmission lines one spare 3Cx500 sqmm cable shall be provided. Transmission line from PSS-1 to periphery of solar plant shall be laid in the allocated cable corridor only. Cable pits shall be provided for additional looping of cables (Details shall be finalized during detail engineering).	We understand from 33KV Spare philosophy layout that one spare cable has to be laid between 300MW PV Pooling substation to PSS-1. Please confirm	Bidder Shall Refer "ANNEXURE- 6 33KV SPARE CABLE LAYING PHILOSOPHY". No change in Tender Conditions. Bidder shall comply with tender conditions.
61	VOLUME - II PART - 2 (Schedule - III A)	GENERAL	1.0	7 of 82	Module Mounting Structures (MMS) made of Metallic structures having adequate strength and appropriate design, to withstand various loads on the MMS including design wind pressures. Modules shall be mounted on noncorrosive support structures with Self Powered and Automatic motor powered Realtime East-West tracking.	Bidder propose that, System shall be Self powered or tapping power from the PV module strings without compromising on the generation number. Since considerable number of Tracker vendors in the market are offering only non self powered system (i.e., system with tapping power from PV module strings). Kindly allow both the options.	No change in Tender Conditions. Bidder shall comply with tender conditions.
62	VOLUME - II PART - 2 (Schedule - III A)	DESIGN PARAMETERS	4.5	8 of 82	DC Self-powered drive system with battery backup of 3 days autonomy.	This shall be as per Tracker vendor's/OEM standard design, Kindly allow it as per OEM.	No change in Tender Conditions. Bidder shall comply with tender conditions.
63	VOLUME - II PART - 2 (Schedule - III A)	MINIMUM SYSTEM REQUIREMENTS	5.12	9 of 82	For trackers that rely on active stowing to resist maximum design wind speeds, a 'fail to stow' load combination shall be considered.	Kindly confirm that (Clarification needed), on 'Fail to stow', with this, Whether design check shall be performed for maximum tilt angle with maximum critical wind speed? The tilt and stow positions with max. wind speed is different in with different tracker OEM. This can we discussed during detail engineering. Kindly allow.	No change in Tender Conditions. Bidder shall comply with tender conditions.
64	VOLUME - II PART - 2 (Schedule - III A)	MODULE MOUNTING ARRANGEMENT	6.7	10 of 82	The limiting permissible vertical deflection for structural steel members shall be as given below. i. Maximum vertical deflection of purlin = Span/180 ii. Maximum vertical deflection of rafter (cantilever & simple span) = Span/180 iii. Maximum lateral deflection of column post = Height/240. iv. All deflection limits can also be as per the serviceability limit defined by the module manufacturer & tracker manufacturer OR the proposed deflection limits duly approved by the module manufacturer and additional moment along with dead load shall be considered during detailed engineering.	1. This Design shall be as per the proposal from the Tracker vendor side, without compromising on the design and system operation. Kindly allow	No change in Tender Conditions. Bidder shall comply with tender conditions.
65	VOLUME - II PART - 2 (Schedule - III A)	MODULE MOUNTING ARRANGEMENT	6.12	11 of 82	Materials Specification & Coating for Structural Steel Works (All the structures used in this project):……	Bidder proposes that, material shall be as per the proposal from the Tracker vendor side, without compromising on the design and system operation and material warranty part.	No change in Tender Conditions. Bidder shall comply with tender conditions.
66	VOLUME - II PART - 2 (Schedule - III A)	MODULE MOUNTING ARRANGEMENT	6.12 - A - Note - 4	12 of 82	All structural calculations of cold formed steel section for checking the adequacy for strength and deflection criteria is to be done taking into consideration the maximum permissible negative tolerance over specified BMT i.e, the lower limit of BMT is to be considered.	Bidder Proposes that, Material tolerance shall be as the general market standards. The tracker OEMs are providing different materials in the super structures considering the site conditions and their design. Also the AMC over tracker is of 10 years. Hence, kindly allow the same.	No change in Tender Conditions. Bidder shall comply with tender conditions.
67	VOLUME - II PART - 2 (Schedule - III A)	MODULE MOUNTING ARRANGEMENT	6.25 - i	15 of 82	SS304 Fasteners (nuts, bolts, washers, and U-bolts) shall be of corrosion-resistant austenitic steel. SS 304 Fasteners shall have a good anti-seize finish with proper wax coating for better durability and firm resistance to all types of failure including seasonal removal and re-fixing of bolts.	This clause is applicable for seasonal tilt structure. We understand that this clause is not applicable. Kindly confirm.	Bidder shall refer Amendment -1
68	VOLUME - II PART - 2 (Schedule - III A)	MODULE MOUNTING ARRANGEMENT	6.28	15 of 82	The material of construction, structural design and workmanship shall be appropriate with a factor of safety of not less than 1.5 in all types of checks in design calculations.	Bidder Proposes, FOS (factor of safety) shall be as per the codal provisions.	No change in Tender Conditions. Bidder shall comply with tender conditions.
69	VOLUME - II PART - 2 (Schedule - III A)	WARRANTY	7.3	18 of 82	25 years for corrosion protection.	Bidder Proposes, It shall be as per Tracker Vendor/Material OEM's standard proposal, kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.

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70	VOLUME - II PART - 2 (Schedule - III A)	DOCUMENTS / DRAWINGS REQUIRED	10.0.	19 of 82	The following drawings / details shall be furnished during detailed engineering. However, the specific design calculations shall be submitted during drawings approval……..	Majority of the Documents shall be shared, Except some documents (example: Wind tunnel testing report and some other documents, by considering Vendor's IP rights conditions), Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
71	VOLUME - II PART - 2 (Schedule - III A)	PROPOSED CLEANING SYSTEM	2.0.	61 of 82	The Bidder Shall Install both Permanent Fresh Water based Wet cleaning system and Robotic Cleaning systems.	Bidder Proposes, For plant optimisation purpose, Any one of Dry cleaning (robotic system) and Wet cleaning system shall be considered, kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
72	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.4	61 of 82	Total water storage capacity shall be 6 Lakh liters for 300 MW Block (Total 12 Lakh liters for 600 MW). The storage tank shall be place above ground on RCC Foundation and Tank material shall be FRP. The detail specification of FRP material shall be decided during detail engineering.		No change in Tender Conditions. Bidder shall comply with tender conditions.
73	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA AND TECHNICAL SPECIFICATION	5.0. - K,l	63 of 82	k) Min. Cleaning wattage/day : 1 MW/Day/robot l) No. of persons required to Lift the robot : 2 Persons only in case of semi-automatic	Bidder proposes, Parameters shall be as per the Standard proposal from the Robotic cleaning system Vendor, Kindly confirm	No change in Tender Conditions. Bidder shall comply with tender conditions.
74	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA AND TECHNICAL SPECIFICATION	5.11	64 of 82	Battery capacity of Robotic system shall be sufficient for at least 3 cleaning cycles without need of any recharge.	Bidder proposes, Parameters shall be as per the Standard proposal from the Robotic cleaning system Vendor, Kindly confirm	Bidder shall refer Amendment -1
75	ANNEXURE - 3 Soil Investigation_Part-1	DISCUSSION & RECOMMENDATIONS	7.0.	53 of 116	The chances of liquefaction may be there, so it should be taken care of during a detailed investigation and during the design of foundations for the individual plot. Wherever the strata are liquefiable, care should be taken during pile designing.	By referring Geotech report that shared majority of the land parcel is prone to liquefaction, with it kindly confirm that whether liquefaction condition and with it ground improvement methods/special foundations to be considered for both MMS/Tracker foundations (PV module area) and ICR area & MCR building OR to be considered for only ICR area & MCR building (excluding MMS/Tracker foundations (PV module area) by considering plant optimisation since if we consider PV module area for ground improvement/for special type of foundations, then huge cost is involved with it).	It will be decided during Detailed Engineering based on Soil investigation Report submitted by the Bidders. No change in Tender Conditions. Bidder shall comply with tender conditions.
76	ANNEXURE - 3 Soil Investigation_Part-1	DISCUSSION & RECOMMENDATIONS	7.0.	53 of 116	It is recommended to provide suitable ground improvement techniques wherever the strata are liquefiable. The report presented is representative of the bore locations and does not represent the entire area of construction as a whole.	kindly confirm that whether liquefaction condition and with it ground improvement methods to be considered for MMS/Tracker foundations (PV module area) by considering cost involved with it.	It will be decided during Detailed Engineering based on Soil investigation Report submitted by the Bidders. No change in Tender Conditions. Bidder shall comply with tender conditions.
77	VOLUME - II PART - 2 (Schedule - III D)	D1 – SCOPE	1.7 - g	6 of 47	33kv Sub pooling station (RCC) platform with superstructure as Pre-Engineered Building (PEB) type building (RCC CUM PEB Building). It shall have Technicians Rooms (Two Numbers each in 300 MW) shall be provided at 33kv sub pooling station with attached toilet and other facilities.	Kindly confirm on PEB structure's area shall be considered. Further kindly clarify if the PEB structure with only have a Technician's room or any other indoor equipment.	PEB Structure is based on equipment sizing selected by Bidders, hence it will be decided during detailed Engineering. Please Refer Tender clause No. D9 of Volume-II, Part- 2(D) sheet 19 of 47. No change in Tender Conditions. Bidder shall comply with tender conditions.
78	VOLUME - II PART - 2 (Schedule - III D)	D3 - HYDROLOGY AND AREA DRAINAGE STUDY	D3	15 of 47	The hydrology study report furnished by OWNER shall be considered for the information only. BIDDER shall review the hydrology study report w.r.t scope of work as given below and if anything required to complete the following scope of work bidder shall arrange the same by Bidder at its own cost.....	Have not received the Hydrology report as part of prebid documents, kindly share the same.	Indicative Hydrology Report uploaded on portal. No change in Tender Conditions. Bidder shall comply with tender conditions.
79	VOLUME - II PART - 2 (Schedule - III D)	D7 - EXCAVATION, BACK-FILLING AND DISPOSAL OF EARTH	7.3	18 of 47	Back filling shall be carried out either with good quality excavated earth as approved by OWNER/ENGINEER or good quality earth brought from borrow areas. Backfilling shall be carried out in layers with minimum 95 % proctor density and required test. Poor quality excavated earth and surplus excavated earth shall be disposed outside the plant premises at unobjectionable areas irrespective of any lead. BIDDER shall obtain all local statutory approvals for bringing earth from outside and disposal of earth outside.	Bidder Suggests: 95% Proctor density compaction shall be achieved only for building and instrument foundations on backfilled soil. Kindly Confirm	No change in Tender Conditions. Bidder shall comply with tender conditions.
80	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	18 of 47	The area around the transformer and equipment's shall be covered with gravel and PVC coated galvanised chain link fence of height min 1.8 m with fence posts and gates shall be provided. All fence posts shall be 65X65X6 MS angles spaced at 2.5m c/c distance and all other specification mentioned for Fencing and gate shall be followed. M.S. angle posts shall conform to IS: 2062.All structure steel shall be hot dip galvanized with galvanization coating thickness of 110 micron. In addition, a small gate, 1.2 m wide shall be provided for man entry. Transformer track rails shall conform to IS: 3443. The requirement of fire barrier wall between transformers shall be as per Electricity Rules and IS: 1646 recommendations. The transformer shall be placed minimum 750 mm above NGL and higher as applicable during detail engineering.	Bidder Suggests,the galvanization coating thickness shall be as per Corrosion study report.	No change in Tender Conditions. Bidder shall comply with tender conditions.
81	VOLUME - II PART - 2 (Schedule - III D)	PEB Specifications	11.8.21	27 of 47	The structural steel shall be hot-dipped galvanized, conform to IS: 4759 or relevant Indian standard. Minimum thickness of galvanization shall be 90 microns for all the structures 300 mm above ground/NGL.	Bidder Suggests, Thickness of galvanization shall be as per Corrosion study report. Kindly share the Corrosion study report if available	No change in Tender Conditions. Bidder shall comply with tender conditions.
82	VOLUME - II PART - 2 (Schedule - III D)	PEB Specifications	11.8.24	27 of 47	The basic wind speed of the site and values of K1, K2, K3 and K4 and other pressure coefficients shall be as per IS: 875-(Part 3) latest version. It shall be as per Pd defined in specification.	Bidder Proposes, As per IS 875, the basic wind speed is 47m/s. The wind coefficient as mentioned below shall be taken in design for Design life considered for 25 yrs. K1=0.9 terrain co-efficient, K2 = 1.0 (Category 2) Topography, K3 = 1.0 Importance factor for cyclonic region, K4 = 1.0 Design wind coefficient as mentioned below, Ka-1.0 Kd- 0.9 for rectangular structure Kc - 0.9. Kindly Confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
83	VOLUME - II PART - 2 (Schedule - III D)	D13 - REINFORCED CONCRETE AND ALLIED WORKS	13.10.	28 of 47	All RCC structural elements shall have minimum grade M35 with 20/40mm downgraded coarse aggregates	Bidder suggests, grade of concrete for RCC sub-structures shall be M35 & for RCC buildings/superstructures shall be M25 grade concrete. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
84	VOLUME - II PART - 2 (Schedule - III D)	D19 - STRUCTURAL STEEL	19.2	34 of 47	All non-hot dip galvanized structural steel (excluding Module Mounting & SCB structure)/Outdoor metal containers/ Enclosure/ Rolling shutter items shall be provided with paint designed for a minimum maintenance-free life of fifteen (15) years (high durability) as per ISO 12944 and IS 800 or equivalent for its corrosion category. For finishing coat suitable colour pigment shall be added. All paints including primer shall be of the reputed brand/manufacturer and as approved by the Owner. The method of application shall be as per the recommendations of the manufacturer. Corrosive category and requirement shall be as specified in Project information Section of this Tender.	Bidder Suggests, for paints the maintenance-free life of four (4) years shall be provided. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
85	VOLUME - II PART - 2 (Schedule - III D)	D23 - ROADS	23.1 23.3	35 of 47	23.1. All roads shall be WMM to carry safe and easy transportation of equipment and material at the project site shall be made. The road shall provide easy and fast approach to each facility of the plant. These roads are to be designed optimally to carry the crane load with all necessary chambers, gradients, super-elevation, and radius of curvatures for the easy movement of cranes, trucks and public transport 23.3. Road works from main road of the RE Park to inverter Station, PV Plant & SCADA Building, and any other approach as required shall be in scope of Bidder. These roads shall be WMM road as per codes. Internal roads shall connect to all inverter stations, ensuring easy and approachable to various facilities, gates, & module cleaning stations, etc. The methodology of road design and construction with material specifications shall be in line with latest IRC-37 / MORTH and shall be submitted for approval before start of works.	Periphery roads are not mentioned, kindly clarify the details for periphery roads if required. Also, kindly confirm if the roads in 33kV pooling substation shall be considered the same type & same carriage width as of Approach and internal roads.	Bidder shall refer Tender clause no. 5.0 of Volume-II , Part-1 , Sheet 6 of 13. No change in Tender Conditions. Bidder shall comply with tender conditions.

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86	VOLUME - II PART - 2 (Schedule - III D)	D23 - ROADS	23.4.	36 of 47	All Roads are to be constructed with sufficient carriage width of minimum 3.5 m width for access Internal and approach road. Shoulders of 0.5m wide on both side of road. The final finished roads shall have a camber of 1in 50.	Kindly clarify the details for periphery roads if required.	Bidder shall refer Tender clause no. 5.0 of Volume-II , Part-1 , Sheet 6 of 13. No change in Tender Conditions. Bidder shall comply with tender conditions.
87	VOLUME - II PART - 2 (Schedule - III D)	D23 - ROADS	23.6.	36 of 47	Locally available good, borrowed soil, minimum 125 mm thick shall be provided for shoulder. The minimum thickness of subgrade (Borrowed earth) shall be 150 mm compacted thickness on a well compacted ground (minimum 95 % proctor density), 200 mm compacted thickness of GSB layer and followed by minimum 150 mm compacted thickness of WMM shall be provided. The finishing coat over WMM shall be 20 mm with query dust. The WMM shall be done after major construction works completed as directed by Owner. However, bidder to design the road as per CBR and provide minimum layer thickness as mentioned above in case lower thickness required.	Bidder proposes, Road thickness shall be arrived by following IRC SP-20 and CBR % as per Site's Geotechnical report.	No change in Tender Conditions. Bidder shall comply with tender conditions.
88	VOLUME - II PART - 2 (Schedule - III D)	D23 - ROADS	23.7.	36 of 47	Sub-grade under road and its shoulders shall be compacted to achieve 95% or more of standard proctor's MDD. CBR value of the sub grade level shall be minimum 4%. If actual CBR is less than 4% in a particular stretch, then the same material shall be modified with increase in GSB thickness.	Bidder proposes, Road design shall be arrived by following IRC SP-20 and CBR % as per Site's Geotechnical report.	No change in Tender Conditions. Bidder shall comply with tender conditions.
89	VOLUME - II PART - 2 (Schedule - III D)	D24 - PERIPHERAL CHAIN LINK FENCING (AS MARK IN THE DRAWING) & MAIN GATE	24.3	38 of 47	All fencing materials shall be galvanized. the galvanization thickness 90 micron. Concrete foundations (as per soil investigation report) for the angle iron posts and stays shall be provided. At drain entry/exit culverts shall be provided. Fencing shall be provided on culvert.	Bidder Suggests, thickness of galvanization shall be as per Corrosion study report. Further kindly confirm that whether 'PVC COATED CHAIN LINK FENCE' to be provided, since one of the shared document 'ANNEXURE - 5 TYPICAL PVC COATED CHAIN LINK PERIPHERAL FENCE DETAILS' there is a mention of PVC coated chain link fence.	As per Tender the PVC Coated GI Fencing shall be provided. No change in Tender Conditions. Bidder shall comply with tender conditions.
90	VOLUME - II PART - 2 (Schedule - III D)	D24 - PERIPHERAL CHAIN LINK FENCING (AS MARK IN THE DRAWING) & MAIN GATE	24.4	38 of 47	At Inverter yard PVC coated chain link fence of height minimum 1.8 m shall be provided. All fence post shall be placed at 2.5 m c/c. Details of fencing, post and other details shall be same as boundary fencing. The transformer yard fencing work shall conform to applicable regulation and codes.	It is mentioned inverter yard, Kindly clarify if fencing is required for Inverter stations as well or only for transformers.	Bidder shall refer Amendment -1
91	VOLUME - II PART - 2 (Schedule - III D)	D25 – STORM WATER DRAINAGE	25.1	38 of 47	The storm water drainage (Trapezoidal section with RR PITCHING) shall be planned as per outcome of area drainage study. It is recommended that the drainage for the plant shall be designed keeping the natural flow of water to the nearest exit point.	Kindly clarify the minimum thickness of stone/RR pitching required for main drains & garland drains.	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
92	VOLUME - II PART - 2 (Schedule - III D)	D25 – STORM WATER DRAINAGE	25.6 25.10	39 of 47	25.6. At outfall location, maximum water level in the pipe culvert should be higher than water level in connecting drain (outside plant boundary). 25.10. BIDDER shall also ensure that drainage from the plot does not encroach/flood into the adjacent property and adjacent solar plots. All above parameters may be suitably adjusted based on inputs being made available by Owner for reference purpose. Also, any specific reference mentioned for Drain design in any IS Code or IRC Code would also be acceptable subject to approval of overall design during detailed Engineering stage. All project drains would connect to the main drains of Park as per detailed layout to be prepared during detailed Engg. stage.	Bidder proposes: Bidder's scope shall be up to the drain outlet point/plant boundary to channelize & collect the plant's drain water through main drains. To avoid water stagnation outfall of water outside the plant boundary shall be in Client's scope.	No change in Tender Conditions. Bidder shall comply with tender conditions.
93	VOLUME - II PART - 2 (Schedule - III D)	D26 - SECURITY CABIN	26.1.	39 of 47	The Minimum size of watchmen's (duty Cabin) cabin is 1.5 m x 1.5 m size and height of 2.4m with appropriate roof at the top. Location of the duty Cabin will be as directed by the OWNER or his representative. The Prefabricated/RCC Security Cabin of size 3 m x 3 m at the main entrance gate shall be designed and constructed by the BIDDER keeping in view the safety and security of the power plant. Security cabin shall have attached toilet facility and proper sewage disposal shall be provided.For each 300 MW block, one Security cabin and 4 Duty cabin shall be provided.	Kindly confirm the type of Duty cabins, also provide the locations of 4 duty cabins inside the plot.	Duty cabin shall be pre-fabricated type serving the project life cycle & based on Owner approval. No change in Tender Conditions. Bidder shall comply with tender conditions.
94	VOLUME - II PART - 2 (Schedule - III D)	D27 - PIPING FOR MODULE CLEANING AND TRENCHES	27.1.	40 of 47	Trenches shall be constructed in reinforced cement concrete of minimum M-35 grade with minimum wall thickness of 125 mm. The top of trenches shall be kept at least 150 mm above the grade level so that rain water does not enter the trench. Trench walls shall not foul with the foundations.	RCC trench for construction in such a large project is tedious and costly. Kindly allow as per IS1255 or above ground cable laying. Kindly accept.	No change in Tender Conditions. Bidder shall comply with tender conditions.
95	ANNEXURE - 3 Soil Investigation_Part-2	ANNEXURE 7: LIQUEFACTION CALCULATION SHEET	Sr .No. 3	61 of 101	Earthquake Magnitude, Mw 7.5	As per the seismotectonic map of India, plant's location is falling under Earthquake magnitude (Mw) of 4.5-6.0, if we update this value in the liquefaction calculation, then the impact of liquefaction shall reduce. Kindly confirm whether Earthquake magnitude (Mw) of 4.5-6.0 shall be considered for liquefaction calculation?, further request to share the updated liquefaction prone depths with respect to Earthquake magnitude (Mw) of 4.5-6.0.	No change in Tender Conditions. Bidder shall comply with tender conditions.
96	General					In addition to aforementioned points, we require the following reports: 1. Hydrology Report 2. Topography & Contour Survey in CAD Format 3. Corrosion report with corrosion category defined and galvanization thickness of steel members for design life of the PV plant.	1. Preliminary/ Indicative Hydrology Report uploaded 2. Preliminary / Indicative Topography & Contour Survey in CAD Format Uploaded 3. Bidder shall follow Tender Conditions for Corrosion Category and Galvanization thickness of steel members. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
97	VOLUME - II PART - 2 (Schedule - III C)	PV array	3.4.1 - a	88 of 100	Establish power (Wp): Prior to conducting any tests, the Bidder must establish the total installed power of the plant. power measurement shall be carried out at string level for the entire plant using an industry accepted PV analyser. power obtained during test conditions shall be extrapolated to STC conditions to arrive at the plant installed capacity. Accepted deviation in extrapolated power and module nameplate power should always be in the range of ±5%. For negative deviations each module in the string shall be checked and any damaged module shall be replaced.	The bidder requests to consider that DC installed capacity is calculated and established as the sum of the nameplate rating of the installed modules, which shall be checked to arrive at peak power, which is standard industry practice. As per IEC 62446, string IV testing shall be done for 5% of the installed strings as reference.	Bidder shall refer Amendment -1
98	VOLUME - II PART - 2 (Schedule - III C)	Open circuit voltage (Voc)	3.4.1 - b	88 of 100	This test verifies that strings are properly connected (module and string polarity) and that all modules are producing the expected voltage according to the module data sheet. To measure Voc, the following procedure must be used:…….	The bidder requests to consider that all modules shall produce voltage within +/- 5% of the expected voltage at STC as per IEC 62446.	No change in Tender Conditions. Bidder shall comply with tender conditions.
99	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.46	35 of 82	Availability of individual inverter should be more than 98% and overall plant inverter availability shall not be less than 99.5%. Both the availability and up-time requirement shall be guaranteed by the manufacturer for 25 years.	The bidder requests to consider overall plant inverter availability shall not be less than 99% for annual periods.	No change in Tender Conditions. Bidder shall comply with tender conditions.
100	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART A: OPERATIONAL ACCEPTANCE TEST (OAT) PROCEDURE - 1	27 of 34	Performance Ratio as determined through the PR test procedure specified here should not be less than 75% for Operational Acceptance Test (OAT).	The bidder requests to consider the monthly PR for 30 days guaranteed by the bidder for the month in which PR test will be conducted. In case the test period falls in two months, weighted average of the monthly PR values shall be considered.	No change in Tender Conditions. Bidder shall comply with tender conditions.
101	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART A: OPERATIONAL ACCEPTANCE TEST (OAT) PROCEDURE - 3	27 of 34	The test will consist of guaranteeing the correct operation of the plant over 30 days, by the way of the efficiency rate (performance ratio) based on the reading of the energy produced and delivered to the grid and the incident solar radiation (Average of all the pyranometers shall be considered for calculation of PR). During this period of 30 days, any 5 (five) instances preferably during 11:00 to 14:00 hrs. of 15 (fifteen) minutes shall be taken to calculate the instantaneous Performance Ratio of 15 minutes block as per the formula given below in Point No. 5. If the PR of these fives instances is above 75%, then Operational Acceptance Test (OAT) shall be considered successful.	The bidder requests to consider PR measurement for the whole day when POA insolation is above average 50W/m2 and cumulative PR of 30 days shall be compared with the guaranteed PR for 30 days. Please consider 99% plant availability for the PR test for 30-day Operational Acceptance test period.	Bidder shall refer Amendment -1

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
102	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART A: OPERATIONAL ACCEPTANCE TEST (OAT) PROCEDURE - 5.1	27 of 34	Performance Ratio (PR) = YA / YR ……	Please consider temperature correction in PR formula inline with IEC 61724 Part 1: 2021.	No change in Tender Conditions. Bidder shall comply with tender conditions.
103	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART A: OPERATIONAL ACCEPTANCE TEST (OAT) PROCEDURE - 2	27 of 34	The Performance Ratio test to prove the guaranteed performance parameters of the power plant shall be conducted at site by the Contractor in presence of the Owner. The Contractor's Engineer shall make the plant ready to conduct such tests. The Operational Acceptance Test shall be commenced, within a period of one (1) month after successful Commissioning and, there will be continuous monitoring of the performance for 30 days. Any extension of time beyond the above one (1) month shall be mutually agreed upon. These tests shall be binding on both the parties to the Contract to determine compliance of the equipment with the guaranteed performance parameters. This monitoring will be performed on the site under the supervision of the Owner/ Owner's engineer.	The calculation for performance ratio test periods will not consider all the following cases: Periods when the average radiation in the plane of the array of the Plant is below 50W/m2. Periods of inverter clipping during periods of higher insolation beyond that considered in design. Periods in which plant is not operating at its nominal voltage, nominal frequency etc. due to grid which have impact upon plant performance than loss of energy shall be adjusted accordingly Periods of power curtailment by utility resulting in decrease in guaranteed generation and load shedding shall be excluded, or loss of energy shall be adjusted. Principal directed reduction in output or shutdown. Event of Force Majeure The inability of the principal to export energy to the Transmission System due to the revocation, annulment, or termination of any relevant Principal's Permit, where such inability arises through no fault of the Contractor. Plant and component malfunctions caused by improper operation of the Solar Farm by the Principal, or third parties not controlled by or under the direction of the Contractor or the O&M Operator. Operation at a reduced Facility maximum AC generation capacity due to off-taker, Owner or grid operator instruction or Govt Authority Transmission system frequency or voltage is outside the limits defined by the contract or grid code requirements Grid Outage Hours: hours during the Period when a failure in the distribution grid or in the Connection Infrastructure prevented energy from being evacuated from the Facility including Periods of ramping the plant from grid down to full rated power to a maximum of 2 minutes. Grid Disturbance Hours: hours during the Period when a fluctuation in the utility grid Parameters from rated (e.g., a frequency or voltage variation) disconnected the inverters or Facility from the utility grid and prevented energy from being evacuated from the Facility. Any Losses on account of a Power Factor other than Unity Power Factor shall be adjusted for the purpose of calculation of estimated PR %. Module underperformance due to any manufacturing defects and/or damage during transit, other than any defect arising out of improper storage and handling or installation of the solar modules by the Contractor.	No change in Tender Conditions. Bidder shall comply with tender conditions.
104	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE - 3	29 of 34	"Actual Delivered Energy" from the plant supplied by the Contractor shall be noted (at ABT main meter installed in 33 kV switchgears at 400/33 kV Pooling Substation-1 at) for every month and summed up for entire year. For this purpose, the net delivered energy at the metering point shall be considered.	the bidder requests to consider temperature corrected Performance Ratio as parameter for plant performance assessment for annual O&M test periods like considered for 30-day OAT period, inline with IEC 61724-Part 1: 2021 standard which is industry practice worldwide.	No change in Tender Conditions. Bidder shall comply with tender conditions.
105	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE - 4(b)	29 of 34	Effect due to variation of meteorological parameters e.g., ambient temperature, module temperature, wind speed, humidity etc. shall not be considered.	the bidder requests to consider the effects of parameters viz, temperature, module degradation, albedo in addition to insolation correction.	No change in Tender Conditions. Bidder shall comply with tender conditions.
106	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI PROCEDURE FOR PERFORMANCE GUARANTEE (PG) TESTING	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE - 4(c)	29 of 34	Generation loss due to grid outage (or power evacuation restriction by GIPCL / Grid authority which is beyond the control of Contractor or any other factors beyond the control of contractor for justified reasons accepted by GIPCL): The measured global solar radiation of the period of the outage of the power evacuation system shall be excluded to calculate average global solar radiation for the period of PR and Annual Targeted Generation test	The bidder requests to consider the same periods of exclusion for annual test periods as commented above.	No change in Tender Conditions. Bidder shall comply with tender conditions.
107	General					A.We understand the following from RFP documents: 1.Metering point shall be at 33kV Switchgear Pooling station of 400/33 KV GIS PSS-1 2.Performance Ratio measurement shall be done at 33kV Sub pooling substation. Kindly confirm.	1. Bidder shall refer Tender clause no. 3 of Volume-II, Part-3, Sheet 29 of 34. 2. Bidder shall refer Tender Clause no. 5.2 (a) of Volume-II, Part-3, Sheet 28 of 34. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
108	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.6	32 of 82	The nominal / rated output power of the Inverter at POI (Point of Interconnection i.e., KPS-II) corresponding to the design ambient temperature of 50ºC or as per CEA Guidelines / Working committee report whichever is higher shall be considered to arrive at required number of inverters for the plant / individual blocks. The Quantity of inverter shall be calculated based on the reactive power support as per CEA Regulation on technical standard for connectivity to the grid. Power factor 0.95 lag to 0.95 lead at voltage 0.95 to 1.05 per unit, temperature at 100% of active power to be maintained.	B.Further, As per document VOLUME - II PART - 2 (Schedule - III A).pdf, Clause no. 3.6 of Section A.4 Inverters, it is mentioned that "the nominal / rated output power of the Inverter at POI (Point of Interconnection i.e., KPS-II) corresponding to the design ambient temperature of 50ºC or as per CEA Guidelines / Working committee report whichever is higher shall be considered to arrive at required number of inverters for the plant / individual blocks" and from Annexure -7, SLD TENTATIVE OVERALL SINGLE LINE DIAGRAM OF 400/33 kV GIS PSS-1 SUBSTATION diagram. We understand the following: 1.KPS-II is 765/400kV substation. 2.All data of 400/33 kV transformer, 400 KV line to be provided by them so calculate cumulative inverter rating required to meet POI as per CEA latest requirement. Kindly provide the inputs to calculate the reactive power requirement via inverters. 3.Capacitor bank of rating 16MVAR are being installed at 33kV AIS Switchboard at PSS-1(400/33kV Substation). For this please note that as per latest CEA guidelines we can use SVG for meeting reactive compensation as capacitor bank are not having dynamic response. Also, we don't have any details of this 400/33KV GIS PSS-1 that how much reactive power is required in this and reactive power requirements at KPS-II substation. Hence, we can consider reactive power requirement of PV plant only. Background: The CEA is not accepting the in-plant capacitor bank which is also recorded in the minutes. The last project CEA has allowed the capacitor bank is of Rising Sun of 190 MW. As of now they will consider SVG only. Hence, there is a risk on the bidder if in future if the WRLDC/ CEA will not accept this capacitor bank then the number of inverters will increase. We will request GIPCL in case the capacitor bank is not accepted by the authorities and the contractor has to installed extra inverter for compliance then the contractor has to be suitably compensated for this. Please confirm.	1. Bidder Shall Refer "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS". 2a. Bidder Shall Refer "Amendment No-1" for transformer losses 2b. Bidder Shall Refer "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS" for transformer impedance and transmission line configurations and PSS-1 electrical system. 3.Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1 (Schedule-1)" No change in Tender Conditions. Bidder shall comply with tender conditions.
109	VOLUME - II PART - 2 (Schedule - III B)	DC Distribution board	3.2.4	71 of 179	Short circuit withstand rating of the DCDB shall be min. 25kA for 1 sec or higher as per system study.	C.Also, at Clause no. 3.2.4 of VOLUME - II PART - 2 (Schedule - III B), it is mentioned that short circuit withstand rating of the DCDB shall be min. 25kA for 1 sec or higher as per system study. Please note that maximum it can be 10kA/1 sec at Incomer and 6kA/1 sec at outgoing MCB's. a.This to bring to your kind notice that only one inverter manufacture qualifies as Class 1 local supplier and latest compliance of CEA/CTU/RLDC's reactive power regulations / requirements as specified in latest specification. This is primarily leading to single source of procurement. However, other suppliers/OEM who are not able to meet the as class 1 suppliers can comply the latest CEA/CTU/RLDC's reactive power regulations / requirements as class 2 supplier. Considering inverter being a critical equipment and backbone of grid compliance, We request you to kindly relax this clause for the better execution of the project. Kindly allow both Class 1 & 2 Suppliers of inverter and relax the APPENDIX-31: FORM OF DECLARATION OF THE COMPLIANCE TO PUBLIC PROCUREMENT TO PROVIDE FOR PURCHASE PREFERENCE (LINKED WITH LOCAL CONTENT)	Bidder shall refer Amendment-1 for DCDB Short Circuit Rating. Bidder shall refer Amendment-1 for Class-1 local supplier of Inverter. No Change in Tender Conditions except Amendment-1. Bidder shall comply with Tender Conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
110	General					D.For HT Cable: We have to provide FRLS cable outer sheath at site as per technical specification. However due to harsh condition and water logging situation at Khavda, for the betterment and life of the HT cables we request to kindly add water soluble in 33KV cable. Further, because of stream harsh condition, salinity and higher electrical stress distribution pattern we suggest considering HDPE outer sheath to restrict ingress of any kind of salinity and damage to 33kv cable which is backbone of Power evacuation infrastructure place in place of conventional FRLS PVC outer sheath specified. Kindly accept.	Bidder shall refer Amendment -1
111	General					E.For DC cable: Due to harsh condition and for the better life of the cable we request to allow HDPE our sheathing. HDPE don't have FRLS PVC outer sheath property. HDPE will protect the cables from water and will provide mechanical protections from saline water ingress. Hence, kindly accept this technical proposal.	Bidder shall refer Amendment -1
112	VOLUME - II PART - 3 (Schedule - IV to VI)	TABLE 2: VARIOUS PARAMETERS TO BE CONSIDERED FOR PVSYST SIMULATION	Sr. No. 17	31 of 34	DC cabling loss at STC + AC cabling loss at STC : 2.5% (DC and AC cabling loss shall be as per system design chosen by Bidder)	DC + AC loss shall be as per PV Syst is 2.5% total as specified in RFS. Since, the supply of other equipments (complete power evacuation infrastructure)) are not in the contractor scope. We understand that the losses mentioned is at 33 kV outgoing of PV Plant Switchgear (supplied by the contractor) at out-going of sub-pooling station. Kindly confirm.	The losses up to Metering Point for Targeted Energy/OAT up to 33kV switchgear of 400/33kV Pooling Substation shall be considered by the Bidder. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
113	General					We understand that both Underground HT cable and above ground HT cable from Sub pooling substation to Pooling Substation is allowed. Kindly confirm.	Bidder shall refer Tender clause No. 3.18 and 4.0 of Volume-II Part-2(B)- B.8 33kV Power Cables No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
114	General					Please confirm distance between Sub pooling substation to Pooling Substation for considering the HT cable and loss to be consider in this. Please advise and confirm.	Bidder to note that Sub-pooling station shall be planned and designed by the Bidder during detail engineering and the distance shall vary accordingly. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
115	General					1 Run of Spare cable considered between 33kV sub pooling substation and 33/400kV Pooling substation for each 300MW plot. Is our understanding correct. Please confirm.	No, 1 Run of Spare cable for each 100MW Block. Please refer Annexure-6: Spare cable laying philosophy for details. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
116	General					As per Annexure 7, supply & installation of 2x16 MVr capacitor bank at main pooling station is by GIPC. Consider this capacitor bank, the Contactor has to undertake various grid compliance studies including dynamic reactive power requirement speculated in CEA regulation/working committee report. We are hereby enclosing the latest CEA MOM dated 13th April, 23 chaired by Chairperson CEA, wherein the use of any static element like capacitor bank is not admissible for meeting the project dynamic power requirement. Further, the suggested equipments for meeting the dynamic power requirement is also listed down in enclosed MOM. In view of development, we request GIPCL to amend the specification requirement including the dynamic power requirement inline with latest CEA MOM which will comply the grid compliance. We request GIPCL during bidding not to allow bidder to consider capacitor bank for meeting the CEA's dynamic reactive power requirement. This will give GIPCL the base cost in with statuary grid compliance with dynamic reactive power requirement. In case in future GIPCL or CEA is ready to accept the capacitor bank then necessary adjustment can be taken the cost will come down/worked out since, this is no deviation bid. This will enable GIPCL to have a grid complied bid. Hence, for this we need clarity so that all the bidders are at same platform.	Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1 (Schedule-1)" No change in Tender Conditions. Bidder shall comply with tender conditions.
117	VOLUME – I & SECTION – 5	SOLAR PV MODULES – Performance Determination	3.0 - I	2 OF 11	The procurement of Solar PV modules is NOT in the Scope of the BoS Bidder……..	Please confirm the make and model, datasheet. Also provide the third party validated .PAN file for PVSyst simulation.	Bidder shall refer Tender clause no. 4.0 of Volume-I Section-5. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
118	VOLUME – I & SECTION – 5	SOLAR PV MODULES – Performance Determination	3.0 - I	2 OF 11	The procurement of Solar PV modules is NOT in the Scope of the BoS Bidder……..	Defect liabilities/ Guarantee part related to module should be in *GIPCL* scope since modules are free issued.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
119	VOLUME - II PART - 3 (Schedule - IV to VI)	Monitoring System for PR Verification	5.2	31 of 34	TABLE 2: VARIOUS PARAMETERS TO BE CONSIDERED FOR PVSYST SIMULATION	Please confirm the module cable length since modules are free issued this parameter to be confirmed during pre bid stage	Bidder shall refer Amendment -1
120	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.4	4 of 82	The usage of Y-connector is acceptable. However, in-line fuses must be provided as below: a) For central inverter configuration with negative grounding system, in-line fuses as per sizing calculation shall be provided in the positive terminal of Y-connector.	Please confirm Inline fuse requirement in Y connectors?	Bidder shall refer clause no.: 3.4, pg. no.: 4 of 82 of VOLUME - II PART - 2 (Schedule - III A). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
121	VOLUME - II PART - 3 (Schedule - IV to VI)	Monitoring System for PR Verification	5.2- TABLE 2 (21)	32 of 34	Grid power limitation : 600 MW AC	Does Grid limitation factor applied at 600MW ac in the Pvsyst simulations?	Grid Power Limitation is applied. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
122	VOLUME - II PART - 3 (Schedule - IV to VI)	Monitoring System for PR Verification	5.2-PART B (4-e)	29 of 34	Based on the parameters for PVSyst given in the tender (including solar irradiance, various loses etc.) and final .PAN file of PV module given by the GIPCL the first year Targeted Generation shall be derived by the contractor and the same shall be binding to the Contractor.	Please confirm the guaranteed generation figure which required from bidder?	The clause is self explanatory. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
123	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.4	31 of 82	Inverter shall be delivering/absorbing dynamically varying reactive power at POI at least up to 0.95pf lag & lead operation in a way which is conducive to maintain the POI voltage as close as possible to the nominal value. Any over-voltage arising within the GIPCL Solar Plant for complying with the above requirement, shall be taken care of by the bidder in designing of the project. Bidder shall submit QV and PQ curve of Inverter.	Please confirm The requirement of reactive power compensation? Can We compensate reactive power capacity at inverter level?	Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1 (Schedule-1)" (Sheet 4 of 13) and "Clause no 3.4 & 3.6 of Volume-II Part-2 (Schedule-III A) (Sheet 31 & 32 of 82)". No change in Tender Conditions. Bidder shall comply with tender conditions.
124	ANNEXURE - 1 ELECTRICAL KEY SLD			1 of 1	DWG No.: TCE.13131A-EL-4030-AU-40001	Please confirm the inverter block size?	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
125	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.6	26 of 179	Switchgears shall be provided with IP55 enclosure or better for Outdoor application with continuous ambient temperature of 50º C or as per CEA guidelines / Working committee report whichever is higher and shall be resistant to water & ultraviolet radiation further for outdoor duty, it shall be placed over extended shed, plinth and working platform, ingress protection specified above is minimum requirement, however IP protection shall be as per OEM recommendation.	Please confirm the Indoor type of outdoor type?	Bidder Shall Refer Clause Number "3.7" and " 4.0 (1) , (2) ",of Volume-II Part-2 (Schedule-III B) (B2) (Sheet 26 & 36 of 179)". . No change in Tender Conditions. Bidder shall comply with tender conditions.
126	VOLUME - II PART - 2 (Schedule - III A)	DESIGN PARAMETERS	4.4 4.13	8 of 82 9 of 82	Tracker Range of Movement (ROM): +/- 60 degrees or better or as required to achieve targeted generation Minimum ground clearance to be maintain at module edge with maximum angle shall not be less than 400mm.However, this will be decided based on final document shared by bidder and approved by OWNER	Please confirm the rotation phase angles, ground clearance and Axis height?	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
127	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA	3.1	75 of 82	Seven (7) nos. weather stations shall be placed in representative locations within the plant including measuring instruments and all necessary software & hardware required to integrate with SCADA to enable availability of data in SCADA……..	Please confirm how many weather stations are required for 750MW DC	Bidder shall refer Amendment -1

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
128	VOLUME - II PART - 2 (Schedule - III C)	Illumination Levels	4	54 of 100	Average LUX level to be maintained in various areas shall be as under: Sl. No. Area Average Lux 1. SCADA cum Office Room and Meeting Room, etc. 300 2. 33kV Sub-pooling station (PEB) 250 3. Inverter Station (Outdoor area) 150 4. Battery Room 200 5. Kitchen cum Pantry 150 6. Spares Room 100 7. Toilets 50 8. Transformer Yard 50 9. Periphery 10	Average LUX level to be maintained in various areas shall be as under/3.Inverter Station (Outdoor area) 150Lux level. Please confirm how many weather stations are required for 750MW DC	Bidder shall refer Amendment -1
129	VOLUME - II PART - 3 (Schedule - IV to VI)	SCHEDULE-VI	PART B	28 of 34	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	We understand that generation guarantee is for O&M period only . There will be no PGTEST.	Bidder shall refer Schedule-VI of Volume - II ,Part-3 (Schedule - IV to VI) and clause 3.10 of Volume - I Section 1 to 5 for Performance Guarantee Testing No change in Tender Conditions. Bidder shall comply with tender conditions.
130	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.10	24 of 82	Combiner box shall be decided during detailed engineering based on Plant SLD/Design and temperature rise calculation (without Y connector and with Y connector), the current rating of the fuses shall be calculated based on PV Module current rating considering bi-faciality factor (if applicable) and fuse factor of 1.56 in line with standard. DC disconnector DC On-load Isolator shall be sized accordingly, and fuse rating shall be calculated as per IEC guidelines.	Please share average Temperature rise value of enclosure and operating temperature of component used in enclosure	Bidder shall refer clause no: 3.26, 3.27, pg no: 25 of 82 of VOLUME - II PART - 2 (Schedule - III A). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
131	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.10	24 of 82	Combiner box shall be decided during detailed engineering based on Plant SLD/Design and temperature rise calculation (without Y connector and with Y connector), the current rating of the fuses shall be calculated based on PV Module current rating considering bi-faciality factor (if applicable) and fuse factor of 1.56 in line with standard. DC disconnector DC On-load Isolator shall be sized accordingly, and fuse rating shall be calculated as per IEC guidelines.	Please share bifacility factor for cable sizing	Bidder shall refer Table-2 (sr.no.: 5), pg no.: 31 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
132	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.16	25 of 82	SCB shall have provision for earthing connection with copper cable to dedicated earthing pit.	Please confirm dedicated Pit is required or SCB can be earthed through PV grid earthing	Bidder shall refer Amendment -1
133	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.22	25 of 82	Spare DC input terminals shall be provided in all SCBs. Total number of SCBs shall be calculated accordingly.	Please share % of spare for total no. of inputs for better sizing of SCB	Bidder shall refer Amendment -1
134	VOLUME - II PART - 2 (Schedule - III A)	Technical Parameters	4.0 (1-f)	26 of 82	SCB output side - As per Calculation considering 20% margin	Please explain for better understanding	Bidder shall provide DC Disconnector at output side of the SCB with 20% margin. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
135	VOLUME - II PART - 2 (Schedule - III A)	Technical Parameters	4.0 (3-a)	27 of 82	Number of DC outputs (+ & –being one output) : Nos. : Fuses to be provided in positive and negative for each SCB	Bidder Understands that Fuse at positive and negative to be provided at Inverter End , not at SCB end	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
136	VOLUME - II PART - 2 (Schedule - III A)				A3 - STRING COMBINER BOX	Please confirm whether string level monitoring is required or not	String Level Monitoring is not required. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
137	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.40	35 of 82	Standalone UPS shall be provided to meet the auxiliary power requirement of inverter. It shall have a backup storage capacity as per CEA requirements. Maintenance free type batteries shall be provided for the UPS. If Outdoor inverters are provided, then the UPS shall also be suitable for outdoor duty with IP 55 or better ingress protection.	Stand alone UPS is not required as Inverter have inbuilt system for meeting its own auxiliary power requirement. Please amend this clause	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
138	VOLUME - II PART - 2 (Schedule - III A)	Control & Monitoring	3.66 - c	38 of 82	Dedicated Prefab compartment required for Ethernet for networking	It will be as per OEM design ,they have type tested design and its not customizable as per requirement. please amend this clause	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
139	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.11	24 of 82	Solar PV On-load Isolator shall be suitable for 1500Vdc operational voltage having minimum Insulation voltage of 1500 V dc, in true 2 pole or 3 pole construction with 500Vdc per pole breaking. Any multipolar device achieving this configuration with shorting link (with less than 500Vdc per pole), will not be acceptable. The isolators shall be type tested to carry the nominal current at rated Voltage till ambient Temperature of 60Deg C without any de-ration, inside the String Combiner box. The Switching part shall necessarily contain reinforced break with an integrated magnetic arc-extinguishing system for the PV arc. **The PV isolator need to positive break indication given through a position indication window**. The PV Isolator terminals need to be silver plated and shall comply with IEC 60947-3 and tested for PV application. These shall withstand any PV current and should have no critical current.	Please make a note , This particular feature in SCB is available in the market , request please review once again	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
140	General					Please confirm whether separate HDPE pipe is required for laying positive and negative cables or both can be laid in common pipe as per general standard	Bidder to provide separate HDPE conduits for both Positive and Negative string cables. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
141	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.6	49 of 82	The DC cabling up to Inverter shall be designed such that the average DC ohmic power loss at STC loss does not exceed 1.5%.	Bidder understand that STC is 25deg Celsius. And power loss in cable sizing from Module to Inverter will be calculated at 25deg. C. ,Please confirm .	Bidder shall refer Amendment-1 and refer STC. No Change in Tender Conditions except Amendment-1 for STC. Bidder Shall Comply With Tender Conditions.
142	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.1	61 of 82	The RE Park developer will provide water from the RE Park storage area. Bidder shall lay the piping system from RE Park water system up to the Module cleaning system.	Please share Re park storage area.	The water storage of RE Park shall be near PSS-1 and exact location shall be provided during detailed engineering. No change in Tender Conditions. Bidder shall comply with tender conditions
143	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA	3.1	75 of 82	Seven (7) nos. weather stations shall be placed in representative locations within the plant including measuring instruments and all necessary software & hardware required to integrate with SCADA to enable availability of data in SCADA……..	How many WMS will be required for 600MW of plant , please share.	Bidder shall refer Amendment -1
144	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.19	6 of 179	The transformer neutrals shall be brought out in a separate cable box. If the same cable box is used for neutral side, then a metallic partition between phases and neutral shall be provided.	Please understand that separate cable box for neutral is not required , although Neutral of Transformer will be taken out through bushing and covered by insulating cap for testing purpose , please amend this clause	Bidder shall refer clause no 3.20 of Volume-II part-2 (Schedule-III B) Sheet 6 of 179. No change in Tender Conditions. Bidder shall comply with tender conditions.
145	VOLUME - II PART - 2 (Schedule - III D)	D22 - WATER SUPPLY	22.2	35 of 47	For operation people, potable water storage tank (six layer) either Sintex or equivalent conforming to IS: 12701 shall be provided over the roof of the control room. The capacity of the tank shall be at 45 litres per day per person with minimum two days storage capacity, complete with all fittings including float valve, stop cock etc. The capacity of the tank shall not be less than 1000 litres.	Please share tank thickness as different manufacture offers different thickness to avoid comments DDE	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
146	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.12	27 of 179	Total height of the switchgear panels shall not generally exceed 2500 mm. The height of switches, push buttons and other hand operated devices shall not exceed 1800 mm and shall not be less than 700 mm from bottom of the panel base. All relays, meters, indicating lamps, switches etc. shall be flush mounted on the respective cubicle front door.	Please amend this clause as all 33KV swgr. Manufacturer offer height more than 2500mm	Bidder shall refer Amendment -1
147	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WITH PERIPHERAL FENCING			1 of 1		Please share colour PDF and autocad file of plot plan.	AUTOCAD file of Plot Plan uploaded on the Website. No change in Tender Conditions. Bidder shall comply with tender conditions
148	ANNEXURE - 1 ELECTRICAL KEY SLD			1 of 1		Bidder is not able to scheme, please make a little more detailed SLD	No change in Tender Conditions. Bidder shall comply with tender conditions.
149	VOLUME - II PART -1 (Schedule - I and 2)	Power Evacuation System	2.1	5 of 13	Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1) on any 33KV Bus / Section as per system requirement to be finalized during detail engineering without any extra cost to the Owner.	Sufficient space for Overhead Transmission Line is available at within given plot area. Please confirm. If GIPCL is identified any such route, please markup the same in the tender layout.	Bidder Shall refer "ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WITH PERIPHERAL FENCING "No change in Tender Conditions. Bidder shall comply with tender conditions.
150	VOLUME - II PART -1 (Schedule - I and 2)	Power Evacuation System	2.1	5 of 13	Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1) on any 33KV Bus / Section as per system requirement to be finalized during detail engineering without any extra cost to the Owner.	Please confirm the ROW and route & length of TL for above mentioned tender clause requirement	Bidder Shall refer "ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WITH PERIPHERAL FENCING " No change in Tender Conditions. Bidder shall comply with tender conditions.
151	VOLUME - II PART -1 (Schedule - I and 2)	EXCLUSIONS	5.0	6 of 13	Supply of following equipment are excluded from the scope of the Bidder: a) 33/400kV Power transformers b) 400kV Switchyard c) 33kV Main Switchgear at PSS-1 d) Pooling substation Main Control Building e) Periphery Road Lighting f) Solar PV Modules g) Peripheral road	Please provide the Solar PV Module 540Wp Bifacial technical datasheet, installation manual and .PAN file. As the PV modules is free issue from GIPCL	It shall be provided during detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions
152	VOLUME - II PART -1 (Schedule - I and 2)	SITE SPECIFIC TECHNICAL DATA	5.0 -B	11 of 13	MODULE MOUNTING – Single Axis E-W Tracker	Please confirm the minimum and maximum tracker angle to be MMS design.	Bidder shall refer Clause No. 4.0. of Volume-II, Part-2(A) sheet 8 of 82. No change in Tender Conditions. Bidder shall comply with tender conditions
153	VOLUME - II PART - 2 (Schedule - III A)	DESIGN PARAMETERS	4.13	9 of 82	Minimum ground clearance to be maintain at module edge with maximum angle shall not be less than 400mm.However, this will be decided based on final document shared by bidder and approved by OWNER	The minimum ground clearance will be as per Tracker design and recommendation. Please accept.	No change in Tender Conditions. Bidder shall comply with tender conditions
154	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE			1 of 1		Kindly confirm that, the bidder need to follow the same SCADA Architecture? Or indicative only.	SCADA Architecture is indicative/tender purpose. Bidder can modify the architecture based on tender specifications, CEA regulations, WRLDC regulations/guidelines, GIPCL approval during detailed engineering. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
155	ANNEXURE- 7 TENTATIVE OVERALL SINGLE LINE DIAGRAM OF 400-33 KV GIS PSS-1 SUBSTATION			2 of 2		As per SLD, is there any limitation i.e. maximum of power to be fed in MW? If yes please provide details. Or else bidder is free to propose his own design, please confirm.	Up to 170 MVA can be loaded to one LV winding of the Power transformer, Bidder shall design accordingly. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
156	ANNEXURE- 7 TENTATIVE OVERALL SINGLE LINE DIAGRAM OF 400-33 KV GIS PSS-1 SUBSTATION			2 of 2		As per SLD, the Solar & Wind feeders are indicated. So we need to consider either solar or wind or both. Please clarify.	Bidder shall consider Solar Project. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
157	Miscellaneous					Please provide plot area AutoCAD file and .kmz file for better understanding of land area	AutoCAD file uploaded for entire Park. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
158	VOLUME - II PART - 2 (Schedule - III D)	SCOPE	1.7 - f	5 of 47	Design and Construction of RCC Building for PV Plant SCADA & monitoring buildings & Mandatory spare room (each for 300 MW Block) along with requisite furniture, workstations, air conditioning, internal and external illumination, other equipment's as per the specifications or OWNER's requirement. Building shall have conference room (one single conference room common for 600 MW can be located at any 300 MW Block). The building shall have main O&M Office along with attached Toilet and pantry and storeroom in each for 300 MW block.	Please provide tentative GA/building size for preliminary estimation.	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
159	VOLUME - II PART - 2 (Schedule - III D)	SCOPE	1.7 - g	6 of 47	33kv Sub pooling station (RCC) platform with superstructure as Pre-Engineered Building (PEB) type building (RCC CUM PEB Building). It shall have Technicians Rooms (Two Numbers each in 300 MW) shall be provided at 33kv sub pooling station with attached toilet and other facilities.	Please provide tentative GA/building size for preliminary estimation.	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
160	VOLUME - II PART - 2 (Schedule - III D)	Geotechnical Investigations and Laboratory Tests	1.2.6	12 of 47	Minimum 1 No. of borehole of minimum 10 m depth shall be carried out in every 12.5 acres of land for MMS foundations. For Inverter yard and building location the minimum depth of bore hole shall be 30 m. Please note that if soil data reveals significant variations, bidder shall carry out additional boreholes after intimating client/GIPCL. On completion of every borehole, field record shall be continuously mailed to client/GIPCL.	KEC proposes for every 30 acres 1 bore hole, 1 pull out, lateral test shall be carried out with a depth of 10m as per industry practices.	No change in Tender Conditions. Bidder shall comply with tender conditions.
161	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	18 of 47	The area around the transformer and equipment's shall be covered with gravel and PVC coated galvanised chain link fence of height min 1.8 m with fence posts and gates shall be provided. All fence posts shall be 65X65 X6 MS angles spaced at 2.5m c/c distance and all other specification mentioned for Fencing and gate shall be followed. M.S. angle posts shall conform to IS: 2062.All structure steel shall be hot dip galvanized with galvanization coating.....	KEC proposes switchyard fence shall be GI chainlink mesh instead PVC coated GI chainlink mesh.	No change in Tender Conditions. Bidder shall comply with tender conditions.
162	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	19 of 47	……..The transformer shall be placed minimum 750 mm above NGL and higher as applicable during detail engineering	KEC proposes transformer placement shall be as per electrical requirements or minimum 0.4m from NGL.	No change in Tender Conditions. Bidder shall comply with tender conditions.
163	VOLUME - II PART - 2 (Schedule - III D)	D9 - 33KV SUB POOLING STATION (RCC) PLATFORM WITH SUPERSTRUCTURE PEB TYPE BUILDING (RCC CUM PEB BUILDING)	9.4	19 of 47	The FFL of building shall be minimum 1.5 m above NGL. Equipment rooms shall be sized and designed as per the OEM recommendations to ensure desired life of equipment. The static live load on floor shall be higher of 1000 kg/m2 or actual equipment load.	KEC proposes FFL shall be as per electrical requirements or minimum 0.6m from NGL. Kindly provide size of the building.	No change in Tender Conditions. Bidder shall comply with tender conditions.

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164	VOLUME - II PART - 2 (Schedule - III D)	D10 – PV PLANT SCADA MONITORING BUILDING INCLUDING SPARE ROOM (EACH FOR 300 MW)	1.1	20 of 47	For PV plant SCADA, monitoring & spare room shall be RCC. It shall consist of Airconditioned SCADA Room and include all other facilities like spare room, pantry, required Toilet and urinals as per statutory and Owner's requirements. It shall include conference room at one location, O&M office and Stores room at both blocks along with Toilets and Pantry facilities and furniture.	KEC proposes platform height shall be as per electrical requirements or minimum 0.6m from NGL. Kindly provide size of the building.	No change in Tender Conditions. Bidder shall comply with tender conditions.
165	VOLUME - II PART - 2 (Schedule - III D)	D11 - INVERTER PLATFORM (RCC) WITH STRUCTURAL STEEL SHED OVER INVERTER AREA & PEB STRUCTURE FOR REST OF THE EQUIPMENT'S	11.2	22 of 47	Outdoor inverter (including containerized solution) platform shall be Min. 1500mm from NGL. Cable bending radius and other relevant factors to be considered during platform design. This shall be reviewed during detailed engineering.	KEC proposes platform height shall be as per electrical requirements or minimum 1.2m from NGL.	No change in Tender Conditions. Bidder shall comply with tender conditions.
166	VOLUME - II PART - 2 (Schedule - III D)	D13 - REINFORCED CONCRETE AND ALLIED WORKS	13.10	28 of 47	All RCC structural elements shall have minimum grade M35 with 20/40mm downgraded coarse aggregates	KEC proposes minimum grade of concrete shall be M25 instead of M35.	No change in Tender Conditions. Bidder shall comply with tender conditions.
167	VOLUME - II PART - 2 (Schedule - III D)	D23 - ROADS	23.1	35 of 47	All roads shall be WMM to carry safe and easy transportation of equipment and material at the project site shall be made. The road shall provide easy and fast approach to each facility of the plant. These roads are to be designed optimally to carry the crane load with all necessary chambers, gradients, super-elevation, and radius of curvatures for the easy movement of cranes, trucks and public transport	KEC proposes 1. Main road to be WBM type with a road width of 3m and 0.5m shoulders on both sides.(Minimum thickness shall be GSB grade I 150thk, GSB grade II & III 75mm thk respectively.) 2. Internal road to be WBM type with 3m wide and 0.5m shoulders on both the sides.(Minimum thickness shall be GSB grade I 150thk, GSB grade II & III 75mm thk respectively.) 3. Peripheral road to be simple compacted 3m wide. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
168	VOLUME - II PART - 2 (Schedule - III D)	D24 - PERIPHERAL CHAIN LINK FENCING (AS MARK IN THE DRAWING) & MAIN GATE	24.1	38 of 47	The objective to provide a fencing is to demarcate the boundary and to keep away the unauthorized access to plant. The BIDDER shall provide PVC COATED GI chain link fencing as shown in drawing. The total height of fence shall be minimum 1.5 meter from the NGL. The fencing shall be provided with aesthetically designed main entry gate. The construction of chain link fencing shall conform to the relevant IS standards and practice. Bidder to refer TCE.13131A-CV-3002-SI-30001-P0 (Typical Chain Link Fencing)	Boundary wall is not in the scope of bidder. Kindly confirm.	The clause is self explanatory. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
169	General- Topo Drawing					Please provide auto cad drawing for the same.	AutoCAD file uploaded for entire Park. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
170	General					Kindly provide the boundary , contours and Detail soil report for the plot.	Boundary coordinates uploaded. Bidder shall refer Tender clause no. D2 of Volume-II, Part- 2(D) Sheet 8 of 47.
171	VOLUME - II PART - 2 (Schedule - III D)	D1 – SCOPE	1.1	4 of 47	This specification covers the general requirements for the Civil & Structural design engineering, construction, fabrication, procurement, supply, transportation to site, storing at site, erection, installation, testing, commissioning, performance testing of all the facilities as listed below on Engineering Procurement and Construction (EPC) basis as per the specification mentioned in this document. OWNER will provide the preliminary study report for topographical, geotechnical and Hydrology which is only for information to the bidder. Bidder to carry out their own study for the same and any risk/ambiguity pertaining to above study (land, soil and water) shall not be responsibility of OWNER.	Geotechnical report is received. Kindly share the preliminary study report for Topographical & Hydrology also.	1. Preliminary/ Indicative Hydrology Report uploaded 2. Preliminary / Indicative Topography & Contour Survey in CAD Format Uploaded No change in Tender Conditions. Bidder shall comply with tender conditions.
172	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	18 of 47	The area around the transformer and equipment's shall be covered with gravel and PVC coated galvanised chain link fence of height min 1.8 m with fence posts and gates shall be provided. All fence posts shall be 65X65X6 MS angles spaced at 2.5m c/c distance and all other specification mentioned for Fencing and gate shall be followed. M.S. angle posts shall conform to IS: 2062.All structure steel shall be hot dip galvanized with galvanization coating.....	Bidder proposes fence post as 50x50x6 in place of 65x65x6 for the fence.	No change in Tender Conditions. Bidder shall comply with tender conditions.
173	VOLUME - II PART - 2 (Schedule - III D)	D10 – PV PLANT SCADA MONITORING BUILDING INCLUDING SPARE ROOM (EACH FOR 300 MW)	1.6. - K	21 of 47	Roof of the Building shall consist of Cast-in-situ RCC slab with an approved water proofing system suitable for local climatic conditions with 10 years of leak-proof guarantee. The roof of the building shall be waterproofed with approved Polymeric membrane type waterproofing and laid as per manufacturer's recommendation. The roof shall be designed for minimum superimposed load to 150 kg/m2. Also, Chajja, canopy shall have water proofing as explained above.	Please provide the detailed specifications for the leak proof material to be used. Leak proof guarantee tenure shall be as per manufacturer/supplier based on the material to be used. Please	No change in Tender Conditions. Bidder shall comply with tender conditions
174	VOLUME - II PART - 2 (Schedule - III D)	D13 - REINFORCED CONCRETE AND ALLIED WORKS	13.10	28 of 47	All RCC structural elements shall have minimum grade M35 with 20/40mm downgraded coarse aggregates	Bidder proposes to consider minimum grade of concrete M25 with use of Pozzolans/Slag cement for corrosion resistance	No change in Tender Conditions. Bidder shall comply with tender conditions.
175	VOLUME - II PART - 2 (Schedule - III D)	D23 - ROADS	23.3	35 of 47	Road works from main road of the RE Park to inverter Station, PV Plant & SCADA Building, and any other approach as required shall be in scope of Bidder. These roads shall be WMM road as per codes. Internal roads shall connect to all inverter stations, ensuring easy and approachable to various facilities, gates, & module cleaning stations, etc. The methodology of road design and construction with material specifications shall be in line with latest IRC-37 / MORTH and shall be submitted for approval before start of works.	Please also provide typical cross section of the Road. Bidder considers that peripheral Road is not mandatory. If required please provide specifications/section for the same also.	Bidder shall refer Tender clause no. 5.0 of Volume-II, Part-1, Sheet 6 of 13. No change in Tender Conditions. Bidder shall comply with tender conditions.
176	VOLUME - II PART - 2 (Schedule - III D)	D24 - PERIPHERAL CHAIN LINK FENCING (AS MARK IN THE DRAWING) & MAIN GATE	24.2	38 of 47	The peripheral chain link fencing shall compromise of PVC coated G.I chain link fencing. For location of peripheral plant fencing refer drawing TCE.13131A-CV-3002-SI-30002-P0 (Overall plant layout) as per drawing attached.	Bidder considers that Galvanization thickness of 90 micron is applicable only for fence supporting members. GI chain link mesh shall not be coated with 90 micron as the same shall be coated with PVC. Please confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions
177	VOLUME - II PART - 2 (Schedule - III D)	D24 - PERIPHERAL CHAIN LINK FENCING (AS MARK IN THE DRAWING) & MAIN GATE	24.2	38 of 47	The peripheral chain link fencing shall compromise of PVC coated G.I chain link fencing. For location of peripheral plant fencing refer drawing TCE.13131A-CV-3002-SI-30002-P0 (Overall plant layout) as per drawing attached.	Bidder considers that peripheral fencing for East side portion of Plot mkd 2,4,6 & West side portion of Plot marked 1,3,5 are not under bidder' scope. Please confirm	Bidder shall Refer Overall plant layout drawing. No change in Tender Conditions. Bidder shall comply with tender conditions.
178	VOLUME - II PART - 2 (Schedule - III D)	D25 – STORM WATER DRAINAGE	25.1	38 of 47	The storm water drainage (Trapezoidal section with RR PITCHING) shall be planned as per outcome of area drainage study. It is recommended that the drainage for the plant shall be designed keeping the natural flow of water to the nearest exit point.	Please specify the nearest exit point/outfall location for drainage system. Please also mention if bidder needs to consider additional water discharge/outfall from nearby plot area.	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.

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179	VOLUME - II PART - 2 (Schedule - III D)	D25 – STORM WATER DRAINAGE	25.7	39 of 47	Pipe culvert shall be designed considering "maximum hourly rainfall intensity" at the site considering 50 years of return period as per recommendation of IMD. Also based on hydrology study report and IMD data worst condition shall be taken for design of drainage system. At no time for entire service life of 25 years, water stagnation shall happen, and care shall be taken to maintain slope and prevention of waterlogging. The surface run off coefficient shall be considered as per site soil condition and shall not be less than 0.6 for the design of drainage system. The velocity within the pipe culvert shall not be less than self-cleansing and not more than erosion limit of lining material. The drainage scheme shall be designed considering the BIDDER's plot area and nearby catchment area contributing to the plot drainage.	Please specify the maximum hourly rainfall intensity to be considered for drainage design	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
180	VOLUME - II PART -1 (Schedule - I and 2)	Corrosive category (for Paints)	D-2	12 of 13	……..Unless noted otherwise, all steel structures exposed to environment would be painted to meet the requirements as mentioned in Clause no 5 (D) of Project information.	Please specify the coating thickness for Galvalume/Pregalvanized material. Coating/finishing for Tracker shall be as per Tracker OEM's	Bidder shall refer Tender Clause no. 6.12 of Volume-II , Part- 2 (A) sheet 11 of 82. No change in Tender Conditions. Bidder shall comply with tender conditions.
181	ANNEXURE - 3 Soil Investigation_Part-2	LIQUEFACTION CALCULATION SHEET	ANNEXURE 7	176 of 216	LIQUEFACTION POTENTIAL - BOREHOLE v/s DEPTH	Bidder seeks clarifications for liquefaction considerations for the Tracker Pile	No change in Tender Conditions. Bidder shall comply with tender conditions.
182	ANNEXURE - 5 TYPICAL PVC COATED CHAIN LINK PERIPHERAL FENCE DETAILS				Hume Pipe (PC)	Bidders considers that Hume Pipe Road crossing marked at the Plot periphery/road shall not be under bidder's scope. Please confirm.	Bidder shall refer Tender clause no. 5.0 of Volume-II, Part-1, Sheet 6 of 13. No change in Tender Conditions. Bidder shall comply with tender conditions.
183	VOLUME - II PART -1 (Schedule - I and 2)	D. PROJECT LOCATION CLASSIFICATION (CORROSION PROTECTION)	1	11 of 13	…….. For below Ground Structures (including up to 300mm above ground) C5-M, 110 Microns For Above Ground Structures (Beyond 300mm), C4, 90 Microns	As the substructure shall be embeded inside concrete with minimum concrete height of 300 mm above ground portion, hence, additional considerations against corrosion shall not be required. Bidder proposes to consider the Corrosion category as C4 or lesser and corresponding thickness of galvanization of 90 micron or lesser for structural portion embeded inside foundation portion.	No change in Tender Conditions. Bidder shall comply with tender conditions.
184	VOLUME - II PART -1 (Schedule - I and 2)	F. WIND DATA & DESIGN CRITERIA		12 of 13	……..For Khavda park, the minimum design wind pressure (Pd) = 890 N/m2	Bidder considers uniform wind pressure to act over the entire module surface area. Eccentric loading (i.e. load centre at 0.3w from winward edge) not considered. Please confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
185	VOLUME – I SECTION – 4	Rights of Way and Facilities	3.31.1	46 OF 105	The Contractor shall bear all costs and charges for special or temporary rights-of-way required by him for access to the Site. The Contractor shall also provide, at his own cost, any additional facilities outside the Site required by him for the purposes of the Works or Services. Contractor shall carry out a detailed route survey for assessment of transportation of heavy and large equipment to Site.	While as per clause 2.1 Owner shall hand over the site to the Contractor, the clause 3.31 requires the contractor to bear costs and charges for special or temporary rights-of-way for access to the Site. During pre-bid meeting it was clarified that the approach road to the Site is under construction by the Owner, under such situation the requirement of the obligation in regard to the right of way for access to site need be to be clarified.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
186	VOLUME – I SECTION – 4	Access and Right to use of the Site	2.1	13 OF 105	Necessary access to the site shall be made by the Contractor after handing over of the site to the Contractor by the Owner within one week from the date of receipt of LoI. Access to the site location is from (SH-45), on as is where is basis. It is responsibility of contractor to investigate and assess the requirements in view of EPC package at no cost to GIPCL. Any improvement, modification required is in the scope of contractor at their cost. In the execution of the Works, no persons other than the Contractor or his duly appointed representative, Sub-contractor and workmen, shall be allowed to do Work on the Site, except by the special permission, in Writing of the Owner.	While as per clause 2.1 Owner shall hand over the site to the Contractor, the clause 3.31 requires the contractor to bear costs and charges for special or temporary rights-of-way for access to the Site. During pre-bid meeting it was clarified that the approach road to the Site is under construction by the Owner, under such situation the requirement of the obligation in regard to the right of way for access to site need be to be clarified.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
187	VOLUME – I SECTION – 4	Standard for Supplies and Performance	3.26.1	44 OF 105	Without limiting any other provision of Contract, Contractor shall perform the Work and cause his Sub-contractors to manufacture and supply or perform their Work hereunder in accordance with Good Engineering Practices and standards of professional care, skill, diligence and competence generally accepted in the independent power industry applicable to engineering and construction and Project management practices for power stations of similar size and type (Solar PV Plant) as the Plant that are intended to have a 30 (thirty) year useful life when operated in accordance with the Operating Manuals, all Applicable Laws, all Applicable Permits, all Manufacturer's and vendor's guarantees and Warranties, all applicable insurance policies, the safety precautions set forth in this section and the provisions of Contract including Specifications.	The useful life of the plant is mentioned in clause 24.7.8 of Volume I Section 4 as 25 years where as the same is mentioned as 30years at clause 3.26.1 of Volume I Section 4. Please clarify in regard to the clause which is to be followed for design calculations.	Bidder shall refer Amendment -1
188	VOLUME – I SECTION – 4	Contractor's Representations and Warranties	24.7.8	102 OF 105	It will design the Equipment and Works so that the useful life thereof may reasonably be expected to 25 years;	The useful life of the plant is mentioned in clause 24.7.8 of Volume I Section 4 as 25 years where as the same is mentioned as 30years at clause 3.26.1 of Volume I Section 4. Please clarify in regard to the clause which is to be followed for design calculations.	Bidder shall refer Amendment -1
189	VOLUME - II PART -1 (Schedule - I and 2)	GENERAL REQUIREMENTS	1.3.10	4 of 13	Redundant Auxiliary power sources to be considered at the sub-pooling stations.	Bidder shall considered 2Nos of feeders from common nearest Block.	Bidder shall refer "ANNEXURE - 1 ELECTRICAL KEY SLD". No change in Tender Conditions. Bidder shall comply with tender conditions.
190	VOLUME - II PART -1 (Schedule - I and 2)	Power Evacuation System	2.1	5 of 13	Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1) on any 33KV Bus / Section as per system requirement to be finalized during detail engineering without any extra cost to the Owner.	Bidder understands that supply of 33KV AIS switchgear and termination of cable at Power transformer LV side is in Bidder scope.	Bidder Shall Refer Clause Number "5.0 (c) and 4.0 of Volume-II Part-1 (Schedule-1) (Sheet 6 of 13)". No change in Tender Conditions. Bidder shall comply with tender conditions.
191	VOLUME - II PART -1 (Schedule - I and 2)	Telemetry System	3.2	5 of 13	The required hardware and software, including laying and termination/splicing with all required connectors etc. of Communication/Fiber Optic cable to Owners' common communication panel at 33/400kV GIS Substation required for communication of Solar plant data is included in the Bidder's scope. Communication link and communication controller/Gateway used for data communication to common communication panel /LDC shall be redundant (one for normal operation and other as hot standby). If any upgradation/ modification required at FOTE, it shall be done by the bidder.	As per clause no. 2.1 Power evacuation system, "Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1) on any 33KV Bus / Section" So communication cable laying between solar PV SCADA to 400KV GIS PSS-1 and upgradation/modification requirement at FOTE not in bidder scope.	Bidder shall refer to PSS-1 DWG NO FCE-171125-CI-DWG-CMS-4100-002.Communication cable from PV SCADA to 400 KV GIS shall be in the scope of Bidder. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
192	VOLUME - II PART -1 (Schedule - I and 2)	TERMINAL POINTS	4.1	6 of 13	Electrical - Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1). All hardware required for 33kV cable termination at 33/400kV switchyard, including support structure and civil works required for the same, shall be under scope of bidder.	Bidder understands that supply of 33KV AIS switchgear and termination of cable at Power transformer LV side is in Bidder scope.	Bidder Shall Refer Clause Number "5.0 (c) and 4.0 of Volume-II Part-1 (Schedule-1) (Sheet 6 of 13)" . No change in Tender Conditions. Bidder shall comply with tender conditions.
193	VOLUME - II PART -1 (Schedule - I and 2)	EXCLUSIONS	5.0	6 of 13	Supply of following equipment are excluded from the scope of the Bidder: a) 33/400kV Power transformers b) 400kV Switchyard c) 33kV Main Switchgear at PSS-1 d) Pooling substation Main Control Building e) Periphery Road Lighting f) Solar PV Modules g) Peripheral road	Bidder understands that bidder scope of works shall be up to Termination of 33KV Cable at Power Transformer LV side.	Bidder Shall Refer Clause Number "5.0 (c) and 4.0 of Volume-II Part-1 (Schedule-1) (Sheet 6 of 13)" . No change in Tender Conditions. Bidder shall comply with tender conditions.
194	VOLUME - II PART - 2 (Schedule - III D)	D1 – SCOPE	1.7 - b	5 of 47	Earthwork for site grading, cutting, filling & levelling of land including cutting and removal trees and vegetation along with necessary statutory permissions, NOCs.	Cutting and removal trees and vegetation along with necessary statutory permissions, NOCs shall be done by client/owner.	No change in Tender Conditions. Bidder shall comply with tender conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
195	VOLUME - II PART - 2 (Schedule - III C)	Size of Conductors	4.4 - a	13 of 100	a) Main Earthing Conductors The earthing conductor sizes shall be calculated based on IS: 3043 and the earthing system shall comply with Indian Electricity Rules and IEEE-80……	Bidder considered the IS3043 for plant & 33kV system including ICRs earthing. And IEEE-80 for switchyard.	Bidder shall refer clause No "5.0 (b) of VOLUME - II PART -1 (Schedule - I and 2) Page 06 of 13" No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
196	VOLUME - II PART - 2 (Schedule - III C)	General Requirements	4.5.4	15 of 100	Inside dimension of the earth pit shall not be less than 600x600 mm. it shall be brick work / precast of M35 Grade RCC with base of 75mm thick PCC below wall.	Bidder considered Earth pit of size 450mmx450mm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
197	VOLUME - II PART - 2 (Schedule - III C)	Earthing System Installation	4.7.8	17 of 100	Connection between the equipment earth lead and the grid conductor shall be welded. For rust protection, the welds shall be treated with zinc chromate primer and coated with zinc rich paint.	As per the standard practice bolted type earthing shall be provided for MMS earthing to avoid the structure damage during welding.	Bidder shall refer clause No "6.3 of VOLUME - II PART -2 (Schedule - 2A) Page 10 of 82" , "Clause No 11.0 (C) (7) of VOLUME - II PART -2 (Schedule - 2A) Page No 21 of 82" , "Clause No 6.27 of VOLUME - II PART -2 (Schedule - 2A) Page No 15 of 82, "Clause No 5.4 of VOLUME - II PART -2 (Schedule - 2A) Page No 09 of 82. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
198	VOLUME - II PART - 2 (Schedule - III C)	PV Modules	2.1	59 of 100	PV modules free issued by the Owner shall be unloaded, stored and transported within solar PV plant with utmost care and shall be installed as per manufacturer's recommendations and instruction manuals.	In the absence of PV module details, 1200mm terminal cable length has been considered for both (+/-) terminals. Further, stringing has been considered as leap methodology.	Bidder shall refer Amendment -1
199	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.5	4 of 179	Inverter Transformers with winding material of electrolytic grade copper / electrolytic grade Aluminum shall be acceptable subjected to proven and of successfully type tested design with service warrantee of 5 years after commissioning.	Bidder considered the 5 years standard warranty provided by the approved vendor with subjective guidelines of the O&M procedures.	No change in Tender Conditions. Bidder shall comply with tender conditions.
200	VOLUME - II PART -1 (Schedule - I and 2)	GENERAL REQUIREMENTS	1.3.13	5 of 13	The bidder shall be carried out the comprehensive operation & maintenance (O&M) of Solar plant for 3 year and Annual Maintenance Contract (AMC) of critical equipment for period of 10 year as mentioned in clause no.05 (G) of project information after successful commissioning and performance demonstration.	Bidder requests to specify list of major equipment for O&M including critical components.	No change in Tender Conditions. Bidder shall comply with tender conditions.
201	VOLUME - II PART - 2 (Schedule - III A)	Control & Monitoring	3.66 - b	38 of 82	Invertres shall have suitable communication card (Modbus TCP/IP or RS 485) for networking and SCADA integration and same shall support dual master communication. Inveters shall include all important measured and internal calculated analog values and alarm & trips signals for remote monitoring, storing and report generation purpose in SCADA system. Detailed list of above such parameters shall be provided along with their Modbus address during detailed engineering stage.	Bidder considers that Inverter shall be as per OEM type tested design. Single master facility for WMS may suffice the requirement. Pls Confirm	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
202	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.36	8 of 179	Drain valves, shut off valves, oil sampling valves and filter valves shall be provided. A ladder with hand rail shall be provided to approach Buchholz relay, PRD, etc. Ladder shall start from 100mm above gravel level to Top of the transformer tank. The ladder shall have pad lockable cover right from start to avoid unauthorized climbing in transformer charged condition and with top hand rail	Bidder understands, ladder shall be provided 100mm above tank bottom wheel. Extension of ladder below tank bottom may damage the ladder during transportation.	No change in Tender Conditions. Bidder shall comply with tender conditions.
203	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.39	8 of 179	Conductors shall be of electrolytic grade Copper / electrolytic grade Aluminum (of proven and of successfully type tested design with service warrantee of 5 years after commissioning) free from scales and burrs. Oxygen content shall be as per IS 12444.	Bidder requested for service warrantee of 2years after commissioning.	No change in Tender Conditions. Bidder shall comply with tender conditions.
204	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.59	10 of 179	For each terminal shall be brought out through bushings with suitable rated Copper Bus bars / terminal connectors of sufficient size, copper flexible jumpers, supporting insulators, and bolt holes to accommodate cable & termination and allow proper heat dissipation due to high current.	Bushings with suitable rated Copper Bus bars / **AL Busbar**/terminal connectors of sufficient size, copper flexible jumpers, supporting insulators, and bolt holes to accommodate cable & termination and allow proper heat dissipation due to high current	No change in Tender Conditions. Bidder shall comply with tender conditions.
205	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.65	11 of 179	Suitable size detachable type Gland plate of non-magnetic material shall be provided. The clear spacing of 900mm shall be provided between gland plate to terminals.	Suitable clear spacing between gland plate to terminal shall be provided as per OEM design and not limited to min 900mm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
206	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.72	12 of 179	The painting of all structures & equipment shall be considering C5-M corrosion zone as per "ISO-12944" for very high saline zone. Painting process shall be approved by the Owner.	Bidder requested to share painting procedure.	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
207	VOLUME - II PART - 2 (Schedule - III B)	Technical Parameters	5 - 9&10	18 of 179	9. Maximum Current Desity a) LV Winding - A/mm2 - 3.0 - 3.5 b) HV winding - A/mm2 - 3.0 - 3.5 10. Maximum Flux Density - wb/m2 - 1.76	current density & flux density shall be as per similar or reference Type tested Transformer	No change in Tender Conditions. Bidder shall comply with tender conditions.
208	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.8	26 of 179	33kV Sub-pooling switchboard shall consists of VCB for the Inverter transformer incomers and VCB for the 33kV transmission line to the 400/33-33kV PSS-1 33KV pooling switchgear. The number of incoming feeders shall be decided based on the block configuration adopted for the project. Space provision for future panel (one no) shall be provided. Minimum clear distances shall be provided of 2500MM at panel front, minimum 1500 mm left and right side and 1750MM at back of the panel shall be provided or clear distances recommended by OEM whichever is higher shall be provided for proper installation, panel /part replacement and O&M activities. 33kV Sub-pooling switchboard shall be provided with RCC cum PEB building.	Minimum clear distance for 33KV HT Panel shall be as per OEM recommendation only for proper installation/part replacement and O&M activity.	No change in Tender Conditions. Bidder shall comply with tender conditions.
209	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.68	34 of 179	All 33kv switchgear breaker feeders including ICOGs shall be provided with dedicated BCU or BCPU	Numerical relay shall be considered in 33KV HT Panel so BCU or BCPU not considered.	No change in Tender Conditions. Bidder shall comply with tender conditions.
210	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria and Technical requirements	3.4	59 of 179	For Other systems like, Battery bank, ACDB, and Bypass Line Transformers, Voltage Stabilizer, static switch, manual bypass switch, other necessary Protective devices and accessories shall have 1x100% configuration.	Voltage stabilizer shall be considered for UPS at SCADA room. For each Inverter stations and each Sub pooling stations UPS shall be considered with stabilizer.	Bidder shall refer Amendment -1
211	VOLUME - II PART - 2 (Schedule - III B)	Lead-acid Tubular (OPzS) battery	3.1.2	68 of 179	Battery shall be sized considering ten (10) hour load cycle. Battery sizing and cell selection shall be based on IEEE. While estimating battery capacities the following shall be considered: a) Maximum ambient temperatures & minimum site ambient temperatures b) 10% design margin c) An ageing factor of 1.25 d) 10% to 15% Future Load	Bidder understands that Battery charger along with battery bank shall be provided "33kV AIS Switchboard"	Bidder Shall Refer " Clause Number 1.0 of Volume-II Part-2 (Schedule - III B) ,Section B6 (Sheet 67 of 179)" No change in Tender Conditions. Bidder shall comply with tender conditions.
212	VOLUME - II PART - 2 (Schedule - III B)	Battery Charger	3.4.1	73 of 179	The float and boost battery charger shall be SMPS (Switch Mode Power Supply) type SMPS modules shall be hot swappable. It shall have N+1 redundancy.	Bidder understands that N+1 redundancy may not be required for battery charger.	No change in Tender Conditions. Bidder shall comply with tender conditions.
213	VOLUME - II PART - 2 (Schedule - III A)	Data to be furnished by vendor after award of contract	6 - B (i)	6 of 82	Type test certificates valid for five years for all equipment/accessories being supplied under this contract.	Bidder request GIPCL to kindly relax this requirement till 10 years from date of EPC contract. Only type tested equipment had been considered for offering. No type testing pf any equipment has been considered in offer.	Bidder shall refer Amendment -1
214	VOLUME - II PART - 2 (Schedule - III A)	DESIGN PARAMETERS	4.12	8 of 82	Cleaning - Comply with robotic module cleaning system	Bidder requested to clarification on Robot ,It is semi automatic or fully automatic. Please Confirm?	Bidder shall refer Tender clause no. 4.1 and 4.2 of Volume-II, Part-2 (A) sheet 63 of 82. No change in Tender Conditions. Bidder shall comply with tender conditions.

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215	VOLUME - II PART - 2 (Schedule - III A)	MINIMUM SYSTEM REQUIREMENTS	5.4	9 of 82	For each row a copper earthing cable / wire jumper shall be installed to interconnect all metallic parts of foundation, tracker structure and PV modules of each table.	Bidder proposed to consider flat strip earthing please confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
216	VOLUME - II PART - 2 (Schedule - III A)	DOCUMENTS / DRAWINGS REQUIRED	10.0 - ff	19 of 82	Grading analysis & levelling requirement of site as per Topo. Estimate of cut and fill quantity.	Land Grading- Bidder request GIPCL to kindly share the site Topography survey report for evacuation and working.	Indicative RE Park Topography survey report uploaded No change in Tender Conditions. Bidder shall comply with tender conditions.
217	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.28	26 of 82	Minimum ground clearance for String combiner box shall be 750mm from bottom of SCB.	Bidder suggest 500 mm ground clearance .	No change in Tender Conditions. Bidder shall comply with tender conditions.
218	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.4	31 of 82	Inverter shall be delivering/absorbing dynamically varying reactive power at POI at least up to 0.95pf lag & lead operation in a way which is conducive to maintain the POI voltage as close as possible to the nominal value. Any over-voltage arising within the GIPCL Solar Plant for complying with the above requirement, shall be taken care of by the bidder in designing of the project. Bidder shall submit QV and PQ curve of Inverter.	Bidder understands that scope is till 33kV inter-connection panel, so POI shall be till 33kV inter-connection only. Please confirm.	Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1" , "Clause no 3.6 of VOLUME - II PART-2 (Schedule-III A) (Sheet 32 of 82)", and "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS". No change in Tender Conditions. Bidder shall comply with tender conditions.
219	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.6	32 of 82	The nominal / rated output power of the Inverter at POI (Point of Interconnection i.e., KPS-II) corresponding to the design ambient temperature of 50ºC or as per CEA Guidelines / Working committee report whichever is higher shall be considered to arrive at required number of inverters for the plant / individual blocks. The Quantity of inverter shall be calculated based on the reactive power support as per CEA Regulation on technical standard for connectivity to the grid. Power factor 0.95 lag to 0.95 lead at voltage 0.95 to 1.05 per unit, temperature at 100% of active power to be maintained.	Bidder understand the scope is till 33kV inter-connection only.	Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1" , "Clause no 3.6 of VOLUME - II PART-2 (Schedule-III A) (Sheet 32 of 82)" and "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS". No change in Tender Conditions. Bidder shall comply with tender conditions.
220	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.7	32 of 82	Busbar to be used for AC/DC termination in the inverter shall be copper busbar only	Bus bar material shall be as per OEM design.	No change in Tender Conditions. Bidder shall comply with tender conditions.
221	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.4	61 of 82	Total water storage capacity shall be 6 Lakh liters for 300 MW Block (Total 12 Lakh liters for 600 MW). The storage tank shall be place above ground on RCC Foundation and Tank material shall be FRP. The detail specification of FRP material shall be decided during detail engineering.	Water storage tank capacity shall be decided during detail engineering as per sizing calculation.	It shall be decided during Detailed Engineering. No change in Tender Conditions. Bidder shall comply with tender conditions.
222	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.7	70 of 82	No shadow shall fall on PV Modules due to ESE LA structures. Appropriate care shall be taken while designing PV array layout.	Bidder requests to allow ESE LA shadow on PV Modules. Energy loss shall be calculated while Pvsyst simulation.	No change in Tender Conditions. Bidder shall comply with tender conditions.
223	ANNEXURE - 1 ELECTRICAL KEY SLD	Notes	4		Seven runs of 3CX500 sqmm cable for approx. 100MW(to be laid in park underground cable corridor)	Number of Runs and size of cable shall be as per cable sizing calculation.	No change in Tender Conditions. Bidder shall comply with tender conditions.
224	ANNEXURE - 1 ELECTRICAL KEY SLD					Incomers feeder: with PQM meter and Main ABT Meter. Bidder understands that PQM & Main ABT Meter shown shall be part of same Incomer feeder.	Bidder Shall Refer Clause Number "5.0 (c) and 4.0 of Volume-II Part-1 (Schedule-1) (Sheet 6 of 13". No change in Tender Conditions. Bidder shall comply with tender conditions.
225	ANNEXURE - 1 ELECTRICAL KEY SLD					Incomers feeder: Numerical Relay and Main ABT Meter shown with separate set of PT. Common PT shall be provided with separate cores for Numerical Relay & ABT meter.	No change in Tender Conditions. Bidder shall comply with tender conditions.
226	ANNEXURE - 1 ELECTRICAL KEY SLD					Incomers & Outgoing feeder: Relay shown with CB Control unit. Numerical Relays shall be provided so CB control unit is not applicable at 33KV AIS switchboard.	No change in Tender Conditions. Bidder shall comply with tender conditions.
227	ANNEXURE - 1 ELECTRICAL KEY SLD					Capacitor Bank feeders have been shown in 33KV AIS Switchboard Bidder requested to confirm Reactive Power compensation need to consider through Inverter or Capacitor Banks.	Bidder Shall Refer Clause Number "7.0 of Volume-II Part-1" , "Clause no 3.6 of VOLUME - II PART-2 (Schedule-III A) (Sheet 32 of 82)" and "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS". No change in Tender Conditions. Bidder shall comply with tender conditions.
228	ANNEXURE - 3 Soil Investigation_Part-2	ERT	ANNEXURE 5:	22 of 101	SOIL RESISTIVITY (ERT) AS PER IS-3043	Bidder requested to consider 50 Ohm/mts for Earthing calculation.	Bidder shall refer clause No "1.3.12 of VOLUME - II PART -1 (Schedule - I and 2) Page 5 of 13" , "Clause No 4.1 of VOLUME - II PART - 2 (Schedule - III C) Page No 13 of 100" and Amendment-1 No Change in Tender Conditions except Ammendment-1. Bidder shall comply with Tender Conditions.
229	VOLUME - II PART -1 (Schedule - I and 2)	Telemetry System	3.2	5 of 13	The required hardware and software, including laying and termination/splicing with all required connectors etc. of Communication/Fibre Optic cable to Owners' common communication panel at 33/400kV GIS Substation required for communication of Solar plant data is included in the Bidder's scope. Communication link and communication controller/Gateway used for data communication to common communication panel /LDC shall be redundant (one for normal operation and other as hot standby). If any upgradation/ modification required at FOTE, it shall be done by the bidder.	Bidder wants to clarify that Cable laying between Plant and GIS Substation shall not be in scope of bidder. End termination may be considered.	Bidder shall refer Tender Clause no. 4.1 of Volume-II, Part-1, Sheet 6 of 13. No change in Tender Conditions. Bidder shall comply with tender conditions.
230	VOLUME - II PART - 2 (Schedule - III C)	C4 - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	1.0	38 of 100	Introduction: Closed Circuit Television System (CCTV) (Each for 300 MW)	Bidder seeks clarity if common NVR Can be considered here or shall we consider 2 NVR's, 1 each for 300MW?	Bidder shall consider 1 NVR for each 300 MW. Bidder shall refer clause no:3.3, pg no: 41 of 100 of VOLUME - II PART - 2 (Schedule - III C). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
231	VOLUME - II PART - 2 (Schedule - III C)	C4 - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	1.2	38 of 100	The location of the Fixed or PTZ (Pan Tilt Zoom) or combination shall be as follows a) Inverter Stations b) SCADA, Monitoring and store room buildings c) 33kV Switchgear Sheds d) All Entry/Exit Gates e) Security/Guard room f) All gates for entry CCTV Surveillance of periphery of project is recommended. Number of cameras shall be selected based on it.	Bidder seeks clarity if Camera's mounted on Street Lighting poles can be considered for periphery.	Bidder shall refer clause no: 1.17, pg no: 40 of 100 of VOLUME - II PART - 2 (Schedule - III C). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
232	VOLUME - II PART - 2 (Schedule - III C)	C4 - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	1.0	38 of 100	Introduction: Closed Circuit Television System (CCTV) (Each for 300 MW)	Bidder seeks clarity if same network can be used for SCADA and CCTV?	Bidder shall refer clause no: 1.3, pg no: 38 of 100 of VOLUME - II PART - 2 (Schedule - III C). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
233	VOLUME - II PART - 2 (Schedule - III C)	C4 - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	1.18	40 of 100	CCTV system must be feed from the critical loads supply (UPS).	Bidder wants to clarify that CCTV Considered shall be powered up with UPS Supply available at Main Control room and Inverter substations correspondingly.	Bidder's understanding is correct. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
234	VOLUME - II PART - 2 (Schedule - III C)	C3 - FIRE PROTECTION, DETECTION & ALARM SYSTEM	1.0	21 of 100	Fire Protection, Detection & Alarm System (Each for 300 MW)	Bidder requests to consider Conventional type Fire Alarm Panels at Main Control Room and Inverter stations.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.

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235	VOLUME - II PART - 2 (Schedule - III C)	C3 - FIRE PROTECTION, DETECTION & ALARM SYSTEM	1.0	21 of 100	Fire Protection, Detection & Alarm System (Each for 300 MW)	Bidder requests to consider Conventional type Fire Alarm Panels at Inverter stations having Potential Free contacts for communication to Local Controller/ SCADA.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
236	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.1 - a	105 of 179	This Section specifies the minimum requirements for design, engineering, installation, and testing of the PV Plant Scada System. Bidder to note that for each 300 MW (AC) block one dedicated SCADA system is required, which shall be placed in "PV Plant SCADA, Monitoring and Spare room" building.	Bidder Understands that There will be Two Control Rooms, each for 300MW. So should common SCADA be considered for the Plant or separate SCADA for 300MW each (2x300 MW - 2 SCADA) be considered? However, the Tender architecture shared with RFP shows common SCADA.	Bidder shall provide separate SCADA for 300 MW each, However, PPC shall be common for both plots which shall be placed at PSS-1 substation. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
237	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE			1 of 1		As per the Tender Architecture shared with RFP, Understand that 2 Slave PPC's are to be considered. Master PPC shall be Integrated to SCADA.	Bidder shall refer clause no: 1.13 - e, pg no: 107 of 179 and clause no: 1.24, 1.25 and 1.26 pg no: 109 of 179 of VOLUME - II PART - 2 (Schedule - III B). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
238	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.4	106 of 179	A common, centralized, Supervisory Control and Data Acquisition System (SCADA) is envisaged for providing control and monitoring functions related to PV solar plant, Electrical system shall be envisaged	Can we consider Decentralized architecture based IOT Solution for SCADA?	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
239	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.1 - b	105 of 179	The SCADA includes all the software, hardware, wiring, servers, infrastructures, Gateway, Networking Equipment, HMI, Laser Printer etc., required to provide the monitoring, control and management capabilities described in this section. The provided system shall include a Graphical User Interface (GUI) for display and representation of data. The Scada must be permanently connected to the internet and the software platform shall have the ability to be accessed remotely and locally with an HMI machine. The Scada hardware infrastructures shall be in the Control Room along with all required supporting equipment. Communication equipment installed shall be interoperable, to allow seamless integration between different vendors.	Bidder requests clarity if any infrastructure for IT/ Cybersecurity is to be considered? Please share details of components required.	Bidder shall comply to CEA regulations and WRLD requirement for cyber security, for this bidder shall refer to tender for better clarity. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
240	VOLUME – I SECTION – 4	Survival: Expiration of Indemnit	17.6	94 OF 105	The provision of this Clause 17 shall survive Take Over or the termination of this Contract; provided that neither Party shall have any indemnity obligations pursuant to this Clause 17 for any claim arising out of or resulting from events or circumstances occurring after the termination of this Contract; and provided further that neither Party shall have any indemnity obligation pursuant to this Clause 17 unless notice of any such claim for indemnity by either Party is received by the indemnifying Party prior to the date that is three (3) years after the expiration of the Warranty Period.	The clause says that the provision of Indemnity shall survive after take over or termination of the contract, provided neither party have any indemnity obligations a) for any claim arising out of or resulting from events or circumstances occurring after the termination of this contract. b) Unless notice of any such claim for indemnity by either Party is received by the indemnifying Party prior to the date that is three (3) years after the expiration of the Warranty Period. Please clarify the provision . As per our understanding, the Indemnity provision under Clause 17 shall not survive for an event/ claim that arose on account of (a) and (b) above after Take Over or Termination.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
241	VOLUME 1 Section 6 (APPENDICES)	APPENDIX-31	I - ii	57 OF 70	i) OEM/Sub-Vendor has to be a 'Class-I local supplier' as defined under Public Procurement (Preference to Make in India) Order, 2017 issued by Department for promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce and Industry, Government of India vide order dated 15/06/2017, its revision dated 16/09/2020 (PPP-MII Order) read in conjunction with 'Public Procurement (Preference to Make in India) to provide for Purchase Preference (linked with local content) in respect of Power Sector' order dated 16/11/2021 issued by Ministry of Power (MoP Order) and subsequent modifications/ amendments if any. Presently, the local content requirement to categorize a supplier as 'Class-I local supplier' is minimum 60%. ii) OEM/Sub-Vendor who are not 'Class-I local supplier' shall not be eligible to bid.	Kindly relax the 'Class-I local supplier' restrictions for Inveters as only ABB is falls in the criteria, rest does not comply with this restriction.	Bidder shall refer Amendment -1
242	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 1	3 of 34	Inverters 1. ABB (String) 2. Sungrow 3. Ingeteam 4. SMA 5. TMEIC/ TOSHIBA 6. Schneider 7. Huawei (String) 8. Sineng	Due to local content "Class-I local supplier" restrictions, pls allow ABB central inverters for better optimization.	Bidder shall refer Amendment -1
243	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 2	3 of 34	String Combiner Box 1. Trinity Touch 2. Solaris 3. ABB 4. Hensel	Please allow "VNT Vrinda Nano Technologies" in approved make for String Combiner Box	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
244	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 13	5 of 34	HT switchgear & panel (33kV) 1. ABB 2. Sterling 3. Siemens 4. Schneider 5. GE 6. L&T 7. BHEL (Bhopal) 8. Trisquare 9. Technocraft	Please allow "Tricolite" in approved make.	No change in Tender Conditions. Bidder shall comply with tender conditions.
245	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 21	6 of 34	Auxiliary Transformers 1. KAPPA 2. Voltech 3. TESLA 4. DANISH 5. CGL 6. Voltamp 7. Bharat BIJLEE 8. ABB 9. Inverter OEM Approved make	Please allow "Kalpa Electrikal" in approved make.	Bidder shall refer Amendment -1

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
246	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 24	7 of 34	Battery Charger 1. Amararaja 2. Caldyne 3. HBL 4. Statcon 5. Dubas 6. Chhabi 7. Emerson 8. Chloride 9. Hitahchi 10. HI-REL 11. Mass-Tech Control 12. Hoppecke Batterien 13. GMBH & CO KG 14. Saft india	Please allow "DHEN" in approved make.	No change in Tender Conditions. Bidder shall comply with tender conditions.
	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 25	7 of 34	ESE Type Lightning Arrestor 1. Jeff Techno Solution 2. Storm master 3. OBLUM 4. LAMCO 5. GE 6. CGL 7. ELPRO 8. Sabo System 9. Indelec Prevectron 10. Nimbus 11. Dmsgi	Please allow "DHEN" in approved make.	No change in Tender Conditions. Bidder shall comply with tender conditions.
	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 27	8 of 34	Earthing Rod & Back filling compound 1. Ashlok 2. ERICO 3. JEF Techno	Please allow "DHEN" in approved make.	No change in Tender Conditions. Bidder shall comply with tender conditions.
247	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 28	8 of 34	SCADA 1. ABB 2. Rockwell 3. Siemens 4. Schneider 5. Honeywell 6. Emerson automation solution intelligent platforms 7. Phoenix Contact Electronics GmbH (Germany)	Please allow below mentioned vendors in approved make. 1. Adaptive, 2. Armax, 3. CES Neosilica	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
248	VOLUME - II PART - 3 (Schedule - IV to VI)	Approved Vendor List	1 - 32	8 of 34	CCTV System 1. Honeywell 2. Hikvision 3. Bosch 4. Sony 5. Milestone	Please allow "CP Plus" in approved make.	Bidder shall refer Note - iii, pg.no. 14 of 34 of VOLUME - II PART - 3 (Schedule - IV to VI). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
249	Vol. 1 & Section 1	TABLE A: IMPORTANT DATES	2.0. - xi.	4 OF 13	Schedule date for Commissioning of 600 MW Projects : 15 Months from the date of issue of LoI	Considering the capacity of the project bidder request GIPCL to extent the timeline for commissioning as 22 months from the date of issue of LoI	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
250	Vol. 1 & Section 1	TABLE A: IMPORTANT DATES	2.0. - xi.	4 OF 13	Schedule date for Commissioning of 600 MW Projects : 15 Months from the date of issue of LoI	Bidder understands that the land acquisition for the project is in employer's scope. Please confirm that the site shall be granted to the contractor immediately on the issue of LOI without any encumbrance. In case of any delay in the grant of the site to the contractor then due EOT and compensation for the additional cost would be granted by the employer.	The Land is already in the Possession of GIPCL. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
251	Vol. 1 & Section 1	TABLE B: IMPORTANT AMOUNTS	2.0. - iii.	6 OF 13	Security Deposit cum Performance Bank Guarantee (PBG) : The Contractor shall furnish Security Deposit (SD) cum Performance Bank Guarantee (PBG) equivalent to 10% (ten percent) of the EPC Contract Price within 01 month after issuance of LoI. The validity period of PBG should be for a total period up to 30 months from the date of LoI or till the date of successful completion of PG test whichever is later; if required, the PBG shall have to be extended for further 3 months beyond the due date of successful completion of PG test.	In light of the Ministry of Finance Office Memorandum dated 30th December 2021 bearing reference No.F.9/4/2020-PPD, bidder request GIPCL to modify the Security Deposit cum Performance Bank Guarantee (PBG) as **equivalent to 3% (three percent) of the EPC Contract Price.**	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
252	Vol. 1 & Section 1	TABLE B: IMPORTANT AMOUNTS	2.0. - iv.	6 OF 13	O&M Bank Guarantee (O&M BG) : 5% of EPC Contract Price, to be submitted upon completion and acceptance of Performance Guarantee Test as per Clause No. xiv of Table A (Important Dates) above for a period of three (3) years, to the 90 days beyond completion of the O&M Period mentioned in Clause No. xv of Table A (Important Dates) above. This O&M BG shall cover the risk against extended warrantee for equipment up to O&M Period and recovery towards shortfall in NEETG during O&M Period.The O&M Bank Guarantee shall be valid 90 days beyond the O&M Period.	Bidder request GIPCL to modify the O&M Bank Guarantee (O&M BG) as equivalent to 20% (twenty percent) of the O&M Contract Price.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
253	Vol. 1 & Section 4	Sourcing	3.4.1 - a	20 OF 105	.....The Contractor shall supply the items as per the make listed in approved manufacturers/Vendor List given in Tender document. The final make selected out of the recommended makes listed provided in Vendor List shall be subject to the Owner's approval during detailed Engineering.....	Bidder request to propose the reputed manufactures / vendor list for the supply items. Please accept.	Bidder shall refer Note in Vol-II , Part 3, sheet 14 of 34.
254	Vol. 1 & Section 4	Indoor Storage Facilities	3.9.3 - a	29 OF 105	Closed storage facility for PV modules and inverters, SCADA equipment. The facility shall be totally enclosed with adequate storage capacity capable of providing safety from weather elements, well ventilated, energy conserving, fireproof, secure against theft and vandalism and situated and constructed to prevent flooding. Drainage shall be provided to intercept and divert storm or surface water. Stored equipment and materials shall be placed on pallets or shoring to permit air circulation under the stored item. Access doors shall be adequate to accommodate the movement and handling of materials and equipment and equipped with secure locks.	Considering the capacity of the project bidder request GIPCL to allow open storage for all the equipment including PV modules which would be packed & closed with the carton boxes and inverters. Bidder can ensure that based on the experience from previous projects proper storage protocols will be followed for the open storage of PV modules and all other equipments as per the industry standards & practices.	Bidder shall refer Amendment -1
255	Vol. 1 & Section 4	Real Estate	3.13.1.1	35 OF 105	Contractor shall be responsible for providing accommodation at the project site for the labour and its staff required for the execution of the Contract. The required land shall be arranged by the Contractor at their cost and Owner will not be providing any land.	Bidder shall be responsible for providing accommodation for the labours but bidder request GIPCL to provide the required land near the project site for the development of labour colony on temporary basis during the project execution.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
256	Vol. 1 & Section 4	Rights of Way and Facilities	3.31.1	46 OF 105	The Contractor shall bear all costs and charges for special or temporary rights-of-way required by him for access to the Site. The Contractor shall also provide, at his own cost, any additional facilities outside the Site required by him for the purposes of the Works or Services. Contractor shall carry out a detailed route survey for assessment of transportation of heavy and large equipment to Site.	Development of access can be made by the contractor if required, but as the site area is identified by employer, bidder request the employer to take the responsibility of right of way for the access to site if any. Bidder proposes that the Employer shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, and for providing possession of and access to all other areas reasonably required for the proper execution of the Contract, including all requisite rights of way.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
257	Vol. 1 & Section 4	Extension of Time for Completion	9.3	68 OF 105	Extension of Time for Completion……	Bidder request GIPCL to provide compensation for the indirect costs, idling machinery and the additional expenses due to such EOT, as for the reason as mentioned under clause 9.3	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
258	Vol. 1 & Section 4	Suspension of Supply of Goods/ Work	9.5	69 OF 105	The Owner reserves the right to suspend and reinstate execution of the whole or any part of the work without invalidating the provisions of the Contract. Orders for suspension or reinstatement of the work will be issued by the Owner to the Contractor in writing. The time for completion of the work will be extended for a period equal to duration of the suspension and no financial compensation will be paid for the above suspension. No idle labour payments will be made on any account. The Owner however shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the contractor or his sub-contractor or any agencies outside the control of the Owner.	Bidder request GIPCL to provide financial compensation (for indirect costs, idling charges etc.) also if the cause of such suspension is not attributable to the bidder or not due to some default on the part of the bidder.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
259	Vol. 1 & Section 4	Resumption of Supply of Goods/ Work	9.7	69 OF 105	After receipt of permission or of an instruction to proceed, the Contractor shall, after notice to the Owner, and together with the Owner examine the Works and Materials affected by the suspension. The Contractor shall make good any deterioration or defect in or loss of the Works or Materials, which has occurred during the suspension. The Work or supply of Goods after resumption shall be started by the Contractor within 7 (seven) Days of receipt of permission or an instruction to proceed.	Bidder request GIPCL to provide financial compensation to make good any deterioration or defect in or loss of the Works or Materials, which has occurred during the suspension, if the cause of such suspension is not attributable to the bidder or not due to default on the part of the bidder or his sub-contractor. The Work or supply of Goods after resumption shall be started by the Contractor within reasonable timeline which could be accepted mutually between the contractor and GIPCL after accessing the damages or disruptions caused due to such suspension after receipt of permission or an instruction to proceed.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
260	Vol. 1 & Section 4	Rejection	10.5	71 OF 105	In case the result of Operational Performance Tests, after all the remedial measures and modifications have been carried out by Contractor, are below the levels set forth in the Technical Specification, the Contractor shall at his risk and Cost take all remedial and rectification measures to bring the Solar Plant performance to the Guaranteed performance level failing which the Owner shall have the right in its sole discretion to reject the Solar Plant or to first attempt to rectify the Solar Plant at the risk and cost of the Contractor so as to get the Guaranteed performance and on determining that such attempt is unsuccessful to reject the Solar Plant.....	Bidder request to clearly mention the procedure and criteria for the Operational Performance Test or the conditions which triggers to rejection of the plant as the criteria is not clear in the tender document or bidder request to delete the clause.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
261	Vol. 1 & Section 4	Liquidated Damages for Underperformance:	11.3	73 OF 105	……..In case the Contractor is successful in 3rd attempt then 1% of the EPC Contract Price (including taxes & duties) deducted after unsuccessful 2nd attempt shall be returned. However, if the Contractor fails in the 3rd attempt as well then the penalty deducted at the time of 2nd unsuccessful attempt shall not be returned.	Bidder understands that if the bidder fails to achieve the PR of 0.75 after the 3rd attempt also 1% of the EPC Contract Price (including taxes & duties) deducted after unsuccessful 2nd attempt shall not be returned and the plant can be accepted. There is no clause for rejection of the plant after 3rd unsuccessful PR attempt. If it so, then the bidder request to delete the clause 10.5 Rejection.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
262	Vol. 1 & Section 4	Warranty Period	12.2.1	74 OF 105	……....Power Conditioning Unit (PCU)/Inverter shall be warranted for the period of minimum 8 (eight) years from the date of commencement of the O&M……	Bidder request GIPCL to modify the warranty period for Power Conditioning Unit (PCU)/Inverter as 5 (five) years from the date of Commissioning of the plant.	Bidder shall refer Amendment -1
263	Vol. 1 & Section 4	FORCE MAJEURE	20.1 - b	95 OF 105	An act of war, (whether declared or undeclared) hostilities invasion, armed conflict or an act of foreign enemies, blockade, embargo, revolution, military action, or sabotage, quarantines.	Bidder requests to include the following in the definition of Force Majeure- "Epidemic , pandemic, quarantine restrictions, lockdowns imposed by the appropriate Government"	Bidder shall refer Amendment -1
264	Vol. 1 & Section 4	FINANCING	21.2 - a,b	98 OF 105	a) Shall comply with the applicable sourcing rules and environmental requirements of the Financing Parties. b) Acknowledges that the Financing Parties may comment on the Contract and the terms and conditions thereof and shall negotiate in good faith with Owner and / or the Financing Parties regarding changes requested by the Financing Parties.	Bidder request to specify the sourcing rules and the environmental requirements of the Financing Parties, as a part of the tender itself. No other terms & condition, scope, additional requirement can be imposed upon the Bidder back to back from any other party. Kindly delete this clause.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
265	Vol. 1 & Section 4	FINANCING	21.4	99 OF 105	The Contractor agrees, upon Lenders' request, to enter into a Direct Agreement with the Lenders in the form reasonably required by the Lenders.	Any agreement, terms & conditions apart from the Tender Document shall not be enforced on the Contractor, until the same has been mutually discussed and agreed upon. Kindly delete the clause.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
266	Vol. 1 & Section 4	ANNEXURE 1	5	104 OF 105	MNRE Clearance : Contractor	Bidder shall take MNRE Clearance only limited to the EPC scope of work. Any project related approvals/ clearances required to be taken from MNRE shall be in employer's scope. Kindly accept.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
267	Vol. 1 & Section 4	ANNEXURE 1	7	104 OF 105	Tree Cutting Permission Contractor	Bidder request to modify the clause as the forest clearance/tree cutting permission to be under employer's scope.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
268	Vol. 1 & Section 5	SOLAR PV MODULES – Performance Determination	3.0	3 OF 11	……..Module shall also be declared as defective, if its output power is derated more than it's deemed Wp capacity taking consideration of yearly degradation. However, the responsibility for measuring the PV module performance output through the use of reputed make PV Analyzer etc, shall lie with the bidder.	After the performance determination if the modules supplied by the owner is found to be defective then GIPCL shall: 1. replace of the defective modules 2. reimburse the cost of testing of Modules 3. pay the workmanship cost of removal of defective Module and Installation of replacement Modules. Kindly Accept.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
269	Vol. 1 & Section 5	DETIALS ON SOLAR PV MODULES	4.00	3 OF 11	GIPCL will try to provide the exact PV Module characteristics including datasheet and other documents by 5 to 7 months after the award of LoI to BOS Bidder. There might be slight changes in the dimensions, weight and Isc as per the actual PV Module compared to the inputs provided by GIPCL in the Tender Document. BOS bidder to suitably design the BOS system to consider such minor changes.	Bidder requests GIPCL to provide the exact PV Module characteristics including datasheet and other documents by the award of LoI to BOS Bidder.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
270	Vol. 1 & Section 5	Free Issue of PV Modules to the BOS Contractor	7.0.	4 OF 11	Owner shall issue the Solar PV Modules (as free issue) to the successful Bidder for the purpose of installation in the Solar Plant. The Solar PV Modules shall be handed over to the Bidder on "FOR-Site" basis. The Owner shall issue a separate Authorisation Letter to the Bidder to enable them to take physical delivery of the PV Modules. It shall be the responsibility of the Bidder for receipt, unloading at site, storage, installation, testing and commissioning of Solar PV Modules. Accordingly, the successful Bidder will have to execute an Indemnity Bond in favour of the Owner in the form acceptable to Owner for keeping the equipment in safe custody and to utilise the same exclusively for the purpose of the said Contract.	Bidder request GIPCL to mention the timeline for the free issue of Solar PV modules and to introduce a clause for In case of any delay in supply of the modules then due EOT and compensation for the indirect costs and the additional expenses due to such EOT would be granted by the employer.	Bidder shall refer clause no. 4.00 of Vol. 1 Section-5. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
271	General					Bidder request GIPCL to provide land required to set up stores at/near the project site.	GIPCL may provide land if available. However it is recommended to store the material within plant boundary only. No change in Tender Conditions. Bidder shall comply with tender conditions.
272	Vol. 1 & Section 5	TERMS OF PAYMENT: For Supply	A-1	7 OF 11	Advance Payment on: 15% of Supply Price excluding taxes & duties (i) Acceptance of LoI (ii) Submission of Advance Bank Guarantee of equivalent amount (iii) Submission of Performance Bank Guarantee (validity of minimum 30 months) -10% of the total EPC Contract Price (iv) Submission of detailed Project execution schedule.	Bidder assumes that the mentioned advance payment is of interest free. Please confirm.	The Advance Payment is Interest Free. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
273	Vol. 1 & Section 5	TERMS OF PAYMENT: Payment towards Installation Services	B-1	8 OF 11	Mobilization Advance Payment: Against mobilization at site and submission of BG of equivalent amount: 10 % of Contract Value of Services (Excluding taxes & duties)	Bidder assumes that the mentioned advance payment is of interest free. Please confirm.	The Advance Payment is Interest Free. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
274	Vol. 1 & Section 5	TERMS OF PAYMENT:Civil Works	C-1	9 OF 11	Mobilization Advance Payment: Against mobilization at site and submission of BG of equivalent amount. : 10 % of Contract Value of Civil Works (Excluding taxes & duties)	Bidder assumes that the mentioned advance payment is of interest free. Please confirm.	The Advance Payment is Interest Free. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
275	Vol. 1 & Section 5	TERMS OF PAYMENT	(A) For Supply	7 OF 11	1 Advance Payment on: 15% of Supply Price excluding taxes & duties (i) Acceptance of LoI (ii) Submission of Advance Bank Guarantee of equivalent amount (iii) Submission of Performance Bank Guarantee (validity of minimum 30 months) -10% of the total EPC Contract Price (iv) Submission of detailed Project execution schedule. 2 Supply of equipment for BoS on pro-rata basis as per mutually agreed schedule on sequential basis only to the Project Site. : 55% of Supply Price 3 Receipt of equipment at site on pro-rata basis and physical verification and certification by the Project Manager/Owner's Representative for the equipment received and stored at site : 10% of Supply Price 4 On Completion of installation of equipment for each block of 20 MW (AC). :10% of Supply Price 5 Upon achieving Commissioning / COD of the Plant : 7.5% of Supply Price 6 Upon Successful Performance of Operational Acceptance Test (OAT) and completion of Punch points. : 2.5% of Supply Price	Bidder requests the modify the payment milestones as below to support better cash flow for the contractor: 1. Advance (Interest free): 15% against acceptance of LOI, submission of ABG of equivalent amount, submission of PBG, submission of detailed project execution schedule. 2.Seventy Five Percent (75%) of Ex-works price component of the Contract price for each identified equipment upon dispatch of equipment from Manufacturer Works 3. Five Percent (7.5%) of Ex-works price Component of the contract price on successful commissioning of part capacity on acceptance/certification by the Project Manager. 4.Five Percent (2.5%) of Ex-works price component of the Contract price on Operational Acceptance	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
276	VOLUME - II PART -1 (Schedule - I and 2)	Power Evacuation System	2.1	5 of 13	Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1) on any 33KV Bus / Section as per system requirement to be finalized during detail engineering without any extra cost to the Owner.	Bidder request to introduce a clause for if in case any delay happens in the completion of terminal 33/400kV PSS-1(Pooling station-1) and the contractor is ready to commission the plant, then the status of deemed commissioning to be provided to the contractor and all the payments related to commissioning to be released.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
277	VOLUME - II PART - 3 (Schedule - IV to VI)	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	4 - J	30 of 34	In case Bidder is not able to achieve the corrected targeted generation then the penalty @ Rs. 2.73/kWh shall be applicable (Plus GST).	Kindly add: maximum liability of the Contractor toward Liquidated damages for ANNUAL TARGETED GENERATION shall be capped at 5% of the EPC Contract Value.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
278	VOLUME - II PART - 3 (Schedule - IV to VI)	PART A: OPERATIONAL ACCEPTANCE TEST (OAT) PROCEDURE	5.1	27 of 34	Performance Ratio (PR) = YA / YR	Please accept/clarify. *Performance Ratio Actual (PR_{Actual}) = (Y_A / Y_R).....(1)* *Where,* *YA = Eac / PNom* *YR = IR Site/ IR STC* *25 ° C Performance Ratio (PR 25 ° C) = (PR_{Actual} / $C_{k,25\,c}$) as per IEC 61724-1:2021 .... (2)* $C_{k,25\,c} = 1 + \frac{\gamma}{100} \times (T_{mod,k} - 25^{\circ}C)$	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
279	VOLUME - II PART - 3 (Schedule - IV to VI)	PART A: OPERATIONAL ACCEPTANCE TEST (OAT) PROCEDURE	5.1	28 of 34	……YR = Reference yield calculated as the product of the average insolation of all the pyranometers on the plane of the collector (i.e., PV modules) in kWh/m2 during the testing period and the installed DC capacity of the plant in kW….	As per IEC for 600 MW AC capacity plant, minimum 6 nos of pyranometer are to be maintained to calculate average radiation to capture the variation of radiation between the blocks/plots/DC field for successful PR & PG test. Yr : average of all pyranometers installed	Bidder shall refer Tender clause no. 3 of Volume-II, Part-3, Sheet 27 of 34. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
280	VOLUME - II PART - 3 (Schedule - IV to VI)	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	4	29 of 34	.....Following factors may be noted for computing the PR and Targeted Generation Test: a) Effect due to variation in annual insolation shall only be considered for computing the PR/Targeted Generation. b) Effect due to variation of meteorological parameters e.g., ambient temperature, module temperature, wind speed, humidity etc. shall not be considered.	Following factors shall be considered while computing the "Target Generation" i) Effect due to variation in annual insolation i.e. (GTI) Global Tilted radiation at Plane of Array (PoA)shall only be considered for computing the PR/Targeted Generation. ii) **Effect of module temperature correction to be considered aprt from of (GTI)Global Tilted radiation at Plane of Array (PoA)** Reason : Generation is based on tilted radiation on plane of array and temperature variation to be allowed to correct as target generation is estimated considering an estimated temperature only	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
281	VOLUME – I & SECTION – 2	GENERAL INSTRUCTIONS	1.8.	1 OF 7	Bidders shall deploy the latest state-of-the-art technology and must ensure that the goods supplied are new, unused and of most recent or current models and incorporate all recent improvements in design and materials for the implementation of the Project.	Bidder seeks clarity on the specifications of the works (instead of arbitrary standards such as "recent/current/latest state-of-the art technology").	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
282	VOLUME – I & SECTION – 4	Priority of Documents	1.7	9 OF 105	……..In the event of any conflict between the documents constituting the contract documents, the documents defining the Contract shall take the following order of precedence…….	Bidder request to clarify the order of priority of documents.	Bidder shall refer Tender clause no. 1.7 of Volume-1, Section-4. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
283	VOLUME – I & SECTION – 4	Priority of Documents	1.7	10 OF 105	……In the event of any ambiguity or conflict between any of the foregoing Contract Documents, the Contractor shall, be deemed to have clarified from the Owner all such ambiguities or conflicts, the most stringent requirement shall govern; decision of the Owner shall always be final & binding on the Bidder/Successful bidder. No extra claims shall be allowed on this account. The order of precedence of the foregoing documents shall be the same as listed herein above.	Bidder seeks that the decision of the Employer shall not be final. Any dispute in this regard shall be subject to the dispute resolution process	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
284	VOLUME – I & SECTION – 4	Contract Co-ordination and Interface	1.13.2	12 OF 105	The Contractor, with whom any of above Contracts are entered into by the Owner, shall be responsible for effective co-ordination and interfacing of all his contracting activities and obligations under the Contract with the activities and obligations of the Other Contractors in a seamless manner, irrespective of whether the same is specifically detailed in such Contracts, to ensure that the Guaranteed Time Schedule and Performance Guarantees set forth in the Contracts are properly fulfilled in a timely manner by all such Other Contractors.	Bidder seeks that if there is a delay on part of other contractors impacts the activity and progress of the Works of the Bidder, the Bidder shall be entitled to due extension of time and financial compensation for the same.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
285	VOLUME – I & SECTION – 4	Assignment	1.14.3	13 OF 105	The Owner reserves the right, without the prior consent of the Contractor, assign to any Person any benefit of or obligation under the Contract in whole or in part. However, the Owner can assign to its parent companies or subsidiary companies without prior permission of the Contractor. Such assignment shall not relieve the Owner from any of its obligations, duties or responsibilities under the Contract.	Bidder seeks that the owner shall not assign without the prior consent of the contractor in writing however such assignment shall not increase the liabilities and reduce the rights of the contractor. (ideally any assignment invoked by the client has to be with knowledge of Contractor).	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
286	VOLUME – I & SECTION – 4	Permits, Licences or Approvals	2.2.2	13 OF 105	The Owner's assistance in applying for Permits, licenses or approvals (for which the Contractor is responsible under the Contract) is not obligatory and the extent of such assistance shall be at the sole discretion and convenience of the Owner. In any case, the Contractor shall be responsible for applying and obtaining all the Permits, licenses or approvals as required to be obtained by Contractor for carrying out and completion of the Works and operation of the Plant, in time as per the Schedule agreed in the Contract irrespective of the manner, outcome and extent of assistance from the Owner. All the necessary fees and any incidental charges required to be.....	kindly provide the clarity on the permits, approvals, and licenses to be applied on behalf of owner by Contractor.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
287	VOLUME – I & SECTION – 4	Sourcing	3.4.1- a	20 OF 105	……Wherever the make is not specified for any other items, the contractor shall submit credential for vendors for relevant items / equipment, out of which Owner shall decide acceptance of vendor based on review of credentials. This shall have no price implication. Owner reserves the right to reject the proposed vendor without assigning any reason.....	Bidder seeks that the owner shall promptly communicate the approval or rejection of the vendor.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
288	VOLUME – I & SECTION – 4	Co-ordination with Owner	3.4.2 - C	21 OF 105	Since the Contractor shall co-ordinate and follow up with Owner and Other Contractors, except as may be expressly excused in the Contract including Specification, no delay or failure to perform on the part of Owner (or its vendors, Other Contractors and I or sub-suppliers) shall excuse Contractor from the timely performance of its obligations under the Contract.	Bidder seeks that if there is any delay by the Owner or other contractors, the contractor shall be entitled to due extension of time and costs due to such delay	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
289	VOLUME – I & SECTION – 4	Suspension of Supply of Goods/ Work	9.5	69 OF 105	The Owner reserves the right to suspend and reinstate execution of the whole or any part of the work without invalidating the provisions of the Contract. Orders for suspension or reinstatement of the work will be issued by the Owner to the Contractor in writing. The time for completion of the work will be extended for a period equal to duration of the suspension and no financial compensation will be paid for the above suspension. No idle labour payments will be made on any account. The Owner however shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the contractor or his sub-contractor or any agencies outside the control of the Owner.	Bidder seeks that if the suspension is not due to contractor's default, then the contractor shall be entitled to due extension of time and costs	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
290	VOLUME – I & SECTION – 4	LIQUIDATED DAMAGES	11	72 OF 105	LIQUIDATED DAMAGES……..	Bidder seeks that liquidated damages for delay, underperformance, for failure to meet performance guarantees etc. everything put together shall not exceed 10% of the EPC Contract price	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
291	VOLUME – I & SECTION – 4	WARRANTIES	12.2.3	75 OF 105	If any defects not remedied within a reasonable time, the GIPCL may proceed to do work at the Contractor's risk and cost, but without prejudice to other rights, which the GIPCL may have against the Contractor in respect of such defects.	Kindly provide clarity on the time within which the defects are to be remedied. Also, bidder seeks for deletion of "but without prejudice to other rights, which the GIPCL may have against the Contractor in respect of such defects."	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
292	VOLUME – I & SECTION – 4	CONTRACT PRICE AND PAYMENT	13.1.4	76 OF 105	The Contractor shall pay all taxes, duties and levies in consequence of his obligations under the Contract, and the Contract Price shall not be adjusted for such Costs, taxes, duties and levies.	There seems to be a contradiction in the provisions of the contract. Please confirm that statutory variation will be provided when there is statutory variation in taxes and duties.	Bidder shall Refer Tender clause no. 3.18 of GENERAL CONDITIONS OF CONTRACT (GCC). No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
293	VOLUME – I & SECTION – 4	Deductions from Contractor's Bills/Payments Withheld	13.7.5	82 OF 105	Any payment due to Owner by the Contractor and remaining unpaid beyond the stipulated date shall be liable to interest payment at the rate of 1% (one percentage) point above the short term Prime Lending Rate of State Bank of India from the date of due to Owner to the date of receipt of dues from Contractor by Owner.	Bidder requests for deletion of this sub-clause	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
294	VOLUME – I & SECTION – 4	Payment after Termination	15.3.1	88 OF 105	After termination under clause no. 15.2 above, the Contractor shall not be entitled to any further payment under the Contract, except that, if Owner completes the Plant and the costs of completion are less than the Contract Price, the Owner shall pay Contractor an amount properly allocable to Services fully performed by Contractor prior to termination for which payment was not made to Contractor or a Sub-contractor, upon completion of the Plant by owner.	Bidder seeks for payment after termination for the works completed by the contractor even if the plant is not completed by the owner	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
295	VOLUME – I & SECTION – 4	Payment after Termination	15.3.2	88 OF 105	The Owner shall be entitled to recover from the Contractor the extra costs, if any, of completing the Works. In addition, Owner shall be entitled to exercise any rights or remedies available to Owner hereunder or at law or in equity.	Bidder seeks that the owner shall either be entitled to exercise any rights or remedies available to Owner hereunder or at law or in equity only and shall not be entitled to recover from the contractor the extra costs.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
296	VOLUME – I & SECTION – 4	FORCE MAJEURE	20	95 OF 105		Would the contractor would be entitle for costs incurred against the sub-contractor for performing an obligations during the force majeure events? Please clarify	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
297	VOLUME – I & SECTION – 5	Right of Interpretation:	11.0.	5 OF 11	The work shall be performed under the supervision of the Project Manager. The scope of the duties of the Project Manager pursuant to the Contract, will include but not be limited to the following: (a) Interpretation of all the terms and conditions of these Tender documents and specifications shall be with GIPCL and binding to the Contractor. (b) Review and interpretation of all the Contractor's drawing, engineering data, etc. and decision of GIPCL in this regard shall be binding to the Contractor.	Bidder seeks for deletion of these sub-clauses	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
298	VOLUME – I & SECTION – 4	Work and Safety Regulations	3.38.19	51 OF 105	The Contractor shall also be responsible for payment of sum as indicated below: a Upon 1st Fatal Accident 1% of the Contract price as awarded, limited to Rs. 50,00,000/- b Upon 2nd Fatal Accident 1.5% of the Contract price as awarded, limited to Rs. 75,00,000/- c Upon 3rd Fatal Accident 2% of the Contract price as awarded, limited to Rs. 1,00,00,000/- d Re-occurrence of Fatal Accident even after 3rd Fatal Accident 2% of the Contract price as awarded, limited to Rs. 1,00,00,000/- per fatal accident For the purpose of calculation of the aforesaid amounts, 'Contract price, as awarded', shall mean the total Contract Price for both Supply of Goods and Works for the facilities (600 MW Solar PV Plant) as per the originally awarded Contract/ Letter of Intent (LoI) (where contract has not been signed) exclusive of any taxes & duties.	Bidder will make all his good efforts to complete the entire project without any fatal accidents, eventhough bidder request to reduce the penalty for the fatal accident as the mentioned penalty is high.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
299	VOLUME - II PART -1 (Schedule - I and 2)	GENERAL REQUIREMENTS	1.3.12	5 of 13	The site study carried out by Owner viz., topographical survey, geotechnical survey, hydrology, ERT etc. shall be for information to Bidder. Bidder shall carry out their own study during detailed engineering. Such studies and activities shall be part of Bidder's scope. Bidder is responsible for all necessary studies and activities for successful completion of project. Bidder to make necessary arrangement for construction power and water along with setting up of site offices as required for the execution of the project.	Bidder request to share the TRT value of the site.	TRT is not available with GIPCL. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
300	VOLUME - II PART -1 (Schedule - I and 2)	STATUTORY COMPLIANCE, GRID CONNECTIVITY AND POWER EVACUATION	7.0 - C	7 of 13	Bidder shall conduct and get approval for detailed Grid compliance studies with Power Plant Controllers for solar project as per CEA technical standard for grid connectivity and latest guidelines and practices of CTUIL / WRLDC/POSOCO for first charging clearance (within stipulated timeline as given in the applicable regulations). Bidder to refer latest FTC (First Time Charging) procedures as applicable. The grid compliance studies to be done in PSS/E and PSCAD as per WRLDC/POSOCO requirement. Bidder shall provide and get approval from respective authorities, all the technical details including but not limited to Inverter bench marking report, Generic model data of inverters, suitable for use in PSS/E and PSCAD software available at RLDC and Encrypted user-defined model (UDM) /generic model of inverter in suitable software format as per requirement of RLDC. In case any site testing required for grid compliance shall also be conducted by Bidder.	As the power transformer and pooling sub station is not in the scope of bidder. Bidder request to consider grid study in GIPCL. Bidder will provide required PV plant data as required.	No change in Tender Conditions. Bidder shall comply with tender conditions.
301	VOLUME - II PART -1 (Schedule - I and 2)	Power Evacuation System	2.1	5 of 13	Bidder has to terminate all the 33kV transmission line from the Solar PV Plant at the 33/400kV PSS-1(Pooling station-1) on any 33KV Bus / Section as per system requirement to be finalized during detail engineering without any extra cost to the Owner.		No change in Tender Conditions. Bidder shall comply with tender conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
302	VOLUME - II PART -1 (Schedule - I and 2)	CABLE LAYING METHODOLOGY	C	11 of 13	1. All cable to be laid above ground / underground keeping in view of the site-specific issues related to water submergence, soil condition etc, which shall be reviewed during the detail design engineering. Bidder may suggest alternate cable laying methodology which will be finalised during detail engineering. Bidder to ensure that the cables are laid properly in line with the design consideration adopted in sizing calculations and have to guarantee the cable performance and tolerance to the site conditions. 2. The cables specifications / design shall be suitably selected as per laying final philosophy/ methodology decided during detail engineering by the Bidder considering the site environmental conditions etc. Bidder shall submit the final specification with methodology for GIPCL Approval. Methodology for all underground 33kV cables (including spare 33kV cable) laying in Park area (in allocated corridor) shall be as per Park Developer's requirements.	Both points are contradicting bidder request to confirm the requirement of 33kV system is it cable or transmission line.	No change in Tender Conditions. Bidder shall comply with tender conditions.
303	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.16	25 of 82	SCB shall have provision for earthing connection with copper cable to dedicated earthing pit.	Bidder request to consider SCB earthing connected to DC field earthing.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
304	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.21	25 of 82	Canopy / shading arrangement shall be provided on top of String Combiner Box to avoid exposure to direct sunlight. Minimum 150 mm extension and SMB enclosure can be opened without obstruction with canopy	Bidder request to consider the SCB placed under the module without canopy. As the SCBs are IP66 protected the canopy will not be required.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
305	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.22	25 of 82	Spare DC input terminals shall be provided in all SCBs. Total number of SCBs shall be calculated accordingly.	Cable from SCB to Inverter will be considered for the actual connected capacity of the modules excluding the spare terminal. Kindly accept	Noted No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
306	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.28	26 of 82	Minimum ground clearance for String combiner box shall be 750mm from bottom of SCB.	As considering the ground condition the installation SCB at 750mm bottom height will be practically difficult. So bidder request to consider the SCB bottom height from ground level as 400mm.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
307	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.40	35 of 82	Standalone UPS shall be provided to meet the auxiliary power requirement of inverter. It shall have a backup storage capacity as per CEA requirements. Maintenance free type batteries shall be provided for the UPS. If Outdoor inverters are provided, then the UPS shall also be suitable for outdoor duty with IP 55 or better ingress protection.	As inverter have the inbuilt auxiliary supply. Bidder request to remove the requirement standalone UPS.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
308	VOLUME - II PART - 2 (Schedule - III A)	General and Installation Requirements	3.1	54 of 82	The cable shall be 1.9/3.3kV Grade, high conductivity stranded compacted circular aluminium conductor, single core, XLPE insulated, Inner PVC ST2 sheathed, galvanized steel strip armoured with overall separate extruded minimum FRLS or as per CEA regulation PVC ST2 outer sheath, conforming generally to IS:7098 (part-II)-1985 and its latest amendment thereof.	Bidder request to consider the DC cable without the PVC inner sheath and construction as per IS 7098 Part 2.	Bidder shall refer Amendment -1. No Change in Tender Conditions except Amendment-1. Bidder shall comply with Tender Conditions.
309	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.1	61 of 82	The RE Park developer will provide water from the RE Park storage area. Bidder shall lay the piping system from RE Park water system upto the Module cleaning system.	Bidder request to share the location of RE park storage area for designing.	The RE Park water storage may be near PSS-1. However exact location shall be provided during Detailed Engineering. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
310	VOLUME - II PART - 2 (Schedule - III A)	PROPOSED CLEANING SYSTEM	2	61 of 82	The Bidder Shall Install both Permanent Fresh Water based Wet cleaning system and Robotic Cleaning systems.	Bidder request to consider the array layout considering future provision for operating Robotic cleaning system and current system with only water cleaning.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
311	VOLUME - II PART - 2 (Schedule - III A)	PROPOSED CLEANING SYSTEM	2	61 of 82	The Bidder Shall Install both Permanent Fresh Water based Wet cleaning system and Robotic Cleaning systems.	Incase both Wet cleaning and Robotic cleaning to be considered. Bidder request to confirm the cleaning frequency of each system and period/season for using the system.	Bidder shall refer Tender clause no. 3.5 of Volume-II, Part- 2(A), sheet 61 of 82. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
312	VOLUME - II PART - 2 (Schedule - III A)	PROPOSED CLEANING SYSTEM	2	61 of 82	The Bidder Shall Install both Permanent Fresh Water based Wet cleaning system and Robotic Cleaning systems.	As robotic cleaning is a option bidder request to consider that LA will be placed without shadow space.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
313	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CRITERIA AND TECHNICAL SPECIFICATION	5.13	64 of 82	The module manufacturer should provide explicit approval for each cleaning system to be deployed, including confirmation that warranty coverage of the module will not be voided by use of the system.	As the module supply is in GIPCL scope. Bidder request to consider the Module manufacturer related confirmation & certification under GIPCL scope and share the datas with bidder.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
314	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.7	70 of 82	No shadow shall fall on PV Modules due to ESE LA structures. Appropriate care shall be taken while designing PV array layout.	Bidder request to consider that the LA will be placed accordingly that the shadow will not fall in the modules for the time of 10 AM to 3 PM.	Bidder shall refer Amendment -1
315	VOLUME - II PART - 3 (Schedule - IV to VI)	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	TABLE 2 -4	31 of 34	Solar PV module characteristic* 2274 mm x1134 mm 33 kg (weight) 13.72 A (Isc) 28 modules in series	Kindly confirm the cable lengths of the module and confirm the connection methodology.	Bidder shall refer Amendment -1
316	VOLUME - II PART - 3 (Schedule - IV to VI)	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	4	29 of 34	The Contractor shall share with GIPCL all the irradiation, generation, etc. parameters details and all other factors necessary for GIPCL to corroborate the estimate. GIPCL has the right to cross verify data submitted by the Contractor by all possible means / sources.....	Kindly confirm when the generation has to be submitted, post award or pre award of the project.	Bidder shall refer Tender clause no. 4(e) of Volume-II, Part-3, Sheet 29 of 34. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
317	VOLUME - II PART - 3 (Schedule - IV to VI)	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	4 - a	29 of 34	Effect due to variation in annual insolation shall only be considered for computing the PR/Targeted Generation.	Bidder request to consider the temperature correction for PR and Plane of Array radiation correction for generation as per IEC 61724.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
318	VOLUME - II PART - 3 (Schedule - IV to VI)	PART B: ANNUAL TARGETED GENERATION TEST PROCEDURE	4	29 of 34	The Contractor shall share with GIPCL all the irradiation, generation, etc. parameters details and all other factors necessary for GIPCL to corroborate the estimate. GIPCL has the right to cross verify data submitted by the Contractor by all possible means / sources. Following factors may be noted for computing the PR and Targeted Generation Test:.....	As the scope of module supply is with GIPCL, bidder request to finalize the procedure for PR and generation guarantee test including the module performance related conditions also.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
319	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.5	4 of 179	Inverter Transformers with winding material of electrolytic grade copper / electrolytic grade Aluminum shall be acceptable subjected to proven and of successfully type tested design with service warrantee of 5 years after commissioning.	Noted, We are considering aluminium winding.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
320	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.12	5 of 179	Transformer Differential protection shall be provided as per CBIP manual of transformer / statutory requirements	As per CEA, differential protection is required for 10MVA and above, so accordingly differential CTs and differential protection shall be considered.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
321	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.2	26 of 179	The switchgear shall have an internal arc test classification corresponding to system fault current and as per ICE62271-200.	Indoor panel shall be rated for internal arc test 25ka for 1Sec. Please accept.	No Change in Tender Conditions. Bidder shall comply with Tender Conditions.

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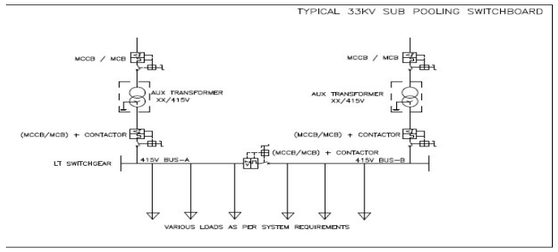
322	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.48	31 of 179	Tariff metering panel, meter, CT and PT with sealing arrangement, all required accessories shall be provided as per statutory / RLDC / CEA requirement. ABT/Tariff Meter to be provided at the outgoing 33kV transmission line feeder to the PSS-1 switchgear. Separate 0.2s class CT and separate 0.2 class PT and/or separate panel with sealing arrangement to be provided for this meter along with TTB as per statutory /RLDC / SLDC / CEA requirement. Tariff metering system shall be as per specification mention in respective section. WRLDC / RLDC / SLDC / CEA / other statutory bodies if required then Separate Tariff metering panel (CT/PT, TTB's, MCB's, 110V DC supply, Supply selection switch, UPS supply, ABT Meters and its accessories etc.) with required sealing arrangement front (Top Bottom), Rear (Top Bottom) shall be provided for each Out Going 33kV Transmission line to 400/33-33kV PSS-1. All communication ports (RS-485 and LAN Ports) of ABT Metering system shall be brought to Control cubicle of respective 33kV panel for future connections (as metering compartment of Tariff metering panel will be sealed by concerned authorities and we intend to have access of ABT meter communication ports.)	Tariff metering shall be considered at 33kV Transmission line feeder (Outgoing Feeder) only. Further there is no local metering required at ICOG level, MFM shall be placed at the incoming feeder panel at 33kV HT switchgear.	Bidder Shall Refer Clause Number 1.3.2, 1.3.3, 1.3.4 of Volume-II, Part-1 (Schedule-1) (Sheet 4 of 13) No change in Tender Conditions. Bidder shall comply with tender conditions.
323	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.56	32 of 179	As an alternative to separate earthing trucks, the Bidder may also offer built-in earthing switches for the busbars / cables and outgoing and incoming connections for all breaker feeders at all sub-pooling switchgears and all ICOG panels. Earthing switches if opted shall be standard proven switchgear design. The inbuilt earthing switches shall be quick make type, independent of the action of the operator and shall be operable from the front of the switchgear panel. These switches shall have facility for padlocking in the earthed condition.	Bidder request to accept the following proposal, instead of earth switch in each panel, bidder shall provide the 2 Nos of earth truck at each 100MW capacity. Please provide your confirmation.	No change in Tender Conditions. Bidder shall comply with tender conditions.
324	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.68	34 of 179	All 33kv switchgear breaker feeders including ICOGs shall be provided with dedicated BCU or BCPU	Numerical Protection relay shall be provide for all 33kV Switchgear Feeders with IEC 61850 communication. Please accept.	Bidder Shall Refer Clause Number "3.24 and 3.31 of Volume-II PART - 2 (Schedule - III B) Sheet no 28 and 29 of 179 respectively". No change in Tender Conditions. Bidder shall comply with tender conditions.
325	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria - Dry Type Transformer	3.1	44 of 179	20% design margin shall be considered while sizing auxiliary transformers. Also, if required, the rating shall be increased to keep the voltage drop during starting of the largest motor within 15%.	Bidder proposes 10 % margin is sufficient for auxiliary transformer at MCR & ICR both. Kindly provide your confirmation for both.	No change in Tender Conditions. Bidder shall comply with tender conditions.
326	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria - Dry Type Transformer	3.12	45 of 179	This transformer shall derive auxiliary power from the inverter / Inverter Transformer LV cable box / LT Panel in case of string inverter and deliver to the 415V Main switchgear. Design shall be in such a way that Aux. supply of Inverter block shall be available in case of failure of incoming source supply (Auxiliary transformer to be fed from two inverters with suitable changeover switch).	Bidder understand 1 x 100% auxiliary transformer required at inverter control room same shall be taped from LVs of IDT as per Tender SLD. Kindly provide your confirmation.	Bidder Shall Refer Clause Number "3.42 of Volume-II PART - 2 (Schedule - III A) Sheet no 35 of 82", "3.26 of Volume-II PART - 2 (Schedule - III B) Sheet no 52 of 179" and ANNEXURE - 1 ELECTRICAL KEY SLD. No change in Tender Conditions. Bidder shall comply with tender conditions.
327	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria and Technical requirements	3.12	60 of 179	For Battery sizing calculation, lowest electrolyte temperature shall be taken as 5 deg ºC more than the minimum ambient temperature or 15 deg ºC whichever is lower, with Temperature correction factors as per relevant standards.	Bidder understand the minimum ambient temperature of the particular location shall be considered for sizing. Please clarify	No change in Tender Conditions. Bidder shall comply with tender conditions.
328	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria and Technical requirements	3.7	60 of 179	UPS for Inverter station / blocks shall have battery backup as per latest CEA technical standard respectively.	Bidder propose 1x100% UPS with SMF(12V) VRLA Battery bank for 30min backup at Inverter station SCADA, Lighting and other critical loads.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
329	VOLUME - II PART - 2 (Schedule - III B)	Design Criteria	3.1.1	68 of 179	Batteries shall be SAN container Lead-acid tubular (OPzS) type. (Type II, High discharge performance cell as per IS 1651)	1.Bidder propose 1x100% BC with SMF(12V) VRLA Battery bank for **1 hour backup** at MCR SCADA, Lighting and other critical loads. 2.Bidder propose Battery charger of 1x100% Float cum boast Charger and 1x100% Battery bank supplied in MCR for control, Protection and metering loads of breakers	No change in Tender Conditions. Bidder shall comply with tender conditions.
330	VOLUME - II PART - 2 (Schedule - III B)	General Requirements of Control Cables	4.1	87 of 179	1.1 KV Grade Control Cables shall have stranded copper conductor and shall be multicore PVC insulated, PVC inner sheathed, armoured, FRLS/as per CEA regulation PVC outer sheathed conforming to IS: 1554. (Part-I).	Bidder propose all control cables and low current carrying shall be 1.1kV, Unarmoured cables.	No change in Tender Conditions. Bidder shall comply with tender conditions.
331	VOLUME - II PART - 2 (Schedule - III C)	Earthing	10.4	11 of 100	GI Earthing flat of suitable design shall be laid along the cable trays. GI Earthing flat shall be connected to earth grid at regular interval and at both end as per IS/IEC standard.	Bidder propose that cable tray shall be connected at two distinct place through the GS flat or bare copper wire instead of complete run of GS Flat/bare copper wire through the cable tray	No change in Tender Conditions. Bidder shall comply with tender conditions.
332	VOLUME - II PART - 2 (Schedule - III C)	Earthing	10.2	11 of 100	Sheath and armour of single core power cables shall be earthed at switchgear end only.	Bidder propose metallic screening is not required for single core cable, and in case of three core cable both metallic screen and armouring combined shall be suitable to rated fault current. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
333	VOLUME - II PART - 2 (Schedule - III C)	Cable Tray mountings - General Notes	11	11 of 100		General : All cable trench from IDT to ICOG and ICOG to Further MV panel shall be directly buried into the sand without brick/tiles/precast hume pipe as per IS standard.	No change in Tender Conditions. Bidder shall comply with tender conditions.
334	VOLUME - II PART - 2 (Schedule - III C)	Design Criteria	4.1	13 of 100	The earthing conductor shall be designed considering the maximum DC system fault current for the solar PV yard and AC system fault current for the remaining AC systems. The net earth resistivity shall also be calculated, and the value of net resistivity shall be as per IS 3043. The soil resistivity data will be furnished by Owner during detailed engineering. The Bidder Shall carry out separate ERT measurement without cost implication to the Owner. Earthing pit shall be 1 Nos. per 1.50 MWp. Nos. of earth pit indicated is valid if all the earth pits are interconnected in single mesh of earth pits	Bidder propose the AC and DC earth grid can be connected to each other to achieve the over all earth resistance below 1 ohm. All equipment shall be connected with GS flat from both end. Size of the GS flat based on the earthing calculation.	No change in Tender Conditions. Bidder shall comply with tender conditions.
335	VOLUME - II PART - 2 (Schedule - III C)	C5 - LIGHTING SYSTEM	3.0	50 of 100	General Technical Requirement	1.Bidder propose, that light fixtures wattage and pole height shall be based on lighting design, meeting the Lux Level requirements during detail engineering 2.Lights in ICR and MCR considered as per standard. 3.Bidder propose that 20% Emergency lighting fixtures shall be powered by UPS for MCR and ICR. Please confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
336	VOLUME - II PART - 2 (Schedule - III C)					Fault Current Bidder consider Fault current "25kA for 1sec"at 33kV HV Switchgear	No change in Tender Conditions. Bidder shall comply with tender conditions.
337	VOLUME - II PART - 2 (Schedule - III C)					General Please share distance from 33kV Sub Pooling Switchboard to 33/400kV PSS-1.	Bidder shall visit the site. No change in Tender Conditions. Bidder shall comply with tender conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
338	ANNEXURE- 7 TENTATIVE OVERALL SINGLE LINE DIAGRAM OF 400-33 KV GIS PSS-1 SUBSTATION					Bidder understand that at 33kV Pooling Switchboard will have 30MW Capacity, same shall be at ICR and from there 33kV line will connect at 33/400kV PSS-1. Bidder propose 1 x 100% auxiliary transformer at each ICR (including 33kV Sub Pooling Switchboard also) same shall be taped from LVs of IDT as per Tender SLD. Kindly provide your confirmation.	Bidder Shall Refer "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS" and "ANNEXURE - 1 ELECTRICAL KEY SLD." No change in Tender Conditions. Bidder shall comply with tender conditions.
339	ANNEXURE- 6 33KV SPARE CABLE LAYING PHILOSOPHY	Notes	3		Methodology for all underground 33kV cables (incl. Spare 33kV cable) laying in park area (in allocated corridor) shall be as per park developer's requirements	Bidder request to provide the detail of cable corridor with cross section, spacing, cable support system provisions from developer side for design considerations.	Bidder shall refer "ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WITH PERIPHERAL FENCING" No change in Tender Conditions. Bidder shall comply with tender conditions.
340	ANNEXURE- 6 33KV SPARE CABLE LAYING PHILOSOPHY				As per Cable laying philosophy, 3R of #cx500 sq.mm per plot is considered and overall 7R of 3Cx500 Sq.mm for 2x300MW incl. 1 Spare run is indicated and the same is mentioned in specification.	Bidder request to clarify that, the mentioned cable sizes and runs are indicative and bidder shall propose the cable size as per design requirements.	No change in Tender Conditions. Bidder shall comply with tender conditions.
341	VOLUME - II PART - 2 (Schedule - III D)	D1 – SCOPE	1.7 - g	6 of 47	33kv Sub pooling station (RCC) platform with superstructure as Pre-Engineered Building (PEB) type building (RCC CUM PEB Building). It shall have Technicians Rooms (Two Numbers each in 300 MW) shall be provided at 33kv sub pooling station with attached toilet and other facilities.	Bidder proposes to use combined building for 33kv Sub pooling station & PV plant SCADA monitoring & spare room with RCC or PEB type. Other requirement shall be in line with RFP. Kindly accept.	No change in Tender Conditions. Bidder shall comply with tender conditions.
342	VOLUME - II PART - 2 (Schedule - III D)	D4 - LIST OF FACILITIES AND BUILDINGS	1.1.- f	16 of 47	33kv Sub pooling station (RCC) platform with superstructure PEB type building (RCC CUM PEB Building) along with the Technician rooms at 2 sub-pooling stations for each 300 MW Blocks.		No change in Tender Conditions. Bidder shall comply with tender conditions.
343	VOLUME - II PART - 2 (Schedule - III D)	D4 - LIST OF FACILITIES AND BUILDINGS	1.1.- g	17 of 47	PV Plant SCADA, Monitoring Building & Mandatory spare room RCC building (each for 300 MW Block) including conference room at one location, O&M office and Stores room at both blocks along with Toilets and Pantry facilities.		No change in Tender Conditions. Bidder shall comply with tender conditions.
344	VOLUME - II PART - 2 (Schedule - III D)	D10 – PV PLANT SCADA MONITORING BUILDING INCLUDING SPARE ROOM (EACH FOR 300 MW)	1.6 - d	21 of 47	Plinth protection 1000 mm wide and 100 mm thick shall be provided around the buildings in PCC M15 grade of concrete. Garland drain shall be provided all round building. Building peripheral drains shall be stone/brick masonry/concrete works. These side drains shall be connected to nearest drain network.	Bidder proposes to use the drain wherever required based on the topography, hydrology report and storm water flow pattern. Kindly accept.	No change in Tender Conditions. Bidder shall comply with tender conditions.
345	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	18 of 47	The area around the transformer and equipment's shall be covered with gravel and PVC coated galvanised chain link fence of height min 1.8 m with fence posts and gates shall be provided. All fence posts shall be 65X65X6 MS angles spaced at 2.5m c/c distance and all other specification mentioned for Fencing and gate shall be followed. M.S. angle posts shall conform to IS: 2062.All structure steel shall be hot dip galvanized with galvanization coating thickness of 110 micron. In addition, a small gate, 1.2 m wide shall be provided for man entry. Transformer track rails shall conform to IS: 3443. The requirement of fire barrier wall between transformers shall be as per Electricity Rules and IS: 1646 recommendations. The transformer shall be placed minimum 750 mm above NGL and higher as applicable during detail engineering.	Bidder proposes to use 50x50x6 angle as vertical post member for transformer yard similar to tender drawing, "TCE.13131A-CV-3002-SI-30001 - TYPICAL PVC COATED CHAIN LINK PERIPHERIAL FENCE DETAILS" Kindly accept.	No change in Tender Conditions. Bidder shall comply with tender conditions.
346	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	18 of 47	The area around the transformer and equipment's shall be covered with gravel and PVC coated galvanised chain link fence of height min 1.8 m with fence posts and gates shall be provided. All fence posts shall be 65X65X6 MS angles spaced at 2.5m c/c distance and all other specification mentioned for Fencing and gate shall be followed. M.S. angle posts shall conform to IS: 2062.All structure steel shall be hot dip galvanized with galvanization coating thickness of 110 micron. In addition, a small gate, 1.2 m wide shall be provided for man entry. Transformer track rails shall conform to IS: 3443. The requirement of fire barrier wall between transformers shall be as per Electricity Rules and IS: 1646 recommendations. The transformer shall be placed minimum 750 mm above NGL and higher as applicable during detail engineering.	Bidder proposes to use GI type Chainlink fence for entire plant boundary. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
347	ANNEXURE - 5 TYPICAL PVC COATED CHAIN LINK PERIPHERAL FENCE DETAILS					8 GAUGE PVC COATING OVER 10 GAUGE PVC COATED CHAIN LINK FENCING, 75MM MESH BOTH SIDE TWISTED. Bidder proposes to use GI type Chainlink fence for entire plant boundary. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
348	VOLUME - II PART - 2 (Schedule - III D)	D8 - TRANSFORMER YARD CIVIL WORKS	1.3.	18 of 47	The area around the transformer and equipment's shall be covered with gravel and PVC coated galvanised chain link fence of height min 1.8 m with fence posts and gates shall be provided. All fence posts shall be 65X65X6 MS angles spaced at 2.5m c/c distance and all other specification mentioned for Fencing and gate shall be followed. M.S. angle posts shall conform to IS: 2062.All structure steel shall be hot dip galvanized with galvanization coating thickness of 110 micron. In addition, a small gate, 1.2 m wide shall be provided for man entry. Transformer track rails shall conform to IS: 3443. The requirement of fire barrier wall between transformers shall be as per Electricity Rules and IS: 1646 recommendations. The transformer shall be placed minimum 750 mm above NGL and higher as applicable during detail engineering.	Bidder proposes to provide 90 microns (as per the minimum galvanisation thickness in Vol-II part-1) for the vertical members as it is above ground structure. Kindly confirm.	No change in Tender Conditions. Bidder shall comply with tender conditions.
349	VOLUME - II PART -1 (Schedule - I and 2)	Corrosive Category (Galvanization)	D - 1	11 of 13	Parameter: For below Ground Structures (including up to 300mm above ground) — Corrosive Category (as per ISO12944-2): C5-M — Minimum Galvanized Thickness at any point of measurement and no averaging shall be allowed: 110 Microns Parameter: For Above Ground Structures (Beyond 300mm) — Corrosive Category (as per ISO12944-2): C4 — Minimum Galvanized Thickness at any point of measurement and no averaging shall be allowed: 90 Microns		No change in Tender Conditions. Bidder shall comply with tender conditions.

<table>
<tr><th>Sr. No</th><th>Vol. No. & Section No.</th><th>Main Clause</th><th>Clause No.</th><th>Page No.</th><th>Tender Term
(GIPCL /Solar/BOS/2023-24)</th><th>Bidder's Queries</th><th>GIPCL reply / clarification to Pre Bid Queries</th></tr>
<tr><td>350</td><td>VOLUME - II PART - 2 (Schedule - III D)</td><td>D13 - REINFORCED CONCRETE AND ALLIED WORKS</td><td>13.13.</td><td>29 of 47</td><td>In case Geotechnical investigations require any special kind of cement or higher grade of concrete, the same shall be provided. The foundation system shall be made which transfer loads safely to the soil for the module mounting structures, depending on soil conditions, geographical condition, regional wind speed, bearing capacity, slope stability etc. All foundation system and foundation depth shall be decided based on the approved geotechnical investigation report. Foundation shall not be placed on back filled soil and foundation depth shall be minimum 1000mm below natural or existing ground level.</td><td>Bidder proposes, that minimum depth of foundation shall be decided based on Geotech report.
Kindly confirm.</td><td>No change in Tender Conditions. Bidder shall comply with tender conditions.</td></tr>
<tr><td>351</td><td>ANNEXURE - 3 Soil Investigation_Part-1</td><td>Safe Bearing Pressure (IS 8009 Part-I:1976, RA-2018):</td><td>6.2</td><td>27 of 115</td><td>$$S_c = \frac{H_t}{(1+e_0)} C_c \log_{10} \frac{(p_0 - \delta_p)}{p_0}$$</td><td>Kindly check the updated formula $$S_c = \frac{H_t}{(1+e_0)} C_c \log_{10} \frac{(p_0 + \delta_p)}{p_0}$$</td><td>This is indicative soil investigation report only. Bidder shall refer Tender clause no. D2 of Volume-II, Part-2(D) sheet 8 of 47.

No change in Tender Conditions. Bidder shall comply with tender conditions.</td></tr>
<tr><td>352</td><td>ANNEXURE - 3 Soil Investigation_Part-1</td><td>Summary of the load-carrying capacity of the pile:</td><td>6.4</td><td>28 of 115</td><td>Table 18: Parameters for the load capacity of a Short Pile
<table>
<tr><th>Bore Hole</th><th>Depth from EGL (m)</th><th>Type of soil</th><th>Bulk density (g/cc)</th><th>Cohesion, C (kg/cm^2)</th><th>Angle of internal friction, φ (degree)</th></tr>
<tr><td rowspan="2">BH-1</td><td>0.00 – 1.50</td><td>CI</td><td>1.740</td><td>0.21</td><td>0</td></tr>
<tr><td>1.50 – 4.50</td><td>ML</td><td>1.771</td><td>0.00</td><td>15</td></tr>
<tr><td rowspan="2">BH-2</td><td>0.00 – 1.50</td><td>CL</td><td>1.769</td><td>0.23</td><td>0</td></tr>
<tr><td>1.50 – 3.00</td><td>CL</td><td>1.769</td><td>0.33</td><td>0</td></tr>
<tr><td rowspan="2">BH-4</td><td>0.00 – 1.50</td><td>CI</td><td>1.742</td><td>0.40</td><td>0</td></tr>
<tr><td>1.50 – 4.50</td><td>CI</td><td>1.817</td><td>0.00</td><td>12</td></tr>
<tr><td>BH-5</td><td>0.00 – 1.50</td><td>ML</td><td>1.719</td><td>0.00</td><td>18</td></tr>
<tr><td></td><td>1.50 – 3.50</td><td>ML</td><td>1.719</td><td>0.00</td><td>15</td></tr>
</table></td><td>For all soils classified as ML in the report, cohesion values have been reported as zero. Normally such soils are expected to behave as c-ϕ soils with significant values of both cohesion and friction.
Kindly Clarify.</td><td>This is indicative soil investigation report only. Bidder shall refer Tender clause no. D2 of Volume-II, Part-2(D) sheet 8 of 47.

No change in Tender Conditions. Bidder shall comply with tender conditions.</td></tr>
<tr><td>353</td><td>VOLUME - II PART - 2 (Schedule - III A)</td><td>DESIGN PARAMETERS</td><td>4.6</td><td>8 of 82</td><td>Redundant communication (Wired/wireless) through messed network topology for individual Trackers</td><td>Bidder wishes to clarify that, most of the tracker vendors providing wireless technology for connectivity of individual tracker. Hence redundant communication is not applicable on wireless technology.
Kindly provide your acceptance for the same.</td><td>Bidder to note that for Wireless also redundant communication is required and can be achieved through meshed network topology.

No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.</td></tr>
<tr><td>354</td><td>VOLUME - II PART - 2 (Schedule - III A)</td><td>Weather Monitoring Station</td><td>1.1</td><td>72 of 82</td><td>The Weather Monitoring Station shall be provided with all the equipment to monitor relevant parameters for the assessment of the performance of the PV Power Plant. The number of sensors shall be as per IEC 61724 – 1.</td><td rowspan="2">Bidder wishes to clarify that, the statements are contradictory. Whether we need to be considered the weather stations as per latest IEC 61724 standards or RFP.
Kindly confirm the same.</td><td>Bidder shall refer Amendment -1</td></tr>
<tr><td>355</td><td>VOLUME - II PART - 2 (Schedule - III A)</td><td>The general BOM for WMS system is as below</td><td>4</td><td>78 of 82</td><td>The general BOM for WMS system is as below:……..</td><td>Bidder shall refer Amendment -1</td></tr>
<tr><td>356</td><td>VOLUME - II PART - 2 (Schedule - III A)</td><td>Weather Monitoring Station</td><td>1.1</td><td>72 of 82</td><td>The Weather Monitoring Station shall be provided with all the equipment to monitor relevant parameters for the assessment of the performance of the PV Power Plant. The number of sensors shall be as per IEC 61724 – 1.</td><td rowspan="2">Bidder wishes to clarify that, the statements are contradictory. All sensors are connected to dedicated data logger, except additional sensors supplied as per IEC 61724 standard. Hence separate 4-20 mA output not required for data logger connecting sensors.
Kindly confirm the same.</td><td>Bidder shall refer Amendment -1</td></tr>
<tr><td>357</td><td>VOLUME - II PART - 2 (Schedule - III A)</td><td>DESIGN CRITERIA</td><td>3.10</td><td>77 of 82</td><td>A compact station with all the measurements integrated (except pyranometer & module temperature sensor) can be provided. Each instrument shall provide separate 4-20 mA output (soft link RS-485) to SCADA system. Battery voltage monitor signal (4-20mA) shall be provided to SCADA.</td><td>Bidder shall refer Amendment -1</td></tr>
<tr><td>358</td><td>VOLUME - II PART - 2 (Schedule - III B)</td><td>SCADA</td><td>1.1 - a</td><td>105 of 179</td><td>This Section specifies the minimum requirements for design, engineering, installation, and testing of the PV Plant Scada System. Bidder to note that for each 300 MW (AC) block one dedicated SCADA system is required, which shall be placed in “PV Plant SCADA, Monitoring and Spare room” building.</td><td>Bidder proposes to consider the Common SCADA system for 600MW plant instead of two SCADA systems.
Kindly confirm the same.</td><td>No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.</td></tr>
<tr><td>359</td><td>VOLUME - II PART - 2 (Schedule - III B)</td><td>SCADA</td><td>1.1 - c</td><td>105 of 179</td><td>The SCADA system shall be designed with Redundant and HOT stand by.</td><td>Bidder understand and proposes to consider the following
a. Redundant PLC at Main Control room.
b. Non- Redundant PLC RIO/RTU at each Inverter Room.
c. Hot swappable IO modules for Main Control room.
d. Non-Hot swappable IO modules at each Inverter room.
Kindly provide your acceptance for the same.</td><td>No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.</td></tr>
<tr><td>360</td><td>VOLUME - II PART - 2 (Schedule - III B)</td><td>SCADA</td><td>1.11</td><td>107 of 179</td><td>SCADA system shall support Modbus (TCP/IP, RS-485), RTU, ASCII, IEC 61850, IEC 60870-5-101 & 104, FTPs, Licensed Web based secured remote monitoring (for 4 simultaneous users), standard protocols (Included but not limited to) to communicate with different sub system/Devices.
Web based secured remote monitoring shall work on popular web browser without need of additional software. It shall be authorized by user ID and password. User Id and password for remote view can only be changed by SCADA administrator. Internet connection for transferring data to web shall be taken by Bidder in name of GIPCL site for O&M period.</td><td>Bidder understand that:
a. Bidder to consider necessary OPC protocol in offered SCADA System for interfacing with remote connection of GIPCL.
b. Bidder to consider necessary internet connectivity at solar plant end for this interfacing.
c. Updation & configuration work in remote GIPCL server for Solar plant related tags shall be carried out by GIPCL and same is not part of bidder's scope.
e. Any hardware and software required at remote end GIPCL server end is not part of bidder's scope.
Kindly confirm that bidder's understanding is correct.</td><td>No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.</td></tr>
<tr><td>361</td><td>VOLUME - II PART - 2 (Schedule - III B)</td><td>SCADA</td><td>1.11</td><td>107 of 179</td><td>SCADA system shall support Modbus (TCP/IP, RS-485), RTU, ASCII, IEC 61850, IEC 60870-5-101 & 104, FTPs, Licensed Web based secured remote monitoring (for 4 simultaneous users), standard protocols (Included but not limited to) to communicate with different sub system/Devices.
Web based secured remote monitoring shall work on popular web browser without need of additional software. It shall be authorized by user ID and password. User Id and password for remote view can only be changed by SCADA administrator. Internet connection for transferring data to web shall be taken by Bidder in name of GIPCL site for O&M period.</td><td rowspan="2">Bidder wishes to clarify that, the statements are contradictory. Whether we need to be considered the web client license 4 no's or 3 no's.
Bidder understand that, the quantity of licenses for combined of 600MW.
Kindly confirm the same.</td><td>No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.</td></tr>
<tr><td>362</td><td>VOLUME - II PART - 2 (Schedule - III B)</td><td>SCADA</td><td>1.17</td><td>108 of 179</td><td>Provision for remote monitoring shall be provided at least for 3 numbers.</td><td>Bidder shall refer Amendment -1</td></tr>
</table>

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
363	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.13	107 of 179	SCADA shall provide for the following control / monitoring as per CEA Technical standards and amendments a) PV plant Monitoring– Zone monitoring at Inverter Level in case of Central inverter b) In case of String inverter - monitoring at recombiner box level c) Control and monitoring of Plant electrical equipment, Feeders and their energy meters (Tariff based / Performance based) etc. d) Provision for remote Enterprise system interface for MIS e) PPC (power plant Controller) Single PPC shall be provided at PSS -1 for 600 MW. f) Tracker System g) Module Cleaning System dry and wet (if applicable) h) UPS and battery chargers i) NIFPS j) Fire Protection System k) Weather Station	e) Bidder understand that, PPC at PSS-1 end shall be in GIPCL scope of supply. Kindly confirm the same. Further the PPC at PSS-1 in GIPCL scope shall be master PPC and For 600MW solar plant slave PPC shall be provided at plant end SCADA system. g) Integration of Module Cleaning System with SCADA is not required as per standard practices followed in Solar projects, As Module cleaning system is a manual activity done at site and as it is not a continuous operating system (like Inverters, Meters etc.), we request to void this requirement. Kindly provide your acceptance for the same.	Bidder to note that slave ppc shall be provided at PSS-1 for 600 MW with all the required software configurations and cable laying is in bidder scope. Bidder shall refer ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
364	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.21	108 of 179	The SCADA system from Solar Power Plant to PSS-1 Common communication Panel shall be connected through 2 nos. of Optical Fiber Cable (armored). a) First optical fiber shall be used for IEC 104, VOIP, OPC, Power Tel broadband connectivity. b) Second optical fiber shall be used for IEC 104, VOIP, OPC. For more details bidder shall refer to PSS-1 DWG NO FCE-171125-CI-DWG-CMS-4100-002.	Bidder wishes to clarify that, 1. Common communication SCADA panel at PSS-1 shall be in GIPCL scope for terminating 2x300MW Solar plant. 2. Only OFC from solar plant end to PSS-1 shall be considered in bidder scope.	Bidder to note that cable laying and termination from PV plant scada to PSS-1 and all software configurations and hardwares is in this package. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
365	VOLUME - II PART - 2 (Schedule - III B)	SCADA	1.27	109 of 179	The cyber security program shall address the following (to be complied for 600 MW): a) Compliance with provisions of the Information Technology Act, 2000 (21 of 2000) and National Cyber Security Policy, 2013 as amended from time to time. b) Implementation of the National Critical Information Infrastructure Protection Centre (NCIIPC) Guidelines. c) Implementation of guidelines and advisories issued by Computer Emergency Response Team (CERT India) and applicable Sectoral Computer Emergency Response Team (CERT). d) Compliance to the Central Electricity Authority (Cyber Security in Power Sector) Guidelines 2021 and amendments e) The bidder shall conduct cyber security audit of their entire SCADA Infrastructure after commissioning of SCADA through CERT-In empanelled Auditors so as to identify gaps and appropriate corrective actions shall be taken by bidder. f) In audit Vulnerability Assessment of SCADA infrastructure shall be carried out. If SCADA is found vulnerable to any exploits or upon any patch updates or major configuration changes, then further Penetration Testing may be carried out offline or in a suitably configured laboratory testbed to determine other vulnerabilities that may have not been identified so far. g) Bidder shall submit the audited report and comply with the requirement if found any in audit report.	Bidder proposes to consider DMZ Network firewall to restrict unauthorized access to HMI/SCADA system instead of Cyber Security System. Kindly provide your acceptance for the same.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
366	VOLUME - II PART - 2 (Schedule - III B)	DATA ACQUSITION, STORAGE AND ANALYSIS	3.1.5	112 of 179	Following Meteorological Station data shall be included in SCADA For each of the installed meteorological stations: a) Ambient temperature, in ºC b) Back of module cell temperature, in ºC c) Global Horizontal Irradiance from pyranometer, in W/m2 d) Global irradiance in collector plane from a pyranometer, in W/m2 e) Diffused irradiance from pyranometer, in W/m2 f) Wind speed, in m/s. g) Wind direction, in degrees h) Cloud in % i) Rain falls in mm j) Humidity k) Weather station communication status	Bidder wishes to clarify that, the statements are contradictory. Whether we need to be considered the weather stations as per latest IEC 61724 (each sensors 6 no's for 600MW) or RFP (each sensors 7 no's). Kindly confirm the same.	Bidder shall refer Amendment -1
367	VOLUME - II PART - 2 (Schedule - III A)	Weather Monitoring Station	1.1	72 of 82	The Weather Monitoring Station shall be provided with all the equipment to monitor relevant parameters for the assessment of the performance of the PV Power Plant. The number of sensors shall be as per IEC 61724 – 1.		Bidder shall refer Amendment -1
368	VOLUME - II PART - 2 (Schedule - III B)	PV Plant SCADA, Monitoring and spare room building shall have the following feature:	3.2.4	116 of 179	Two numbers Operator workstation, One Engineering workstation, one redundant historian server, one OPC Server, one laptop with EWS and OWS programming and two gateway systems (one is main and Redundant) with 24 inch" LED monitor minimum for Engineer work station and 50 inch for operator work station. Both the systems to be connected to redundant servers (24x7). The Systems to be functionally interchangeable. I.e., The function of both Engineering station and operator station shall be possible from both the systems. Operator shall be able to access all control/information related data under all operating conditions including a single processor and computer failure/hardware failure. Bidder shall provide dedicated Laptop configured to work as Operator cum Engineering Workstation.	Bidder understand and proposes to consider the following quantities, 1. EWS cum OWS-1 no 2. OWS-2 nos 3. Historian Server-2 nos 4. Laptop EWS cum OWS-1 no 5. OPC server-1 no Kindly confirm that bidder's understanding is correct.	Tender clause is self explanatory. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
369	VOLUME - II PART - 2 (Schedule - III B)	PV Plant SCADA, Monitoring and spare room building shall have the following feature:	3.2.6	116 of 179	The SCADA shall include two (2) redundant Control Unit Servers working in hot-standby mode. The performance, memory and hard disk of Control Unit servers shall be sufficient to fulfil the requirements specified in this document Hard disk for archiving shall be a RAID05 system providing resilience against a single hard disk failure. The servers shall have the high reliability, easy maintenance and shall be of 19" industry standard rack-layout design with slide-out rails, collapsible, high resolution. As a minimum, the servers shall meet at least the following: a) Redundant monitored power supply, hot pluggable b) Monitored cooling fans c) Redundant hot pluggable, hot swappable hard disk array d) Power supply: redundant from UPS	Bidder request to elaborate the requirement of redundant control unit servers.	The clause is self explanatory. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
370	VOLUME - II PART - 2 (Schedule - III B)	ARCHIVING SERVER SYSTEM	3.4.5	120 of 179	For regular backup of the RAID data storage array a Network Attached Storage unit (NAS) shall be provided. The unit shall have a sufficient capacity to allow: a) Complete backup of the whole server and workstation operating system files and application programs – this backup to be done by the system administrator on monthly basis. Only one historical backup and one actual backup shall be maintained on the storage unit. b) The unit shall be capable to ensure backup capacity of those files for a continuous period of 6 months. An alarm shall be raised when the NAS capacity decreases to less than 20%.	Bidder wishes to clarify that, for storage we are considering redundant historian servers. Bidder request to elaborate the requirement of NAS.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
371	VOLUME - II PART - 2 (Schedule - III B)	TIME SYNCHRONISATION EQUIPMENT	5.1	144 of 179	The bidder can take time synchronization signal from PSS-1 GPS system through Optical Fiber Cable on OPC, for this required hardware/software/cables etc. shall be in scope of bidder.	Bidder wish to clarify that, up to Solar plant end PPC shall be in bidder scope. Connectivity (hardware/software/cables etc.,) between Solar Plant end PPC and PSS-1 PPC shall be in scope of GIPCL. Bidder understand and proposes to consider Common SCADA for 600MW plant and 1 no PPC with redundant controller. Please confirm your acceptance for the same.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
372	VOLUME - II PART - 2 (Schedule - III C)	C4 - CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	1.0	38 of 100	Introduction: Closed Circuit Television System (CCTV) (Each for 300 MW)	Bidder proposes to consider the Common CCTV workstation for 600MW (300MW+300MW). Kindly confirm the same.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.

Sr. No	Vol. No. & Section No.	Main Clause	Clause No.	Page No.	Tender Term (GIPCL /Solar/BOS/2023-24)	Bidder's Queries	GIPCL reply / clarification to Pre Bid Queries
373	VOLUME - II PART - 2 (Schedule - III C)	Introduction	1.2	38 of 100	The location of the Fixed or PTZ (Pan Tilt Zoom) or combination shall be as follows a) Inverter Stations b) SCADA, Monitoring and store room buildings c) 33kV Switchgear Sheds d) All Entry/Exit Gates e) Security/Guard room f) All gates for entry CCTV Surveillance of periphery of project is recommended. Number of cameras shall be selected based on it.	Bidder understand and proposes to consider the following locations for CCTV: a) Inverter Stations b) SCADA, Monitoring and store room buildings c) 33kV Switchgear Sheds d) All Entry/Exit Gates e) Security/Guard room f) All gates for entry g) Periphery Kindly confirm that bidder's understanding is correct.	Bidder understanding is correct. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
374	VOLUME - II PART - 2 (Schedule - III C)	Introduction	1.2	38 of 100	The location of the Fixed or PTZ (Pan Tilt Zoom) or combination shall be as follows a) Inverter Stations b) SCADA, Monitoring and store room buildings c) 33kV Switchgear Sheds d) All Entry/Exit Gates e) Security/Guard room f) All gates for entry CCTV Surveillance of periphery of project is recommended. Number of cameras shall be selected based on it.	Kindly share the camera specifications for PTZ type cameras.	specifications will be shared during detail engineering. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
375	ANNEXURE – 2 PRELIMINARY SCADA ARCHITECTURE			1 of 2	OWS screen size 24 inch	Bidder wishes to clarify that, the statements are contradictory. Whether we need to be considered the OWS with 24 inch screen or as per RFP (50 inch screen for OWS). Kindly confirm the same.	Bidder shall refer clause no: 3.2.4 pg no: 116 of 179 of VOLUME - II PART - 2 (Schedule - III B). No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
376	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.1	61 of 82	The RE Park developer will provide water from the RE Park storage area. Bidder shall lay the piping system from RE Park water system upto the Module cleaning system.	Please confirm the RE park Storage area location. And also confirm whether the supplied water will meet the water requirement of the module manufacturer's recommendation.	The RE Park water storage may be near PSS-1. However exact location shall be provided during Detailed Engineering. No Change in Tender Conditions. Bidder shall comply with Tender Conditions.
377	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.4	61 of 82	Total water storage capacity shall be 6 Lakh liters for 300 MW Block (Total 12 Lakh liters for 600 MW). The storage tank shall be place above ground on RCC Foundation and Tank material shall be FRP. The detail specification of FRP material shall be decided during detail engineering.	Please confirm that the 6 lakh liter of the water tank needs to locate at one location for each plot or it can be the sum of all water storage tank capacity.	The capacity is total only. Bidder may provide small tanks at respective blocks which shall be decided during detailed Engineering. No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
378	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.6	61 of 82	MCS shall have Either Web page monitoring & control or SCADA monitoring & control and dedicated PLC/controller to provide at least the following data on Modbus protocol. a) Pump on-off status. b) Pump on-off control (Remote) c) Water level status. d) Water consumption. e) Discharge Pressure	Bidder proposes only pump on & pump off status can be viewed in SCADA using DI/DO module. Please confirm.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
379	VOLUME - II PART - 2 (Schedule - III A)	DESIGN CONSIDERATION AND GENERAL SYSTEM REQUIREMENTS FOR WET CLEANING SYSTEM	3.17	62 of 82	Minimum pressure at the outlet of Nozzle shall be 5 Bar	Bidder proposes only 3 bar of nozzle terminal pressure. Due to excess pressure applied over the module, the cells may get damaged. Please confirm.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
380	VOLUME - II PART - 2 (Schedule - III C)	Areas to be air conditioned	1.1.	68 of 100	PV Plant SCADA and Monitoring Room and / or any other area where temperature is required to be controlled to maintain the maximum designed temperature with 100% redundancy……..	Please confirm, whether any additional room required redundancy of air conditioning system.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
381	VOLUME - II PART - 2 (Schedule - III C)	Areas to be ventilated	1.2.	68 of 100	PEB Buildings (wherever applicable): In PEB buildings, Ventilation system shall consist of multiple axial flow supply air fan units. The air being supplied is free from dust particles and shall be supplied with pre filters and fine filtersVentilation of PEB buildings shall be designed in such a way that the temperature rise of the rooms does not exceed the maximum designed temperature of equipment and other auxiliaries. Accordingly, adequate quantity of supply air fan and exhaust fan shall be suitably chosen to remove the heat from the PEB buildings. The air quality supplied by the ventilation system shall be as per the recommendations of equipment manufacturers. All exhaust and fresh air fans shall be provided with thermostat control.	By using a ventilation system, we can maintain the max temperature of ambient +5 deg. celsius (using an exhaust fan and supply air fan). Please confirm, if any air conditioning system needs to consider in case of ambient +5 and the equipment's maximum heat values are same.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.