Consolidated Response to Bidder's Queries							
References: 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 through various email(s). 3. Tender Amendment/ Clarification Document dated 26.06.2023							
Sl. No.	**Volume/Section**	**Main Clause**	**Clause No.**	**Page No.**	**Tender Term (GIPCL /Solar/BOS/2023-24)**	**Bidder's Queries**	**Reply / clarification to Pre Bid queries 13.07.23**
1	VOLUME - II PART -1 (Schedule - I and 2)		7.0 (e)	08 of 13	The preliminary system study input parameters related to the PSS-1(400/33kV, 1200MW) and 400kV transmission line between PSS-1 and KPS-II (CTUIL 400/765kV) substation and all other details pertaining to PSS-1 and transmission line (PSS-1 to KPS-II) shall be provided to the successful Bidder during detail engineering stage. For each 340/170/170 MVA, 400/33/33 kV Power Transformer following parameters may be considered for preliminary system study. Impedances: □ HV-LV1 & HV-LV2 = 15.0% +/- 7.5% tolerance (Base 170 MVA, at principal tap). □ LV1-LV2 = 27% +/-15% tolerance. (Base 170 MVA, at principal tap). Losses: □ No Load Loss at rated voltage and frequency = 135 KW Load Loss at rated current and at 75°C for HV and LV. (LV1+LV2) windings, at principal tap position = 760 KW. I^2R Loss at rated current and at 75°C for HV and LV (LV1+LV2) windings, at principal tap position = 600 KW.	In this amendment only Trafo losses are provided. Please provide the following loss: 1. Auxiliary loss at PSS1 which is to be considered for 600MW capacity. 2. Transmission line length and line parameters from PSS1 to 765/400kV KPS-II Substation(which is POI) for 600MW plant. Kindly provide R and Xl/Xc 3. Any other loss which is to be considered for building Inverter capacity design considering 600MW PV plant capacity This we need for CEA's Inverter capacity fulfilment	1. PSS-1 (1200 MW) is equipped with 2 x 1250 KVA, 33 kV/0.433 kV , Dyn11 Station Service Transformers with 100% redudancy. Energy Efficiency Class of SST is 3, Winding material is Copper. Approximate connected load @ 0.8 pf is less than 500 KVA (Balance capacity is for GIPCL Park Use and metered seperately). 2. Bidder shall refer "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS". (Please See 400 kV Line Bay where approximate tansmission line length and type of conductor is allready mentioned.) 3. Bidder to consider all the losses upto POI to comply requirements of regulations and tender condiitions. No change in Tender conditions. Bidder shall comply with tender conditions
2	Consolidated Response to Bidders queries 26.06.2023.pd	Technical Parameters	4.0 - 13	37 of 179	Short Circuit Withstand capability kA 31.5 for 1 sec	Request you to consider Short circuit withstand capability of Switchgear as per Design requirements. This can be discussed during detail engineering.	Bidder shall refer Amendment -2. No change in Tender conditions except Amendment -2. Bidder shall comply with tender conditions
3	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%.	We understand that we have to meet total AC+DC loss : 2.5% as per PV syst provided input in RFP, individual DC loss capping of 1.5% is not mandatory. Kindly confirm. We understand with AC/DC power, the Operating tempeture of the conductor will be rise due to the ambient temperature and due to current flow. With this conductor temperature will increase. We further understand that the conductor temperature for losses shall be as per operating temperature. Hence, the PVsyst will simulate with respect to 2.5% losses as per operating temperature of the plant/system and accordingly 2.5%(AC+DC) of losses to be maintained. Kindly confirm.	Bidder shall refer Amendment - 2. No change in Tender conditions except Amendment-1 and Amendment -2. Bidder shall comply with tender conditions

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4	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.	Request GIPCL to provide 1200mm cable with module. Since, the with 300 mm to 500 mm module cable length, this shall not be sufficient with different tracker design (proven standard Internationally). The contractor need to add extra cable & MC4 connector to complete the string and techno-commercial disadvantage from owner prospective. With this the number joints between the two modules will increase which is not good for plant life of 25 years as well. Hence, request to amend this clause.	Bidder to plan for daisy chain cabling arrangement with return cable. No change in tender conditions except Amendment - 1. Bidder shall comply with tender conditions.
5	VOLUME - II PART - 2 (Schedule - III A)	Design Criteria	3.4	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.	UPS is required for Inverter room, for auxiliary supply of Inverter. The UPS is not required at night the supply and it will used as back up only and we understand that the aux. power during non solar hour shall be supplied through grid and not in the scope of EPC. Is our Understanding correct.	UPS is required for auxiliary supply to control circuits of IDT, ICOG/ MV panel, RTU/SCADA panel, Secondary Weather Station, etc. At night, the auxiliary supply shall be through grid. However, in case of grid failure/ downtime, the UPS battery backup shall be as per latest CEA technical standard respectively. No change in tender conditions. Bidder shall comply with tender conditions.
6	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.	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. In the SLD "ANNEXURE- 7 TENTATIVE OVERALL SLD OF 400-33 KV GIS PSS-1 SS" capacitor bank is shown. However, the CEA is not accepting the capacitor bank. By this the statuary requirement of dynamic reactive power requirement can only be complied through Inverter/SVG Hence, the bidder has to provide extra inverters/SVG to meet the reactive power at KPS2 to meet the statuary requirement. Is our understanding correct.	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.
7	ANNEXURE - 4 OVERALL PLANT LAYOUT(2X300MW)WIT H PERIPHERAL FENCING	General				Babul tree scope on Plot We have revisited the site after the layout and coordinates provided by GIPCL. We found around 550 acres of land completely filled by babul trees. We understand this removal of tree is in bidder scope. If required the provide the approval for tree cutting shall be provided. Kindly reconfirm.	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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8	VOLUME - II PART - 2 (Schedule - III A) VOLUME - II PART - 2 (Schedule - III A) VOLUME - II PART - 2 (Schedule - III B)	General and Installation Requirements General and Installation Requirements General and Installation Requirements	3.1 3.5 3.1	54 of 82 55 of 82 96 of 179	3.1) 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. Alternatively, HDPE Outer sheath with UV Resistant property shall also be acceptable. 3.5) Extruded PVC outer sheath of type ST-2 as per IS: 5831/1984 and its latest amendment shall be applied over armouring with suitable additive to prevent attack by rodent and termite and Its thickness shall be in accordance with clause -17.32 of IS:7098 (Part-III)/1985 and latest amendment thereof. Alternatively, HDPE Outer sheath (ST-7) with UV Resistant property as per IEC 60502-1 standards shall also be acceptable. 3.1) The cable shall be 19/33kV Grade, high conductivity stranded compacted circular aluminum conductor, Three cores, XLPE insulated, Inner PVC ST2 sheathed, metallic screened suitable for carrying the system earth fault current, conductor and insulation screened galvanized steel strip armoured with overall separate extruded PVC ST2 outer sheath, FLRS/ FRLSH as per CEA regulation, conforming generally to 1S:7098 (part-II)-1985 and lasted amendment thereof suitable for 33kV 3 phase 50 Hz earthed system. HDPE Outer sheath (ST-7) with UV Resistant property shall also be acceptable.	For overground Power DC cables: The HDPE outer sheath cable have the property of mechanical protection. Hence, separate galvanized steel strip armoured is not required for mechanical protection for the cable layed above ground. Hence request you to kindly accept this.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions. Galvanized sleel strip for mechanical protection of cables is required for HDPE outer sheath cables also.
9	VOLUME - II PART - 2 (Schedule - III A2)	DESIGN PARAMETERS	4.6	8 OF 82	Redundant communication (Wired/wireless) through messed network topology for individual Trackers	Request to remove redundancy for communication, we will offer wireless communication.	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
10	VOLUME - II PART - 2 (Schedule - III A2)	MODULE MOUNTING ARRANGEMENT	6.22	14 OF 82	The Structure shall be analysed and designed in accordance with finite element method and the fundamental principles of Engineering using commercially available software (such as STAAD pro or similar), with dead loads and imposed loads considered as per IS 875 (Part 1 & 2) respectively, and with wind loads considered as per IS 875 (Part 3) or as per Wind Tunnel study done from a reputed national/international facility (IITs / CSIR-SERC / CPP Wind Engineering / RWDI or equivalent). Analysis shall be done as per appropriate load combinations as per IS codes.	Design calculation >> pls request design as per ASCE 7-10., load consideration can be as per IS 875	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.

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11	VOLUME - II PART - 2 (Schedule - III A2)	MODULE MOUNTING ARRANGEMENT	6.12	12 OF 82		Please allow coupler (uncoated material) for below the ground for concrete foundation	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
12	VOLUME - II PART - 2 (Schedule - III A2)		6.12	12 OF 82		Purlin thickness > min. 1.2mm requested	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
13	VOLUME - II PART - 2 (Schedule - III A2)		6.12	12 OF 82		For below ground, request to approve 90 microns instead of 110 microns	No Change in Tender Conditions. Bidder Shall Comply With Tender Conditions.
14	VOLUME - II PART - 3 (Schedule - IV to VI)	PART A: OPERATI ONAL ACCEPTANCE TEST (OAT) PROCEDURE - 3	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. During the 15-minute measurement period(s), minimum availability of the plant shall be 99%. If the PR of these fives instances is above 75%, then Operational Acceptance Test (OAT) shall be considered successful.	**Bidder request to amend as below:** Performance ratio formulae to be calculated as per IEC 61724-1 i.e., PR with Temperature correction. Measured PR with temperature correction for entire 30 days of PR test period is to be averaged and to be above 75%, instead of 15 minutes time block.	Bidder shall refer Amendment - 2. Bidder to refer & comply with Volume -II, Part 2(B), section - B.9, clause no 1.16 of the tender document regarding recording intervals of data. No change in Tender conditions except Amendment-1 and Amendment -2. Bidder shall comply with tender conditions
15	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.	**Instead of GHI correction, Bidder request to amend as below:** For the annual targeted generation test procedure, simulate and calculate the target generation in PVSYST considering the site measured tilted insolation, ambient temperature and wind speed date of the corresponding O&M year (365 days) and compare against actual/ measured net generation. GTI measured during grid outage / backdown / surrender constraints / Period to be excluded from measured GTI. The expected Net Energy Export / target generation shall be calculated using the actual measured GHI, Tamb and Wind speed by feeding them in the PVSYST software, keeping all the parameters fixed as per the approved design values to meet out the Estimated Net Energy Export.	Bidder shall refer Amendment -2. No change in Tender conditions except Amendment -2. Bidder shall comply with tender conditions
16	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	Considering the 600 MW capacity of the project execution in Challenging soil conditions and Monsoon period, bidder request GIPCL to increase the project duration for commissioning to 17 months instead of 15 months as specified in the contract and 18 Months for completion of facilities	Bidder shall refer Amendment - 2. No change in Tender conditions except Amendment-1 and Amendment -2. Bidder shall comply with tender conditions
17	VOLUME - I SECTION –1	TABLE A: IMPORTANT DATES	vi	3 of 13	Online (e-tendering) Tender/Offer submission last date {This is mandatory} : **11th July, 2023** **Time: 17:00 hours (IST)** **On n-procure portal for BidSubmission**	Bidder is requesting GIPCL to extend the Bid submission due date by 2 weeks i.e., from 11th July 2023 to 25th July 2023.	Bidder shall refer Amendment - 2. No change in Tender conditions except Amendment-1 and Amendment -2. Bidder shall comply with tender conditions
18	VOLUME - I SECTION –1	TABLE A: IMPORTANT DATES	vii	4 of 13	Physical receipt of Bid with all the relevant documents last date (By RPAD or Speed Post or By Personal Messenger) {This is mandatory} : **13th July, 2023** **Venue: GIPCL Corporate Office,** **PO: Ranoli - 391 350, Dist. Vadodara.**	Bidder is requesting GIPCL to extend the Bid submission due date by 2 weeks i.e., from 11th July 2023 to 25th July 2023.	Bidder shall refer Amendment - 2. No change in Tender conditions except Amendment-1 and Amendment -2. Bidder shall comply with tender conditions