



एनटीपीसी-सेल पावर कम्पनी लिमिटेड

(एनटीपीसी और सेल का संयुक्त उपक्रम)

NTPC-SAIL Power Company Limited

(A joint venture of NTPC & SAIL)

केन्द्रीय कार्यालय

Corporate Centre

CORRIGENDUM NO. 6 dated 26.05.2026

Tender ID No: 2026_NSPCL_275573_1

Package: EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai

Dear Sir

This is in reference to IFB bearing Bidding Document No: CMCC260018 and above mentioned **Tender ID No: 2026_NSPCL_275573_1 dated 24.04.2026** and for **EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai** available on Government e-procurement portal of NIC (GePNIC) at website - <https://etenders.gov.in/eprocure/app>

Kindly note the following changes in the bidding schedules and arrange to submit your offer accordingly.

Bid (both Techno-Commercial and Price) receipt date & time	Up to 08.06.2026 by 14:00 hrs (IST)
Date & Time for opening of Envelop-I (Techno-Commercial)	09.06.2026 at 14:30 hrs (IST)
Date & Time for opening of Envelop-II (Price bid)	Shall be intimated after opening of Techno-Commercial Bid.

Clarifications no. 2A (Commercial), Clarifications no. 2B (Technical) and Amendment no. – 02 (Commercial) pertaining to the pre-bid queries are attached herewith.

As mentioned at Clarification no. 2B (Technical) Sl. No. 34 that “The KML file for the project site shall be shared with the bidder for reference. However, the bidder shall verify the same at site.” The bidder may write an email request for the same to NSPCL emails sk.babel@nspcl.co.in & debasish.dutta@nspcl.co.in .

All other details and terms & conditions of the NIT/IFB, as amended by earlier corrigenda/errata/clarifications/addenda (if any), shall remain unchanged.

Bidders are advised to regularly visit the [GePNIC e-Procurement Portal](#) for updates.

Thanking You.

Your faithfully
For & on Behalf of NSPCL
(S.K. Babel)
Sr. Manager (C&M)

EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai

Sl. No.	Clause Reference	Amendment No. 2 (Commercial)	
		Existing Provision	Amended Provision
1.	SECTION – I : APPENDIX-1 TO IFB Page 3 of 3 - QR Clause 2.3	In case where audited results for the last financial year as on date of techno-commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company are under audit as on techno-commercial bid opening and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.	In case where audited results for the last financial year as on date of techno-commercial bid submission are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company are under audit as on techno-commercial bid submission and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.
2.	SECTION – VII BOOK 1 OF 2 : ATTACHMENT – 3A-2 PAGE 4 OF 5	In case where audited results for the last financial year as on date of techno commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company are under audit as on techno-commercial bid opening and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.	In case where audited results for the last financial year as on date of techno commercial bid submission are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company are under audit as on techno-commercial bid submission and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.

EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai

3.	<p>Section-III PAGE 5-6: BDS Clause 4.0</p>	<p>In case where audited results for the last financial year as on date of techno-commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company are under audit as on techno-commercial bid opening and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.</p>	<p>In case where audited results for the last financial year as on date of techno-commercial bid submission are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the financial results of the company are under audit as on techno-commercial bid submission and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.</p>
4.	<p>SECTION – VII BOOK 1 OF 2 : APPENDIX-C TO ATTACHMENT – 3A-2</p>	<p>I, Mr. (CEO/ CFO of the Company) of (Name of the Company) declare that the financial results of M/s. (Name of the Bidder) are under audit as on (Date of Techno-commercial bid opening) and the Certificate from the practicing Chartered Accountant certifying the financial parameters is also not available.</p>	<p>I, Mr. (CEO/ CFO of the Company) of (Name of the Company) declare that the financial results of M/s. (Name of the Bidder) are under audit as on (Date/time of bid submission) and the Certificate from the practicing Chartered Accountant certifying the financial parameters is also not available.</p>

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-A (Commercial)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-Section)	Clause No.	Page No.	Any other reference	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
1						While reviewing the tender documents, we encountered an issue under SECTION – VII, BOOK 1 OF 2 of BIDDING DOCUMENT NO.: CMCC260018, with reference to ATTACHMENT – 3A-2 and APPENDIX-C TO ATTACHMENT – 3A-2 , we are unable to furnish the declaration regarding unaudited financial results as on the Techno-Commercial Bid Opening date due to compliance-related constraints. In this regard, we kindly request you to clarify the following: (A) Whether submission of the said declaration is mandatory in our case; (B) Whether any alternate document/certificate may be submitted in lieu of the declaration	Amendment is being issued with the corrigendum no. 06. The same to be referred please.
2	Section VII			Attachment – 3K / Manufacturer Authorization	Manufacturer's authorization requirement mentioned in bidding document.	Kindly confirm whether Manufacturer's Authorization (Attachment-3K) is required to be submitted along with bid submission or can be submitted after award during detailed engineering/procurement stage.	Attachment-3K can be provided before contract execution.
3		GCC Clause 36			Change in law gives price/time adjustment after 7 days before price bid deadline, but excludes raw materials/intermediate procurement.	Regulatory/grid/MNRE/ALMM changes after bid may increase cost. Please confirm that changes in CEA/RLDC/SLDC/MNRE/ALMM requirements after bid will be treated as change in law/regulation.	Bidding documents provision are clear and shall remain unchanged.
4		GCC Clause 40			EOT allowed for employer default, suspension, change, force majeure, unforeseen conditions and site possession delay.	Need practical recording method. Please confirm that Hindrance Register entries for BSP shutdown, permit delay, approval delay and access restriction will be accepted for EOT.	Bidding documents provision are clear and shall remain unchanged. Please refer GCC Clause 40.
5		GCC 10 and GCC 40/41			Employer assists permits and provides certain facilities; EOT may be available for employer delay/suspension.	Need clear trigger for EOT and cost. Please confirm that any delay beyond contractor control, including statutory/utility/BSP/SLDC/RLDC delays, will qualify for EOT and reimbursement of BG/insurance extension charges.	Bidding documents provision are clear and shall remain unchanged. Please refer GCC Clause 40 and 35 for details.
6		GCC 35 Unforeseen Conditions			Contractor may claim relief for materially different physical conditions after notice.	Floating reservoir bed, underwater obstructions and underground switchyard utilities are major unknowns. Please confirm that unexpected underwater obstructions, unsuitable reservoir bed, hidden utilities, contaminated material or unknown foundations will be treated as unforeseen conditions with EOT and cost adjustment.	
7	Section VII	Section VII, BG Formats			Performance Security is 5% of Contract Price and valid 90 days beyond defect liability period.	Multiple BGs may overlap: CPS, advance BG, generation BG, O&M BG, AMC BG. Please confirm that overlapping BGs will not be encashed for the same default and that BG value will be reduced/released promptly after relevant milestone completion.	Bidding documents provision are clear and shall remain unchanged.
8		GCC 34 Insurance			Contractor to maintain required insurances; employer/co-insured clauses apply; insurance proof is linked to payments.	Deductibles, insured values and insurer requirements are not fully clear. Please provide Appendix-3 insurance schedule with required policy values, deductibles, additional insured wording, insurer rating and whether broker-arranged policies are acceptable.	Bidding documents provisions are clear and shall remain unchanged.
9		GCC Completion Time Guarantee; SCC LD			Delay LD is 0.5% per week/part week, capped at 5% of total First + Second Contract price.	Delay LD may overlap with generation LD if commissioning is delayed. Please confirm that delay LD and generation/performance LD will not both apply for the same period/event.	Bidding documents provisions are clear and shall remain unchanged.
10		GCC Limitation of Liability			Aggregate contractor liability is capped at total contract price, except patent infringement; indirect/consequential damages are excluded.	Need confirmation of cap across all contracts and all LDs. Please confirm that total aggregate liability under all three contracts, including all LDs, claims, indemnities and BG encashment, shall not exceed the total contract price except expressly excluded items.	Bidding documents provisions are clear and shall remain unchanged.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-A (Commercial)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-Section)	Clause No.	Page No.	Any other reference	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
11		GCC Change in Facilities			Employer can instruct changes; price/time adjustment mechanism exists.	Need practical process and rates for variation. Please confirm timeline for approval of variation orders, applicable unit rates, and that contractor is not required to proceed with cost-impacting changes without written instruction.	Bidding documents provisions are clear and shall remain unchanged.
12	Section VII	Bid Form Clause 3.3; Section VII			Prices are firm; price adjustment not applicable.	Firm price conflicts with open-ended regulatory and interface scope. Please confirm that firm price excludes employer changes, statutory changes, new RLDC/SLDC requirements and change in tender drawings.	Bidding documents provisions are clear and shall remain unchanged.
13		BOQ Schedule 10			Unit rates are stated to be used for quantity variation, but supply and installation rows show NIL.	Variation pricing mechanism is missing. Please issue a filled unit-rate schedule or confirm variations will be paid on actual cost plus agreed overhead and profit.	Price Schedule 10 is the not applicable for this case and it is disabled in the Price schedule excel.
14		Section VII, BOQ / Price Schedules			Price Schedules generally do not describe full scope; bidder rates deemed inclusive. BOQ has Schedule 2, 3, 4, 5, 6, 7 and 10.	BOQ quantities may not capture full interface scope and mandatory spares. Please confirm that tender technical specifications will prevail over BOQ descriptions, and any item not measurable in BOQ but required due to employer/interface changes will be treated as variation.	Bidding documents provisions are clear and shall remain unchanged.
15		BOQ Schedule 7			GST to be quoted separately on supply, F&I, installation, civil, O&M, AMC and safety.	GST classification may differ across components. Please confirm GST rates to be used for solar EPC supply, civil, O&M and AMC, and whether later GST change will be reimbursed.	Bidding documents provision are clear and shall remain unchanged.
16		BOQ Notes / Schedule 6 Spares			BOQ notes restrict use of "Not Applicable" for spares; functionally equivalent spares may be required.	Risk of free supply later if applicability changes during detailed engineering. Please confirm that bidder may quote functionally equivalent spares based on offered design, and that spares not applicable to the offered design will not be required later free of cost unless specifically part of mandatory spares.	Bidding documents provision are clear and shall remain unchanged.
17	Section - II Instruction To Bidders (ITB)		Bid Security, Clause no 12.2	32	EMD: For the Bid Security amount up to Rs. 1,00,000/- (Rupees One Lacs only), the Bidders must submit the Bid Security amount through Electronic Fund Transfer (EFT) only. Bidders may opt for Online Transfer of EMD (INR only) amount through EFT to NSPCL's Bank whose details are as under.	Kindly allow EMD exemption to eligible MSME bidders upon submission of valid Udyam certificate, We undertake to submit: Valid Udyam Registration Certificate Self-declaration of eligibility Relevant category registration	As already mentioned at the GePNIC Portal, "EMD Exemption is not allowed" for this package being a works contract.
18	Section-IV (GCC)		Performance Security, Clause 13.3.4	123	Performance Security: 13.3.4 Whenever adjustments under Clause 39 [Change in the Facilities] result in an accumulative increase or decrease of the Contract Price by more than fifteen percent (15%) of the Contract Price stated in the Contract Agreement	Request for reduce 5% of contract price	Bidding documents provisions are clear and shall remain unchanged.
19	General		General		Extension of Bid submission	We respectfully request an extension of the bid submission deadline by fifteen (15) days. This additional time will enable us to prepare and submit a more comprehensive and competitive proposal, ensuring that all technical, financial, and compliance aspects are addressed with due diligence.	Bidders are requested to visit the GePNIC (e-tender) portal on regular basis for the updated bidding schedule.
20	General					We request allowing submission of hard copy documents within 2–3 days after the online bid deadline. This is in line with standard Government tender practices where physical documents are permitted within up to 72 hours post bid submission.	Bidding documents provisions are clear and shall remain unchanged. Further, it is advised to refer IFB Clause 5.0 and ITB Clause 12.10.2.1.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
1	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Reservoir Water Uses purpose.	Location of reservoir is mentioned in tender document. Bidder advised to visit the site to get the water details
2	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Are there any restriction for usable of Reservoir Area/Water.	Technical specification is clear. Bidder to follow the tender drawing.
3	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Water Body Type:- 1. Water Storage Plant 2. Irrigation Pond 3. Water Treatment 4. Drinking Water Pond 5. Quarry Lake 6. Industrial Pond 6. Dam (Please share if any specific document available)	Fresh water reservoir. The bidder shall visit the site and carry out its own assessment regarding water quality and treatment requirements for module cleaning and other project related uses.
4	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Water Type :(Please share if any specific document available) 1. Fresh 2. Fresh 3. Saltly 4. If Other please describe	Fresh water reservoir. The bidder shall visit the site and carry out its own assessment regarding water quality and treatment requirements for module cleaning and other project related uses.
5	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Does the body of water have a liner/membrane - on bank slope or on bottom	Available information is already shared with tender document. Bidder to visit site, if any further details is required.
6	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	1. Reservoir Bottom level 2. Reservoir Lowest & Highest Water Level 3. Reservoir Flow rate 4. Wave Height 5. Reservoir Bank & Bottom Soil Composite type 6. Reservoir Bank Height 7. Reservoir Water Level maintained 8. Depth of Reservoir (Please share if any specific document available)	Bidder shall refer to the Bathymetry and Topography reports included in the tender document (Tech. Spec. page-619/647) for reservoir levels, depth profile and other available details. Any additional investigation or study required for design and execution of the project shall be in the bidder's scope.
7	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Does Bidder allow to empty reservoir for any further requirement? (Please share if any specific document available)	No, reservoir shall not be emptied.
8	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Any specific Anchoring restriction are there for design consideration. (Please share if any specific document available)	The bidder shall design the anchoring and mooring system accordingly and in compliance with the Technical Specification requirements.
9	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Kindly provide the initial reports for quotation or bidding purposes:- 1. Hydrology Report, 2. Geo-Technical Investigation	Bathymetry and Topography reports are included in the tender document. Any additional hydrological, geotechnical or site specific study required for final design are under bidder's scope.
10	SECTION – VI	1-A PROJECT INFORMATION		6/676	General	Please confirm which type of generation file is permitted for use in PVsyst software — Meteo file, SolarGIS, or NASA data.	Bidder to follow the Technical Specification requirement.
11	SECTION – VI	1-A PROJECT INFORMATION	PROJECT CAPACITY	6/676		Minimum specific Generation at metering point shall be 2.195 MU/MW/year- UG Cable loss need to be included	Bidder to follow the tender specification.
12	SECTION – VI	2-A ELECTRICAL SCOPE OF SUPPLY & SERVICES		45/676		Based on prior experience, the bidder proposes a DC loss of 3% from the module to the inverter and an AC loss of 3% from the inverter to the MV panel. Kindly confirm.	DC loss is clearly mentioned in Technical specification clause 1(n), chapter -2-A. Bidder to follow the Technical Specification.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
13	SECTION – VI	PROJECT INFORMATION	6.0 TECHNICAL SPECIFICATIONS Methodology for calculation of LD during O&M	19/676	$G2' = (H2/H1) \times G1 \times MCF \times PGF$	How will H2 (measured GHI) be recorded — onsite pyranometer, satellite data, or third-party validation?	Bidder to follow the Technical Specification requirement.
14	SECTION – VI	PROJECT INFORMATION	6.0 TECHNICAL SPECIFICATIONS Methodology for calculation of LD during O&M	19/676	Methodology for calculation of LD during O&M	Bidder request to add Radiation Correction factor in LD Calculation Methodology	The methodology for calculation of LD during O&M is already specified in Clause 6.0, Sec-VI of the Technical Specification. The tender requirement shall prevail and bidder shall follow the same.
15	SECTION – VI	PROJECT INFORMATION	30) Interfacing with SAIL BSP Network	32/676	(i) At BSP MSDS-VI, a 132 kV AIS (Air-Insulated Switchyard) with a double busbar scheme is available. The bidder is required to construct and integrate a new 132 kV bay for the evacuation of solar power at the designated vacant space earmarked for future bays, as indicated in the existing switchyard layout drawing. The equipment installation at 132 KV switchyard shall be as per existing BSP MSDS-VI switchyard layout.	Please share marked designated vacant space earmarked for future bays, with existing switchyard layout drawing KMZ File.	The indicative future bay location is shown in the tender layout/vicinity drawing at Page 606/676, Sec-VI of the Technical Specification. Bidder shall visit the site for assessment and understanding of available space, existing switchyard arrangement and integration requirements.
16	SECTION – VI	PROJECT INFORMATION	30) Interfacing with SAIL BSP Network	32/676	The scope includes the supply, installation, and commissioning of all associated equipment and infrastructure necessary for interfacing with the existing switchyard, including 33 kV/132 kV power transformer, isolators, current transformers (CTs), potential transformers (line PTs), earth switches, lightning arresters (LAs), circuit breakers (CBs), control and relay system including SAS, IED-based digital RTCC systems, and fire alarm systems, switchgear, connection with the existing 132 kV bus, annunciation systems, firefighting systems, cables, metering at both 33 kV and 132 kV levels, as well as all related civil works and approach roads. All work shall conform to the technical specifications and standards outlined in the tender documents.	What will be the system fault ?	The available system fault level and associated switchyard interface details shall be shared/confirmed during detailed engineering.
17	SECTION – VI	PART-B A – DC SYSTEMS	A-1 SOLAR PHOTOVOLTAIC (SPV) MODULES 2.0 CRYSTALLINE SILICON MODULES (C-Si)	59/676		Based on prior experience, the bidder has requested a modification to achieve a module efficiency of 20%, with a minimum fill factor of 0.75.	Bidder to follow the PV module requirements specified in Clause 2.1(3), Chapter A-1, Page 59/676, Sec-VI of the Technical Specification.
18	SECTION – VI	A-3 DC CABLES	2.0 DC CABLES (STRING COMBINER BOX TO INVERTER)	78/676	Type test, routine, acceptance tests requirements for these cables shall be as per EN50618:2014/IS 17293:2020. All test charges shall be deemed to be included in the cable price. Sampling for acceptance tests will be as per IS 7098.	Kindly confirm whether cables placed over water or on floaters are required to possess anti-termite, anti-rodent, and water-resistant properties.	Bidder to follow the technical Specification requirement and submit the relevant type test reports for approval.
19	SECTION – VI	A-3 DC CABLES	2.0 DC CABLES (STRING COMBINER BOX TO INVERTER)	78/676	Type test, routine, acceptance tests requirements for these cables shall be as per EN50618:2014/IS 17293:2020. All test charges shall be deemed to be included in the cable price. Sampling for acceptance tests will be as per IS 7098.	Please confirm if cables laid over water or on floaters must have lead material incorporated in the outer sheath.	Bidder to follow the technical Specification requirement and submit the relevant type test reports for approval.
20	SECTION – VI		POWER EVACUATION SYSTEM, TELEMTRY & SCADA. 3.3	48/676	Provision of SCADA HMIS/SERVER Operator Work-Station (OWS) at CMCS SCADA, PPC & other associated electrical system shall be placed in the CMCS Buildings to be constructed by the bidder. Engineering cum Operator work station (EWS+OWS) (Desktop & Monitor) - 1 Set	Could you please confirm whether one set refers exclusively to one desktop and one monitor?	Bidder's understanding is correct.
21	SECTION – VI	SCADA	14	111/676	Supply of Outdoor Wireless Access Point	Please confirm whether the same need to be consider or not. As Wireless is more subjected to Cyber Threats.	Bidder to follow the Technical Specification requirement.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
22	SECTION – VI	SWITCHYARD & TRANSMISSION SYSTEM	1.02 DETAILED SCOPE OF WORK - ELECTRICAL	265/676		IPS Tube Need to use in BAY Construction or Cable need to be used. Please confirm	Bidder to follow the Technical Specification requirement.
23	SECTION – VI	SWITCHYARD & TRANSMISSION SYSTEM	1.02 DETAILED SCOPE OF WORK - ELECTRICAL	265/676		Kindly confirm whether the bidder is required to consider a double bus system or a single bus system.	The bidder shall follow the tender SLD and existing switchyard scheme.Final configuration and detailed interconnection arrangement shall be finalized during detailed engineering subject to approval of NSPCL/SAIL BSP.
24	SECTION – VI	SWITCHYARD & TRANSMISSION SYSTEM		297/676		Does Bidder need to Consider 33KV Cable only as 33kV poles not applicable. Please confirm	Bidder to follow the tender drawings at Page 606-607/676, Sec-VI of the Technical Specification, for the 33 kV power evacuation system.
25	SECTION – VI	I-1 TENDER DRAWINGS		606/676	Vicinity Map Plant Area	Please share CAD & Kmz file.	KMZ Shall be shared
26	SECTION – VI			607/676	Vicinity Map 33kV Route	Please share CAD & Kmz file.	KMZ Shall be shared
27	SECTION – VI	4.0 HT POWER CABLES		171/676	For single-core armoured cables, the armoring may constitute the metallic part of insulation screening	Kindly confirm whether the HT cable(from IDT to ICOG/HT& From HT Panel To 33kV ICOG Panel) to be used should be of the earthed type or the unearthed type.	Bidder to follow the Technical Specification requirement. The more details will be finalised during the detailed engineering.
28	SECTION – VI	2.0 CABLE SELECTION & SIZING		171/676	The Maximum Overall Voltage Drop: As per relevant clause in chapter 2-A,Part A,Subsection 2.	In line with industry practice, the bidder proposes considering the average voltage drop rather than the maximum overall voltage drop for cable sizing calculations. Kindly confirm.	Bidder to follow the Technical Specification requirement.
29	SECTION – VI	2-B CIVIL SCOPE OF SUPPLY & SERVICES		49/676	Permanent Store-Room	Kindly specify the Size & material. RCC/PEB	Permanent store room to be provided as per tender drawings and Sec-VI of the Technical Specification. Size, material and arrangement shall be finalized during detailed engineering.
30	SECTION – VI	2-B CIVIL SCOPE OF SUPPLY & SERVICES		52/676	Bathymetry Survey of the reservoir	Kindly share the preliminary report. if any.	Bathymetry and Topography Survey reports are already included in Sec-VI of the Technical Specification. Bidder shall refer to Page 619/676.
31	SECTION – VI	2-B CIVIL SCOPE OF SUPPLY & SERVICES		69/676	Floating blocks / array should be designed in such a way to have minimum 1.0M of water depth (corresponding to minimum water level) during entire project life.	Can we reduce it to 50mm max.	Bidder to follow the Technical Specification requirement.
32	SECTION-III (BDS)	Bid Data Sheet	BDS Item No. 11	65/351	Time to complete the facilities from the date of Notification of Award: 12 months.	We request to kindly extend the project completion period to 18 months under the clause governing Time for Completion, considering project complexity, site conditions, and execution requirements.	Bidder to follow the Technical Specification ande tender requirement.
33	SECTION – VI	C-1 TOPOGRAPHY SURVEY AND SOIL INVESTIGATION	2.0 BATHYMETRIC SURVEY	353/676	"The owner has carried out bathymetric survey & report of the same is attached at sub-section I-1, onus of the correct assessment of the report is with the bidder." The bathymetric survey requires a wide range of base data. The report of the Bathymetric survey should include following points: . . . 6. AutoCAD drawings with co-ordinate and corresponding bed profile. 7. Location map, bathymetry map & contour map with all co- ordinates of survey area & boundary. 8. All the maps should be prepared in digitized forms using computer software like AutoCAD – Release 2016 or the latest.	As the bathymetry survey is being conducted by the Owner, we require the AutoCAD files of the survey drawings/maps for further engineering, design, and project execution activities.	The AutoCAD files of the bathymetric survey shall be shared with the bidder for reference only. However, the bidder shall verify and satisfy itself regarding the correctness, adequacy and suitability of the data, and the onus of its use shall remain with the bidder.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
34	SECTION – VI	PART-A SUBSECTION – 1	1-A PROJECT INFORMATION- 3.0 LOCATION AND APPROACH	7/676		The indicative coordinates of the project site have been provided; however, the KMZ/KML file for the project boundary/survey area has not been shared. Kindly provide the same for accurate site reference and further engineering activities.	The KML file for the project site shall be shared with the bidder for reference against bidder's request email. However, the bidder shall verify the same at site.
35	SECTION – VI	VICINITY MAP	PROPOSE LAYOUT(VICINITY MAP)	607/676	33kV cable route,location of cmcs and 132kV switchyard	Please mention the distance from the water body- upto 132kV switchyard as the cable will be laid in the ground from water body end to switchyard. As per the discussion held in the NTPC prebid meeting held on 11/05/26, it was mentioned by NSPCL team that the length maybe approx 3.3kms.Please provide confirmation	The approximate distance from the waterbody to the 132 kV switchyard is 3.5 km. However, the bidder shall visit the site and assess the actual route length.
36	SECTION – VI	PART-A SUBSECTION – 1	8.0 STATUTORY COMPLIANCE, GRID CONNECTIVITY AND POWER EVACUATION	9/676	Power Evacuation shall be at 33 kV voltage level and to be connected to 132 Kv Switchyard at MSDS-VI. Necessary modification like bus extension, additional panel, shifting or modification of existing panel or systems are in the scope of Bidder.	please mention the distance from from water body upto Power Evacuation point at 33 kV voltage level and to be connected to 132 Kv Switchyard.	The distance between the solar plant and 33 kV pooling substation shall be finalized during detailed engineering based on the bidder's design proposal. The location for prposed floatingf solar plant and switchyard are shown in tender drawing. . However, the bidder shall visit the site and assess the actual route length for design, estimation and execution purposes.
37	SECTION – VI	PART-B AC SYSTEMS	B-11 Lightning Protection System 3.0 LIGHTNING PROTECTION SYSTEM FOR SOLAR ARRAY	249/676	NF C 17-102:2011 or latest: Lightning Protection with early Streamer Air Termination Rod.	Can bidder proposed convetional type Air terminal for Lightning protection?	Bidder shall comply with the Technical Specification requirements.
38	SECTION – VI		A-2 FLOATING SYSTEM	76/676	Corrosion Resistance (Painting and Preservation) a) Metal based platforms have to be painted/preserved to withstand severe atmospheric corrosion conditions. The platforms shall be designed/ painted/ preserved for the corrosion category (mentioned in technical specification elsewhere) as per EN ISO 12944-2. No re-painting of the platforms shall be allowed up to 25 years, hencefor any type of corrosion, Suitable corrosion prevention mechanism shall be provided or appropriate compatible material to be used.	Mentioned period is very long, request you to reduce it to 5years.	Bidder shall comply with the Technical Specification requirements.
39	SECTION – VI	List of Tender Drawings	132kV Single line diagram	615/676	31.5MVA 332/33kV TIE type TRANSFORMER,ONAN, considered at the 132KV switchyard in SLD.	As per the discussion held in the NSPCL prebid meeting held on 11/05/26, it was mentioned by NSPCL team. Please provide confirmation	Bidder shall comply with the Technical Specification requirements and tender SLD.
40	SECTION – VI	APPENDIX – 1 SITE SPECIFIC TECHNICAL DATA	F. ANCHORING AND MOORING SYSTEM	16/676	2. Puncturing or disturbance of reservoir embankment is not allowed. 3. Anchoring & mooring system shall be such that it doesn't damage the embankment and its associated structures 4. Special care to be taken while installing and laying of anchor blocks so as not to damaged or disturbed the reservoir floor	As per the discussion held in the NSPCL prebid meeting held on 11/05/26. "structure can be designed dead load can be considered " - Please confirm	Bidder shall propose a suitable design for anchoring and mooring arrangement in line with the Technical Specification. The final design shall be reviewed and finalized during detailed engineering .
41	SECTION – VI	General			" Inverter room , HT panels, and other equipment placement completely in bidders scope and design, depending on the site conditions but no construction is allowed on the band as the band is 60yrs old"	Can we place these equipment little far from the band? As per the discussion held in the NSPCL prebid meeting held on 11/05/26. "structure can be designed dead load can be considered " - Please confirm	Bidder shall propose a suitable layout /design in line with the Technical Specification.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
42	Section VI (TS)		A-2 FLOATING SYSTEM	73 of 676	4.2 ANCHORING AND MOORING SYSTEM j. Anchoring system for the floating island can be through dead weight anchors	Anchoring Methodology The tender specifies anchoring and mooring using dead weight anchor blocks. Kindly confirm whether this is a mandatory requirement, or if alternative anchoring systems (such as pile anchoring, helical anchors, or hybrid systems) may also be considered.	Bidder shall propose a suitable design for anchoring and mooring arrangement in line with the Technical Specification. The final design shall be reviewed and finalized during detailed engineering.
43	Section VI (TS)		APPENDIX – 1 SITE SPECIFIC TECHNICAL DATA	16 of 676	F. ANCHORING AND MOORING SYSTEM 1. Suitable investigation/study other than boreholes (puncturing of reservoir bottom is not envisaged) to be carried out at site to determine the bearing capacity and settlement of the reservoir to design the anchoring system. 2. Puncturing or disturbance of reservoir embankment is not allowed.	Coefficient of Friction for Design For the design of the anchoring and mooring system, the coefficient of friction of the reservoir bed is a critical parameter. However, determination of the same requires physical testing, which involve puncturing the reservoir bed. The puncturing of the reservoir bed is prohibited and determination of Co- efficient of friction is considered beyond the present scope. kindly clarify the recommended or standard value of coefficient of friction to be considered for design purposes.	Bidder shall comply with the requirements of the Technical Specification for design of the anchoring and mooring system. Requirement of soil/reservoir bed testing, if any, shall be reviewed during detailed engineering and shall be subject to approval of NSPCL/ BSP (SAIL).
44	Section VI (TS)		APPENDIX – 1 SITE SPECIFIC TECHNICAL DATA	16 of 676	F. ANCHORING AND MOORING SYSTEM 1. Suitable investigation/study other than boreholes (puncturing of reservoir bottom is not envisaged) to be carried out at site to determine the bearing capacity and settlement of the reservoir to design the anchoring system. 2. Puncturing or disturbance of reservoir embankment is not allowed.	Design Responsibility and Liability In the event of island movement due to wind or other environmental forces, kindly confirm whether approval of the anchoring and mooring design by the Engineer-in-Charge / Client shall constitute acceptance of the design adequacy, and whether any subsequent damage to the floating island arising from such movement be acceptable to NSPCL, since the coefficient of friction of the reservoir bed has not been specified and determination of the same through site investigation (including puncturing) is not permitted.	Bidder shall design the anchoring and mooring system in compliance with the Technical Specification.
45	Section VI (TS)		General	-	-	We request you to kindly provide the drawing of Floating boundary Barrier.	KML file for the proposed plant location shall be shared with the bidder for reference.
46	Section VI (TS)		General	-	-	We request you to kindly provide the Soil Investigation report of the Reservoir Bed.	Bathymetry and Topography reports are included in the tender document. Any additional site specific study required for final design are under bidder's scope.
47	Section VI (TS)		General	-	-	We request you to kindly provide the AutoCAD file of Bathymetry Report.	The AutoCAD files of the bathymetric survey shall be shared with the bidder for reference.
48	Section VI (TS)		A-2 FLOATING SYSTEM(Clause 4.1)	68 of 676	4.1 MODULE SUPPORT STRUCTURE (IF APPLICABLE) b. The MSS and associated hardware / fasteners, if used are metallic in nature, shall be non-corrosive and suitable for local corrosion conditions. The structures shall be made of anodised aluminium. All fasteners, nuts, bolts, and other hardware shall be of Stainless steel – 304 or higher grade. Appropriate compatible materials should be used to prevent galvanic corrosion.	Kindly confirm can we also allow to use the ZAM and Al-Zn structure for the module mounting structure.	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
49	Section VI (TS)		C-4 CIVIL & STRUCTURE WORKS – GENERAL DESIGN CRITERIA	366 of 676	CMCS, INVERTER ROOMS, SECURITY ROOM & STORE ROOM A. CMCS Building: The CMCS shall be RCC framed structure with bricks/concrete blocks masonry walls D. Store Room (PEB): One store (PEB) (in addition to all other stores and PEB Invertor room) shall be constructed near CMCS Room for storage of Mandatory Spares during O&M Period by bidders and later on for Owner after O&M period.	We request you to kindly confirm that sufficient space required for the CMCS and Store Room shall be provided by NSPCL.	NSPCL shall provide the space for CMCS and store room as per project requirement
50	Section VI (TS)		C-4 CIVIL & STRUCTURE WORKS – GENERAL DESIGN CRITERIA	366 of 676	CMCS, INVERTER ROOMS, SECURITY ROOM & STORE ROOM A. CMCS Building: The CMCS shall be RCC framed structure with bricks/concrete blocks masonry wall	We request you to kindly permit the use of a pre-fabricated structure for the CMCS building instead of an RCC-framed structure.	Bidder shall comply with the Technical Specification requirements.
51	Section I to V		BDS Item No. 11	65 of 351	Time to complete the facilities from the date of Notification of Award: 12 months.	Since the proposed project is a floating solar project involving additional technical complexities such as anchoring, mooring systems, etc., along with execution challenges including crossing of Indian Railways infrastructure, the project execution is comparatively more complex than conventional ground- mounted solar systems. In view of the above, we kindly request you to consider allowing an execution period of 18 months instead of 12 months for successful completion of the project.	Bidder shall comply with the Technical Specification and tender requirements.
52		MISC			KMZ of the Plant	Please provide the KMZ file of the plant specifying the extents of reservoir area to be utilised for array layout preparation.	KML file for the proposed plant layout shall be shared with the bidder for reference. However, the final layout shall be finalized during detailed engineering.
53		A-5 POWER CONDITIONING UNIT	3.00 GENERAL REQUIREMENTS	88/ 676	3.03. The PCU shall be capable of supplying reactive power as per grid requirement during solar and non-solar hours. PCU shall have Static Var Generation (SVG) function.	Please confirm whether an additional inverter is required to compensate for reactive power or if a combination of SVG and inverter can be considered for compensation.	Bidder may propose a suitable reactive power compensation methodology, either through additional inverter capacity or by using SVG. However, the same shall be finalized during detailed engineering in compliance with the Technical Specification requirements.
54		A-5 POWER CONDITIONING UNIT	3.00 GENERAL REQUIREMENTS	87/ 676	PCU shall meet the following technical parameter - Active power limit control, reactive power, and power factor control features.	Kindly confirm the scope of Filter.It will be in bidder scope or NTPC -SAIL scope	Technical specification is clear. Bidder shall comply with the Technical Specification requirements.
55		B-11 LIGHTNING PROTECTION SYSTEM	3.3 LIGHTNING PROTECTION SYSTEM FOR SOLAR ARRAY WITH E.S.E AIR TERMINAL	250/676	LA postioning	Kindly confirm, whether we can place the module under la shadow, if yes, then kindly confirm the shadow timing.	Technical specification is clear. Bidder shall comply with the Technical Specification requirements.
56		B-11 LIGHTNING PROTECTION SYSTEM	3.3 LIGHTNING PROTECTION SYSTEM FOR SOLAR ARRAY WITH E.S.E AIR TERMINAL	250/676	Support mast for ESE Air terminal shall be heavy duty hot dip galvanized material and shall be suitable to withstand dynamic and static forces acting on it without failure. Foundation for the mast shall be M20 Grade concrete or better with minimum depth of 1200 MM.	Bidder understands Lightning arrester installed on floaters.Kindly confirm.	Bidder's understanding is correct. However, the same shall be reviewed and finalized during detailed engineering.
57		SCADA			SCADA and PPC make	To avoid unavailability of the product, kindly approve the use of the same make for PPC and SCADA.	Bidder shall comply with the Technical Specification requirements.
58		B-6 SCADA	6.0 SOFTWARE REQUIREMENT	197/676	Software Licence - The Contractor shall provide software license for all software being used in Contractor's System.	Bidder proposes, 2 license, kindly confirm	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
59		B-5 CABLE INSTALLATION METHODOLOGY -	3.0 EQUIPMENT DESCRIPTION	187 / 676	AC/DC trench laying	We are considering brick laying for AC trench only. 3 options of RC cable trench or buried hume pipes or cables buried under brick with cable . Kindly confirm availability of all 3 options as per site feasibility	Bidder shall comply with the Technical Specification requirements.
60		B-5 CABLE INSTALLATION METHODOLOGY -	3.0 EQUIPMENT DESCRIPTION	187 / 676	Sand bedding	There shall be a minimum of 75 mm sand bedding above and below the HDPE pipe carrying AC cables. Kindly Confirm	Bidder shall comply with the Technical Specification requirements.
61		Annexure -II - INDICATIVE VENDOR LIST SUB-SYSTEM: ELECTRICAL	ACCEPTABLE SUPPLIER AS PER DATABASE, M/s	501 / 676	Make List-	<p>Bidder requests to consider some other make for the bid participation.</p> <ol style="list-style-type: none"> 1. SCB - Heyday / Skytron / VNT / HPL / MAC / Delta Interconnection or Equivalent 2. IDT - Atlanta / Synergy / Indotech / Wilson / Nucon / Tesla / Devolt or Equivalent 3. DC Cable (module to inverter) - Prysmian / RR / Kable / Paramount / Special cable / Dynamic or Equivalent 4. AC Cable - Apar / Universal / Lapp / Dynamic / Paramount or Equivalent 5. 33kV Switchgear - Schneider / Siemens System House (in case of Outdoor panels) (Channel Partners) / Sterling / Tricolite / LS Power / Kruti / GE T&D, SYSTEM HOUSE FOR MAKE or Equivalent 6. ICOG Panel - Schneider / Siemens System House (in case of Outdoor panels) (Channel Partners) / Sterling / Tricolite / LS Power / Kruti / GE T&D, SYSTEM HOUSE FOR MAKE or Equivalent 7. WMS - Kipp & Zonen / Meatech / Campbell Scientific / Apogee/ Rm Young / Davis/ Theis Clima / Texas Electronics / Webdyn / SolarLog (Iplon) / EKO / Huxseflux / Surya Logix / Meteo Experts / Power AMR or Equivalent 8. CCTV - Honeywell / Bosch / Schneider / CP Plus / Dahua or Equivalent 9. SCADA & PPC - GE / Schneider (Citect) / Emerson (Cimplicity) / Rockwell (FactoryView) / Mitsubishi / Siemens / Prescinto / Adaptive/ Greenwave / Machineplus/ Inaccess /EIT Automation-(System house of all makes) or Equivalent 10. MMS - Karamtara / Ratan / Good luck or Equivalent 11. DC Fuses - Cooper Bussman / Mersen / Little Fuse / Siba / Trinity / Phoenix / Adler / Chint or Equivalent 12. Isolator - IPL / SMC / S&S / GR power / Faraday or equivalent 13. Inverter - Fimer / Huawei or Equivalent 14. ABT Meter - Schneider 	Bidder shall comply with the Technical Specification requirements.
62		Inverter Transformer	5		NIFPS & Differential relay	Bidder proposes, NIFPS and differential relay for more than 10MVA rating IDT and not lesser rating	Bidder shall comply with the Technical Specification requirements.
63		MISC			Spare List	kindly share the spare list. Floaters spares required or not to be confirmed from NTPC-SAIL/	<p>Bidder shall comply with the Technical Specification requirements.</p> <p>Bidder to refer chapter-H, Mandatory Spares of the Technical Specification.</p>

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
64		D-3 MODULE CLEANING SYSTEM	1.0 Solar Module Washing Systems with Water:	437/676	Bidder shall propose solar modules cleaning system by water through pipe network.	Kindly confirm, whether we can use pond water to clean the module during O&M phase. Water test report is awaited and bidder assumes pond water is used for all module cleaning purposes without any additional retreatment.	Bidder to follow Chapter D-3, Module Cleaning System, Page 437/676, Sec-VI of the Technical Specification.
65		WMS	21	426/676	D-1 WEATHER MONITORING STATION	Bidder propose, IEC 61724 for the quantity of WMS	Bidder shall comply with the Technical Specification requirements.
66		D-8 CLOSED CIRCUIT TELEVISION (CCTV) SYSTEM	4.02 Cameras:	456/676	a) PTZ Dome Cameras High Definition (HD) PTZ cameras	The bidder has considered using a PTZ camera with a 500-meter coverage range instead of installing cameras at individual ICR blocks.	Bidder shall comply with the Technical Specification requirements.
67		PLANT ILLUMINATION SYSTEM	B-9	229/676	7.0. LIGHTING POLES -The Street Light system and peripheral lighting shall be designed generally in line with design guidelines.	The bidder understands that no lighting is required for the plant boundary/peripheral area. Accordingly, lighting will be proposed for the ICR area only. As per standard industry practice, dedicated LED lighting for floating solar arrays are not typically provided, as it increases auxiliary power consumption without adding significant operational benefits. We request the removal of this requirement, considering industry standards and the need for optimal auxiliary power utilization	Lighting shall be provided as per Chapter B-9, Plant Illumination System, Page 229/676, Sec-VI of the Technical Specification. Bidder shall not limit lighting only to ICR area.
68		2-B CIVIL SCOPE OF SUPPLY & SERVICES	15	49/676	15. Project Boundary Fencing with Gate(s) As per tender drawing.	Kindly confirm, bidder understands there is no requirement of floating boundary fence construction for solar panels near the pond periphery.. Only fencing to be provided for IDT/ICR yard . Kindly confirm.	Bidder to refer Clause 10.0 of ECC, Chapter. G-1, Page 587/676, Sec-VI of the Technical Specification.
69		A-2 FLOATING SYSTEM	4.0 TECHNICAL REQUIREMENT OF FLOATING UNIT	70/676	k. The complete floating system shall have at least 400 mm floating corridor along the periphery comprising of module floaters and/ or walkway floater to prevent water splash.	As the plant is far from land, a floating approach is not feasible from a stability standpoint. Kindly allow boat access instead. Stability concerns arise when long floating walkways are used in reservoirs. Boat access is a more practical and widely used approach in large-scale floating solar projects. Standard industry practice for such projects involves using boats for operation and maintenance (O&M) activities. We request the removal of the mandatory floating walkway requirement and confirmation that boats can be used for accessing floating solar arrays instead.	Bidder may propose a suitable access arrangement based on site conditions and in compliance with the Technical Specification requirements. The same shall be reviewed and finalized during detailed engineering.
70		C-4 CIVIL & STRUCTURE WORKS – GENERAL DESIGN CRITERIA	2.2 SPECIFICATION OF INVERTER ROOMS (PEB):	19/676	The layout of the Inverter room shall be designed so as to divert the heat generated from each inverter outside the room. The inverter room shall be designed for a life of 25 years.	Bidder proposes the Outdoor Floating platform (Inverter Barge) for placing of electrical equipments such as inveter, HT panel, Inveter Duty Transformer and LT panel without any shed arrangements. Kindly Provide the Confirmation On same . Bidder proposes central inverter + HT panels supported on platform near land end on piles and cross beam steel joists arrangement along with IDT supported on RCC piles with steel liners .Also option of ICR and IDT platform for indoor inside water supported on ferrocement platform. High flood level data is awaited from NTPC -SAIL. Bidder requests to confirm top of ICR platform at HFL + 0.3m . ICR platform at +1.2m above water level and IDT at 0.5m above water level.	Bidder may propose a suitable layout and arrangement for placement of electrical equipment based on site conditions and in compliance with the Technical Specification requirements. The proposed arrangement shall be reviewed and finalized during detailed engineering.
71		A-3 DC CABLES	A-3	79/676	A maximum of 8 Cables (4 Circuits) shall be laid in one HDPE Pipe for DC Cable from Module to string monitoring box (if applicable). The fill factor of the pipe should not be more than 40%.	Request DC cable shall be laid directly over floaters.	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
72		Dredging				Bidder understands there is no requirement of dredging of river bed during construction phase as well as O&M phase. Kindly confirm.	Bidder shall comply with the Technical Specification requirements.
73		Reservoir cleaning				Bidder understands first time pond cleaning shall be undertaken before laying of floats and mooring. No future pond cleaning is envisaged.	Bidder shall comply with the Technical Specification requirements.
74		Central Control Station (CCS)				CCS area has not been furnished. Bidder understands 100 sqm is adequate. In RFQ , mentioned as PEB/ Portable cabin. Bidder understands RCC CCS as per site visit . Kindly confirm. Kindly share tentative MCR layout /plan.	CMCS/CCS building shall be provided as per tender drawings and Technical Specification. Area, layout and construction type shall be finalized during detailed engineering.
75		ROW				ROW of access road , land for construction of control room , temporary site setup , jetty point , TL line land ROW and route and TL line termination is in NTPC-SAIL scope. Kindly confirm	For ROW/ clearances, Bidder shall comply with Clause 12.0 of Chapter 1-A, Page 12/676, Sec-VI of the Technical Specification.
76		Site investigation reports.				Request to share geotechnical reports of reservoir bed, flood level reports and wave study reports for Maroda reservoir	Geotechnical reports of reservoir bed is not available with NSPCL. Any site specific study required for final design are under bidder's scope.
77		Bathymetry report			Tank embankments at 312 and 314, In general, bed level varies in between 308.500 to 298.943 with respect to the Mean Sea Level. Minimum bed level of 298.943 (538400.0mE , 2340400.0mN) was recorded in near pump house . Minimum Drawdown level is 306.0m (MDDL) Full Reservoir Level is 310.14m (FRL)	Bidder requests provision of all 3 nos mooring and anchoring options of piling for floaters , wire rope and dead block anchoring and shore anchoring by bidder. Steel liner piles at mid portion of reservoir , dead concrete blocks with wire in middle shallow portion and shore anchoring for corner arrays.	Bidder shall design the anchoring and mooring system in compliance with the Technical Specification
78						Please confirm whether dredging is required or not . If required the same will be taken up by NPCL or Bidder scope please confirm as bathymetry report prepared during May , 2024 is 2 years old.	Bidder shall comply with the Technical Specification requirements.
79		ANCHORING AND MOORING SYSTEM	4.2.j.	73	Anchoring system for the floating island can be through dead weight anchors.	Please if possible provide wave study report of plant if available.	Bathymetry and Topography reports are included in the tender document. Any additional site specific study required for final design are under bidder's scope.
80		Autacd file				kindly share the bathmentry in autocad file	The AutoCAD files of the bathymetric survey shall be shared with the bidder for reference.
81						Kindly confirm the approximate length/routing of the proposed transmission line/33 kV underground cabling up to the 132 kV Bhilai switchyard.	Bidder shall visit the site and assess the actual route length.
82						As mentioned in the scope regarding the construction of Central Monitoring and Control Station (CMCS), please clarify whether the CMCS building is required to be constructed at the entry of the 132 kV switchyard or within the floating solar plant premises.	The location of the CMCS shall be as per the tender layout, which is near the 132 kV switchyard.
83						Please clarify whether railway crossing approvals/NOC required for underground cabling are in the scope of the bidder/contractor or shall be facilitated by NSPCL.	The Technical Specification is clear regarding statutory clearances. Bidder shall comply with Clause 12.0 of Chapter 1-A, Page 12/676, Sec-VI of the Technical Specification.
84						Kindly confirm whether MOEF approvals/tree cutting permissions, if applicable, are in the scope of the bidder/contractor or owner.	The Technical Specification is clear regarding statutory clearances. Bidder shall comply with Clause 12.0 of Chapter 1-A, Page 12/676, Sec-VI of the Technical Specification.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
85						Please clarify the responsibility for obtaining statutory approvals/clearances related to the project and indicate which approvals are under the scope of NSPCL and which are under the contractor's scope.	The Technical Specification is clear regarding statutory clearances. Bidder shall comply with Clause 12.0 of Chapter 1-A, Page 12/676, Sec-VI of the Technical Specification.
86						Kindly clarify the proposed location of the inverter and transformer installations.	The actual location of the inverter and transformer shall be finalized during detailed engineering based on the bidder's design proposal and site conditions.
87						Please confirm whether the reactive power consumption/compensation can be managed through inverter or if SVG is mandatory.	Bidder may propose a suitable reactive power compensation methodology, either through additional inverter capacity or by using SVG. However, the same shall be finalized during detailed engineering in compliance with the Technical Specification requirements.
88						Request you to kindly provide the KMZ/KML file or layout coordinates of the project site.	The KML file for the project site shall be shared with the bidder for reference.
89						Kindly share the preferred or approved anchoring and mooring methodology.	Bidder shall design the anchoring and mooring system in compliance with the Technical Specification.
90	Section-I Invitation for Bids (IFB)		2.0 Brief Scope of Work, Clause 8	8	Statutory Clearances	We request to kindly consider the scope of arranging statutory clearances in the scope of Employer. However, contractor will provide the documentary support. Kindly confirm.	The Technical Specification is clear regarding statutory clearances. Bidder shall comply with Clause 12.0 of Chapter 1-A, Page 12/676, Sec-VI of the Technical Specification.
91	Section-VI (Technical Specifications)		B-13 Switchyard & Transmission System, Clause 1.01.01 (ii)	255	Cable network including RoW (if applicable) from Substation at solar plant to grid connecting substation, following latest ISTS (Inter-State Transmission System) technical standards by CEA and connectively regulations.	It is presumed that there no Right of Way (ROW) issue is involved. Kindly confirm.	Bidder shall visit the site and assess the actual site condition. ROW approval is under bidder's scope.
92	Section-VI (Technical Specifications)		PART-B I – Tender Drawings	606	General	It is requested to kindly share the distance of interconnection point from the plant boundary	Bidder shall visit the site and assess the actual route length.
93	Section-VI (Technical Specifications)		C-1 Topography Survey and Soil Investigation	353	General	It is understood that Topo & soil investigation is not mandatory if the bidder adopts tender report. Kindly confirm.	Geotechnical investigation is in the scope of the bidder (refer Clause 12.0 of Chapter C-1, Page 356/676, Sec-VI of the Technical Specification). Bidder may refer to the tender topography & Bathymetry studies report for reference only.
94	Section-VI (Technical Specifications)		Appendix – 3A Liquidated Damages for Shortfall In Generation During PG Test And O&M	18	Liquidated damages for shortfall in generation during O&M period on yearly basis. a) Liquidated damages per unit (kWh) shortfall in generation would be considered as INR 3.66 / kWh. b) Maximum Liquidated Damages for the shortfall of generation during O&M period shall be limited to generation revenue corresponding to 10% of the quoted generation by the bidder at tariff of INR 3.66/kWh.	We assume that the Grid Availability factor /outage will be considered for LD calculation during O&M Period. Kindly confirm.	Bidder to refer APPENDIX – 3A, page 18/676, Sec-VI of technical specification
95	General		General		Commissioning and Completion of the Facilities	We understand that by commissioning means commissioning of total 20 MW (AC) capacity. Please confirm	Bidder's understanding is correct

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	Clarification by NSPCL
96	Section-VI (Technical Specifications)		PART-B I – Tender Dwawings		KMZ File	Bidder is requesting to provide .KMZ file & other locations like CMCS & Switchyard area.	KML file for the proposed plant layout shall be shared with the bidder for reference.
97	Section-VI (Technical Specifications)		A-5 Power Conditioning Unit, Clause 3.03 (Reactive Power)	88	The PCU shall be capable of supplying reactive power as per grid requirement during solar and non-solar hours. PCU shall have Static Var Generation (SVG) function	Kindly Confirm whether Bidder has to consider reactive power compensation by increasing Inverters (or) can bidder consider suitable rating of "SVG" at Switchyard End?	Bidder may propose a suitable reactive power compensation methodology, either through additional inverter capacity or by using SVG. However, the same shall be finalized during detailed engineering in compliance with the Technical Specification requirements.
98	Section-VI (Technical Specifications)		1-B Intent Of Specification, Clause 22	31	All equipment, materials and services that are necessary for implementation of the harmonic filters etc. as per the grid study with satisfactory operation of the Solar PV system and its integration with the existing AC Systems	Kindly Confirm whether Bidder has to consider Harmonic Filter?	Bidder shall comply with the Technical Specification requirements.
99	Section-VI (Technical Specifications)		2-B Civil Scope Of Supply & Services, Clause.D	52	Site Investigations 1. Topographical survey 2. Geo-Technical investigation 3. Bathymetry Survey, if required 4. Hydrological studies, if required	Request you to kindly share the Contour & Geo technical Investiogation reports along with Bathometry Survey reports.	Geotechnical investigation report is not available. Bidder to carry out the same at its own scope . Bathymetry & toppography report is part of the Technical Specification. Bidder shall refer to Page 619/676, sec-VI of Technical Specification for reference purpose.
100	Section-VI (Technical Specifications)		2-B Civil Scope Of Supply & Services, Clause.D	52	Site Investigations 1. Topographical survey 2. Geo-Technical investigation 3. Bathymetry Survey, if required 4. Hydrological studies, if required	Please share the geotechnical report for the MCR/ ICR/ store room location and Substation location	Geotechnical investigation reports are not available. Bidder to carry out the same at its own scope .
101	Section-VI (Technical Specifications)		B-13 Switchyard & Transmission System, Clause 1.01.01 (ii)	255	Cable network including RoW (if applicable) from Substation at solar plant to grid connecting substation, following latest ISTS (Inter-State Transmission System) technical standards by CEA and connectively regulations.	We assume that ROW, approvals for the project is in the scope of client? Request to please confirm.	Bidder shall visit the site and assess the actual site condition. ROW approval is under bidder's scope.
102	General		C-2 Site Levelling And Grading, Clause 1.1.2	360	Site grading level shall be fixed with due reference to site drainage of the whole area, existing drainage pattern, and system requirements.	Drainage requirement not applicable due to Floating Power Plant. Only drainage arrangement for CMCS and switchyard to be constructed for disposal of water. Please clarify the scope.	Bidder's understanding is correct. On-shore construction shall have proper drainage system as per prevailing site condition.
103	General		C-3 Boundary Wall, Fencing And Gate, Clause 1.0.C	362	c) Floating barrier for Floating Solar PV blocks	Specification pertaining to floating barrier for floating solar PV blocks is missing. Request you to please elaborate and give detail of the desired system.	Bidder shall comply with the Technical Specification requirements. It shall be deliberated during detailed engg.
104	General		General		Storage Space	Please confirm, Who will provide well graded and levelled land within the vicinity of the site for Contractor Site Office establishment, labour hutment & Storage Space. Please provide the approved location for the procurement of building material. Such as Sand, gravel, aggregate, Stone, Bricks, Stone etc.	Any levelling required for the same shall be carried out by the bidder. Bidder is requested to visit site and explore local sources as per their requirement, subject to requirement of Technical Specifications and Tender .
105	General		General		General	Please provide the lead distance for the disposal of excess earth/debris from site location.	Bidder is requested to visit site and explore local condition as per their requirement, subject to requirement of Technical Specifications and Tender .
106	General		General		General	While carrying out construction activities below ground level, if we meet any obstruction e.g. presence of any drainage pipe / water or fire pipeline, cable/ ash trench, any leftover foundation concrete, live wire etc., the owner shall arrange to remove the same & we shall be free by the owner from any such obstruction for conducting our works. Please confirm	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
107	General		A-2 Floating System, Clause 4.0.h	69	To protect floating waterbody against deterioration of its water quality a material test certificate of floaters showing no appreciable change in water quality of the reservoir/water body for entire life of the project has to be submitted by the bidders during detailed engineering.	Please share test report of water quality.	Bidder shall carry out specific water quality tests as per their requirement, and the same shall be under the bidder's scope.
108	Section-VI (Technical Specifications)		Cl. No. 2.0	18	APPENDIX – 3A LIQUIDATED DAMAGES: Maximum liquidated damages on account of failing to meet guaranteed generation during PG test for the solar PV project shall be limited to 15% of the contract value (excluding O&M charges).	We request to limit the maximum LD during PG Test to 10%.	Bidders are requested to visit the GePNIC (e-tender) portal on regular basis for the updated bidding schedule.
109	Section-VI (Technical Specifications)		PART-B I – Tender Dwawings	607	Tender Drawing	Please provide KML file to know the exact location and boundary of the usable FSPV area.	The KML file for the project site shall be shared with the bidder for reference only.
110	Section-VI (Technical Specifications)		PART-B I – Tender Dwawings	615	Tender Drawing	In Tender drawing , Tie Transformer rating is mention 31.5 MVA- Please confirm that minimum rating shall be application for all bidders.	Bidder shall comply with the Technical Specification requirements and tender SLD
111	Section-VI (Technical Specifications)		PART-B I – Tender Dwawings	615	Tender Drawing	Please provide the reservoir drawing, with details of reservoir embankment, slopes and other details	Bidder may visit the site for better understanding and assessment of actual site conditions.
112	Section-VI (Technical Specifications)		PART-B I – Tender Dwawings	615	Tender Drawing	Please convey max. depth of excavation that is allowed for cable crossing on reservoir embankment	Bidder shall comply with the Technical Specification requirements.
113	Section-VI (Technical Specifications)		Tender Drawing	615	33 kV Pooling Switchgear System Fault Current Rating: As per Single Line Diagram.	System fault current rating is not mentioned in tender SLD. Please provide.	System fault current rating shall be provided during detailed engineering.
114	Section-VI (Technical Specifications)		Tender Drawing	615	Power Evacuation System: Power Evacuation shall be through tie transformers at 132 kV Voltage level to get connected to existing 132 kV Switchyard.	As per tender SLD and scope of work mentioned TS document it is mentioned	Bidder Query is not clear
115	Section-VI (Technical Specifications)		1-A Project Information, Clause No. 4.0	606	All Project Roads and all Drains (Refer Vicinity Map / Layout – Tender Drawing) are in Bidder Scope and shall be constructed and connected suitably with Main Roads and existing drainage system.	Kindly provide layout and drawings of existing Roads and drainage system for better understanding.	Bidder shall visit the site and assess the actual site condition.
116	Section-VI (Technical Specifications)		Tender Drawing	615	Tender SLD (132kV/33kV Switchyard)	Please clarify why higher rating of Tie transformer (31.5 MVA) suggested for 20MW AC Solar PV plant?	Bidder shall comply with the Technical Specification requirements and tender SLD
117	Section-VI (Technical Specifications)		Tender Drawing	615	Tender SLD (20MW Floating Solar PV Project in Reservoir 1b at NSPCL Bhilai) 33 Kv MAIN POOLING INDOOR SWITCHGEAR AT 132kV PSS	Please clarify the scope of 33 kV MAIN POOLING INDOOR SWITCHGEAR, at 132kV PSS whether it is existing switchgear at owner's control room or it has to be supplied new by the bidder. Also if it is in bidder's scope than please confirm whether it will be placed in the owner's control room.	Bidder shall comply with the Technical Specification requirements
118	Section-VI (Technical Specifications)		Scope of work, Clause 1.1	353	Carrying out the Benchmark (GTS) to site(s) under survey by parallel levelling, establishing and constructing benchmark, grid and reference pillars in the field and spot level survey of the entire area at specified intervals and development of the contours. Bidder can also use DGPS for establishing the coordinates.	Employer to identified and provide the Permanent bench mark as reference near each site location to establish the bench mark at project site by bidder. Please confirm.	Nearest available Bench Mark shall be provided to successful bidder. Transfer of BM to construction site shall be in the scope of bidder.
119	Section-VI (Technical Specifications)		Scope of work		The enclosed Vicinity Map indicates the tentative location of the area/areas to be surveyed for locating Solar PV Project/s.	Detail measurement of the land and Water body with Area wise break up to be provided to the Bidder for ready reference and pre-bid engineering.	Bidder shall visit the site and assess the actual measurements of land and water body area.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
120	Section-VI (Technical Specifications)		Scope of work, Clause 2.0	35	Basic Engineering of the plant and systems.	Related to Grid feasibility report is not in the scope of Bidders please confirm	Bidder shall comply with the Technical Specification requirements
121	Section-VI (Technical Specifications)		Scope of work	35	Underground Cabling/Overhead lines of 33KV from Pooling Switchgears of FSPV Project to Switchyard	Please clarify UG or OH lines which is exactly to be used	Bidder shall comply with the Technical Specification requirements.
122	Section-VI (Technical Specifications)		B-13 Switchyard & Transmission System, Scope of work, Clause 2.05	281	Wave Trap	Bidder understanding is that wave trap is not applicable as per the bidder scope of work. Please confirm.	Bidder shall comply with the Technical Specification requirements.
123	Section-VI (Technical Specifications)		C.2 Site Levelling and Grading, Clause 1.1.1	360	All works related to site clearance including removal of bushes, trees, levelling, grading, finishing and other additional works shall be carried out by the Contractor	No major tree cutting is envisaged in bidder's scope other than minor site clearance and removal of shrubs, vegetation required for establishment of a solar park. Please confirm.	Bidder shall comply with the Technical Specification requirements.
124	Section-VI (Technical Specifications)		C.2 Site Levelling and Grading, Clause 1.1.1	360	Mandatory permission/ licenses/ statutory clearances from Competent Authorities for site levelling activities like removal of tree and bushes, undertaking blasting related works, disposal of cutting material etc. shall be carried out by the contractor	Bidder presume that all statutory clearances shall be provided by the customer. However, bidder shall assist to provide the necessary documents for the same.	The Technical Specification is clear regarding statutory clearances. Bidder shall comply with Clause 12.0 of Chapter 1-A, Project Information, Page 12/676, Sec-VI of the Technical Specification.
125	Section-VI (Technical Specifications)		C.2 Site Levelling and Grading, Clause 1.1.2	358	Site grading level shall be fixed with due reference to site drainage of the whole area, existing drainage pattern, and system requirements	Bidder is requested to provide existing GA details of road and drainage. Also, Bidder understanding is that No Major site Grading and Levelling is in the scope of Bidder except micro levelling. Please provide the detail technical specification for Site grading/levelling/Slope protection etc.	Bidder shall visit the site and assess the existing road and drainage conditions. Site grading, levelling, drainage and slope protection etc is in the scope of bidder and shall be carried out as per Technical Specification.
126	Section-VI (Technical Specifications)		C.2 Site Levelling and Grading, Clause 1.3	360	In case Earth has to be borrowed from outside the plant boundary, the same shall be arranged by the Contractor himself.	Bidder is requested to provide the location from where earth material is to be borrowed.	Bidder shall comply with the Technical Specification requirements.
127	Section-VI (Technical Specifications)		C.2 Site Levelling and Grading, Clause 1.6	359	Bidder shall also provide Suitable sand erosion control measure shall be provided in case any sand dune or very loose soil areas fall inside the plot area. The same may be made with Random rubble/boulder/stone pitching/concrete blocks etc. Bidder shall also provide sufficient grass/buses/trees covers on these dune / loose soil patches. in the technical specification.	Please specify the type of sand erosion protection measure that is to be deployed for better understanding and due diligence of the bidder	Bidder shall comply with the Technical Specification requirements.
128	Section-VI (Technical Specifications)		3.1 - Power Evacuation System:	31	Power Evacuation shall be through tie transformers at 132 kV Voltage level to get connected to existing 132 kV Switchyard.	Please clarify on the power evacuation voltage for tie transformer	Bidder to follow the tender SLD
129	Section-VI (Technical Specifications)		3.1 - Power Evacuation System:	51	19. Motorboat and accessories 2 nos.	Please share the technical specification of the motor boat	Bidder to follow technical Specifications.
130	Section-VI (Technical Specifications)		3.1 - Power Evacuation System:	33	13. Project Boundary Fencing with Gate(s) As per tender drawing.	Please clarify where the boundary fencing with gates are envisaged, kindly share area marking in the vicinity map	Bidder to follow technical Specifications.
131	Section-VI (Technical Specifications)		B-7 Instrumentation And Communication Cable, Clause 1.1	210	Data (Modbus) Cable to be used shall be shielded type with stranded copper conductor based on VDE 0881. Cable shall have minimum 2 pair each with conductor size of 0.5 SQMM and core identification shall comply with DIN 47100. Cable shall be flame retardant according to IEC 60332-1-2. or equivalent Standard Surge protection device to be provided shall be approved from UL/CSA or any national/international approved lab	Bidder will consider 2P 0.5sq/mm and 8P 0.5Sq/mm armored instrumentation & communication cable. Please confirm.	Bidder to follow Technical Specification.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
132	Section-VI (Technical Specifications)		B-7 Instrumentation And Communication Cable, Clause 1.0	210	Optic Fiber cable shall be 8/12 core, galvanized corrugated steel taped armored, fully water blocked with dielectric central member for outdoor /indoor application so as to prevent any physical damage. The cable shall have multiple single-mode or multimode fibers on as required basis so as to avoid the usage of any repeaters. The outer sheath shall have Flame Retardant, UV resistant properties and are to be identified with the manufacturer's name, year of manufacturing, progressive automatic sequential on-line marking of length in meters at every meter on outer sheath.	Bidder will consider 8 Core single mode armored LSZH Optical fiber cable with Flame retardant & UV properties. Please confirm.	Bidder to follow Technical Specification.
133	Section-VI (Technical Specifications)		B-6 SCADA, Clause 11.0.ii)	200	The data to be stored in the above system shall include alarm and event list, periodic plant data, selected logs/reports.	Bidder will consider log data on SCADA system with a frequency of 1 minute which will be sufficient for data analysis. Please confirm.	Bidder to follow Technical Specification.
134	Section-VI (Technical Specifications)		D-1 Weather Monitoring Station, Clause D.1	426	As a part of weather monitoring station, Bidder shall provide following measuring instruments with all necessary software & hardware required to integrate with SCADA so as to enable availability of data from meteorological instrument in SCADA. Each instrument shall be supplied with necessary cables, transmitters and accessories (Trackers, Mounting and base stand etc.) provided by OEM of the sensors only.	Bidder will provide weather monitoring station data to SCADA system over Modbus-TCP/IP or Modbus-Rs485 protocol	Bidder to follow Technical Specification.
135	Section-VI (Technical Specifications)		D-8 CCTV System, Clause 4.02	456	D-8 CLOSED CIRCUIT TELEVISION SYSTEM (CCTV) Cameras: All the cameras shall be colour, suitable for day and night surveillance and network compatible. There will be two types of cameras viz. PTZ & Fixed. PTZ cameras shall be high speed integrated dome type.	Bidder is requesting to please clarify the location of PTZ and Dome type camera	Locations shall be finalized during detailed engineering.
136	Section-VI (Technical Specifications)		D-1 Weather Monitoring Station, Clause 2.2	428	Indoor Air Temperature Sensor (Qty – 1 no. at each Inverter room) In case outdoor inverter is offered and associated equipment like PLC/RTU panel etc. is offered inside a closed room then minimum 2 such rooms shall be provided with temperature monitoring to be hooked up with SCADA	Bidder will consider outdoor type inverter and associated equipment RTU panel etc. as outdoor type hence indoor air temperature sensor is not applicable. Please confirm.	Bidder to follow Technical Specification.
137	Section-VI (Technical Specifications)		Tender Drawing	615		As per the SLD, the redundant Bus PT and Auxiliary Transformer shall be removed, as there is only one 33 kV busbar. Furthermore, it is defined in the SLD that the auxiliary power supply source shall be provided from the existing substation.	The scheme shall be finalized during detailed engineering considering technical suitability and compliance with the Technical Specification requirements.
138	Section-VI (Technical Specifications)		C-4 Structure Works-General Design Criteria, Clause 2.2	372	Inverter Rooms: SPECIFICATION OF INVERTER ROOMS (PEB):	Bidder will consider Inverter station as outdoor type. All equipment i.e inverter, RTU, Aux trafo, ACDB, UPS, ICOG will be installed outdoor on raised RCC platform with canopy on top, please confirm.	Bidder to follow Technical Specification.
139	Section-VI (Technical Specifications)		Switchyard & Transmission System, Clause 4.05	297	33 kV POLES	Bidder understanding is that the relevant clause of 33kV pole is not applicable in case of underground 33 kV HT cable laying.	Bidder's understanding is correct
140	Section-VI (Technical Specifications)		B-10 Auxiliary Power Supply System, Clause 1.01	231	ACDB in CMCS room shall have two incomer (100% rated) fed from two different sources.	Bidder understanding is that 1 source is aux transformer at CMCS and please clarify what is the other income source of power to be consider.	Bidder shall follow the tender SLD and comply with the Technical Specification requirements. However, the power distribution scheme shall be finalized during detailed engineering.
141	Section-VI (Technical Specifications)		B-9 Plant Illumination System, Clause 7.0	229	Lighting shall be provided along boundary/periphery and at roads connecting Boundary Gate to strategic locations like CMCS/Switchyard (Avg 10 Lux).	Please clarify whether the periphery lighting is already installed or bidder need to consider new peripheral lighting with pole shall be consider around the reservoir	Specification is clear. Bidder shall comply with the Technical Specification requirements

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
142	Section-VI (Technical Specifications)		B-3(C) Tie Transformer, Clause 1.0 i)	162	MVA Rating Number and rating of EHV tie transformers shall be as indicated in tender	As per reference clause the Tie Transformer specification, rating, configuration, dimension, and foundation design shall be as per "Standard Technical Specifications of Transformer(s) for solar park Pooling Station" issued by CEA. But as per Tender SLD (note 14) Minimum 63MVA Tie transformer shall be provided, please clarify.	Bidder shall comply with the Technical Specification requirements and tender SLD
143	Section-VI (Technical Specifications)		B-2 HT Switchgear, Clause 2.i	133	RMU Configuration: - Two Nos. Load break switches (LBS) and transformer circuit breaker as per system requirement	Bidder understand, 2 no of LBS will be considered whereas 1 for outgoing supply and 1 for incomer (from adjacent ICR) and another incomer as VCB for transformer. Please confirm.	Bidder shall follow the tender SLD and comply with the Technical Specification requirements. However, the scheme shall be finalized during detailed engineering.
144	Section-VI (Technical Specifications)		1-C Proveness, Clause 1.0	36	A-1 SOLAR PHOTOVOLTAIC (SPV) MODULES	Please clarify the type of Solar PV module Glass to Glass / Glass to back sheet.	Bidder shall comply with the Technical Specification requirements
145	Section-VI (Technical Specifications)		2-B Civil Scope Of Supply & Services, Clause.1.A.21	51	High Mast Supply & Installation CMCS & ICR locations	Since flood light is generally considered at CMCS and ICR location hence High mast is not required. Please confirm.	Bidder shall comply with the Technical Specification requirements
146	Section-VI (Technical Specifications)		2-A Electrical Scope Of Supply & Services, Clause 1.0 e	44	Same size of Inverter is recommended for the whole plant and same size of Inverter Transformer is also preferred considering Mandatory spare management. Foundation/floating Platform design of Inverter and Inverter transformer shall be of one type as per highest size.	Bidder understand the however the Same size of inverter/ IDT possible will consider for the whole plant. However, where not possible to consider same size of IDT, will consider different size of IDT to achieve to required capacity. Please confirm.	Bidder shall comply with the Technical Specification requirements. The sizing of the inverter shall be reviewed during the detailed engineering.
147	Section-VI (Technical Specifications)		General		Road Crossing through ACSR Conductor and Mono Pole Structure (at both ends of road.)	Bidder understanding is that this is applicable for overground power evacuation system of 33kV and same shall not be applicable for underground evacuation system (road crossing area cable laying shall be done through Hume pipe). Please confirm.	Bidder shall comply with the Technical Specification requirements
148	Section-VI (Technical Specifications)		General		If switchyard control and protection panels, Substation Automation System panels, PLCC/ FOTE/ DPC panels, and Power Transformer digital RTCC (only IED based) and fire alarm panels are proposed to be kept inside CMCS, then sufficient space with air conditioning (as applicable) in addition to above minimum area shall be provided considering the equipment size, OEM recommendations and maintenance access. Space for future panels shall be provided in CMCS/control room which shall be finalized during detailed engineering stage. Spare battery bank with mounting rack for inverter station /sub pooling system (UPS/battery charger) shall be installed in the CMCS battery room.	Bidder understanding is that generally the switchyard associated items shall be kept near to PSS / Substation at PSS control room. However, if CMCS location shifted to near PSS then the switchyard associate items may be placed at CMCS room.	Bidder's proposal regarding placement of switchyard associated items at CMCS shall be reviewed during detailed engineering, subject to compliance with the Technical Specification requirements.
149	Section-VI (Technical Specifications)		C-5 Switchyard Civil Works, Clause 3.02.01	391	Dead loads shall include the weight of structure complete with finishes, fixtures and partitions and shall be taken as per IS: 875 (Part - I).	Please specify the edition year to be follow during design.	Bidder shall comply with the Technical Specification requirements
150	Section-VI (Technical Specifications)		C-5 Switchyard Civil Works, Clause 3.02.02	392	For consideration of imposed loads on structures, IS: 875 (Part - II) "Code of practice for design loads (other than earthquake) for buildings & structures" shall be followed.	Please specify the edition year to be follow during design.	Bidder shall comply with the Technical Specification requirements
151	Section-VI (Technical Specifications)		C-4 Structure Works-General Design Criteria, Clause 3.4 g)	381	g) All loads shall be considered in line with IS: 875. Seismic loads for design shall be in accordance with IS: 1893 and relevant Standards.	Please specify the edition year to be follow during design.	Bidder shall comply with the Technical Specification requirements
152	Section-VI (Technical Specifications)		C-4 Structure Works-General Design Criteria, Clause 6.0 a)	384	Surface drainage system shall be designed considering 'maximum hourly rainfall intensity'.	Capacity check of the existing drainage system is not in our scope. Bidder requested to provide the metrological data for the design of drainage system.	Bidder shall design the drainage system as per site condition, applicable standards and Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
153	Section-VI (Technical Specifications)		C-4 Structure Works-General Design Criteria, Clause 6.0 d)	384	d). Bidder shall also ensure that drainage from his plot does not encroach/flood in to the adjacent property and adjacent solar plots (if any).	Please share the Highest Flood Level for reference and pre bid engineering.	Bidder shall visit the site and assess reservoir/site levels for pre-bid engineering.
154	Section-VI (Technical Specifications)		Appendix – 1.F Project Information (Anchoring And Mooring System)	16	Anchoring & mooring system shall be such that it doesn't damage the embankment and its associated structures.	In case, any type of anchoring is not allowed over embankment, confirm the availability of space around reservoir for shore anchoring through Concrete piles. Please clarify whether any hindrances are available in form of pipelines, permanent structures, cables etc.	Bidder shall propose a suitable design for anchoring and mooring arrangement in line with the Technical Specification. The final design shall be reviewed and finalized during detailed engineering .
155	Section-VI (Technical Specifications)		D-3: Module Cleaning System	437	Suitability of reservoir water for module cleaning has to be ascertained by bidder/module manufacturers recommendations. Necessary filtration and water treatment of reservoir water for module cleaning suitability shall be in bidder's scope.	Please provide the water test report of reservoir water to know the suitability of water for module cleaning purpose.	Bidder to do the specific test as per their requirement and it is under their scope.
156	Section-VI (Technical Specifications)		2-A Electrical Scope of Supply & Services, Clause No.3	47	POWER EVACUATION SYSTEM	Please specify approx distance between CMCS to termination point	Bidder may visit the site for estimating the actual length
157	Section-VI (Technical Specifications)		1-A Project Information, Clause No. 8.0.3.(iii)	11	Simulation Report of Reactive Capability Curve of Plant measured at POI to ISTS system for compliance of CEA technical standard (for Voltage 0.95/1/1.05 pu with pf ranging from 0.95 lag to 0.95 lead) and short circuit study/Load flow study/harmonics analysis results.	Please confirm that through Reactive power compensator - CEA Regulation can be compensated or Addition of inverter is required ?	Bidder shall comply with the Technical Specification requirements.
158	Section-VI (Technical Specifications)		Cl. No. 13.0(7) Section-VI: Technical Specification	13	Tree Cutting Permission	We request to keep tree cutting permission in NSPCL's scope.	Bidder shall comply with the Technical Specification requirements.
159	Section-VI (Technical Specifications)		General	362	Floating barrier for Floating Solar PV blocks	Kindly provide the specification of Floating barrier for Floating Solar PV blocks	Bidder / OEM may propose suitable floating barrier (if applicable) as per the floating island design and site condition. The same shall be reviewed during the detailed Engineering
160	Section-VI (Technical Specifications)		General	363	1.3 Main Gate	Please provide Main Gate Location for clarity and working of BOS.	Main gate location shall be proposed in the layout and finalized during the detailed Engineering
161	Section-VI (Technical Specifications)		C-1 Topography Survey And Soil Investigation, Clause 3.0.1	356	The Bidder shall carry out geotechnical investigation for establishing the subsurface conditions and to decide type of foundations for the structures envisaged, construction methods, any special requirements/treatment called for remedial measures for sub-soil/ foundations etc.	Bidder is requested to provide the existing geotechnical investigation report.	Geotechnical report is not available. Bidder to do the specific test as per their requirement and it is under their scope.
162	Section-VI (Technical Specifications)		C-4 Structure Works-General Design Criteria, Clause A	367	The minimum size & requirements of the CMCS Building & all items shall be as tender drawing title: "Details of Central Monitoring & Control Station".	Drawing is not readable.	Clear Drawing shall be shared to bidders.

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-)	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
163	Section-VI (Technical Specifications)		D-6 Performance Gurantee (Pg) Test	446	PG Test- Following factors shall be considered for computing the "target Generation" and shortfall (if any): a) Effect of any meteorological parameters shall not be considered except of solar radiation.	1. Request NTPC to revise the PG test procedure since the Plant Performance Guarantee only considers the impact of solar radiation (GHI). The PG test formula has remained the same over the last 8-10 years whereas there have been numerous changes in external environment including regulatory, technological, energy simulation methodology etc. Unlike earlier times, presently generation beyond the rated power is not allowed. Energy beyond rated power capacity is curtailed at the plant through PPC. As you are aware, the generation is affected during the curtailment period. In general, there is a proportional linear correlation between GHI and generation. However, during the periods of curtailment, the correlation between GHI and generation is no longer linear – the generation does not increase in proportion to GHI increase and there are additional losses majorly due to temperature and DHI effects. Further, as known, GHI is a mix of DNI and DHI. Any variation in GHI due to cloudiness etc. increases DHI whereas DNI reduces much further. This affects generation as DNI is responsible for solar generation in c-Si based module technologies. 2. We request NTPC to adopt IEC 61724-2 and 3 standard for the PG test procedure. As per the standard, at the time of design and engineering of the plant, the loss parameters are fixed and based on time series weather data, energy generation is estimated through PVSYS simulation and documented. This PVSYS model is fixed for the project. Post commissioning and during PG Test period the actual measured weather data is noted and the fixed PVSYS model is rerun utilising the actual measured weather data. This new estimated generation value is used as corrected generation for comparison and levy of penalties on actual measured generation. This methodology has been widely adopted by many reputed public and private players in the market.	Bidder shall comply with the Technical Specification requirements.
164	Section-VI (Technical Specifications)		General		Statutory Compliance Grid connectivity and Power Evacuation	There was Multiple grid study requirement added on the scope on this section Bidder request to incorporate those scope under NTPC. If NTPC still put the scope under Bidder scope kindly clarify the grid study need to conduct through specific agency or directly co-ordinate with Concern department kindly give clarity on the same	Bidder to follow clause:8.0, chapter. 1-A, page -7/676, Sec-VI of Technical Specification
165	Section VI PART B		C - CIVIL WORKS			As we noticed, the tender documents currently do not include sufficient relevant documents/drawings required for accurate project costing. In view of the above, we request you to kindly provide the relevant documents, drawings, and any other technical details that will enable us to prepare the costing for the project accurately.	The tender document includes the relevant drawings and documents for bidding purpose. However, any specific requirement may be assessed and clarified by the bidder through site visit and actual assessment of site conditions.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	Clarification by NSPCL
166		Appendix-1 to IFB, Note (b) under Technical Criteria			"SPV based Roof-top/Floating solar power projects, which are grid connected, shall also be considered eligible for QR purposes."	Kindly clarify whether Grid Connected Ground Mounted Solar Projects shall also be considered eligible under the QR requirement.	Bidder understanding is correct. Bidder to comply the APPENDIX-1 TO IFB
167		Section-I, IFB Clause 2.0, Sr. No. 12, Page No.: 8			Topographical survey, geotechnical investigation and bathymetry survey are in bidder's scope "if required".	Request Employer to provide available survey reports, contour maps, bathymetry data and geotechnical investigation reports for reference. Kindly clarify whether fresh survey is mandatory ?	Bathymetry and Topography reports are included in the tender document. Bidder to carry out GeoTechnical Investigation & any additional site specific study required for final design are under bidder's scope.
168		Section-I, IFB Clause 2.0, Sr. No. 12, Page No.: 8			Dredging works, site grading and vegetation clearing are included in bidder's scope if required.	Kindly provide estimated quantity/scope of dredging and vegetation clearing envisaged under the project. Please clarify disposal location for dredged material.	Bidder shall visit the site and assess the actual quantum of dredging and vegetation clearing work, if any, based on site conditions. Disposal of dredged/cleared material shall be carried out by the bidder.
169		Section-I, IFB Clause 2.0, Sr. No. 18 & 22			Underground 33 kV cabling including multiple railway crossings and integration with existing 132 kV switchyard is in bidder's scope.	Kindly provide detailed route drawing, cable corridor availability and approved crossing methodology for railway crossing. Please confirm whether railway approval charges shall be reimbursed by Employer.	Bidder shall propose a suitable crossing methodology in compliance with the Technical Specification .
170		General			Plant capacity specified as 20 MW (AC).	Kindly clarify maximum permissible DC capacity and DC:AC ratio allowed for design optimization.	Bidder shall refer to Clause 2.0 of Chapter 1-A, Project Information, Page 22/676, Sec-VI of the Technical Specification regarding the DC:AC ratio.
171		Technical Specification Clause 9.0 & Appendix-3A			Generation guarantee linked liquidated damages applicable during PG test and O&M.	Kindly clarify treatment of force majeure events, grid outages, transmission restrictions and reservoir water level variations while calculating generation guarantee and LD.	Technical Specification is clear in this regard. Bidder shall refer to Chapter D-6, Performance Guarantee Test, Page 446/676, Sec-VI of the Technical Specification for treatment of such events while calculating generation guarantee and LD.
172		Technical Specification Appendix-1, Anchoring & Mooring System			Puncturing of reservoir bottom and embankment disturbance are not allowed.	Kindly clarify acceptable anchoring methodology and whether dead-weight anchoring system is mandatory. Please provide reservoir depth profile for design reference.	Bidder shall propose a suitable design for anchoring and mooring arrangement in line with the Technical Specification. The final design shall be reviewed and finalized during detailed engineering.
173		Tender Drawings / Vicinity Map			33 kV UG cable evacuation system is in bidder's scope.	As per vicinity map, approximately 3.5 km UG cable route is envisaged. Kindly confirm exact cable route length, corridor availability, and crossing details.	The 3.5 km underground cable route is tentative. The bidder shall visit the site and assess the actual cable route length, corridor availability and crossing details.
174		Technical Specification – Transformer			Transformer scope included under power evacuation package.	Kindly clarify whether 31.5 MVA transformer rating is mandatory or equivalent/higher standard rating offered by OEM shall also be acceptable subject to technical compliance.	Bidder shall comply with the Technical Specification requirements and tender SLD.
175					KMZ & AutoCAD file	Bidder request to share the KMZ & AutoCAD file for the reservoir	KML file for the proposed layout shall be shared to bidder for reference.
176	PART-A SUBSECTION – 1	APPENDIX – 1 SITE SPECIFIC TECHNICAL DATA	A	14		As per tender Solar radiation mentioned is 1875.9Wh/m2 but as per Solar GIS report using given coordinates the GHI value is 1868.8 kWh/m2. Please confirm whether bidder can proceed GHI value as per Solar GIS report.	Grid limitation to be considered at the POI
177						Bidder request to confirm whether Grid limitation needs to be considered for the repective project.	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
178	PART-A SUBSECTION – 2	2-A ELECTRICAL SCOPE OF SUPPLY & SERVICES	1(p)	41	The DC Power and AC Cables shall be laid on floats in a manner that they are not submerged in water. Bidder to use suitable cable trays, cable supports etc. to achieve this. The AC Cables shall be laid in trefoil formation using good quality trefoil clamps and other cable clamps shall also be able to sustain the harsh floating environment. Cable straps used shall be UV resistant. Bidder can propose suitable laying scheme taking into consideration the floating aspect of the project which shall be reviewed during detailed engineering.	Bidder request to confirm using of water soluble tape for cables	Bidder shall comply with the Technical Specification requirements.
179	PART-A SUBSECTION – 1	1-A PROJECT INFORMATION	12	13	All the statutory fees for approvals till the completion of O&M period shall be in the scope of bidder (unless otherwise specifically mentioned in document).	The statutory approvals mentioned shall be of NSPCL scope.	Bidder shall comply with the Technical Specification requirements.
180					The minimum design clearance (at the highest tilt angle) between the lower edge of the modules and the developed ground level shall be as specified in Appendix-1 of Part-A, Chapter 1-A. A tolerance of +/-50mm shall be allowed as per site conditions	As it is floating solar system, this min clearance requirement is not applicable, So bidder requested to remove this.	Bidder shall comply with the Technical Specification requirements.
181		Vicinity map				Bidder request to provide the 33kV HT cable route length	Tentative cable route is shown in the tender drawing. Bidder shall visit the site and assess the actual route length.
182					Same size of Inverter is recommended for the whole plant and same size of Inverter Transformer is also preferred considering Mandatory spare management.	Bidder request to consider only same size inverter as mandatory spare	Bidder shall comply with the Technical Specification requirements.
183	PART-B D – GENERAL SYSTEMS	D-3 MODULE CLEANING SYSTEM		437	Bidder shall propose solar modules cleaning system by water through pipe network.	Bidder requested to share the water test report (if available)	Water test report is not available. Bidder to do the specific test as per their requirement and it is under their scope.
184	PART-B A – DC SYSTEMS	A-2 FLOATING SYST	4.2 j	73	Anchoring system for the floating island can be through dead weight anchors.	1. Bidder requested to consider helical screw pile anchoring also. Kindly clarify the concrete block anchoring will be under water anchoring/shore anchoring? 2. Please confirm if dregging is required for the project.	Bidder shall propose a suitable design for anchoring and mooring arrangement in line with the Technical Specification, without causing any damage or disturbance to the reservoir embankment, associated structures and reservoir floor. The final design shall be reviewed and finalized during detailed engineering .
185		132kV SLD				Bidder request to determine the each solar feeder capacity to be considered.	Bidder's Query is not clear
186	PART-A SUBSECTION – 1	1-A PROJECT INFORMATION	9	11	Bidder shall install suitable reactive compensation equipment for compliance of dynamic reactive power compensation at rated capacity at POI under CEA technical standard of connectivity to Grid and Report of the Working Group in respect of Data Submission Procedure and Verification of Compliance to CEA Regulations on Technical Standards for Connectivity to the Grid by RE Generators July 2022 and it's amendments/clarifications thereof.	Bidder request to confirm reactive power comopensation to be considered through inverters or SVG.	Bidder may propose a suitable reactive power compensation methodology, either through additional inverter capacity or by using SVG. However, the same shall be finalized during detailed engineering in compliance with the Technical Specification requirements.
187	PART-A SUBSECTION – 1	1-A PROJECT INFORMATION	10	12	Bidder shall measure harmonic content, DC injection and flicker at least once in a year in line with the provisions mentioned as per CEA Technical Standards for Connectivity to the Grid, 2007. Bidder shall ensure that the power quality values at POI are within the limit specified as per CEA Technical Standards for Connectivity to the Grid, 2007. This measurement shall be done every year till the completion of O&M and report shall be submitted to RLDC/Employer for verification to ensure compliance.	Bidder request to confirm harmonic filters to be considered for the project.	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
188	PART-B B – AC SYSTEMS	B-2 HT SWITCHGEAR	9.3	123	The earth bus shall have sufficient cross section to carry the momentary short circuit and short time fault currents to earth as indicated under switchgear parameters without exceeding the allowable temperature rise.	Please confirm the fault level requirement	System fault current rating shall be provided during detailed engineering.
189					BID DOC. NO: CMCC260018PAGE NO(608/676)	Bidder requests clarification regarding the provision of the store room in the CMCS building.As per the drawings, a store room is shown along with toilets; however, the specifications also mention one permanent store room. In this regard, please confirm an additional separate permanent store room is to be considered apart from what is shown in the CMCS building (store room and toilets).	Bidder shall provide store room as per tender drawings and Technical Specification
190					BID DOC. NO: CMCC260018 PAGE NO(357/676)	Bidder requests confirmation that Geotechnical Investigations, including ERT, CBR, and TP tests, will be considered for five tests across the total onshore project area	Bidder shall carry out geotechnical investigation as required by the Technical Specification.
191					BID DOC. NO: CMCC260018 PAGE NO(363/676)	Bidder request to confirm as per the drawings and also considering one main gate and 2 secondary gates	Boundary wall, fencing and gates shall be provided as per tender drawings and Technical Specification.
192					BID DOC. NO: CMCC260018 PAGE NO(367/676)	Bidder request to clarify as per the spec separate security room with toilet considering	Security room with toilet shall be provided by bidder as per tender drawings and Technical Specification.
193					BID DOC. NO: CMCC260018 PAGE NO(606/676)	Based on the reservoir development image, the bidder seeks clarification on whether clearing of muddy areas is included within the bidder's scope or not.	Clearing, grading and disposal of muddy/unsuitable material, if required for execution of works, shall be in bidder's scope . Bidder shall assess actual site condition.
194						Bidder request to confirm for onshore area CMCS separate fencing is consider or not	Fencing/boundary arrangement for onshore/CMCS area shall be provided as per tender drawings and site/security requirement.
195						Please confirm whether the cable trenches shall be considered as RCC cable trenches or direct buried cable routing	Cable trench/routing arrangement shall be as per Technical Specification and approved cable route.
196			IFB Clause 2.0; Section VI, Part-A, 1-B		Scope includes design, engineering, supply, construction, erection, testing, commissioning, power evacuation, 3-year O&M and 10-year AMC; all items necessary for satisfactory operation are deemed included.	Please issue a clear scope matrix showing contractor scope, NSPCL/BSP scope and exclusions for floating system, DC system, AC system, 33 kV evacuation, 132 kV bay, SCADA/SAS, civil works, approvals and O&M/AMC.	Scope shall be as per Technical Specification and tender drawings.
197			Section VI, 3-A Terminal Point and Exclusions		Electrical terminal points are owner's 415 V AC/220 V DC boards, 132 kV existing switchyard and owner communication network; civil exclusions are NIL.	Please confirm the exact physical terminal points with drawings and confirm that work beyond these points will be treated as variation.	Terminal points and exclusions are defined in Section VI, Chapter 3-A and Tender SLD.
198			Section VI, Tender Drawings		Tender drawings are preliminary and may change during detailed engineering; minimum parameters may increase without extra cost.	Please confirm that changes due to employer/BSP/SLDC/RLDC requirements beyond tender drawings and specifications will be treated as variation, except normal detailed engineering optimization by bidder.	Tender drawings are preliminary and for bidding purpose. During Detailed engineering, if any increase required to meet system/specification requirements shall be in bidder scope.
199			Existing Underwater Utilities / Restricted Zones		Floating solar and anchoring area may have restrictions.	Please confirm whether any underwater utilities, intake structures, pipelines, reservoir protection structures, silt zones, restricted zones or no-anchor zones are present within the floating solar and anchoring area. If yes, please provide drawings with coordinates.	Bidder shall refer tender drawings and bathymetry report for available details. For any additional information, Bidder may visit the site and assess actual reservoir conditions, restrictions and anchoring area before bidding.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
200			Section VI, 1-B, Underground Facilities		Any underground facilities within switchyard construction/excavation area are to be rerouted and restored by bidder.	Please provide underground utility drawings and survey records / KMZ for MSDS-VI and cable route. Please confirm that any unidentified/incorrectly marked utility requiring rerouting should be treated as a variation with EOT?	Bidder shall visit site for actual assessment of site condition.
201			Underground Utilities		Works are required in switchyard and cable corridor areas.	Please provide the available records / KMZ markings for underground utilities in the switchyard and cable corridor areas, and clarify responsibility for diversion or protection.	Bidder shall identify and protect/divert underground utilities during detailed survey and execution. Responsibility shall be of bidder as per Technical Specification and tender conditions.
202			Section VI, Appendix-1; C-4 Civil Design		Drainage, roads, approach roads, plot drains, adjacent catchment and civil works are in bidder scope.	Please provide rainfall intensity, existing drain drawings, discharge points, catchment limits and required road/drain terminal points.	Bidder shall design roads and drainage based on site assessment, applicable codes and technical specification requirements.
203			Section VI, Civil Scope / Drainage / Access Roads / Reservoir Bank Works — Reference to be confirmed		Civil works include access roads, drainage, reservoir bank interface works, anchoring / mooring routes and related site development.	Kindly provide existing drain drawings, discharge points, catchment limits, flow direction and required road / drain terminal points around the reservoir area. It is important in case we opt for shore-based inverter / transformer stations.	Bidder shall visit the site and assess existing drainage, flow direction and terminal points. Required access road, drainage and related civil works shall be in bidder scope.
204			Section VI, Appendix-1, Anchoring and Mooring		Puncturing reservoir bottom and embankment disturbance are not envisaged/allowed; road cutting over embankment may be required and restoration is bidder scope.	Please clarify the acceptable anchoring and mooring methodology. Please confirm permitted anchoring/mooring methods, whether dead-weight anchors are mandatory, whether any bank anchoring is allowed, and who approves embankment road cutting/restoration methodology.	Bidder shall propose suitable anchoring and mooring methodology in line with Technical Specification.
205			Section VI, Appendix-1, Anchoring and Mooring		Any damage during construction must be rectified by bidder at no cost.	Please confirm that bidder will be responsible only for damage directly caused by bidder, and not for pre-existing defects or hidden weakness.	Any damage during construction shall be rectified by bidder at no cost to NSPCL.
206			Floating Platform / O&M Jetty		Inverter, transformer and O&M access are linked with floating platforms / jetties.	Please clarify the minimum requirement for inverter / transformer floating platforms and O&M jetties, including access, loading and maintenance requirements. This is critical to estimate EPC and O&M Costing.	Bidder shall comply with the Technical Specification requirements.
207			Floating Inverter / Transformer Requirement		Tender indicates inverters and transformers are to be installed over water.	Please confirm whether floating over-water installation of inverter and transformer stations is mandatory, or whether shore-based / land-based stations are also acceptable subject to design compliance. In case, shore-based / land-based stations are acceptable, please provide details, drawings and geotech reports with tentative location marking on KMZ.	Bidder may propose suitable inverter/transformer station arrangement (shore based or off shore) subject to compliance with Technical Specification. The offered arrangement shall be reviewed during detailed engineering.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
208			Inverter PEB Shed Arrangement		Tender drawings indicate inverter PEB shed arrangement.	Please clarify whether the inverter PEB shed is to be provided on land or on the floating platform. If it is required over water, please provide the design criteria for structure, loading, stability, access, corrosion protection and maintenance.	Inverter PEB shed/platform arrangement shall be as per offered design and tender requirements.
209			Floating Inverter and Transformer Platform Design		Floating platforms are required for electrical equipment.	Please confirm the acceptable construction material for floating inverter and transformer platforms, such as steel, HDPE, FRP, ferrocement, precast concrete or any other approved system. Or it is open for bidder to decide?	Bidder shall comply with the Technical Specification requirements.
210			Installation of Transformer / Heavy Equipment on Water		Transformer / inverter station may need to be installed inside reservoir.	If transformers and inverter stations are to be installed inside the reservoir, please clarify the acceptable installation methodology, including floating crane / barge, load-out arrangement, temporary jetty and required safety approvals.	Bidder shall comply with the Technical Specification requirements.
211			Shallow Water Constraint for Barge Movement		Floating / barge movement may be required near shore.	Since water depth near the shore appears limited, please confirm whether barge movement is feasible and whether any minimum water depth / access route data will be provided.	Bidder shall assess water depth and access route during site survey and plan suitable installation methodology accordingly.
212			Wave Breakwater Requirement		Wave study / wave attenuation may be required.	Please clarify whether wave breakwater arrangement is mandatory under the tender scope, or whether it shall be assessed and decided by the bidder based on wind and wave study. This will impact our costing.	Bidder shall comply with the Technical Specification requirements.
213			Reservoir Construction Window		Floating system, anchoring, mooring and cable laying are to be done in reservoir.	Please confirm whether any seasonal restrictions, monsoon restrictions, reservoir operation restrictions, water level constraints or shutdown windows apply for floating system installation, anchoring, mooring and cable laying works.	Bidder shall comply with the Technical Specification requirements.
214			Section VI, 1-B, Interfacing with SAIL BSP Network		Scope includes 33/132 kV power transformer, isolators, CTs, PTs, LAs, CBs, protection, SAS, metering and civil works.	Please confirm 33/132 kV transformer MVA rating, number of transformers, impedance, vector group, losses, cooling, oil quantity and fire protection requirement.	Bidder shall refer Tender SLD and Chapter B-3(C) for 33/132 kV transformer requirements. Transformer rating/configuration shall be as per tender documents.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
215			Section VI, Part-A, 2-A, Clause 3.1 Power Evacuation System; Part-B, B-3(C) Tie Transformer; Tender SLD / Schematic		Power evacuation shall be through a 33/132 kV tie transformer to connect with the existing 132 kV switchyard. Tie transformer specification refers to CEA standard and tender requirement. Schematic indicates transformer rating as 31.5 MVA.	Please confirm that the "Tie Transformer" and the 33/132 kV "Power Transformer" shown in the schematic are the same equipment, and that no separate Power Transformer and Tie Transformer are required. The schematic shows 31.5 MVA; kindly confirm whether this rating is final. Please also issue the transformer data sheet and confirm whether bidders can optimize the transformer rating subject to 20 MW AC export requirement.	Bidder shall comply with rating and requirements indicated in Tender SLD and Technical Specification.
216			Inverter Duty Transformer		Inverter duty transformer make	Please confirm whether other suitable makes are acceptable subject to compliance with tender specifications.	Bidder shall comply with the Technical Specification requirements.
217			Inverter Duty Transformer		Inverter duty transformer is required.	If dry type inverter duty transformer is proposed, please confirm whether other suitable makes are acceptable subject to compliance with tender specifications.	Bidder to follow the Technical Specification
218			NIFPS / Transformer Fire Protection		NIFPS / fire protection requirement is indicated.	Please confirm whether NIFPS requirement shall be as per CEA guidelines only, or if any additional NSPCL / BSP requirement is applicable.	Transformer fire protection/NIFPS shall comply with applicable CEA guidelines and Technical Specification
219			Section VI, 1-B Interfacing with SAIL BSP Network / Existing 132 kV MSDS-VI Switchyard Data / Existing Protection & SAS Data		Bidder must construct and integrate a new 132 kV bay at BSP MSDS-VI, including bus extension, protection, SAS, SCADA, busbar protection relay, testing and recommissioning. Existing BSP / MSDS-VI protection and SAS system must also be integrated.	Please provide the complete existing 132 kV MSDS-VI switchyard data package, including latest as-built drawings, existing SLD, bay layout, busbar rating, CT/PT ratios and cores, CB/isolator/LA details, protection SLD, existing busbar protection scheme, relay settings, SAS/SCADA make and model, SAS architecture, communication protocol, spare panel space, available ports/licenses, point list, cybersecurity requirements, approved vendor list, available shutdown windows and BSP/SLDC approval process for 132 kV bay integration.	Available existing switchyard, protection and SAS/SCADA details shall be shared with successful bidder during detailed engineering. Bidder shall integrate the new bay as per Technical Specification.
220			BSP Switchyard Shutdowns		Work includes 132 kV bay integration and busbar protection modification.	Please confirm the shutdown windows that will be provided for 132 kV bay integration, busbar protection modification and stability testing. Or it will be provided based on bidder's request as per requirement at the time of commissioning & testing?	Shutdowns for 132 kV bay integration and testing shall be coordinated with BSP/NSPCL based on approved schedule and system availability.
221			BOQ Schedule 2		Main equipment is lump sum and includes power transformer, SAS, switchyard works, ABT meters and all other necessary equipment.	Please provide minimum equipment quantities for transformer, 132 kV bay, CT/PT/CVT/LA/CB/isolators, panels, meters, SCADA and cables.	Bidder shall assess required quantities based on Technical Specification, tender drawings and site visit.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	Clarification by NSPCL
222			Section VI, 1-B, 132 kV Bay Integration		Bidder to provide GE P743 PU relay and integrate it into existing busbar protection system including stability testing.	Please confirm existing relay make, firmware version, spare slots, CT/PT details, scheme drawings and whether any failure or modification required in existing BSP protection system will be treated as employer scope or variation.	Bidder shall comply with the Technical Specification requirements.
223			Switchyard Earthing / Railway Track Earthing		Railway tracks within switchyard area are to be bonded across fish plates and connected to earth grid.	Please confirm whether the railway tracks mentioned in the switchyard area are for power transformer shifting and placement.	Bidder to visit the site to get the details
224			Section VI, Type Tests / Bought-Out Items		Type, routine and acceptance tests are included.	Fresh type testing is not feasible. Please confirm list of mandatory type tests and whether valid type test reports from NABL/ILAC accredited labs within 5 or 10 years period will be accepted.	bidder to refer Clause 4.0, Chapter 2-C, Page 54/676, Sec-VI of the Technical Specification.
225			Section VI, 1-B, 33 kV Cable Route		Tentative cable route shown in vicinity map; bidder to survey and coordinate with BSP/NSPCL.	Please provide approved 33 kV cable corridor, route length, crossing list, trench/HDD requirement, railway crossing drawings and land access permissions.	Tentative 33 kV cable route is indicated in the tender drawings. Final route, length and crossings shall be surveyed and finalized by bidder in coordination with BSP/NSPCL during detailed Engineering.
226			33 kV Cable Trench / Duct Bank		33 kV cabling route is in bidder scope.	Please clarify the required arrangement for 33 kV cable trench / duct bank, including treatment at railway crossing locations.	33 kV cable trench/duct bank arrangement shall be designed and executed by bidder as per Technical Specification, site conditions and statutory/Railway requirements.
227			33 kV Cable Trench / Duct Bank		33 kV cabling route is in bidder scope.	Please clarify the 33 kV cable route length and installation methodology.	Bidder shall visit the site and assess actual route length and installation methodology.
228			Railway Crossing Scope Split		NSPCL arranges permission, but civil / protection works are in bidder scope.	Please clarify the scope split for railway crossing works. Kindly confirm whether railway charges, supervision charges, shutdown charges, deposits, barricading, reinstatement and railway safety compliance are in NSPCL scope or bidder scope. If in bidder scope, kindly provide cost capping so that Bid price can be estimated properly. Kindly confirm that cost beyond maximum cap shall be treated as variation.	Necessary Railway permission shall be arranged/facilitated as per tender provisions. Bidder shall provide drawings, technical support and execute all associated works as per Railway requirements.
229			Section VI, 1-B Intent, item 8; Section VI, 1-A Clearance Table		33 kV evacuation corridor crosses railway lines. One clause says necessary railway permission shall be arranged by NSPCL; clearance table says Railway clearance is to be facilitated by bidder.	Please confirm that NSPCL will obtain Railway crossing permission/NOC and bear Railway statutory charges. Bidder may provide drawings and technical support only. Delay in Railway approval should qualify for EOT and cost compensation.	Railway clearance shall be dealt with as per Technical Specification.
230			33 kV Cable Route / Railway Crossing		Underground cabling from FSPV pooling switchgear to 132 kV switchyard includes multiple railway crossings.	Please confirm the number of railway crossings and crossing width / corridor details for the 33 kV cable route, so that bidders can estimate cost and duration properly.	Number and width of railway crossings shall be assessed by bidder during detailed route survey in coordination with BSP/NSPCL.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
231			Railway Crossing Methodology		33 kV cable route includes railway crossings.	Please clarify the approved methodology for 33 kV cable railway crossing, such as HDD, pipe jacking, trenchless crossing, casing pipe method or any method mandated by Railways / NSPCL so that price can be estimated properly.	Railway crossing methodology shall comply with Railway/statutory/ technical specification requirements.
232			Section VI, SCADA/CCTV/CMCS		CMCS, SCADA, PPC, WMS and CCTV are in bidder scope; data to SLDC/owner/BSP network.	Please confirm software license duration, historian/data storage period, remote access policy, firewall/NGFW requirement, cyber audit approval process and who bears recurring communication charges. If recurring charges are in bidder scope, kindly provide a cost estimate so that O&M price can be quoted accordingly.	Bidder shall comply with the Technical Specification requirements.
233			Cybersecurity Requirement		Cybersecurity requirements are mentioned generally.	Please provide the detailed cybersecurity requirements, including firewall, access control, remote access, hardening and approval requirements.	Refer Contract Cl no. (xv), 8.0, Chapter 1A, Sec VI.
234			Telemetry / Communication Scope		Data transmission from solar plant up to 132 kV substation and to SLDC / NLDC / RLDC is in contractor scope with redundant link / gateway.	Please confirm the communication distance, required data points, protocol, interface location and redundancy requirement for data transmission to SLDC / NLDC / RLDC. This is critical from costing perspective.	Bidder shall comply with the Technical Specification requirements.
235			Owner / BSP Communication Network		Bidder may need to upgrade or modify Owner / BSP communication system.	Please clarify the exact extent of bidder responsibility for upgradation or modification of the Owner / BSP communication system. This is critical from costing perspective.	Refer Contract Cl no. (vi), 30, 1.0, Chapter 1B, Sec VI.
236			Section VI, PPC/PQM Requirement		Bidder to supply hot-standby PPC, PQM at POI/as per RLDC, IEC-104 communication with RLDC/SLDC and SCADA integration.	Please provide complete PPC/PQM/SCADA signal list, communication architecture, cybersecurity/firewall requirement, RLDC/SLDC data mapping, redundancy requirement and approved makes.	Bidder shall comply with Technical Specification requirements. Detailed architecture shall be finalized during detailed engineering.
237			Section VI, Project Capacity / Metering Point / POI		Plant capacity is 20 MW AC at grid connection point. Metering point mentions 132 kV side of 33/132 kV tie transformer and 33 kV outgoing feeder of CMCS switchgear. POI is 132 kV switchyard.	Please confirm the single commercial and performance metering point for quoted generation, PG Test, O&M generation LD and auxiliary loss accounting. Please also clarify treatment of 33 kV and 132 kV metering differences.	Metering shall be as per Technical Specification and Tender SLD.
238			Section VI, Grid Compliance Study		Bidder must submit steady-state/dynamic/power-quality studies, PSS/E and PSCAD models, RMS/EMT models, benchmarking reports and update models after COD.	Please clarify the exact version of PSS/E, PSCAD and model formats required. Any new or changed model/study requirement after bid submission should be treated as a change order / variation.	Bidder shall comply with the Technical Specification requirements.
239			Section VI, Reactive Compensation		Bidder to install suitable reactive compensation equipment and harmonic filters as required by grid study and applicable regulations.	Please provide minimum reactive compensation requirement at POI. If final RLDC/SLDC study requires additional or higher-rated equipment beyond bidder's design, please confirm it will be a variation.	Bidder shall install suitable reactive compensation equipment and harmonic filters as required by grid study and applicable BSP/ CEA/RLDC requirements. Sizing is under bidder's scope.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
240			Grid Compliance / Reactive Power Requirement		Reactive power support is required as per grid compliance. PCU shall have Static Var Generation (SVG) function.	Please clarify whether reactive power compensation can be provided through SVG / STATCOM equipment as required, or only inverters through inverters. Please confirm whether bidder may decide as per their design philosophy.	Bidder may propose suitable reactive compensation methodology subject to meeting technical specification requirements. The same shall be finalized during detailed engineering.
241			Section VI, Grid Compliance / Site Testing		If site testing is required by RLDC, it shall be conducted by bidder.	Please confirm who will approve test procedure, arrange grid outage/charging permission, witness tests and bear cost of repeat tests due to grid/employer constraints.	Bidder shall comply with the Technical Specification requirements.
242			Section VI, Forecasting and Scheduling		Forecasting and scheduling during 3-year O&M is in bidder scope.	Please confirm whether bidder will act as QCA or only provide data support. Please clarify responsibility and cap for DSM/deviation charges, SLDC fees and penalties due to grid or SLDC instruction. Please confirm that costing beyond cap limit will be treated as variation.	Bidder shall comply with the Technical Specification requirements.
243			Section VI, 1-A, Statutory Compliance and Clearances		Bidder must comply with CERC/CEA/RLDC/SLDC/STU/MNRE and other regulations; statutory fees till O&M completion are bidder scope unless otherwise stated.	Please provide a responsibility matrix for CEIG, SLDC/RLDC, CEA, STU/CTU, Railway, MOEF, local body and BSP approvals, including who applies, who signs, who pays fees, and how approval delays will be handled. Please clarify responsibility and maximum capping. Please confirm that costing beyond cap limit will be treated as variation.	Clearances shall be arranged/facilitated by bidder as per Clause 12.0 of Chapter 1-A. Statutory fees till completion of O&M shall be in bidder scope unless specifically stated otherwise.
244			Section VI, Module Type / ALMM		Bifacial crystalline modules and cells must be from ALMM List-I and ALMM List-II.	Please confirm whether ALMM compliance is required as on bid submission date, module PO date, dispatch date or commissioning date. Any ALMM change after bid should be treated as change in law/change in regulation.	ALMM compliance shall be as per prevailing MNRE orders and technical Specification requirement. Refer clause 2.0, chapter. 1-A and clause 1.0, chapter. 1-C of the Technical Specification.
245			Section VI, Module Type / ALMM		Bifacial crystalline modules and cells must be from ALMM List-I and ALMM List-II.	Please confirm whether the Approved List of Cells and Manufacturers (ALCM) requirement shall be applicable for this tender. Since ALCM is not yet fully implemented / rolled out, kindly confirm that if ALCM is enforced after bid submission or during project execution, the resulting impact on module procurement, cost, delivery timeline and approved vendor selection shall be treated as a change in law / variation, with suitable cost and time adjustment to the bidder.	ALMM compliance shall be as per prevailing MNRE orders and technical Specification requirement. Refer clause 2.0, chapter. 1-A and clause 1.0, chapter. 1-C of the Technical Specification. Any change in law/regulation shall be dealt with as per GCC provisions.
246			Statutory Approval		Tender includes statutory compliance requirements.	Please confirm whether any DGMS or other special statutory compliance / approval is required for this project.	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries						Clarification by NSPCL	
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
247			SCC Time for Completion		Completion of facilities is 12 months from Notification of Award; O&M is 3 years from commissioning of full project capacity.	Please confirm that the 12-month period will be extended for delay in site access, BSP/SLDC shutdown, Railway approval, CEIG approval, RLDC clearance, employer drawing approval and force majeure.	Bidding documents provision are clear and shall remain unchanged.
248			Section VI, Construction Water/Power		Construction water and power are to be arranged by bidder.	Please confirm whether NSPCL/BSP will provide tapping points for construction power and water, applicable charges, water quality, and permissions for reservoir water use for construction/module cleaning.	Bidder shall comply with the Technical Specification requirements.
249			Section VI, Appendix-1 Site Data		Annual GHI is 1875.9 kWh/m ² ; minimum 1% unavailability and 1.5% soiling loss to be considered in PVsyst.	Please confirm whether bidders must use the tender GHI and minimum loss assumptions only, or may use third-party satellite data. Please also confirm that abnormal reservoir/site restrictions will be excluded from generation LD.	Bidder shall comply with the Technical Specification requirements.
250			Section VI, Appendix-3A, O&M LD		O&M LD is Rs. 3.66/kWh shortfall, max linked to 10% of quoted generation; recovery first from O&M payment then BG.	Please confirm exclusions for grid outage, backdown, SLDC curtailment, force majeure, employer shutdown, delayed approvals, reservoir restrictions, module cleaning water non-availability and access restrictions.	Bidder to follow Clause 6.0, Chapter 1-A, Page 19/676, Sec-VI of the Technical Specification.
251			Section VI, Appendix-3A		If GHI is unavailable due to instrumentation/SCADA problem, corresponding insolation and generation are excluded.	Please clarify treatment when one or more WMS sensors fail, data is partly available, or SCADA downtime occurs due to grid/employer communication issues.	Bidder to follow Appendix-3A, Page 18/676, Sec-VI of the Technical Specification.
252			PG Test / O&M Generation Loss		Generation guarantee and LD are applicable.	Please confirm that generation loss due to reservoir operation, abnormal water level, access restriction, boat movement restriction, module cleaning water restriction, security restrictions, reservoir maintenance, de-silting or other site restrictions not attributable to contractor shall be excluded from generation shortfall and LD calculation.	Generation loss due to reasons not attributable to contractor shall be dealt with as per Appendix-3A.
253			Section VI, Module Cleaning System		Wet module cleaning system is included in scope.	Please confirm cleaning water source, quality requirement, pumping/storage scope, permitted use of reservoir water, wastewater/discharge requirement and cleaning frequency assumed for generation guarantee.	Bidder shall comply with the Technical Specification requirements.
254			Module Cleaning Water		Wet module cleaning system is required.	Please confirm the permitted water source for module cleaning, reservoir-use permission, water quality requirement and disposal limits.	Bidder shall comply with the Technical Specification requirements.
255			Water Treatment for Module Cleaning		Module cleaning system is required.	Please clarify whether water treatment / RO / water softening plant is mandatory, or whether it is required only if available water quality does not meet module OEM requirements.	Bidder shall comply with the Technical Specification requirements.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
256			Section VI, Appendix-3B		Comprehensive AMC for floaters, inverters, SCADA, PPC and CCTV is 10 years from commissioning of full capacity.	Please clarify exact AMC scope from year 4 to year 10: preventive visits, breakdown support, spares, consumables, software licenses, firmware upgrades, major replacements and response time.	Bidder to comply the Technical Specification requirement
257			Section VI, Appendix-3B		Floaters have 10-year warranty but must be designed for 25-year service life with no failures affecting system integrity.	Please confirm that contractor's warranty obligation for floaters is limited to 10 years, while 25-year service life is a design requirement only, subject to normal O&M and exclusions.	Bidder to comply the Technical Specification requirement
258			Section VI, D-5 Clause 8		O&M of part commissioned capacity is required until full plant commissioning.	Please confirm that extended part-capacity O&M beyond the planned period will be paid separately on pro-rata basis.	Bidder to comply the Technical Specification requirement
259			BOQ Schedule 2 Mandatory Spares		Spares include floating units, 33 kV spares, 132 kV switchyard equipment and SAS spares.	Please confirm mandatory spares are one-time supply only and not required to be replenished during O&M unless consumed due to contractor fault.	Mandatory spares shall be supplied as per BOQ and Technical Specification. Replenishment during O&M shall be as per tender obligations.
260			Section VI, D-5 O&M		Minimum O&M manpower includes round-the-clock technicians, support manpower, SCADA operator, boat operator and security.	Please confirm whether BSP/NSPCL security requirements are additional to tender manpower or included within stated minimum manpower.	Minimum O&M manpower shall be provided as per Chapter D-5.
261			Section VI, D-5 Clause 6		Plant to be handed over after O&M in safe and healthy condition; returnable items to be returned or recovered.	Please define handover checklist and confirm normal wear and tear will not be recovered from contractor.	Plant shall be handed over as per Chapter D-5.
262			Section VII, Attachment-18; Section VI, Generation Guarantee		Bidder must quote annual generation in MU at metering point; minimum is 43.89 MU; value must match BOQ.	Please confirm that the BOQ generation value and Attachment-18 value must be identical, and provide an example showing quoted generation, DC:AC ratio, reference generation and BG calculation.	Quoted annual generation shall be identical in all relevant bid schedules/attachments and shall not be less than 43.89 MU. BG calculation shall be as per Appendix-3B, Sec-VI of the Technical Specification.
263			BDS Item 12.0 / 12.2; BOQ1		Evaluation is on Total Quoted Bid Price per MU, i.e. FEP/G.	Please confirm that generation above minimum is bidder's commercial choice and no additional penalty applies except as expressly stated in PG/O&M LD clauses.	Generation above minimum is bidder's quoted guarantee/commercial decision. LD and BG applicability shall be as per technical specification requirement.
264			Section VI, Appendix-3B		Extra generation BG is required if DC:AC ratio is greater than 1.50, with different treatment above 1.55.	Please confirm release/reduction condition for generation-linked BG. Should it be released after successful PG Test, or only after O&M period?	Bidder shall comply with tender conditions and technical specifications requirement
265			SCC / GCC 13.5		O&M security starts at 5% of O&M contract price, then is enhanced to 0.1 x G x R million rupees, and later revised for 10-year AMC.	Please confirm exact due dates, release dates and reduction mechanism for performance security, O&M BG, generation BG and 10-year AMC BG.	Bidder shall comply with tender conditions and technical specifications requirement.
266			SCC Clause 13.5		O&M BG to be enhanced to 0.1 x G x R million rupees; later AMC BG is Rs. 1 lakh/MW.	Please confirm calculation with an example for minimum generation and for higher quoted generation.	Technical specification is clear. Bidder to comply technical specifications requirement
267			Section VI, Appendix-3A		PG Test shortfall LD is R x N, with R = Rs. 3.66/kWh and N = 11.81; PG LD cap is 15% of total contract value excluding O&M.	Please confirm that PG Test LD is the sole remedy for PG generation shortfall, and that once LD is paid and Operational Acceptance is issued, no further PG-related claim will arise for the same shortfall.	Bidder shall comply with tender conditions and technical specifications requirement.

PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
268			Section VI, Appendix-3A; GCC Operational Acceptance		Operational Acceptance can occur after guarantee test is met or contractor pays LD.	Please confirm that payment of PG LD, if applicable, will not delay Operational Acceptance Certificate and release of the 10% PG-linked payment milestone.	Bidder shall comply with tender conditions and technical specifications requirement.
269			Section VII, Payment Appendix		Ex-works payment: 15% advance, 55% dispatch, 15% site receipt, 2.5% part commissioning, 2.5% completion, 10% PG/OAC.	Please confirm the expected timeline for PG Test after commissioning and whether OAC/PG payment will be released if PG Test is delayed due to grid unavailability or employer reasons.	PG Test shall be conducted as per Chapter D-6, Sec-VI of the Technical Specification after commissioning.
270			GCC Clause 25.2.2 / 25.2.3		If Guarantee Test is delayed for employer reasons, payment release mechanism is provided.	Please confirm documents required to claim PG payment if PG Test cannot be completed due to employer/grid reasons.	Documents for PG payment release shall be as per GCC Clause 25.2.2/25.2.3 and Payment Appendix. Bidder shall submit supporting records for delay, if any.
271			Section VI, Appendix-3B		PV Module Performance Insurance must cover minimum 6% of module order value for 25 years, with employer as beneficiary and limited reinsurer names.	Please confirm acceptable policy wording, acceptable Indian fronting insurers, whether equivalent reinsurers are acceptable, and whether a declaration is sufficient until final policy issuance.	Bidder to comply the Technical Specification requirement
272			Section VII, Payment Appendix		Ex-works payment for PV modules is linked to PV Module Performance Insurance Policy/Declaration for each lot.	Please confirm maximum review time for insurance policy/declaration and that dispatch payment will not be withheld if bidder submits insurer commitment letter pending final endorsement.	Bidder to comply the Technical Specification requirement
273		Additional Data / Document Request			Additional Data / Document Request	Requesting for CAD/DWG file of Bathymetric Survey and Topography Survey report	CAD/DWG files of Bathymetric Survey and Topography shall be shared for reference only.
274		Additional Data / Document Request			Additional Data / Document Request	Requesting for CAD/DWG file of Reservoir Drawings	Bidder may visit the site for better understanding of actual site conditions.
275		Additional Data / Document Request			Additional Data / Document Request	Requesting for KMZ file of facility marked with important places such as float, cable / transmission route / POC / switchyard, etc.	The KML file for the project site shall be shared with the bidder for reference. However, the bidder shall verify the same at site.
276		Additional Data / Document Request			Additional Data / Document Request	Requesting for existing SCADA system architecture (with communication protocols marked inside)	Available existing SCADA/SAS architecture details shall be shared with successful bidder during detailed engineering, wherever required for integration.
277		Additional Data / Document Request			Additional Data / Document Request	Requesting for existing Switchyard protection scheme.	Available existing switchyard protection scheme/details shall be shared with successful bidder during detailed engineering, wherever required for integration.
278		Additional Data / Document Request			Additional Data / Document Request	Requesting for Load Flow / Grid study report, if any	Bidder shall carry out all required studies/models as per Technical Specification.
279		Additional Data / Document Request			Additional Data / Document Request	Requesting water quality report.	Bidder shall carry out specific tests as per requirement and the same shall be in bidder scope.
280		Additional Data / Document Request			Additional Data / Document Request	Requesting air quality report.	Bidder shall assess site conditions and carry out any required study in its own scope.
281		Additional Data / Document Request			Additional Data / Document Request	Requesting site photos and videos.	Bidder may visit the site for better understanding of actual site conditions. Available site photos/videos, if any, may be shared for reference.

**PACKAGE NAME : EPC Package for 20MW Floating Solar PV Project at Maroda Reservoir-2, Bhilai
CLARIFICATION NO. 2 Part-B (Technical)**

Bidders' submitted Queries							Clarification by NSPCL
Sl.No	Document Name (Section & Sub-	Clause No.	Page No.	Any other	Description as per Bid Documents - as submitted by bidder	Clarification sought by bidder	
282		Additional Data / Document Request			Additional Data / Document Request	Requesting any feasibility or site visit/study report available, if any.	Bidder shall carry out its own assessment based on site visit and tender documents.