

**SINGLE STAGE
REQUEST FOR PROPOSAL DOCUMENT**

FOR

**SELECTION OF TRANSMISSION SERVICE PROVIDER
THROUGH
TARIFF BASED COMPETITIVE BIDDING PROCESS**

TO

ESTABLISH TRANSMISSION SYSTEM

**“Transmission System Strengthening Scheme for Evacuation of Power from
Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”**

ISSUED BY



**Registered Office:
1st Floor, “Urjanidhi”,1, Barakhamba Lane,
Connaught Place, New Delhi-110001**

March 06, 2020

PFC CONSULTING LIMITED
(A wholly owned subsidiary of Power Finance Corporation Ltd.)

Corporate Office:
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi-110001

Request for Proposal Document for selection of Bidder as Transmission Service Provider through tariff based competitive bidding process to establish Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” is issued by PFC Consulting Limited for the benefit of Long Term Transmission Customer(s) as named in Annexure 19.

This RFP document is issued to -

M/s. _____

Chief Executive Officer

PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Ltd.)
Corporate Office:
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi-110001

Email: **pfcl.itp@pfcindia.com**
Place: **New Delhi**
Date: **06.03.2020**

Signature:

REQUEST FOR PROPOSAL NOTIFICATION

PFC Consulting Limited
(A wholly owned subsidiary of Power Finance Corporation Ltd.)

Corporate Office:
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi-110001

- The Ministry of Power, Government of India, vide its notification no.15/3/2018-Trans-Pt(1) dated 24/01/2020 has appointed PFC Consulting Limited to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish transmission system for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process.
- PFC Consulting Limited (hereinafter referred to as BPC) hereby invites all prospective Bidders to participate in Request for Proposal (RFP) process for selection of Transmission Service Provider (TSP) on the basis of international competitive bidding in accordance with the “Tariff Based Competitive Bidding Guidelines for Transmission Service” and “Guidelines for Encouraging Competition in Development of Transmission Projects” issued by Government of India, Ministry of Power under section – 63 of The Electricity Act, 2003 and as amended. The responsibility of the TSP would be to establish the following Transmission System – “Transmission System for Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” (hereinafter referred to as 'Project') on build, own, operate & maintain basis and to provide transmission service to the Long Term Transmission Customers, as listed out in **Annexure – 19** of this RFP. The BPC reserves the right to add, delete or replace any Long Term Transmission Customer(s) to the list:

Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”			
S.No	Name of Transmission Element	Capacity /km	Scheduled COD in months from Effective Date
1.	<p>Establishment of 765/400 kV, 3X1500 MVA GIS substation at Narela with 765 kV (2x330 MVAR) bus reactor and 400 kV (1x125 MVAR) bus reactor</p> <p><i>Future provisions: Space for 765/400kV ICTs along with bays: 1</i> <i>765 kV line bays along with switchable line reactor: 6</i> <i>400 kV line bays: 6+4</i> <i>765kV reactor along with bays:2</i> <i>400/220 kV ICTs along with bays:8</i></p>	<p>765/400 kV, 1500 MVA ICT – 3 765/400 kV, 500 MVA spare ICT (1-phase) – 1 765 kV ICT bays – 3 400 kV ICT bays – 3 765 kV line bays- 4 (GIS) 330MVAR, 765 kV</p>	18 Months (Dec' 2021) [#]

	220 kV line bays: 12 400 kV bus reactor along with bays:2	bus reactor- 2 765 kV bus reactor bay – 2 110 MVAR, 765 kV, 1-Ph Bus Reactor (spare unit) -1 125 MVA _r , 420 kV bus reactor - 1 420 kV bus reactor bay – 1 330 MVA _r , 765 kV line reactor- 2 Switching equipment for 765 kV reactor - 2 (1x110 MVA_r spare reactor at Khetri to be used as spare for Khetri – Narela 765 kV D/c line)	
2.	Khetri – Narela 765 kV D/c line 1x330MVA_r Switchable line reactor for each circuit at Narela end of Khetri – Narela 765kV D/c line	Length -180	
3.	2 nos. of 765 kV line bays at Khetri for Khetri – Narela765 kV D/c line	765 kV line bays – 2 (AIS)	
4.	LILO of 765 kV Meerut- Bhiwani S/c line at Narela	Length – 25	

#Scheduled COD in months is considering Effective Date in June 2020, It is clarified that in case there is delay in achieving Effective Date, the schedule shall be compressed accordingly to achieve Scheduled COD by December, 2021.

Note:

- i) As per MoM of 6th NCT held on 30.09.2019, it was decided that the scheme is to be implemented by December 2021.
- ii) Developer of Khetri substation to provide space for 2 no of 765 kV bays at Khetri substation along with the space for 2 no of line reactors.
- iii) The line lengths mentioned above are approximate as the exact length shall be

obtained after the detailed survey

- iv) *Future Space provision to be kept for 2 Nos Bus Coupler bay: (1 no. for each Bus section), 2 Nos. Transfer Bus Coupler bay (1 no. for each Bus section) & 2 nos. Bus Sectionalizer (1 no. for each main Bus)*
3. The TSP shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with Indian Standards and Codes issued by Bureau of Indian Standards and only in case they are not available under certain conditions, the other equivalent internationally recognized Standards and Codes shall be followed, with prior approval of CEA.
 4. **Transmission License:** The TSP shall obtain the Transmission License from the Appropriate Commission on such terms and conditions as specified by the Appropriate Commission. Bidders shall ensure that they comply with all the requirements of Appropriate Commission for grant of Transmission License.
 5. **Bidding Process:** PFC Consulting Limited seeks to select a Transmission Service Provider through tariff based competitive bidding process for the Project based on meeting stipulated Qualification Requirements prescribed in Clause 2.1 of Section 2 of RFP and the lowest Levelised Transmission Charge derived from Final Offers quoted during the e-reverse bidding. The selection of the TSP shall be subject to it obtaining Transmission License from the Appropriate Commission which after expiry may be further extended by such period as deemed appropriate by the Appropriate Commission under power vested with it to amend the conditions of Transmission License. The entire bidding process shall be conducted on electronic platform created by MSTC Limited.

The Bidder shall also make physical submission of the Technical Bid in addition to online submission through the electronic bidding platform. There should be no physical submission of the Financial Bid.

6. The objective of the bidding process is to select a Successful Bidder pursuant to this RFP, who shall acquire one hundred percent (100%) of the equity shares of [SPV, which is under incorporation] along with all its related assets and liabilities as per the provisions of the Share Purchase Agreement, at the Acquisition Price to be intimated by the BPC, twenty (20) days prior to the Bid Deadline.

The [SPV, which is under incorporation], of which one hundred percent (100%) equity shares has been acquired by the Selected Bidder, shall be responsible as the TSP, for ensuring that it undertakes ownership, financing, development, design, engineering, procurement, construction, commissioning, operation and maintenance of the Project, and to provide Transmission Service to the Long Term Transmission Customers as per the terms of the RFP Project Documents.

7. **Commencement of Transmission Service:** The Selected Bidder shall have to commence Transmission Service in accordance with the provisions as may be specified in the TSA.
8. **Transmission Charges:** The Transmission Charges shall be payable by Long Term Transmission Customer(s) in Indian Rupees. Bidders shall quote the Transmission Charges as per the pre-specified structure, as mentioned in RFP.

9. **Issue of RFP document:** The detailed terms and conditions for qualification and selection of the Transmission Service Provider for the Project and for submission of Bid are indicated in the RFP document. All those interested in purchasing the RFP document may respond in writing to **Senior Vice President Tel. +91 11 23443777, Fax +91 11 23443990, Email: pfcl.itp@pfcindia.com**, PFC Consulting Limited at the address given in para 12 below with a non-refundable fee of Rs. 5,00,000/- (Rupees Five Lakh Only) or US\$ 7000/- (US Dollars Seven Thousand Only) plus 18% GST, in the form of a demand draft in favour of “PFC Consulting Limited” payable at New Delhi, latest by 06/05/2020 or through electronic transfer in the following Bank Account:

Account No.	:	30366888291
Bank	:	State Bank of India (SBI),
IFSC	:	SBIN0001639
Branch	:	Chandralok Building, Janpath, New Delhi - 110001

The RFP document shall be issued to the Bidders on any working day from 06/03/2020 to 06/05/2020 between 1030 hours (IST) to 1600 hours (IST). BPC, on written request and against payment of the above mentioned fee by any Bidder shall promptly dispatch the RFP document to such Bidder by registered mail/ air mail. BPC shall, under no circumstances, be held responsible for late delivery or loss of documents so mailed.

10. **Receipt and opening of Bid:** Scanned Copy of the Technical Bid must be uploaded online through the electronic bidding platform on or before 1600 hours (IST) on 08/05/2020. In addition to the above, the Technical Bid in one (1) original plus one (1) copy, must be delivered to the address as given in Para 12 below on or before 1600 hours (IST) on 08/05/2020 and Technical Bid will be opened on the same day at 1630 hours (IST) at PFC Consulting Limited, 9th Floor, A-Wing, Statesman House, Connaught Place, New Delhi - 110001, India in the presence of Bidders’ representatives who wish to attend. If the Bid Deadline is a public holiday at the place of submission of Bid, it shall be received and opened on the next working day at the same time and venue. Bidders meeting the Qualification Requirements, subject to evaluation as specified in Clause 3.2 to 3.4 shall be declared as “Qualified Bidders” and eligible for opening of Initial Offer.
11. The RFP document is not transferable. BPC reserves the right to reject all Bid and/or annul the process of tariff based competitive bidding for selection of TSP to execute the Project without assigning any reason. BPC shall not bear any liability, whatsoever, in this regard.

12. **Nodal person for enquiries and clarifications**

All correspondence, clarification in respect of RFP document and submission of Technical and Financial Bid shall be addressed to:

Senior Vice President
PFC Consulting Limited
(A wholly owned subsidiary of PFC Limited)
9th Floor, A-Wing, Statesman House
Connaught Place, New Delhi - 110001, India
Tel. + 91-11-23443777
Fax + 91-11-23443990
Email: pfcl.itp@pfcindia.com

DISCLAIMER

1. This Request for Proposal (RFP) document is not an agreement or offer by the BPC to the prospective Bidders or to any other party. The purpose of this RFP document is to provide interested parties with information to assist the formulation of their Bid. The RFP document is based on material and information available in public domain.
2. This RFP, along with its Annexures, is not transferable and the information contained therein are to be used only by the person to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors). In the event that the recipient does not continue with its involvement in the Project in accordance with this RFP, this RFP must be kept confidential.
3. While this RFP has been prepared in good faith, neither the BPC nor its employees or advisors/consultants make any representation or warranty express or implied as to the accuracy, reliability or completeness of the information contained in this RFP. The Bidders shall satisfy themselves, on receipt of the RFP document, that the RFP document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within ten (10) days from the date of issue of this RFP document on or before the date & time mentioned in this RFP, it shall be considered that the issued document, complete in all respects, has been received by the Bidders.

This bidding process is in accordance with the Bidding Guidelines issued by Ministry of Power, Government of India under Section 63 of the Electricity Act, 2003. Revisions or amendments in these Bidding Guidelines may cause the BPC to modify, amend or supplement this RFP document, including the RFP Project Documents to be in conformance with the Bidding Guidelines.

4. This RFP document includes statements, which reflect various assumptions arrived at by BPC in order to give a reflection of current status in the RFP. These assumptions should not be entirely relied upon by Bidders in making their own assessments. This RFP document does not purport to contain all the information each Bidder may require and may not be appropriate for all persons. It is not possible for BPC to consider the investment objectives, financial situation and particular needs of each party who reads or uses this RFP document. Certain Bidders may have a better knowledge of the Project than the others. Each Bidder should conduct its own investigations and analysis and should check the accuracy, reliability and completeness of the information in this RFP document and obtain independent advice from appropriate sources.
5. Neither BPC nor their employees or consultants make any representation or warranty as to the accuracy, reliability or completeness of the information in this RFP document.
6. Neither BPC, its employees nor its consultants will have any liability to any Bidder or any other person under the law of contract, tort, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage which may arise from or be incurred or suffered in connection with anything contained in this RFP document, any matter deemed to form part of this RFP document, the award of the Project, the information supplied by or on behalf of BPC or its employees, any consultants or otherwise arising in any way from the qualification process for the said Project.

7. By participating in the bidding process, each of the Bidder shall have acknowledged and accepted that he has not been induced to enter into such agreement by any representation or warranty, express or implied, or relied upon any such representation or warranty by or on behalf of BPC or any person working in the bidding process.
8. BPC may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement this RFP document. Such updations, amendments or supplements, if any, will however be circulated to the Bidders not later than 7days prior to the last date for submission of Bid.
9. Each Bidder unconditionally agrees, understands and accepts that the BPC reserves the rights to accept or reject any or all Bids without giving any reason. Neither the BPC nor its advisers shall entertain any claim of any nature, whatsoever, including without limitations, any claim seeking expenses in relation to the preparation of Bids.
10. This RFP may be withdrawn or cancelled by the BPC at any time without assigning any reasons thereof. BPC further reserves the right, at its complete discretion to reject any or all of the Bids without assigning any reasons whatsoever.

INDEX

SECTION	CONTENTS	PAGE NO.
	DEFINITIONS	11
1.	INTRODUCTION	17
2.	INFORMATION AND INSTRUCTIONS FOR BIDDERS	24
3.	EVALUATION OF THE TECHNICAL AND FINANCIAL BID	50
4.	ANNEXURES FOR BID	57
	ANNEXURES	
1	Format for the Covering Letter	59
2	Format for Letter of Consent from Consortium Members	62
3	Format for evidence of authorized signatory's authority (Power of Attorney)	64
4	Format for Power of Attorney to be provided by each of the other members of the Consortium in favor of the Lead Member	66
5	Format for Bidder's composition and ownership structure and Format for Authorization	68
6	Format for Consortium Agreement	71
7A	Format for Qualification Requirement – Net worth	76
7B	Format for Technical Requirement	80
7C	Format for Technical and Financial Requirement – Relationship & Equity Shareholding	83
7D	Format for Additional Information for verification of Financial and Technical Capabilities of Bidders	86
8	Format for Undertaking and Details of Equity Investment	88
9	Format for Authorisation from Parent / Affiliate of Bidding Company / Member of Bidding Consortium whose technical / financial capability has been used by the Bidding Company / Member of Bidding Consortium.	93
10	Format for Undertaking by Technically/Financially Evaluated Entity/Ultimate Parent Company	95
11	Format for Board Resolution	99
11A	Illustration for Applicable Board Resolution Requirements under Clause 2.5.2	101
12	Format for illustration of Affiliates	103
13	Format for disclosure	104

14	Format For Bid Bond	105
15	Format for Contract Performance Guarantee	107
16	Format for Checklist for Technical Bid Submission Requirements	109
17	List of Banks	112
18	Grid Map of the Project	114
19	List of Long Term Transmission Customers	115
20	Format for Clarifications / Amendments on the RFP / RFP Project Documents	116
21	Formats For RFP Project Documents	117
22	Format For Financial Bid	118
23	Illustration of the Bid Evaluation/Computation of Levelized Transmission Charges	122
	Annexure A – Technical Details with respect to Electronic bidding	123
	Annexure B - Technical Specifications of Transmission System	125

DEFINITIONS

Any capitalized term, used but not defined in this RFP, shall have the meaning ascribed to such term in the RFP Project Documents, or the Bidding Guidelines, in that order. In absence of availability of definitions in the foregoing references, the capitalized terms shall be interpreted in accordance with the Electricity Act 2003, the CERC (Terms and Conditions of Tariff) Regulations 2019, Grid Code or any other relevant electricity law, rule or regulation prevalent in India, as amended or re-enacted from time to time, in that order.

The following terms are defined for use in this RFP:

"Acquisition Price" shall have the same meaning as defined in the Share Purchase Agreement;

"Affiliate" shall mean a company that either directly or indirectly

- i. controls or
- ii. is controlled by or
- iii. is under common control with

a Bidding Company (in the case of a single company) or a Member (in the case of a Consortium) and **"control"** means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company. As an illustration a chart is annexed hereto as Annexure – 12;

"Allocated Project Capacity" shall mean, for each Long Term Transmission Customer, the sum of the generating capacities allocated to such Long Term Transmission Customer from the ISGS and the contracted power, if any, as adopted by CERC from time to time in determining sharing of transmission charges between the Long Term Transmission Customers;

"Appropriate Commission" shall mean the Central Electricity Regulatory Commission referred to in sub-section (1) of section 76 of the Electricity Act, or the State Regulatory Commission referred to in section 82 of the Electricity Act, 2003 or the Joint Commission referred to in section 83 of the Electricity Act, as the case may be;

"Appropriate Government" shall mean the Central Government in case of any Inter-State Transmission System and the appropriate State Government in case of an Intra-State Transmission System;

"Bid" shall mean Technical Bid and Financial Bid submitted by the Bidder, in response to this RFP, in accordance with the terms and conditions thereof;

"Bidder" shall mean either a single company (including its permitted successors and legal assigns) or a Consortium of companies (including its permitted successors and legal assigns) submitting a Bid in response to this RFP. Any reference to the Bidder includes Bidding Company, Bidding Consortium/ Consortium, Member in a Bidding Consortium and Lead Member of the Bidding Consortium jointly and severally, as the context may require;

"Bidding Company" shall refer to such single company (including its permitted successors and legal assigns) that has submitted a Bid for the Project;

"Bidding Consortium/ Consortium" shall refer to a group of companies (including

their permitted successors and legal assigns) that has collectively submitted a Bid for the Project;

“Bidding Guidelines” shall mean the “Tariff Based Competitive-Bidding Guidelines for Transmission Service” and “Guidelines for Encouraging Competition in Development of Transmission Projects” issued by Government of India, Ministry of Power dated 13th April 2006 under Section – 63 of Electricity Act and as amended from time to time;

“Bid Bond” shall mean the unconditional and irrevocable bank guarantee for Rupees Thirty One Crore One Lakh (Rs. 31.01 Crore) only, to be submitted along with the Technical Bid by the Bidder under Clause 2.11 of this RFP, as per the format prescribed in Annexure 14;

"Bid Deadline" shall mean the last date and time for submission of Bid in response to this RFP, specified in Clause 2.7.1;

“Bid Process Coordinator or BPC” shall mean a person or its authorized representative as notified by the Government of India/concerned State Government, responsible for carrying out the process for selection of Transmission Service Provider;

"CEA" shall mean the Central Electricity Authority constituted under Section - 70 of the Electricity Act, 2003;

“CERC” shall mean the Central Electricity Regulatory Commission of India constituted under Section-76 of The Electricity Act, 2003 and any successors and assigns;

“Conflict of Interest” A Bidder shall be considered to be in a Conflict of Interest with one or more Bidders in the same bidding process if they have a relationship with each other, directly or through a common company, that puts them in a position to have access to information about or influence the Bid of another Bidder;

"Commercial Operation Date (COD)" shall mean the date of charging the Project or part thereof to its rated voltage level or seven (7) days after the date on which it is declared ready for charging by the Transmission Licensee, but is not able to be charged for reasons not attributable to the Transmission Licensee, its suppliers or contractors;

Provided that the date of commercial operation shall not be a date prior to the Scheduled Date of Commercial Operation mentioned in the TSA, unless mutually agreed to by all parties;

“Consents, Clearances, Permits” shall mean all authorizations, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements, or concessions required to be obtained from or provided by any concerned authority for the development, execution and performance of Project including without any limitation on the construction, ownership, operation and maintenance of the transmission lines and/or sub-stations;

"Contract Performance Guarantee" shall have the meaning as per Clause 2.12 of this RFP;

"Contract Year" shall mean the period beginning on the Scheduled COD, and ending on the immediately succeeding March 31 and thereafter each period of 12 months beginning on April 1 and ending on March 31 provided that:

- (i) the last Contract Year shall end on the last day of the term of the TSA;

Provided that for the purpose of payment, the Contract Year shall be the applicable Contract Year as per Annexure-4 of this RFP;

"CTU/Central Transmission Utility" shall mean the utility notified by the Central Government under Section-38 of the Electricity Act, 2003;

"Effective Date" shall have the meaning as ascribed thereto in the TSA;

"Element" shall mean-each Transmission Line or each circuit of the Transmission Lines (where there are more than one circuit) or each bay of the Sub-station or switching station or HVDC terminal or inverter station of the Project, which has a separate scheduled COD as per Schedule 3 of the TSA and has a separate percentage for recovery of Transmission Charges on achieving COD as per Schedule 6 of the TSA;

"Final Offer" shall mean the Quoted Escalable Transmission Charges and Quoted Non Escalable Transmission Charges, required to be submitted as part of the Financial Bid on the electronic bidding platform during the e-reverse bidding stage. In case, no Final Offer is received during the e-reverse bidding stage then the lowest "Initial Offer" shall be deemed to be the Final Offer;

"Financial Bid" shall mean the Initial Offer and Final Offer, containing the Bidder's Quoted Transmission Charges, as per the format at Annexure-22 of this RFP;

"Financially Evaluated Entity" shall mean the company which has been evaluated for the satisfaction of the financial requirement set forth in Clause 2.1.3 hereof;

"Grid Code" / "IEGC" or "State Grid Code" shall mean the Grid Code specified by the Central Commission under Clause (h) of sub-section (1) of Section 79 of the Electricity Act, 2003 and/or the State Grid Code as specified by the concerned State Commission referred under Clause (h) of sub-section (1) of Section 86 of the Electricity Act, 2003 as applicable;

"Initial Offer" shall mean the Quoted Escalable Transmission Charges and Quoted Non Escalable Transmission Charges, required to be submitted as part of the Financial Bid on the electronic bidding platform along with the Technical Bid;

"Inter State Generating Station" or "ISGS" shall mean a Central / other generating station in which two or more states have shares and whose scheduling is to be coordinated by the Regional Load Despatch Centre;

"Inter-State Transmission System" shall include

- (i) Any system for the conveyance of electricity by means of main transmission line from the territory of one State to another State;
- (ii) The conveyance of electricity across the territory of an intervening State as well as conveyance within the State, which is incidental to such inter-State transmission of electricity;
- (iii) The transmission of electricity within the territory of a State on a system built, owned, operated, maintained or controlled by Central Transmission Utility;

“Intra-State Transmission System” shall mean any system for transmission of electricity other than an Inter-State Transmission System;

“Lead Member of the Bidding Consortium” or “Lead Member” shall mean a company who commits at least 26% equity stake in the Project, meets the technical requirement as per Clause 2.1.2 and so designated by other Member(s) in Bidding Consortium;

“Lead Long Term Transmission Customer” shall have the meaning as ascribed thereto in the TSA;

“Letter of Intent” or “LoI” shall mean the letter to be issued by the BPC to the Bidder, who has been identified as the selected Bidder, for award of the Project to such Bidder;

“Levelized Transmission Charges” shall mean the Transmission Charges calculated in accordance with the provisions of Clause 3.5.2 in this RFP;

“Long Term Transmission Customer(s)” shall mean a person availing or intending to avail access to the Inter-State Transmission System for a period up to twenty-five (25) years or more, and for the purposes of this Project, shall refer to entities listed in Annexure – 19 of this RFP or any such other person who executes a supplementary agreement for availing transmission service as per the provisions of the TSA;

“Member in a Bidding Consortium/Member” shall mean each company in the Bidding Consortium;

“MOP” shall mean the Ministry of Power, Government of India;

“MOEF” shall mean the Ministry of the Environment and Forests, Government of India;

“National Committee on Transmission” shall mean the committee constituted by the Ministry of Power, Government of India in terms of "Guidelines for Encouraging Competition in Development of Transmission Projects", as notified from time to time;

“Parent Company” shall mean a Company that holds at least twenty six percent (26%) of the paid - up equity capital directly or indirectly in the Bidding Company or in the Member in a Bidding Consortium, as the case may be;

“Qualification Requirements” shall mean the qualification requirements as set forth in Section- 2, Clause 2.1 of this RFP;

“Quoted Transmission Charges” shall mean the sum of the Quoted Escalable Transmission Charges and Quoted Non-Escalable Transmission Charges submitted online through the electronic bidding platform by the Bidder as part of its Financial Bid as per the format in Annexure– 22 of this RFP;

“Quoted Escalable Transmission Charges” shall mean the column 5 of Financial Bid quoted online through the electronic bidding platform by the Bidder as per Annexure– 22;

“Quoted Non-Escalable Transmission Charges” shall mean the column 4 of Financial Bid quoted online through the electronic bidding platform by the Bidder as per Annexure– 22;

“RFP” shall mean Request for Proposal document along with all schedules, formats, annexure and RFP Project Documents attached hereto, issued by BPC for tariff based competitive bidding process for selection of TSP to execute the Project, and shall include any modifications, amendments or alterations or clarifications thereto;

“RFP Project Documents” shall mean the following documents to be entered into in respect of the Project, by the parties to the respective agreements:

- a. TSA,
- b. Share Purchase Agreement and
- c. Any other agreement, as may be required;

"Scheduled COD" shall have the meaning as ascribed hereto in Clause 2.6 of this RFP;

“Statutory Auditor” shall mean the auditor appointed under the provisions of the Companies Act, 1956 or under the provisions of any other applicable governing law;

"Share Purchase Agreement" shall mean the agreement amongst PFC Consulting Limited, [SPV, which is under incorporation] and the Successful Bidder for the purchase of one hundred (100%) per cent of the shareholding of the [SPV, which is under incorporation] for the Acquisition Price, by the Successful Bidder on the terms and conditions as contained therein;

"Short Term Transmission Customer(s)" shall mean a transmission customer other than the Long Term Transmission Customer;

"Successful Bidder" or "Selected Bidder" shall mean the Bidder selected pursuant to this RFP to acquire one hundred percent (100%) equity shares of [SPV, which is under incorporation], along with all its related assets and liabilities, which will be responsible as the TSP to establish the Project on build, own, operate and maintain basis as per the terms of the TSA and other RFP Project Documents;

"Survey Report" shall mean the report containing initial information regarding the Project and other details provided as per the provisions of Clause 1.6.2.1.a of this RFP;

"Technical Bid" shall mean the scanned copy of the bid submitted online through the electronic bidding platform and hard copy of the Bid in one (1) original and one (1) copy, containing the documents as listed out in Clause 2.5.2 of this RFP;

“Technically Evaluated Entity” shall mean the company which has been evaluated for the satisfaction of the technical requirement set forth in Clause 2.1.2 hereof;

“Transmission Charges” shall mean the charges payable to TSP by Long Term Transmission Customer(s) pursuant to the TSA, as adopted by the Appropriate Commission;

“Transmission License” shall mean the license granted by the Appropriate Commission in terms of the relevant regulations for grant of such license issued under the Electricity Act, 2003;

"Transmission Licensee" shall mean a licensee authorized to establish and operate Transmission Lines by the Appropriate Commission;

“Transmission Lines” shall mean all high pressure cables and overhead lines (not being an essential part of the distribution system of a licensee) transmitting electricity from a generating

station to another generating station or a sub-station, together with any step-up and step-down transformers, switch-gear and other works necessary to and used for the control of such cables or overhead lines, and such buildings or part thereof as may be required to accommodate such transformers, switchgear and other works;

“Transmission Service Agreement” or “TSA” shall mean the agreement entered into between Long Term Transmission Customer(s) and the TSP pursuant to which TSP shall build, own, operate and maintain the Project and make available the assets of the Project to Long Term Transmission Customer(s) on a commercial basis and a draft of which is attached hereto and marked as Format 1 of Annexure 21, including all its schedules, annexures and all amendments or modifications;

“Transmission Service Provider” or “TSP” shall mean [SPV, which is under incorporation] which has executed the Transmission Service Agreement and has been/shall be acquired by the Selected Bidder;

“Transmission System” shall mean a line with associated sub-stations or a group of lines interconnected together along with associated sub-stations and the term includes equipment associated with transmission lines and sub-stations;

“Ultimate Parent Company” shall mean a company which owns at least twenty six percent (26%) equity in the Bidding Company or Member of a Consortium, (as the case may be) and in the Technically Evaluated Entity and/or Financially Evaluated Entity (as the case may be) and such Bidding Company or Member of a Consortium, (as the case may be) and the Technically Evaluated Entity and/or Financially Evaluated Entity (as the case may be) shall be under the direct control or indirectly under the common control of such company.

SECTION – 1

INTRODUCTION

SECTION 1

1. INTRODUCTION

- 1.1 The Ministry of Power, Government of India, vide its notification no. 354[F. No. 15/3/2018-Trans-Pt(1)]dated 24/01/2020 has notified PFC Consulting Limited to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish transmission system for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process.

The BPC hereby invites Bids from all prospective Bidders in accordance with this Request for Proposal (RFP) to select prospective Transmission Service Provider (TSP) in accordance with the “Tariff Based Competitive-Bidding Guidelines for Transmission Service” and “Guidelines for Encouraging Competition in Development of Transmission Projects” issued by Government of India, Ministry of Power under Section – 63 of the Electricity Act. The BPC shall select the Bidder having the prescribed technical and financial capability to become TSP and be responsible for establishing the Project in the state(s) of Rajasthan. The TSP will make the Project available for use by the Long Term Transmission Customer(s) for Transmission Charges, as adopted by Appropriate Commission, payable to TSP by Long Term Transmission Customer(s), pursuant to a Transmission Service Agreement (TSA) to be signed between the TSP and the Long Term Transmission Customer(s).

- 1.2 The TSP will be required to establish the following Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” (hereinafter referred to as ‘Project’) on build, own, operate and maintain basis, and to provide transmission service to the Long Term Transmission Customers, as listed out in Annexure – 19 of this RFP. The BPC reserves the right to add, delete or replace any Long Term Transmission Customer(s) to the list.

Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”			
S.No	Name of Transmission Element	Capacity /km	Scheduled COD in months from Effective Date
1.	Establishment of 765/400 kV, 3X1500 MVA GIS substation at Narela with 765 kV (2x330 MVAR) bus reactor and 400 kV (1x125 MVAR) bus reactor <i>Future provisions: Space for 765/400kV ICTs along with bays: 1 765 kV line bays along with switchable line reactor: 6</i>	400 kV, 1500 MVA ICT – 3 765/400 kV, 500 MVA spare ICT (1-phase) – 1 765 kV ICT bays – 3 400 kV ICT bays – 3	18 Months (Dec’ 2021#)

	<p>400 kV line bays: 6+4 765kV reactor along with bays:2 400/220 kV ICTs along with bays:8 220 kV line bays: 12 400 kV bus reactor along with bays:2</p>	<p>765 kV line bays- 4 (GIS) 330MVA_r, 765 kV bus reactor- 2 765 kV bus reactor bay – 2 110 MVA_r, 765 kV, 1-Ph Bus Reactor (spare unit) -1 125 MVA_r, 420 kV bus reactor - 1 420 kV bus reactor bay – 1 330 MVA_r, 765 kV line reactor- 2 Switching equipment for 765 kV reactor - 2 <i>(1x110 MVA_r spare reactor at Khetri to be used as spare for Khetri – Narela 765 kV D/c/line)</i></p>	
2.	<p>Khetri – Narela 765 kV D/c line 1x330MVA_r Switchable line reactor for each circuit at Narela end of Khetri – Narela 765kV D/c line</p>	<p>Length -180</p>	
3.	<p>2 nos. of 765 kV line bays at Khetri for Khetri – Narela 765 kV D/c line</p>	<p>kV line bays –2 (AIS)</p>	

Scheduled COD in months is considering Effective Date in June 2020, It is clarified that in case there is delay in achieving Effective Date, the schedule shall be compressed accordingly to achieve Scheduled COD by December, 2021.

Note:

- As per MoM of 6th NCT held on 30.09.2019, it was decided that the scheme is to be implemented by December 2021,
- Developer of Khetri substation to provide space for 2 no of 765 kV bays at Khetri substation along with the space for 2 no of line reactors.
- The line lengths mentioned above are approximate as the exact length shall be

obtained after the detailed survey

- d. *Future Space provision to be kept for 2 Nos. Bus Coupler bay: (1 no. for each Bus section), 2 Nos. Transfer Bus Coupler bay (1 no. for each Bus section)& 2 nos. Bus Sectionalizer (1 no. for each main Bus*

At Narela GIS Substation.

765kV

1. TSP shall develop 3 Nos of 765kV GIS complete diameters with ICT-Tie-Line configuration and 2 Nos of 765 kV GIS complete diameters with Bur Reactor-Tie-Line configuration.
2. The GIS Line bays being developed under present scope shall be suitably provided with GIS switchable Line Reactor modules as specified.
3. The GIS bus ducts for future line with switchable line reactor (being developed under present scope) shall be brought outside the GIS Hall and shall be provided with extension/interface module suitably.

400kV

1. TSP shall develop 1 no. of 400kV GIS complete diameter with 765/400kV ICT- Tie-Bus Reactor configuration and 2 nos. of 400kV GIS complete diameters with 765/400kV ICT- Tie- 400/220kV ICT configuration.
2. The GIS bus ducts for future 400/220 kV Transformers (being developed under present scope) shall be brought outside the GIS Hall and shall be provided with extension/interface module suitably.

1.3 Project Description

- i. Government of India has set a target for establishing 175 GW renewable capacity by 2022, which includes 100 GW from Solar and 60 GW from Wind. This includes solar generation potential of about 20 GW in Rajasthan. Transmission system for evacuation of 8.9 GW under phase-I has already been taken up for implementation. Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (11.1 GW – 3 GW through intra state) under Phase II, inter-alia includes evacuation of 1.05GW in Bhadla complex, 2.2GW in Fatehgarh complex, 1.9GW in Ramgarh and 2.95 GW in Bikaner.
- ii. For integration and evacuation of power from generation projects in the above areas, a high capacity 765kV and 400kV transmission system interconnecting Bhadla-II, Fatehgarh-II, Sikar&Khetri along with establishment of 765/400kV new substations at Sikar-II &Narela and 400/220kV new substation at Bikaner-II &Ramgarh-II have been planned.
- iii. The subject transmission scheme involves establishment of 765/400kV Narela S/s(GIS)& implementation of Khetri – Narela 765kV D/c, LILO of Meerut –

Bhiwaniat Narela which shall facilitate in transfer of power from RE sources in Rajasthan for onward dispersal of power to various beneficiaries.

- iv. The proposal has been agreed in the 5th meeting of Northern Region Standing Committee on Transmission (NRSCT) held on 13.09.2019. The same was also recommended for implementation through TBCB route with commissioning schedule as December, 2021 in the 6th NCT meeting held on 30.09.2019. Further, MOP vide notification dated 24/01/2020 has appointed PFC as Bid Process Coordinator (BPC) for implementation of subject scheme under TBCB.

1.4 Transmission Grid Map

Transmission Grid Map indicating the location of the Project is enclosed as Annexure 18 of this RFP, for information and reference of the Bidders.

- 1.5 The objective of the bidding process is to select a Successful Bidder pursuant to this RFP, who shall acquire one hundred percent (100%) of the equity shares of [SPV, which is under incorporation] along with all its related assets and liabilities as per the provisions of the Share Purchase Agreement, at the Acquisition Price to be intimated by the BPC, twenty (20) days prior to the Bid Deadline.

The [SPV, which is under incorporation], of which one hundred percent (100%) equity shares has been acquired by the Selected Bidder, shall be responsible as the TSP, for ensuring that it undertakes ownership, financing, development, design, engineering, procurement, construction, commissioning, operation and maintenance of the Project, and to provide Transmission Service to the Long Term Transmission Customers as per the terms of the RFP Project Documents.

1.6 Brief Scope of Work

1.6.1 Scope of Transmission Service Provider

The TSP's scope of work for the Project shall comprise, but not necessarily be limited to the following:

- 1.6.1.1 Establishment, operation and maintenance of the Project on build, own, operate and maintain basis and completion of all the activities for the Project, including survey, detailed project report formulation, arranging finance, project management, necessary Consents, Clearances and Permits (way leave, environment & forest, civil aviation, railway/ road/river/canal/power crossing/PTCC, etc.), land compensation, design, engineering, equipment, material, construction, erection, testing & commissioning.
- 1.6.1.2 The TSP shall ensure that design, construction and testing of all equipment, facilities, components and systems of the Project shall be in accordance with Indian Standards and Codes issued by Bureau of Indian Standards and only in case they are not available under certain conditions, the other equivalent internationally recognized Standards and Codes shall be followed, with prior approval of CEA.
- 1.6.1.3 The TSP shall ensure timely completion of entire scope of Project in all respects and its operation and maintenance, as shall be specified in the RFP documents.

1.6.1.4 The TSP shall seek Transmission License from the Appropriate Commission, as per the provisions of the Electricity Act and regulations made thereunder, if it is not a deemed licensee.

1.6.2 Scope of Bid Process Coordinator (BPC)

BPC's scope of work is briefly outlined hereunder:

1.6.2.1 The BPC has initiated development of the Project and shall be responsible for the tasks in this regard as specified hereunder:

- a) Provide to the Bidders a Survey Report for the Project at least thirty (30) days prior to the Bid Deadline. The Survey Report will contain information regarding the transmission line, i.e. voltage level, line configuration (i.e., S/C or D/C), indicative route alignment, conductor type conductor configuration and type of terrain likely to be encountered.

Provided that neither the BPC, its authorized representative, any of the Long Term Transmission Customer(s), nor their directors, employees or advisors/consultants make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions made in the Survey Report, or the accuracy, completeness or reliability of information contained therein, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of such Survey Report, even if any loss or damage is caused to the Bidders by any act or omission on their part.

- b) To obtain approval for laying of overhead transmission lines under Section 68 of Electricity Act, from Appropriate Government at least twenty (20) days prior to the Bid Deadline.
- c) To initiate acquisition of land for location specific substations, switching stations or HVDC terminal or inverter stations, if required.
- d) To initiate process of seeking forest clearance, if required.
- e) Intimate the Bidders at least twenty (20) days prior to the Bid Deadline, the name of the BPC for the purpose of issue of the Bid Bond and the place where the Bid Bond shall be payable by the Guarantor Bank.
- f) Any addition, deletion or replacement to the list at Annexure 19, will be communicated at least 20 (twenty) days prior to the Bid Deadline. Further, the entities which are legally permitted to sign the TSA on behalf of the Long Term Transmission Customer(s) shall also be intimated to the Bidders at least twenty (20) days prior to the Bid Deadline.
- g) The BPC shall intimate the Bidders, the Acquisition Price payable by the Selected Bidder to the PFC Consulting Limited for the acquisition of one hundred percent (100%) of the equity shareholding of [SPV, which is under incorporation], along with all its related assets and liabilities at least twenty (20) days prior to the Bid Deadline.

- h) TheBPC shall ensure issuance of all finalized RFP Project Documents duly executed, except for the Share Purchase Agreement, at least seven (07) days prior to the Bid Deadline.

Provided that for any delay in meeting the above obligations of the BPC within the specified time period above, the Bid Deadline as per Clause 2.7.1 shall be extended on a day for day basis.

- i) The details and documents as may be obtained by the BPC in relation to the Project shall be handed over to the TSP on as-is-where-is basis, so that it may take further actions to obtain Consents, Clearances and Permits.
- 1.7 All costs (including direct and indirect) incurred by the BPC in connection with the activities concerning the Project shall be recovered from the TSP, which shall be included in the Acquisition Price.
- 1.8 The Project is required to be completed progressively in accordance with the schedule prescribed in this RFP.
- 1.9 A company under the Companies Act 2013 by the name [SPV, which is under incorporation] has been incorporated to initiate the activities for execution of the Project. The said company shall be acquired by the successful Bidder as per terms and conditions as may be prescribed in RFP.
- 1.10 The Ministry of Power and the appropriate State Government(s) have agreed to provide their support to the TSP, on best endeavor basis, in enabling the TSP to develop the Project.
- 1.11 All Bidders are required to submit their Bid in accordance with the instructions set forth in this RFP.
- 1.12 Once the Successful Bidder is selected, the details and documents as may be obtained by the BPC in relation to the Project, shall be handed over to the Successful Bidder on as is where basis, so that it may take further actions to obtain all necessary Consents, Clearances and Permits and the TSP shall not be entitled for any extensions in the Scheduled COD of the Project except as provided for in the TSA.
- 1.13 The assets of the Project shall be made available on a commercial basis to the Long Term Transmission Customer(s) as per the terms and conditions of the TSA.

SECTION - 2

**INFORMATION
AND
INSTRUCTIONS
FOR BIDDERS**

SECTION – 2**2. INFORMATION AND INSTRUCTIONS FOR BIDDERS****2.1 Qualification Requirements**

2.1.1 The Bidder should be a company duly incorporated under the relevant laws (Bidding Company) or a Consortium of companies (Bidding Consortium) with one of the companies acting as the Lead Member of the Bidding Consortium. The Bidder shall be selected on meeting the Qualification Requirements specified in Section 2 of this RFP, as demonstrated by the Bidder's Technical Bid and the lowest Levelised Transmission Charge derived from Final Offers quoted during the e-reverse bidding. A Bidding Consortium can participate in the bidding process for the Project if any Member of the Consortium has purchased the RFP document for such Project.

2.1.2 Technical requirement to be met by the Bidding Company or Lead Member of Bidding Consortium

The Bidder must fulfill following technical requirements:

Experience of development of projects (not necessarily in the power sector) in the last five (5) years with aggregate capital expenditure of not less than **Rs. 1033.75 Crore (Rupees One Thousand Thirty Three Crore and Seventy Five Lakh Only)** or equivalent USD (calculated as per provisions in Clause 3.4.1). However, the capital expenditure of each project shall not be less than **Rs. 206.75 Crore (Rupees Two Hundred Six Crore and Seventy Five Lakh only)** or equivalent USD (calculated as per provisions in Clause 3.4.1).

- i. For this purpose, capital expenditure incurred on projects that have been commissioned/ completed at least seven (7) days prior to the Bid Deadline shall be considered. The capital expenditure discussed above shall be as capitalized and reflected in the audited books of accounts of the Technically Evaluated Entity. In case a clearly identifiable part of a project has been put into commercial operation, the capital expenditure on such part of the project shall be considered. The Technically Evaluated Entity must have either executed such projects itself or must own at least 26% of the shareholding in the company that has executed the project(s) and must have held such shareholding from the date of financial closure of the project(s) till the time of commissioning/completion of such project(s). The Technically Evaluated Entity may be the Bidding Company or the Lead Member of a Consortium or an Affiliate or Parent of such Bidding Company or the Lead Member, as the case may be.
- ii. In case of a Bidding Consortium, the technical requirement should be met by the Lead Member of the Consortium or its Affiliate/Parent.
- iii. Bidders shall furnish documentary evidence duly certified by any whole-time Director

/Manager¹ of the company (supported by a specific Board Resolution) and the Statutory Auditor in support of their technical capability as defined in Clause 2.1.2 of this RFP.

2.1.3 Financial requirement to be met by the Bidding Company/Bidding Consortium

2.1.3.1 The Bidder must fulfill following financial requirements:

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B. Networth:

Net worth shall not be less than **Rs. 516.88 Crore (Rupees Five Hundred Sixteen Crore and Eighty Eight Lakh only)** or equivalent USD (calculated as per provisions in Clause 3.4.1) computed as the Net worth based on unconsolidated audited annual accounts (refer to Note below) of any of the last three (3) financial years as provided in Clause 2.2.3, immediately preceding the Bid Deadline.

Note: Audited consolidated annual accounts of the Bidder may be used for the purpose of financial criteria provided the Bidder has at least 26% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Technical Bid. Bidders shall furnish documentary evidence duly certified by any whole-time Director/Manager² of the company (supported by a specific Board Resolution) and the Statutory Auditor in support of their financial capability as defined in Clause 2.1.3 of this RFP.

2.1.3.2 Above financial parameters shall be computed in following manner by the Bidder:

A. Left Blank

B. Networth

=	Equity share capital
Add:	Reserves
Subtract:	Revaluation Reserves
Subtract:	Intangible Assets
Subtract:	Miscellaneous expenditures to the extent not written off

2.1.3.3 If the Technical Bid is submitted by a Bidding Consortium the financial requirement shall

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- ¹
- a. The company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.
 - b. The Company Secretary also certifies that the company does not have a Managing Director.
- ²
- a. The company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.
 - b. The Company Secretary also certifies that the company does not have a Managing Director.

be met individually and collectively by all the Members in the Bidding Consortium. The financial requirement to be met by each Member of the Bidding Consortium shall be computed in proportion to the equity commitment made by each of them for investment in the Project.

- 2.1.4 The Bidder may seek qualification on the basis of technical and financial capability of its Parent and/ or its Affiliate(s) for the purpose of meeting the Qualification Requirements. However, in the case of the Bidder being a Consortium, the Lead Member has to meet the technical requirement on its own or by seeking the technical capability of its Parent and/or its Affiliate(s). Authorization for use of such technical or financial capability shall have to be provided from its Parent and/or Affiliate(s) as per Annexure 9. The technical and financial capability of a particular company, including its Parents and/or Affiliates, shall not be used by more than one Bidder/ Member of a Bidding Consortium/ Bidding Company.

The determination of the relationship of Parent or Affiliate with the Bidding Company or with the Member of the Bidding Consortium, including the Lead Member, shall be on the date seven (7) days prior to the last date of submission of the Bid. Documentary evidence to establish such relationship shall be furnished by the Bidder along with the Technical Bid.

If the Technically Evaluated Entity and/or Financially Evaluated Entity is an entity other than the Bidding Company or a Member in a Bidding Consortium, the Bidding Company or Member relying on such Technically Evaluated Entity and/or Financially Evaluated Entity will have to submit a legally binding undertaking supported by a board resolution from the Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, that all the equity investment obligations of the Bidding Company or the Member of the Consortium shall be deemed to be equity investment obligations of the Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, and in the event of any default the same shall be met by such evaluated entity or by or the Ultimate Parent Company. Moreover, the Bidding Company or the Consortium Member shall have to provide information and documents relating to its relationship with such Technically Evaluated Entity and/or Financially Evaluated Entity including details about the equity shareholding between them as per Annexure 7(C).

- 2.1.5 A Bidder shall submit only one Bid in the same bidding process, either individually as Bidding Company or as a Member of a Bidding Consortium (including the Lead Member). It is further clarified that any of the Parent/ Affiliate/Ultimate Parent of the Bidder/ Member in a Bidding Consortium shall not separately participate directly or indirectly in the same bidding process. Further, if any Bidder is having a Conflict of Interest with other Bidders participating in the same bidding process, the Bids of all such Bidders shall be rejected.
- 2.1.6 Notwithstanding anything stated above, BPC reserves the right to verify the authenticity of the documents submitted for meeting the Qualification Requirements and request for any additional information and documents. BPC reserves the right at its sole discretion to contact the Bidder's bank and project references and verify the Bidder's information and documents for the purpose of bid evaluation.
- 2.1.7 The Qualified Bidder(s) will be required to continue to maintain compliance with the Qualification Requirements throughout the bidding process and till execution of TSA.

Where the Technically Evaluated and/or the Financially Evaluated Entity is not the Bidding Company or a Member in a Bidding Consortium, as the case may be, the Bidding Company or Member shall continue to be an Affiliate of the Technically Evaluated and/or Financially Evaluated Entity till the execution of the TSA. Failure to comply with the aforesaid provisions shall make the Bid liable for rejection at any stage.

2.2 Submission of Bid by the Bidder

- 2.2.1 The information and documents in TechnicalBid will be submitted by the Bidder as per the formats specified in Section – 4 (Formats for RFP) of this document
- 2.2.2 Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures/pamphlets. Non-adherence to formats and/ or submission of incomplete information may be a ground for declaring the TechnicalBid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of Bidder.
- 2.2.3 The Technical Bid shall contain unconsolidated/consolidated audited annual accounts (consisting of unabridged Balance Sheet, Profit and Loss Account, profit appropriation account, Auditors Report, etc.), as the case may be, of Bidding Company or each Member in Consortium including Lead Member for the last three (3) financial years immediately preceding the last date for submission of Bid for the purpose of calculation of Net worth.

In case the annual accounts for the financial year immediately preceding the Bid Deadline is not audited, the Bidder shall give an undertaking to this effect duly certified by its statutory auditor. In such a case, the Bidder shall provide the audited annual accounts for 3 (three) years preceding the financial year as above for which the annual accounts have not been audited.

2.2.4 Bidsubmitted by a Bidding Consortium:

- 2.2.4.1 The TechnicalBid shall contain a legally enforceable Consortium Agreement entered amongst the Members in the Bidding Consortium, designating one of the Members to be the Lead Member (as per **Annexure - 6**). There shall be only one Lead Member which shall continue to hold twenty six percent 26% equity in the TSP and cannot be changed for five (5) years from the Commercial Operation Date (COD) of the Project. Each Member in Bidding Consortium shall duly sign the Consortium Agreement making it liable for raising the required funds for its respective equity investment commitment as specified in the Consortium Agreement. In absence of Consortium Agreement, the TechnicalBid will not be considered for evaluation and will be rejected.

Provided that the Lead Member of the Bidding Consortium will be required to be liable to the extent of 100% of the total proposed commitment of equity investment of the Bidding Consortium i.e. for both its own liability as well as the liability of other Members.

Provided further that the Consortium Agreement shall not be amended without the explicit approval of the BPC.

The Lead Member of the Consortium will be the single point of contact for the purposes of the bid process before the date of signing of last of the RFP Project Documents. Settlement of any dispute amongst the Consortium Members shall not be the responsibility of the BPC

and/or the LongTerm Transmission Customer(s) and the BPC and/or Long Term Transmission Customer(s) shall not bear any liability whatsoever on this account.

2.2.4.2 The Lead Member should designate one person to represent the Consortium in its dealings with the BPC. The person designated by the Lead Member should be authorized through a Power of Attorney (as per Annexure 3) to perform all tasks including, but not limited to providing information, responding to enquiries, signing of TechnicalBid on behalf of the Consortium, etc. The Bidding Consortium shall submit board resolutions from Consortium Members committing 100% of equity requirement for the Project, in its TechnicalBid.

2.2.4.3 The TechnicalBid should also contain signed Letter of Consent (as per **Annexure- 2**) from each Member in Consortium confirming that the entire Technical and Financial Bids has been reviewed and each element of the Technical and Financial Bids is agreed to by them including investment commitment for the Project.

2.2.5 Bid submitted by a Bidding Company

2.2.5.1 The Bidding Company should designate one person to represent the Bidding Company in its dealings with BPC. The person should be authorized to perform all tasks including, but not limited to providing information, responding to enquiries, signing of Technical and Financial Bids etc. The Bidding Company should submit, along with TechnicalBid, a Power of Attorney (as per **Annexure- 3**),authorizing the signatory of the Technical and Financial Bids. The Bidding Company shall submit the board resolution committing 100% of equity requirement for the Project, in the TechnicalBid.

2.3 **Clarifications & Pre Bid Meeting**

2.3.1 The Bidders may seek clarifications or suggest amendments to the RFP by sending an email to the BPC at the email id indicated in Clause 2.14 within the date and time mentioned in Clause 2.7.2. For any such clarifications or amendments, the Bidders should adhere to the format as per **Annexure – 20**.

2.3.2 Only those Bidders or their authorized representatives, who have purchased the RFP documentsare invited to attend the pre-bid meeting(s), which will take place on date as specified in Clause 2.7.2, or any such other date as notified by the BPC. The time and address of this would be intimated later.

2.3.3 The purpose of the pre-bid meeting will be to clarify any issues regarding the RFP, including in particular, issues raised in writing by the Bidders as per the provisions of Clause 2.3.1.

2.3.4 Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

2.3.5 The BPC is not under any obligation to entertain / respond to suggestions made or to incorporate modifications sought for.

2.3.6 In case Bidders need any further clarifications not involving any amendments in respect of final RFP, they should ensure that written request for such clarification is delivered to the BPC at least ten (10) days prior to the Bid Deadline as mentioned in Clause 2.7.1. The BPC

may issue clarifications only, as per its sole discretion, which is considered reasonable by it. Any such clarification issued shall be sent to all the Bidders to whom the RFP has been issued. Clarifications sought after this date shall not be considered in any manner and shall be deemed not to have been received. There shall be no extension in Bid Deadline on account of clarifications sought as per this Clause 2.3.6.

2.4 Amendment of RFP

- 2.4.1. At any time, not later than 7 (seven) days prior to the last date for submission of Bid, the BPC may, for any reason, whether at its own initiative or in response to clarifications requested by any Bidder modify or amend the RFP, including the timelines specified in Clause 2.7.2 by issuance of addendum/modification/errata and/or revised document. Such document shall be notified in writing through a letter or fax or e-mail to all the entities to whom the RFP has been issued and shall be binding on them. In order to ensure that Bidders have reasonable time to take the modification into account in preparing their Bid, or for any other reasons, BPC may at its discretion, extend the due date for submission of Bid. Late receipt of any addendum/modification/errata and/or revised document will not relieve the Bidder from being bound by that modification.
- 2.4.2. All modifications shall become part of the terms and conditions of this RFP. No interpretation, revision or communication regarding this RFP is valid, unless made in writing.
- 2.4.3. The amendment to the RFP shall be notified to all the Bidders through the electronic bidding platform and shall be binding on them.

2.5 The Bidding Process

- i. The entire bidding process shall be conducted on electronic bidding platform created by MSTC Limited. The Bid shall comprise of the Technical Bid and the Financial Bid. The Bidders shall submit the Technical Bid & Financial Bid through the electronic bidding platform. In addition to the online submission, the Bidders must make physical submission of the Technical Bid in one (1) original and one (1) copy. There should be no physical submission of the Financial Bid.
- ii. Evaluation of Technical Bid will be carried out considering the information and documents furnished by the Bidders as required under this RFP. This step would involve responsiveness check, technical and financial evaluation of the details/documents furnished by the Bidding Company / Bidding Consortium in support of meeting the Qualification Requirements. Bidders meeting the Qualification Requirements, subject to evaluation as specified in Clause 3.2 to 3.4 shall be declared as “Qualified Bidders” and eligible for opening of Initial Offer.
- iii. The Financial Bid will comprise of two rounds. In the first round the Initial Offer (submitted online along with the Technical Bids) of the responsive bids would be opened and Levelised Transmission Charges of Initial Offer shall be ranked on the basis of ascending order for determination of the Qualified Bidders as provided in Section-III of RFP. The Qualified Bidders, holding first fifty per cent of the ranks (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall be considered to be the qualified for participating in the electronic reverse auction stage and submit their Final Offer.

Provided however, in case only one Bidder remains after the evaluation of Technical Bids per Clause 3.2, 3.3 and Clause 3.4, the Initial Offer of such Bidder shall not be opened and the matter shall be referred to the Government.

Provided that in the event the number of qualified Technical Bids is between two and four, then each of the qualified Bidder shall be considered as “Qualified Bidders”.

Provided that in the event of identical Levelised Transmission Charges derived from the Initial Offer having been submitted by one or more Bidders, all such Bidders shall be assigned the same rank for the purposes of determination of Qualified Bidders. In such cases, the fifty per cent shall stand enhanced to fifty per cent (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, plus the number of Qualified Bidders, whose Levelised Transmission Charges derived from Initial Offer are identical minus the number of such identical Initial Offer.

- iv. The applicable ceiling Levelised Transmission Charges for electronic reverse bidding shall be the lowest levelised Transmission Charges derived from the Initial Offer received from the Qualified Bidders. The Qualified Bidders shall be permitted to place their Final Offer on the electronic bidding platform, which is lower than zero point twenty five (0.25) % of the prevailing lowest Levelised Transmission Charges.
- v. The initial period for conducting the e-reverse bidding should be at least 2 hours which will be extended by 30 minutes from the last received bid time, if the bid is received during the last 30 minutes of the scheduled or extended bid time. Subsequently, it will be extended again by 30 minutes from the latest received bid time.
- vi. The technical details with respect to access to such electronic platform are provided in Annexure-A (Technical Details with respect to electronic auction).
- vii. In case of any technical clarification regarding access to the electronic auction platform or conduct of the auction process, the Bidders may contact MSTC Limited directly at the address provided in **Annexure-A**.

2.5.1 Bid Formats

The Bids in response to this RFP will be submitted online through the electronic bidding platform by the Bidders in the manner provided in Clause 2.9. The Bids shall comprise of the following:

2.5.2 Technical Bid comprising of:

1. Covering Letter (as per prescribed format enclosed as **Annexure- 1**);
2. Letter of Consent from Consortium Members in **Annexure- 2**;
3. Original power of attorney issued by the Bidding Company or the Lead Member of the Consortium, as the case may be, in favour of the person signing the Bid, in the form attached hereto as **Annexure- 3**.

Additionally, in case of a Bidding Consortium, the power of attorney in favour of the Lead Member issued by the other Members of the Consortium shall be provided in Original as per format attached hereto as **Annexure - 4**.

Provided that in the event the Bidding Company or the Lead Member of the Consortium or any Member of the Bidding Consortium, as the case may be, is a foreign entity, it may issue Board resolutions in place of power of attorney for the purpose of fulfilling these requirements.

4. Bidder's composition and ownership structure in **Annexure - 5**
5. Format for Authorization submitted in Non-Judicial stamp paper duly notarized as per **Annexure - 5** from the Bidding Company / each Member of the Consortium authorizing the BPC to seek reference from their respective bankers & others.
6. In case of Bidding Consortium, the Consortium Agreement shall be provided in Original as per format attached hereto as **Annexure - 6**
7. Format of Qualification Requirement (**Annexures - 7A, 7B, 7C and 7D**)
8. Bidders Undertakings and details of equity investment in Project (as per prescribed formats 1 and 2 of **Annexure - 8**);
9. Authorization from Parent / Affiliate of Bidding Company / Member of Bidding Consortium whose technical / financial capability has been used by the Bidding Company / Member of Bidding Consortium (**Annexure - 9**).
10. Undertaking from the Technically / Financially Evaluated Entity (ies) **OR** Undertaking from the Ultimate Parent Company, for total equity investment commitment, in the prescribed format in **Annexure-10**, to meet any shortfall in the equity investment by the Selected Bidder in the [SPV, which is under incorporation].

Note: The effective Equity holding of the Selected Bidder in the [SPV, which is under incorporation], as specified in Clause 2.5.8.1 shall be computed as per the provisions of Clause 2.5.8.3 of this RFP.

Provided further, in case the Bidding Company or Member of a Consortium, (as the case may be) holds at least twenty-six percent (26%) equity in such Technically/ Financially Evaluated Entities, whose credentials have been considered for the purpose of meeting the Qualification Requirements as per the RFP, no such Undertaking shall be required from the Technically / Financially Evaluated Entities.

11. Board resolutions, as per prescribed formats enclosed as **Annexure - 11**, duly certified by the Company Secretary or Whole-time Director / Manager (supported by a specific Board Resolution), as applicable to the Bidder and mentioned hereunder,
 - (a) Board resolution from the Bidding Company (and any investing Affiliate/ Parent Company/ Ultimate Parent Company) committing one hundred percent (100%) in aggregate of the equity requirement for the Project - Format-1 of **Annexure - 11**;

- (b) Board resolutions from each of the Consortium Member of the Bidding Consortium (and any investing Affiliate/ Parent Company/ Ultimate Parent Company) together committing to one hundred percent (100%) in aggregate of equity requirement for the Project, in case Bidder is a Bidding Consortium - Format-1 of **Annexure - 11**;
- (c) In either of the cases as in (a) or (b) above as applicable, Board resolutions as per Format 2 of - **11** for total equity investment commitment from the Technically / Financially Evaluated Entity(ies) whose technical / financial credentials had been considered for the purpose of meeting Qualification Requirements as per the RFP

OR

Board resolutions as per Format 2 of **Annexure - 11** from the Parent Company or the Ultimate Parent Company for total equity investment commitment.

Provided that such Board resolutions, as specified in (a) or (b) or (c) above, in case of a foreign entity, shall be supported by an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

For clarity sake, illustrations identifying which Board Resolution shall be applicable in typical cases are provided in **Annexure - 11A**.

12. Format for Illustration of Affiliates as on seven (7) days prior to Bid Deadline, duly certified by Company Secretary and supported by documentary evidence (**Annexure -12**).

Certified copy of the Register of Members / Demat Account Statement, Share Certificate, Annual Return filed with ROC etc. submitted as documentary evidence along with **Annexure - 12**.

13. Disclosure as per **Annexure - 13** regarding participation of any related companies in this bidding process.
14. Bid Bond, as per the prescribed format at **Annexure - 14**;
15. Contract Performance Guarantee, as per the prescribed format at **Annexure - 15**;
16. Checklist for Technical Bid submission requirements as per **Annexure - 16**.
17. Last three (3) financial years' unconsolidated / consolidated audited annual accounts / statements, as the case may be, of the Financially Evaluated Entity / Technical Evaluated Entity
18. Unconsolidated audited annual accounts of both the TEE and the Bidding Company/Lead member, as applicable, for the financial years in which financial closure was achieved and the financial year in which the said project was completed / commissioned.

19. Copy of the Memorandum and Articles of Association and certificate of incorporation or other organizational document (as applicable), including their amendments, certified by the Company Secretary of Bidding Company or each Member in case of a Consortium including Lead Member.
20. For each project listed in **Annexure - 7(D)**, certified true copy of the certificates of final acceptance and/ or certificates of good operating performance duly issued by owners or clients for the project, duly signed by any whole time Director/ Manager (supported by a specific Board resolution).

In addition to the online submission of above formats through the electronic platform, the Bidder is also required to submit the Technical Bid, in one (1) original plus one (1) copy, to the office of BPC by the date and time mentioned in this RFP.

2.5.3 Financial Bid (as per prescribed format at Annexure-22)

Financial Bid shall comprise of: (i) the Initial Offer; and (ii) the Final Offer. The Initial Offer is required to be submitted along with the Technical Bid. It is hereby clarified that the Financial Bid will comprise of two rounds. In the first round the Initial Offer of the responsive bids would be opened and Levelised Transmission Charges of Initial Offer shall be ranked on the basis of ascending order for determination of the Qualified Bidders as provided in Section-III of RFP.

In accordance with Clause 2.5 of this RFP, the qualified Bidders shall be eligible to participate in the electronic auction and submit their Final Offer.

The applicable ceiling Levelised Transmission Charges for electronic reverse bidding shall be the lowest Levelised Transmission Charges derived from the Initial Offer received from the Qualified Bidders. The Qualified Bidders shall be permitted to place their Final Offer on the electronic bidding platform, which is lower than zero point twenty five (0.25) % of the prevailing lowest Levelised Transmission Charges.

The initial period for conducting the e-reverse bidding should be at least 2 hours which will be extended by 30 minutes from the last received bid time, if the bid is received during the last 30 minutes of the scheduled or extended bid time. Subsequently, it will be extended again by 30 minutes from the latest received bid time.

The Bidders shall inter-alia take into account the following while preparing and submitting the Initial Offer and Final Offer of Financial Bid:-

- a. The Bidders shall quote Transmission Charges having two components, namely:
 - i Quoted Escalable Transmission Charges, and
 - ii Quoted Non-Escalable Transmission Charges
- b. In case of Quoted Escalable Transmission Charges, the Bidders shall quote charges only for the first Contract Year after Scheduled COD of the Project, subject to Sl. No. (f) below.
- c. Ratio of minimum and maximum Quoted Transmission Charges during the term of TSA shall not be less than zero point seven (0.7) and this ratio shall be applied

only at the Bid evaluation stage on the Quoted Transmission Charges after duly escalating the Quoted Escalable Transmission Charges on the basis of the escalation rates specified in Clause 3.5.1.3. The Escalable Transmission Charges (after duly escalating the Quoted Escalable Transmission Charges on the basis of the escalation rates specified in Clause 3.5.1.3 for any Contract Year should not exceed fifteen percent (15%) of the corresponding Quoted Non-Escalable Transmission Charges for that Contract Year, and this percentage shall be applied only at the Bid evaluation stage.

- d. The Quoted Transmission Charges as per the format at **Annexure-22** shall be inclusive of all charges and no exclusions shall be allowed. The Bidders shall take into account all costs including capital and operating, statutory taxes, duties, levies. Availability of the inputs necessary for operation and maintenance of the Project should be ensured by the TSP at the Project site and all costs involved in procuring the inputs (including statutory taxes, duties, levies thereof) at the Project site must be included in the Quoted Transmission Charges.
- e. Bidders are required to quote Transmission Charges for the Contract Years, for a period of 35 years commencing from the Scheduled COD of the Project, as per the format at **Annexure-22**.
- f. Bidders shall have the option to quote firm Quoted Transmission Charges for the period of 35 years commencing from the Scheduled COD of the Project i.e., where the Quoted Escalable Transmission Charges shall be 'nil' for all the Contract Years.
- g. **Annexure - 22** duly signed by authorized signatory.

2.5.4 Wherever information has been sought in specified formats, the Bidders shall fill in the details as per the prescribed formats and shall refrain from referring to any other document for providing any information required in the prescribed format.

2.5.5 Transmission Charges

- 2.5.5.1. The Transmission Charges shall be as specified in the TSA and shall be payable to the TSP in Indian Rupees only. The Bidders shall quote Transmission Charges for each Contract Year during the term of the TSA as per the format at **Annexure-22**.
- 2.5.5.2. The Quoted Transmission Charges of the Selected Bidder shall be inserted in Schedule 6 of the TSA.

2.5.6 Bidders may note that:

- a) All the information and documents in Bid shall be submitted in English language only.
- b) Bidders shall mention the name, designation, telephone number, fax number, email address of the authorized signatory and complete address of the Bidder in the covering letter.
- c) All pages of the Bid submitted shall be initialed and stamped by the authorized signatory on behalf of the Bidder.

- d) A Bidder shall submit only one Bid in the same bidding process, either individually as Bidding Company or as a Member of a Bidding Consortium.
- e) The technical and financial capability of a particular company (Parent and/ or Affiliate) shall not be used by more than one Bidder/ Member of a Bidding Consortium including Lead Member/ Bidding Company.
- f) This RFP document is not transferable. The RFP document and the information contained therein is for the use only by the Bidder to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors). In the event that the recipient does not continue with its involvement in the Project, this RFP document must be kept confidential.
- g) Though adequate care has been taken while preparing this RFP document, the Bidder shall satisfy himself that the document is complete in all respects. Intimation of any discrepancy shall be given to the BPC immediately. If no intimation is received from any Bidder within ten (10) days from the date of issue of RFP document, it shall be considered that the RFP document is complete in all respects and has been received by the Bidder.
- h) Bids submitted by the Bidder and opened on scheduled date and time as stipulated in this RFP shall become the property of the BPC and the Long Term Transmission Customer(s) and shall not be returned to the Bidders.
- i) If any Bidder conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in its Bid, in any manner whatsoever, the BPC reserves the right to reject such Bid or cancel the Letter of Intent, if issued. If such event is discovered after the Effective Date, consequences specified in TSA shall apply.
- j) If for any reason the Bid of the Bidder with the lowest evaluated Levelized Transmission Charges is rejected or Letter of Intent issued to such Selected Bidder is cancelled, the BPC may:-
 - i. Invite best reduced financial bids from those Bidders whose Bids are responsive and valid; or
 - ii. Annul the bid process; or
 - iii. Take any such measure as may be deemed fit in the sole discretion of the BPC³
- k) The BPC may, at its sole discretion, ask for additional information/ document and/or seek clarifications from a Bidder after the Bid Deadline, inter alia, for the purposes of removal of inconsistencies or infirmities in its Bid. However, no change in the substance of the Quoted Transmission Charges shall be sought or permitted by the BPC.
- l) Non submission and/or submission of incomplete data/ information required under the provisions of RFP shall not be construed as waiver on the part of BPC of the obligation of the Bidder to furnish the said data/ information unless the waiver is in writing.

³ BPC shall record reasons for the same.

- m) Bidders shall familiarize itself with the procedures and time frames required to obtain all Consents, Clearances and Permits.
- n) All Bidders are required to ensure compliance with the standards and codes mentioned in Clause 1.6.1.2.
- o) BPC reserves the right to reject all Bids and/ or annul the process of tariff based competitive bidding for selection of TSP to execute the Project without assigning any reason. BPC shall not bear any liability, whatsoever, in this regard.

2.5.7 Bidders to inform themselves fully

- 2.5.7.1. The Bidders shall make independent enquiry and satisfy themselves with respect to all the required information, inputs, conditions and circumstances and factors that may have any effect on his Bid. Once the Bidders have submitted their Bids, the Bidders shall be deemed to have inspected and examined the site conditions (including but not limited to its surroundings, its geological condition and the adequacy of transport facilities to the site), the laws and regulations in force in India, the transportation facilities available in India, the grid conditions, the adequacy and conditions of roads, bridges, railway sidings, ports, etc. for unloading and/or transporting heavy pieces of material and has based its design, equipment size and fixed its price taking into account all such relevant conditions and also the risks, contingencies and other circumstances which may influence or affect the transmission of power. Accordingly, each Bidder acknowledges that, on being selected as Successful Bidder and on acquisition of one hundred percent (100%) of the equity shares of the [SPV, which is under incorporation], the TSP shall not be relieved from any of its obligations under the RFP Project Documents nor shall the TSP be entitled to any extension in Scheduled COD mentioned in this RFP or financial compensation for any reason whatsoever.
- 2.5.7.2. In their own interest, the Bidders are requested to familiarize themselves with all relevant laws of India, including without limitation, the Electricity Act 2003, the Income Tax Act 1961, the Companies Act, 1956 / Companies Act, 2013, Environment Protection Act 1986 and Forest (Conservation) Act, 1980, the Customs Act, the Foreign Exchange Management Act, Land Acquisition Act, 1894, the Indian Telegraph Act 1885, Labour & Employment Laws of India, [Insurance Act] the regulations/standards framed by Appropriate Commissions and CEA, all other related acts, laws, rules and regulations prevalent in India, as amended from time to time.

In addition to the above, the Bidders are required to familiarize themselves with all relevant technical codes and standards, including but not limited to the Grid Code / State Grid Code, Central Electricity Authority (Installation and Operations of Meters) Regulations, 2006, Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007, Central Electricity Regulatory Commission (Open Access in Inter-State Transmission) Regulations, 2008, Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-state Transmission and related matters) Regulations, 2009 along with related amendments brought in from time to time.

The BPC shall not entertain any request for clarifications from the Bidders regarding the above laws / acts / rules / regulations / standards. Non-awareness of the same shall not be a reason for the Bidder to request for extension in Bid Deadline. The Bidders undertake

and agree that, before submission of their Bid, all such factors as generally brought out above, have been fully investigated and considered while submitting their Bids.

- 2.5.7.3. Bidders may visit the route of the Transmission Lines associated with the Project and the surrounding areas and obtain / verify all information which they deem fit and necessary for the preparation of their Bid.
- 2.5.7.4. The BPC has carried out a survey of the Transmission Lines associated with the Project and shall provide each Bidder with its Survey Report of the Project. Bidders in their own interest should carry out required surveys and field investigation for submission of their Bid.
- 2.5.7.5. Failure to investigate the route of the Transmission Lines associated with the Project and to examine, inspect site or subsurface conditions fully shall not be grounds for a Bidder to alter its Bid after the Bid Deadline nor shall it relieve a Bidder from any responsibility for appropriately eliminating the difficulty or costs of successfully completing the Project.
- 2.5.7.6. The Selected Bidder shall obtain all necessary Consents, Clearances and Permits as required. The Bidders shall familiarize itself with the procedures and time frame required to obtain such Consents, Clearances and Permits.
- 2.5.7.7. The technical requirements of integrated grid operation are specified in the Indian Electricity Grid Code (IEGC). The Bidders should particularly acquaint themselves with the requirements of connection conditions, operating code for regional grids, scheduling and dispatch instructions/codes, etc. The Bidders are also advised to fully familiarize themselves with the real time grid conditions in the country. Information regarding grid parameters such as voltage and frequency is available on the websites of Regional / State Load Despatch Centers.

2.5.8 Minimum Equity holding/Equity Lock-in

- 2.5.8.1. (a) The aggregate equity share holding of the Selected Bidder, in the issued and paid up equity share capital of [SPV, which is under incorporation] shall not be less than the following:
- (i) Fifty one percent (51%) up to a period of (2) two years after COD of the Project; and
 - (ii) Twenty six percent (26%) for a period of three (3) years thereafter.
- (b) In case the Selected Bidder is a Bidding Consortium, then any Member (other than the Lead Member) of such Bidding Consortium shall be allowed to divest its equity as long as the other remaining Members (which shall always include the Lead Member) hold the minimum equity specified in (i) and (ii) above.
- (c) If equity is held by the Affiliates, Parent Company or Ultimate Parent Company, then subject to the second proviso of this Clause 2.5.8.1 (c), such Affiliate, Parent Company or Ultimate Parent Company shall be permitted to transfer its shareholding in [SPV, which is under incorporation] to another Affiliate or to the Parent Company / Ultimate Parent Company. If any such shareholding entity, qualifying as an Affiliate / Parent Company / Ultimate Parent Company, is likely to cease to meet the criteria to qualify as an Affiliate / Parent Company / Ultimate Parent Company,

the shares held by such entity shall be transferred to another Affiliate / Parent Company / Ultimate Parent Company.

Provided that in case the Lead Member or Bidding Company is holding equity through Affiliate/s, Ultimate Parent Company or Parent Company, such restriction shall apply to such entities.

Provided further, that the aggregate equity share holding of the Bidding Consortium or a Bidding Company in the issued and paid up equity share capital of [SPV, which is under incorporation] shall not be less than fifty one percent (51%) up to a period of two (2) years after COD of the Project and the lead Member of the Consortium shall have the equity share holding not less than twenty six percent (26%). The Lead Member shall continue to hold equity of at least twenty six percent (26%) up to a period of five (5) years after COD of the Project. In case the Selected Bidder is a Bidding Consortium, then any Member (other than the Lead Member) of such Bidding Consortium shall be allowed to divest its equity as long as the other remaining Members (which shall always include the Lead Member) hold the minimum equity specified in (a)(i) and (a)(ii) above.

(d) All transfer(s) of shareholding of [SPV, which is under incorporation] by any of the entities referred to above, shall be after prior written permission from the Lead Long Term Transmission Customer.

2.5.8.2. The Selected Bidder may invest in the equity share capital of [SPV, which is under incorporation] through its Affiliate(s) or Ultimate Parent Company or Parent Company. Details of such investment will have to be specified in the Technical Bid as per Format 2 of Annexure 8 of the RFP. If the Selected Bidder so invests through any Affiliate(s) or Ultimate Parent Company or Parent Company, the Selected Bidder shall be liable to ensure that minimum equity holding/lock-in limits specified in Clause 2.5.8.1 and as computed as per the provisions of Clause 2.5.8.3 are still maintained.

2.5.8.3. For computation of effective Equity holding, the Equity holding of the Selected Bidder or its Ultimate Parent Company in such Affiliate(s) or Parent Company and the equity holding of such Affiliate (s) or Ultimate Parent Company in [SPV, which is under incorporation] shall be computed in accordance with the example given below:

If the Parent Company or the Ultimate Parent Company of the Selected Bidder A directly holds thirty percent (30%) of the equity in [SPV, which is under incorporation] then holding of Selected Bidder A in [SPV, which is under incorporation] shall be thirty percent (30%);

If Selected Bidder A holds thirty percent (30%) equity of the Affiliate and the Affiliate holds fifty percent (50%) equity in [SPV, which is under incorporation], then for the purposes of ascertaining the minimum equity/equity lock-in requirements specified above, the effective holding of Bidder A in [SPV, which is under incorporation] shall be fifteen percent (15%), (i.e., $30\% * 50\%$);

2.5.8.4. The provisions as contained in this Clause 2.5.8 and Article 18.10 of the TSA shall override the terms of the Consortium Agreement submitted by the Bidder as part of the RFP.

2.6 Project Schedule

2.6.1. All Elements of the Project are required to be commissioned progressively as per the schedule given in the following table;

Sr. No	Name of the Transmission Element	Scheduled COD in months from Effective Date	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project	Element(s) which are pre-required for declaring the commercial operation (COD) of the respective Element
1.	Establishment of 765/400 kV, 3X1500 MVA GIS substation at Narela with 765 kV (2x330 MVA) bus reactor and 400 kV (1x125 MVA) bus reactor <i>Future provisions: Space for 765/400kV ICTs along with bays: 1 765 kV line bays along with switchable line reactor: 6 400 kV line bays: 6+4 765kV reactor along with bays:2 400/220 kV ICTs along with bays:8 220 kV line bays: 12 400 kV bus reactor along with bays:2</i>	18 Months (Dec' 2021#)	38.20	Elements marked at Sl. No. 1 to 4 are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	Khetri – Narela 765 kV D/c line 1x330MVA Switchable line reactor for each circuit at Narela end of Khetri – Narela 765kV D/c line		52.10	
3.	2 nos. of 765 kV line bays at Khetri for Khetri – Narela 765 kV D/c line		2.47	
4.	LILO of 765 kV Meerut- Bhiwani S/c line at Narela		7.23	

#Scheduled COD in months is considering Effective Date in June 2020, It is clarified that in case there is delay in achieving effective date, the schedule shall be compressed accordingly to achieve Scheduled COD by December, 2021.

Note:

- As per MoP notification dated 24/01/2020, completion schedule of the scheme is Dec'21.
- Developer of Khetri substation to provide space for 2 no of 765 kV bays at Khetri substation along with the space for 2 no of line reactors.

The payment of Transmission Charges for any Element irrespective of its successful commissioning on or before its Scheduled COD shall only be considered after successful commissioning of the Element(s) which are pre-required for declaring the commercial operation of such Element as mentioned in the above table.

Scheduled COD for overall Project: 18months from Effective Date. Scheduled COD in months is considering Effective Date in June 2020, It is clarified that in case there is delay in achieving effective date, the schedule shall be compressed accordingly to achieve Scheduled COD by December, 2021.

2.7 Due dates

2.7.1. The Bidders should submit the Bids online through the electronic bidding platform before the Bid Deadline and submit the Technical Bids, in one (1) original plus one (1) copy so as to reach the address specified in Clause 2.9.4 by 1200 hrs (IST) on 08/05/2020.

2.7.2. Important timelines are mentioned below:

S.No.	Date	Event
1.	06/03/2020	Issuance of RFP
2.	26/03/2020	Submission of written clarifications/ amendments, if any, on the RFP/ RFP Project Documents by Bidders so as to reach BPC by 1700 hours. Such written clarifications/amendments shall be in the format provided in Annexure-20 .
3.	30/03/2020	Pre-Bid meeting(s)
4.	13/04/2020	Issue of written clarifications and revised RFP documents
5.	01/05/2020	Issue of final RFP Project Documents
6.	08/05/2020	Submission of Bid (Online submission of Bid through electronic bidding portal and physical submission of Technical Bid))
7.	08/05/2020	Opening of Technical Bid
8.	18/05/2020	Shortlisting and announcement of Qualified Bidders
9.	19/05/2020	Opening of Financial Bid - Initial Offer
10.	20/05/2020	Electronic auction (Financial Bid – Final Offer) for the Qualified Bidders.
11.	28/05/2020	Selection of Successful Bidder and issue of LOI
12.	07/06/2020	Signing of RFP Project Documents and transfer of [SPV, which is under incorporation]

2.7.3. To enable BPC to meet the schedule, all Bidders are expected to respond expeditiously during the bidding process. If any milestone/activity falls on a day which is not a working day or which is a public holiday, then the milestone/activity shall be achieved/ completed on the next working day.

2.8 Validity of the Bid

2.8.1. The Bid shall remain valid for a period of one hundred and eighty (180) days from the Bid Deadline.

2.8.2. The BPC may solicit the Bidders' consent for an extension of the period of validity of the Bid. The request and the response, thereafter, shall be in writing. In the event any Bidder refuses to extend its Bid validity as requested by the BPC, the BPC shall not be entitled to invoke the Bid Bond. A Bidder accepting the BPC's request for validity extension shall not be permitted to modify its Bid and such Bidder shall, accordingly, extend the validity of the Bid Bond as requested by the BPC within seven (7) days of such request, failing which the Bid shall not be considered as valid.

2.9 Method of Submission

2.9.1. Both the Technical and Financial Bids duly filled in, all formats and supporting shall be scanned and uploaded online through electronic bidding platform in the manner specified in Annexure A.

2.9.2. Envelope containing the hard copy of Technical Bid in one (1) original plus one (1) copy to be submitted by Bidders, should be packed in a single closed envelope, with the following superscript:

“Technical Bid for selection of Transmission Service Provider to establish Transmission system for Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”

Due for opening on 08/05/2020

PFC Consulting Limited
(a wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

“Name of the Bidder

2.9.3. The Bidders have the option of sending their Technical Bids either by registered post; or speed post; or courier; or by hand delivery, so as to reach the BPC at the specified address by the Bid Deadline. Bids submitted by telex/telegram/fax/e-mail shall not be considered under any circumstances. The BPC shall not be responsible for any delay in receipt of the Bids. Any Bid received by the BPC after the Bid Deadline shall be returned unopened.

2.9.4. Hard copies of Technical Bids shall be submitted at the following address by the Bid Deadline specified in Clause 2.7.1. Non submission of the hard copies of Technical Bid post uploading in the electronic bidding platform or vice versa shall not be considered for evaluation purpose.

Senior Vice President
PFC Consulting Limited
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001
Tel. + 91 11 23443777
Fax + 91 11 23443990
Email: pfcl.itp@pfcindia.com

- 2.9.5. It may be noted that Technical Bid shall not contain any information/ document relating to Financial Bid. If Technical Bid contains any such information/ documents, the BPC shall not be responsible for premature opening of the Financial Bid.

All pages of the Bid, except for the Bid Bond (**Annexure - 14**) and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized signatory on behalf of the Bidder. It is clarified that the same authorized signatory shall sign all pages of the Bid. However, any published document submitted in this regard shall be signed by the authorized signatory at least on the first and last page of such document.

- 2.9.6. Bidders shall submit the Technical Bid in one (1) original plus one (1) copy, duly signed by the authorized signatory of the Bidder. The original Bid shall be clearly marked "ORIGINAL", and all other copies are to be clearly marked "COPY OF BID". In the event of any discrepancy between the online submission, original and the accompanying copy, only the online submission shall prevail.
- 2.9.7. No change or supplemental information to a Bid will be accepted after the Bid Deadline, unless the same is requested for by the BPC as per Clause 2.5.6 (k).

Provided that a Bidder shall always have the right to withdraw / modify its Bid before the Bid Deadline. In cases where the Technical Bid is withdrawn by the Bidder, then such Bid shall be returned unopened. No Technical Bid or Initial Offer shall be modified, substituted or withdrawn by the Bidder on or after the Bid Deadline.

- 2.9.8. If the outer cover envelope (Technical Bid) is not closed and not transcribed as per the specified requirement, the BPC will assume no responsibility for the Bid's misplacement or premature opening.

2.10 Preparation cost

- 2.10.1. The Bidders shall be responsible for all the costs associated with the preparation of the Bid and participation in discussions and attending pre-bid meetings, and finalization and execution of the Share Purchase Agreement, etc. The BPC shall not be responsible in any way for such costs, regardless of the conduct or outcome of this Bid process.
- 2.10.2. The cost of this RFP is Rupees Five Lakhs Only (Rs. 5,00,000/- or U.S. Dollar Seven Thousand Only (US\$ 7000/-) plus 18% GST, which shall be non-refundable. This amount shall be payable by a crossed demand draft or banker's cheque drawn in favour of "PFC Consulting Limited", payable at New Delhi latest by 06/05/2020 or through electronic transfer in the following Bank Account :

Account No.	:	30366888291
Bank	:	State Bank of India (SBI),
IFSC	:	SBIN0001639
Branch	:	Chandralok building, Janpath, New Delhi - 110001

2.11 Bid Bond

- 2.11.1. Each Bidder shall submit the Bid accompanied by Bid Bond issued by any of the Banks listed in Annexure-17. The Bid Bond shall be valid for a period of thirty (30) days beyond the validity of the Bid.
- 2.11.2. Subject to the provisions of Clause 2.15.5, the Bid Bond may be invoked by the BPC or its authorized representative, without any notice, demure, or any other legal process upon occurrence of any of the following:
- i. Bidder withdraws during the period of Bid Validity as specified in this RFP or as extended by mutual consent of the respective Bidder(s) and the BPC
 - ii. Failure to execute the Share Purchase Agreement as per the provisions of Clause 2.15.2; or
 - iii. Failure to furnish the Contract Performance Guarantee as per Clause 2.12; or
 - iv. Failure to acquire one hundred percent (100%) equity shares of [SPV, which is under incorporation], along with all its related assets and liabilities, in accordance with the provisions of Clause 2.15.2; or
 - v. Failure to apply for grant of Transmission License as per Clause 2.15.4; or
 - vi. Failure to comply with the provisions of Clause 2.15.5, leading to annulment of the award of the Project.
 - vii. Bidders submitting any wrong information or making any misrepresentation in their Bid as mentioned in Clause 2.5.6.

Intimation of the reasons of the invocation of the Bid Bond shall be given to the Selected Bidder by the BPC within three (3) working days after such invocation.

- 2.11.3. The Bid Bond of the Selected Bidder shall be returned on submission of the Contract Performance Guarantee as per Clause 2.12 and the relevant provisions of the TSA.
- 2.11.4. The Bid Bond of all the Bidders, whose Bids are declared non-responsive, shall be returned within a period of thirty (30) days after the date on which the Financial Bids are opened.
- 2.11.5. The Bid Bond of all unsuccessful Bidders shall be returned and released by the BPC on the same day on which the [SPV, which is under incorporation] is transferred to the Selected Bidder. The Bid Bond of the Successful Bidder shall be returned on submission of Contract Performance Guarantee as per Clause 2.12 of this RFP and the provisions of the TSA.

2.12 Contract Performance Guarantee

- 2.12.1. Within ten (10) days from the date of issue of the Letter of Intent, the Selected Bidder, on behalf of the TSP, will provide to the Long Term Transmission Customers the Contract Performance Guarantee for an aggregate amount of Rs. 78.30 Crore (Rupees Seventy Eight Crore and Thirty Lakh Only), which shall be provided separately to each of the Long Term Transmission Customers for the amount calculated pro-rata in the ratio of their

Allocated Project Capacity, as on the date seven (7) days prior to the Bid Deadline (rounded off to the nearest Rupees one lakh (Rs. 100,000) with the principle that amounts below Rupees Fifty Thousand (Rs. 50,000) shall be rounded down and amounts of Rupees Fifty Thousand (Rs. 50,000) and above shall be rounded up). The Contract Performance Guarantee shall be initially valid for a period up to three (3) months after the Scheduled COD of the Project and shall be extended from time to time to be valid for a period up to three (3) months after the COD of the Project and thereafter shall be dealt with in accordance with the provisions of the TSA. The Contract Performance Guarantee shall be issued by any of the banks listed in **Annexure-17**.

- 2.12.2. In case the Selected Bidder is unable to obtain the Contract Performance Guarantee for the total amount from any one bank specified in **Annexure-12**, the Selected Bidder may obtain the same from not more than three (3) banks specified in **Annexure-17**, subject however to the apportionment as provided in Clause 2.12.1.

2.13 Opening of Bids

- 2.13.1. Technical Bid will be opened as per the following time schedule and at the venue where the Bids are required to be submitted, as specified in Clause 2.9.4, in the presence of one representative from each of such Bidders who wish to be present:

Opening of Envelope (Technical Bid): 1630 hours (IST) on 08/05/2020.

Opening of Initial Offer: Initial Offer shall be opened by the Bid Process Coordinator in presence of the Bid Evaluation Committee at 1500 hours (IST) on 19/05/2020.

In the event of any of above dates falling on a day which is not a working day or which is a public holiday, then the Bids shall be opened on the next working day at the same venue and time.

- 2.13.2. The following information from each Bid will be read out to all the Bidders at the time of opening of Technical Bid:

- i. Name of the Bidding Company/ Consortium Members in case of Bidding Consortium only, from Format-2 of **Annexure - 8** (Technical Bid)
- ii. Details of Bid Bond (Technical Bid)

Information to be provided after opening of Initial Offer:

Only the lowest Initial Offer (s) shall be communicated to all the Qualified Bidders to participate in the e-reverse bidding process. During the e-reverse bidding process only the lowest prevailing levelised bid should be visible to all the Bidders on the electronic platform.

2.14 Enquiries

Written clarifications on the RFP and other RFP Project Documents as per Clause 2.3 and 2.4 may be sought from:

Senior Vice President
PFC Consulting Limited
(a wholly owned subsidiary of PFC Limited)

9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001
Tel. + 91 11 23443777
Fax + 91 11 23443990
Email: pfcl.itp@pfcindia.com

2.15 Other Aspects

2.15.1. The drafts of the following RFP Project Documents have been attached to this RFP.

- a) Draft TSA as per Format – 1 of **Annexure - 21**
- b) Share Purchase Agreement as per Format – 2 of **Annexure - 21**

When the drafts of the above RFP Project Documents are provided by the BPC, these RFP Project Documents shall form part of this RFP as per Format – 1 & 2 of Annexure 21.

Upon finalization of the RFP Project Documents after incorporating the amendments as envisaged in Clause 2.4 of this RFP, all the RFP Project Documents, except for the Share Purchase Agreement, shall be duly executed by the [SPV, which is under incorporation] and the Long Term Transmission Customers, and copies delivered to the Bidders at least 07 (seven) days prior to the Bid Deadline.

The RFP Project Documents shall be signed in required number of originals so as to ensure that one original is retained by each party to the Agreement(s).

2.15.2. Within ten (10) days of the issue of the Letter of Intent, the Selected Bidder shall:

- a) provide the Contract Performance Guarantee in favour of the Long Term Transmission Customers as per the provisions of Clause 2.12;
- b) execute the Share Purchase Agreement and all other RFP Project Documents as listed in **Annexure-21**;
- c) acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of [SPV, which is under incorporation] from PFC Consulting Limited, who shall sell to the Selected Bidder, the equity shareholding of [SPV, which is under incorporation], along with all its related assets and liabilities;

Stamp duties payable on purchase of one hundred percent (100%) of the equity shareholding of [SPV, which is under incorporation], along with all its related assets and liabilities, shall also be borne by the Selected Bidder.

- d) make an application to the Appropriate Commission for the adoption of Transmission Charges, as required under section 63 of the Electricity Act 2003.
- e) execute the RFP Project Documents in required number of originals so as to ensure that one original is retained by each party to the Agreement(s).

Provided further that, if for any reason attributable to the BPC, the above activities are not completed by the Selected Bidder within the above period of ten (10) days as mentioned in this Clause, such period often (10)days shall be extended, on a day for day basis till the end of the Bid validity period.

All stamp duties payable for executing the RFP Project Documents shall be borne by the Successful Bidder.

- 2.15.3. After the date of acquisition of the equity shareholding of [SPV, which is under incorporation], along with all its related assets and liabilities, by the Selected Bidder,
- i. the authority of the BPC in respect of this Bid Process shall forthwith cease and any actions to be taken thereafter will be undertaken by the Lead Long Term Transmission Customer,
 - ii. all rights and obligations of [SPV, which is under incorporation], shall be of the TSP,
 - iii. any decisions taken by the BPC prior to the Effective Date shall continue to be binding on the Long Term Transmission Customers and
 - iv. contractual obligations undertaken by the BPC shall continue to be fulfilled by the TSP.
- 2.15.4. Within ten (10) days of the issue of the Letter of Intent, the TSP shall apply to the Appropriate Commission for grant of Transmission License.
- 2.15.5. If the Selected Bidder / TSP fails or refuses to comply with any of its obligations under Clauses 2.15.2, 2.15.3 and 2.15.4, and provided that the Long Term Transmission Customer(s) and/or other parties to the respective RFP Project Documents are willing to execute the Share Purchase Agreement and PFC Consulting Limited is willing to sell the entire equity shareholding of [SPV, which is under incorporation], along with all its related assets and liabilities, to the Selected Bidder, such failure or refusal on the part of the Selected Bidder shall constitute sufficient grounds for cancellation of the Letter of Intent. In such cases, the BPC / its authorized representative(s) shall be entitled to invoke the Bid Bond of the Selected Bidder.
- 2.15.6. If the TSP fails to obtain the Transmission License from the Appropriate Commission, it will constitute sufficient grounds for annulment of award of the Project.
- 2.15.7. The annulment of award, as provided in Clauses 2.15.4 and 2.15.6 of this RFP, will be done by the Government on the recommendations of National Committee on Transmission. However, before recommending so, National Committee on Transmission will give an opportunity to the Selected Bidder/ TSP to present their view point.

2.16 Confidentiality

- 2.16.1. The parties undertake to hold in confidence this RFP and RFP Project Documents and not to disclose the terms and conditions of the transaction contemplated hereby to third parties, except:

- a) to their professional advisors;
- b) to their officers, contractors, employees, agents or representatives, financiers, who need to have access to such information for the proper performance of their activities;
- c) disclosures required under Law, without the prior written consent of the other parties of the concerned agreements.

Provided that the TSP agrees and acknowledges that any of the Long Term Transmission Customers may at any time, disclose the terms and conditions of the RFP and RFP Project Documents to any person, to the extent stipulated under the Law or the Bidding Guidelines.

2.17 Right of the BPC to reject any Bid

BPC reserves the right to reject all or any of the Bids/ or cancel the RFP without assigning any reasons whatsoever and without any liability.

- 2.18** Non submission and/or submission of incomplete data/ information required under the provisions of RFP shall not be construed as waiver on the part of BPC of the obligation of the Bidder to furnish the said data / information unless the waiver is in writing.

2.19 Fraudulent and Corrupt Practices

- 2.19.1. The Bidders and their respective officers, employees, agents and advisers shall observe the highest standard of ethics during the Bid process and subsequent to the issue of the LoI Notwithstanding anything to the contrary contained herein, or in the LoI, the BPC shall reject a Bid, withdraw the LoI, as the case may be, without being liable in any manner whatsoever to the Bidder, if it determines that the Bidder has, directly or indirectly or through an agent, engaged in corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice in the Bid process. In such an event, the BPC shall forfeit the Bid Bond, without prejudice to any other right or remedy that may be available to the BPC hereunder or otherwise.
- 2.19.2. Without prejudice to the rights of the BPC under Clause 2.19.1 hereinabove and the rights and remedies which the BPC may have under the LoI, if a Bidder is found by the BPC to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practice during the Bid process, or after the issue of the LoI, such Bidder & its Affiliates shall not be eligible to participate in any tender or RFP issued by the BPC during a period of 10 (ten) years from the date such Bidder is found by the BPC to have directly or indirectly or through an agent, engaged or indulged in any corrupt practice, fraudulent practice, coercive practice, undesirable practice or restrictive practices, as the case may be.
- 2.19.3. For the purposes of this Clause 2.19, the following terms shall have the meaning hereinafter respectively assigned to them:
- a) **“corrupt practice”** means (i) the offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the actions of any person connected with the Bid process (for avoidance of doubt, offering of employment to or employing or engaging in any manner whatsoever, directly or indirectly, any official

of the BPC who is or has been associated or dealt in any manner, directly or indirectly with the Bid process or the LoI or has dealt with matters concerning the TSA or arising there from, before or after the execution thereof, at any time prior to the expiry of one year from the date such official resigns or retires from or otherwise ceases to be in the service of the BPC, shall be deemed to constitute influencing the actions of a person connected with the Bid Process); or (ii) engaging in any manner whatsoever, whether during the Bid Process or after the issue of the LoI or after the execution of the TSA, as the case may be, any person in respect of any matter relating to the Project or the LoI or the TSA, who at any time has been or is a legal, financial or technical adviser of the BPC in relation to any matter concerning the Project;

- b) **"Fraudulent practice"** means a misrepresentation or omission of facts or suppression of facts or disclosure of incomplete facts, in order to influence the Bid process;
- c) **"Coercive practice"** means impairing or harming, or threatening to impair or harm, directly or indirectly, any person or property to influence any person's participation or action in the Bid process;
- d) **"undesirable practice"** means (i) establishing contact with any person connected with or employed or engaged by the BPC with the objective of canvassing, lobbying or in any manner influencing or attempting to influence the Bid process; or (ii) having a Conflict of Interest; and
- e) **"Restrictive practice"** means forming a cartel or arriving at any understanding or arrangement among Bidders with the objective of restricting or manipulating a full and fair competition in the Bid process.

SECTION - 3

**EVALUATION OF
THE TECHNICAL
AND FINANCIAL
BID**

SECTION 3

1. EVALUATION OF BID

The evaluation process of Technical Bid comprises the following three steps:

- Step I – Responsiveness check
- Step II- Compliance with submission requirements
- Step III– Evaluation of Technical Bids
- Step IV– Evaluation of Financial Bids
- Step V – Bidder Selection

STEP I – Responsiveness check

The Technical Bid submitted by the Bidder shall be initially scrutinized to establish “Responsiveness”. Subject to Clause 2.5.6 (k), any of the following conditions shall cause the Technical Bid to be “Non-responsive”:

- a) Technical Bid that are incomplete.
- b) Technical Bid(both online submission through electronic bidding platform and physical submission of one (1) original and one (1) copy) not received by the scheduled date and time.
- c) Technical Bid not signed by authorized signatory and / or stamped in the manner indicated in this RFP.
- d) All pages of the Technical Bid submitted but not initialed by the authorized signatories on behalf of the Bidder.
- e) Technical Bid not including the covering letter as per Annexure 1.
- f) Technical Bid submitted by a Bidding Consortium not including the Consortium Agreement.
- g) Technical Bid contains material inconsistencies in the information and documents submitted by the Bidder, affecting the Qualification Requirements.
- h) Bidder submitting or participating in more than one Bid either as a Bidding Company or as a Member of Bidding Consortium.
- i) More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.
- j) Information not submitted in formats specified in the RFP.
- k) Applicable Board resolutions, or any other document, as provided in Clause 2.5.2, not being submitted;
- l) Bid not accompanied by a valid Bid Bond;
- m) Non submission of power of attorney, supported by a Board resolution;

- n) Bid validity being less than that required as per Clause 2.8 of this RFP;
- o) Bid not containing Format-1 (Bidders' Undertakings) of **Annexure-8**;
- p) Bidder having Conflict of Interest
- q) The Bidder has not submitted a disclosure as per **Annexure - 13**.
- r) Bidders delaying in submission of additional information or clarifications sought by the BPC.
- s) If the Bidder makes any misrepresentation as specified in Clause 3.7.
- t) Bid being conditional in nature;

STEP II - Compliance with submission requirements

Each Bidder's Technical Bid shall be checked for compliance with the submission requirements set forth in this RFP before the evaluation of Response to RFP is taken up. Annexure 16 and Annexure 11 shall be used to check whether each Bidder meets the stipulated requirements.

STEP III -Evaluation of Technical Bid

Evaluation of Technical Bid will be carried out considering the information and documents furnished by the Bidders as required under this RFP. This step would involve technical and financial evaluation of the details/ documents furnished by the Bidding Company / Bidding Consortium in support of meeting the Qualification Requirements

3.4.1. Interpolation of financial data

For the Qualification Requirements data provided by the Bidders in foreign currency, equivalent rupees of Net worth will be calculated using bills selling exchange rates (card rate) USD/INR of State Bank of India prevailing on the date of closing of the accounts for the respective financial year as certified by their Banker.

For the purpose of calculating the aggregate capital expenditure of the projects completed/ commissioned where such projects are executed outside India and capital expenditure is denominated in foreign currency, bills selling exchange rates (card rate) USD/INR of State Bank of India prevailing on the date of closing of the financial year in which the projects were completed and as certified by their Banker shall be considered.

For the projects executed in the current financial year bills selling (card rate) USD/INR of State Bank of India prevailing on seven (7) days prior to the last date of submission of Technical Bid and as certified by their Banker shall be considered.

For currency other than USD, Bidders shall convert such currency into USD as per the exchange rates certified by their Banker prevailing on the relevant date and used for such conversion.

If the exchange rate for any of the above dates is not available, the rate for the immediately available previous day shall be taken into account.

3.4.2. Bidders meeting the Qualification Requirements, subject to evaluation as specified in Clauses 3.2 to 3.4 shall be declared as Qualified Bidders and eligible for opening of Initial Offer.

STEP IV - Evaluation of Financial Bids

3.5.1. General

3.5.1.1. The Bids which has been found Qualified by the BPC, based on the Steps I to III as specified above in Clauses 3.2 to 3.4, shall be opened and Levelised Transmission Charges of such Initial Offer shall be ranked on the basis of the ascending Initial Offer submitted by each Qualified Bidder.

Based on such ranking of the Qualified Bidders, holding first fifty per cent of the ranks (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall be considered to be the qualified for participating in the electronic auction.

Provided however, in case only one Bidder remains after the Evaluation of Technical Bid (Steps 1 to III) as per Clause 3.2 to 3.4, the Initial Offer of such Bidder shall not be opened and the matter shall be referred to the Government.

Provided that in the event the number of Qualified Bidders is between two and four, then each of the responsive Bidder shall be considered as Qualified Bidders.

Provided that in the event of identical Levelised Transmission Charges derived from the Initial Offer having been submitted by one or more Bidders, all such Bidders shall be assigned the same rank for the purposes of determination of Qualified Bidders. In such cases, the fifty per cent shall stand enhanced to fifty per cent (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, plus the number of Qualified Bidders, whose Levelised Transmission Charges derived from Initial Offer are identical minus the number of such identical Initial Offer.

3.5.1.2. The Financial Bids submitted by the Bidders shall be scrutinized to ensure conformity with the provisions of Clause 2.5.3 of this RFP. Any Bid not meeting any of the requirements as per Clause 2.5.3 of this RFP may cause the Bid to be considered "Non-responsive", at the sole decision of the BPC. Financial Bid not in conformity with the requirement of SI. No.(c) and (g) of Clause 2.5.3 of this RFP shall be rejected.

3.5.1.3. The Bidders shall quote the different components of Transmission Charges as specified in the format at Annexure – 22. Based on the Quoted Transmission Charges provided by the Bidders, the Levelized Transmission Charges (only in Rupees per year) of each Bid shall be calculated for the term of the TSA as per the methodology mentioned below:

(a) For the purposes of comparison of the Financial Bids, the Quoted Escalable Transmission Charges of each Bidder shall be uniformly escalated as per the escalation rate mentioned below. However, for the purpose of actual payment of

Transmission Charges, such escalation rate shall be applied as per the provisions of the TSA.

S. No.	Head	Value
1.	Annual escalation rate applicable to Quoted Escalable Transmission Charges	This shall be as per the rate notified by the CERC, applicable on the seventh day prior to the Bid Deadline
2.	Discount rate for computation of Levelized Transmission Charges	This shall be as per the rate notified by the CERC as applicable for generation projects, applicable on the seventh day prior to the Bid Deadline

- (b) The factor at Sl. No. 1 in the above table shall be applied from the Scheduled COD of the Project, and shall be applied as at the midpoint of each Contract Year.

3.5.2. Computation of Levelized Transmission Charges

3.5.2.1. The computed Quoted Transmission Charges (in Rupees per year) of each of the Bidders for each Contract Year for the term of TSA, calculated as per provisions of Clause 3.5.1.3, shall then be discounted up to the Scheduled COD of the Project mentioned in Clause 2.6 of this RFP, by applying the discount factors (based on the discount rate as mentioned at serial no. 2 of the table in Clause 3.5.1.3 above) and such aggregate discounted value for the term of the TSA shall be divided by the sum of such discount factors so as to calculate the Levelized Transmission Charge of each Bidder.

3.5.2.2. The Levelized Transmission Charges shall be calculated by assuming uniformly the following for all the Bidders

- Grant of Transmission License within 6 months from the date of Letter of Intent to the Selected Bidder by the BPC as per the timelines in Clause 2.7.2 above.
- Project to be commissioned on the date which is approx. 12 months from the assumed date of grant of Transmission License as enumerated above.
- Transmission Charges shall be levelized over a period from the Scheduled COD of the Project, up to 35 years.

3.5.2.3. The methodology of computation of Levelized Transmission Charges is explained in the example provided in **Annexure-23**.

STEP V - Bidder Selection

3.6.1. The prevailing lowest Levelised Transmission Charges derived from Final Offers calculated as per Clause 3.5.2 shall be displayed during the e-reverse bidding. The Bidder with the prevailing lowest Levelised Transmission Charges derived from Final Offer at the close of the scheduled or extended period of e-reverse bidding as mentioned in Clause 2.5 shall be declared as the Successful Bidder and the Letter of Intent shall be issued to such Successful Bidder in two (2) copies.

However, if no bid is received during the e-reverse bidding stage then the Bidder with lowest quoted initial Levelised transmission charges ("Initial Offer") during e-bidding stage shall be declared as the Successful Bidder.

- 3.6.2. The Selected Bidder shall unconditionally accept the LoI, and record on one (1) copy of the LoI, "Accepted unconditionally", under the signature of the authorized signatory of the Successful Bidder and return such copy to the BPC within seven (7) days of issue of LoI.
- 3.6.3. If the Successful Bidder, to whom the Letter of Intent has been issued, does not fulfill any of the conditions specified in Clauses 2.15.2, 2.15.3 and Clause 2.15.4, then subject to Clause 2.15.5, the BPC reserves the right to annul the award of the Project and cancel the Letter of Intent. Further, in such a case, the provisions of Clause 2.5.6 (j) shall apply.
- 3.6.4. The BPC, in its own discretion, has the right to reject all Bids if the Quoted Transmission Charges are not aligned to the prevailing market prices.

Misrepresentation by the Bidder

If the Bidder conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in the Technical Bid or Bid, as the case may be, in any manner whatsoever, in order to create circumstances for the acceptance of its Technical Bid/Bid, the BPC reserves the right to reject such Technical Bid/Bid, and/ or cancel the Letter of Intent, if issued. Further, in case Letter of Intent is cancelled, consequences as per provisions of the RFP shall follow.

Disposition of Technical Bid

- 3.8.1. Technical Bid found to be Non-responsive as per Clause 3.2, due to any of the following conditions, shall be liable for rejection.
 - i. Technical Bid that is incomplete.
 - ii. Technical Bid not signed by authorized signatory and/ or stamped in the manner indicated in this RFP.
 - iii. All pages of the Technical Bid submitted but not initialed by the authorized signatories on behalf of the Bidder.
 - iv. Technical Bid not including the covering letter as per **Annexure - 1**.
 - v. Technical Bid contains material inconsistencies in the information and documents submitted by the Bidder, affecting the Qualification Requirements.
 - vi. Information not submitted in formats specified in the RFP.
 - vii. The Bidder has not submitted a disclosure as per **Annexure - 13**.
 - viii. Bidders delaying in submission of additional information or clarifications sought by the BPC.
- 3.3.2 Technical Bid found to be Non-responsive as per Clause 3.2, due to any of the following conditions, shall be rejected.
 - i. Technical Bid not received by the scheduled date and time.
 - ii. Technical Bid submitted by a Bidding Consortium not including the Consortium Agreement.
 - iii. Bidder submitting or participating in more than one response either as a Bidding Company or as a Member of Bidding Consortium.

- iv. More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.
- v. Technical Bid having Conflict of Interest.
- vi. If the Bidder makes any misrepresentation as specified in Clause 3.2.

BPC reserves the right to interpret the Bid in accordance with the provisions of this RFP document and make its own judgment regarding the interpretation of the same. In this regard, BPC shall have no liability towards any Bidder and no Bidder shall have any recourse to BPC with respect to the qualification process.

BPC shall evaluate Bid using the process specified in Clause 3.1 to 3.6, at its sole discretion. BPC's decision in this regard shall be final and binding.

SECTION - 4

ANNEXURES FOR

BID

SECTION – 4

I. Formats for Technical Bid

The following formats are required to be included in the Bidder's Technical and Financial Bid. These formats are designed to demonstrate the Bidder's compliance with the Qualification Requirements set forth in Clause 2.1 of Section – 2.

Technical Bid

1. Format for the Covering Letter
2. Format for Letter of Consent from Consortium Members
3. Format for evidence of authorized signatory's authority (Power of Attorney)
4. Format for Power of Attorney from to be provided by each of the other Members of the Consortium in favor of the Lead Member
5. Format for Bidder's composition and ownership structure and Format for Authorization
6. Format for Consortium Agreement
7. Formats for Qualification Requirement
8. Format of Bidders Undertaking and details of Equity Investment
9. Authorization from Parent/ Affiliate of Bidding Company/Member of Bidding Consortium whose technical/financial capability has been used by the Bidding Company/Member of Bidding Consortium.
10. Undertaking from the Technically/ Financially Evaluated Entity (ies) or from Ultimate Parent Company for equity investment
11. Format of Board Resolutions
12. Format for Illustration of Affiliates
13. Format for Disclosure
14. Format for Bid Bond
15. Format for Contract Performance Guarantee
16. Checklist for Technical Bid submission requirements

Financial Bid

22. Format for Financial Bid

II. The following formats are for the information to the Bidders to enable them to submit their Bid.

- 11A. Illustration for Applicable Board Resolution Requirements Under Clause 2.5.2
17. List of Banks
18. GRID Map of the Project
19. List of Long Term Transmission Customers
20. Format for clarification/amendments on the RFP/RFP Project Documents
21. Formats for RFP Project Documents
23. Illustration of Bid Evaluation/Computation of Levelized Transmission Charges

Bidder may use additional sheets to submit the information for its detailed Bid.

COVERING LETTER

(The covering letter should be on the Letter Head of the Bidding Company/ Lead Member of the Consortium)

Date:

From:

.....

.....

Tel. No.:

Fax No.:

E-mail address:.....

To,

Chief Executive Officer,
PFC Consulting Limited
 (A wholly owned subsidiary of PFC Limited)
 9th Floor, Wing-A, Statesman House,
 Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process.

1. Being duly authorized to present and act on behalf of M/s (insert name of Bidding Company / Bidding Consortium) (hereinafter called the “Bidder”) and having read and examined in detail the Request for Proposal (RFP) document, the undersigned hereby submit our Technical Bid with duly signed formats in one (1) original + one (1) copy and Financial Bid (Initial Offer) as stipulated in RFP document for your consideration.
2. It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP document and subsequent clarifications/amendments as per Clause 2.3 and 2.4 of RFP.
3. The information submitted in our Bid is complete, is strictly as per the requirements stipulated in the RFP document and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid.
4. We are herewith submitting legally binding board resolution for the total equity requirement of the Project.
5. We hereby confirm that in accordance with Clause 2.1.4 of the RFP, we are herewith submitting legally binding undertaking supported by a board resolution from the(Insert name of Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) that all the equity investment obligations of (Insert name of the Bidding Company) shall be

deemed to be equity investment obligations of the (Insert name of Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) and in the event of any default by..... (Insert name of the Bidding Company), the same shall be met by (Insert name of Technically Evaluated Entity and/or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be).

[Sl. No 5 to be inserted only in case the Bidder is a Bidding Company / Lead Member of a Consortium and has sought qualification on the basis of technical and financial capability of its Affiliate(s) and/or its Parent]

6. We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfill our obligations with regard to the Project.
7. We hereby confirm that we shall continue to maintain compliance with Qualification Requirements till the execution of the TSA.
8. We confirm that we have studied the provisions of relevant Indian laws and regulations required to enable us to build, own, operate and maintain the said Project and to prepare this Bid.
9. We hereby confirm that we shall abide unreservedly with BPC’s decision in the qualification process for selection of Qualified Bidder and further warrant that under no circumstances we shall challenge either the BPC’s decision or its right to make such decision at any time in the future.
10. We confirm that all the terms and conditions of the Bid are valid for acceptance for a period of one eighty (180) days from the Bid Deadline.
11. The details of contact person are furnished as under:
 Name:
 Designation:
 Name of the Company:
 Address of the Bidder:
 Phone Nos.:
 Fax Nos.:
 E-mail address:

12. Bid Bond

We have enclosed a Bid Bond of RupeesCrores (Rs.) only or US\$ (.....US Dollars), in the form of bank guarantee no.....[Insert number of the Bank Guarantee] dated.....[Insert Date of the Bank Guarantee] as per your proforma (**Annexure-14**) from.....[Insert name of bank providing Bid Bond] and valid up toin terms of Clause 2.11 of the RFP.

13. Acceptance

We hereby unconditionally and irrevocably agree and accept that the decision made by the BPC on any matter regarding or arising out of the RFP shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

14. Familiarity with Relevant Indian Laws & Regulations

We confirm that we have studied the provisions of relevant Indian laws and regulations as required to enable us to submit this Bid and execute the Share Purchase Agreement, in the event of our selection as the Successful Bidder. We further undertake and agree that all such factors as mentioned in Clause 2.5.7 of RFP have been fully examined and considered while submitting the Bid.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP and subsequent communications from BPC.

The information submitted in our Bid is complete, strictly as per the requirements stipulated in the RFP and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid.

We confirm that we have not taken any deviation so as to be deemed non-responsive with respect to the provisions stipulated at Clause 2.5.1, of this RFP.

Thanking you,

Yours sincerely,

.....
(Signature and Seal)*

Name:
Designation:
Address:

Date:
Place:

*To be signed by any whole-time Director / Manager (supported by a specific Board Resolution) of the Bidding company or Lead Member in case of Consortium.

* Provided that, in case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question and the Company Secretary also certifies that the Company does not have any Managing Director.

LETTER OF CONSENT FROM CONSORTIUM MEMBERS

(On the letter head of each Member of the Consortium including Lead Member)

Date:
From:
.....
.....
Tel. No.:
Fax No.:
E-mail address:.....

To,
Chief Executive Officer,
PFC Consulting Limited
(A wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process.

We, the undersigned Member of (Insert name of the Bidding Consortium) have read, examined and understood the RFP document for the short-listing of Bidders as prospective TSP to establish Transmission System for “**Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G**” through tariff based competitive bidding process. We hereby confirm our concurrence with the Bid including in particular the Consortium Agreement submitted by (Insert name of the Lead Member) in response to the RFP document.

We hereby confirm our commitment to participate in the said Bidding Consortium and invest % of the total equity requirement for the Project as per the terms of the Consortium Agreement dated and board resolution for such investment commitment is enclosed herewith.

We hereby confirm that in accordance with Clause 2.1.4 of the RFP, we are enclosing legally binding undertaking supported by a board resolution from the (Insert name of Technically Evaluated Entity and/ or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) that all the equity investment obligations of (Insert name of the Member) shall be deemed to be equity investment obligations of the (Insert name of Technically Evaluated Entity and/ or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be) and in the event of any default by..... (Insert name of the Member), the same shall be met by..... (Insert

name of Technically Evaluated Entity and/ or Financially Evaluated Entity or its Ultimate Parent Company, as the case may be). [Insert if applicable]

[To be inserted by the Lead Member only] We are also enclosing legally binding board resolution for the total equity requirement of the Project in case of any breach of any of the equity investment commitment by any of the Consortium Members, in line with the provisions of the Consortium Agreement dated [Bidder to insert date of Consortium Agreement].

The details of contact person are furnished as under:

Name:
Designation:
Name of the Company:
Address:
Phone Nos.:
Fax Nos.:
E-mail address:

Dated the day of of 20...

Thanking you,

Yours faithfully,

.....
(Signature)

Name:
Designation:

.....
(Affix Company's Seal)

(Signature, Name, Designation of Authorized Signatory of Consortium Member and Company's Seal)

FORMAT FOR EVIDENCE OF AUTHORIZED SIGNATORY’S AUTHORITY (POWER OF ATTORNEY)

POWER OF ATTORNEY

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign companies submitting bids are required to follow the applicable law in their country)

Know all men by these presents, We(name and address of the registered office of the Bidder) do hereby constitute, appoint and authorize Mr./Ms.....(name and residential address) who is presently employed with us and holding the position of as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our Bid for selection of Bidder as Transmission Service Provider to establish Transmission System for **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”**through tariff based competitive bidding process in the country of India, including signing and submission of all documents related to the Bid, including, undertakings, letters, certificates, acceptances, clarifications, guarantees, etc, making representations to the BPC, and providing information / responses to the BPC, representing us in all matters before the BPC, and generally dealing with the BPC in all matters in connection with our Bid for the said Project till the completion of the bidding process in accordance with the RFP and signing of the Share Purchase Agreement by all the parties thereto.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

For [Insert name of the Bidder on whose behalf PoA is executed]

.....
(Signature)

Name:
Designation:

Accepted

.....
(Signature of the Attorney)

Name:
Designation:
Address:

.....
(Name, Designation and Address of the Attorney)

Specimen signatures of attorney attested by the Executant

.....
(Signature of the Executant)

Common Seal of
has been affixed in my/our
presence, pursuant to the
Board of Director’s
resolution dated

.....
(Signature)
[To be signed by the person(s) authorized by the Board in whose presence the Common Seal can
be affixed]

.....
(Signature of Notary Public)

Place:
Date:

Notes:

- 1) To be executed by Bidding Company or the Lead Member, in the case of a Bidding Consortium, as the case maybe.
- 2) The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the required procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.
- 3) Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a Board resolution / power of attorney, in favour of the Person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

Annexure - 4

**FORMAT FOR POWER OF ATTORNEY TO BE PROVIDED BY EACH OF THE
OTHER MEMBERS OF THE CONSORTIUM IN FAVOUR OF THE LEAD
MEMBER**

POWER OF ATTORNEY

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign companies submitting bids are required to follow the applicable law in their country)

KNOW ALL MEN BY THESE PRESENTS THAT M/s....., having its registered office at,,and M/s having its registered office at , (Insert names and registered offices of all Members of the Consortium), the Members of Consortium, have formed a Bidding Consortium named (insert name of the Consortium) (hereinafter called the **“Consortium”**) vide Consortium Agreement dated..... and having agreed to appoint M/s..... as the Lead Member of the said Consortium do hereby constitute, nominate and appoint M/s.....a company incorporated under the laws ofand having its Registered / Head Office atas our duly constituted lawful Attorney (hereinafter called as **“Lead Member”**) which is one of the Members of the Consortium, to act as the Lead Member and our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of Consortium's Bid for the Project **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”**Project, including signing and submission of the Bid and all documents related to the Bid, including, undertakings, letters, certificates, acceptances, clarifications, guarantees, etc, making representations to the BPC, and providing information / responses to the BPC, representing us and the Consortium in all matters before the BPC, and generally dealing with the BPC in all matters in connection with our Bid for the said Project, till completion of the bidding process in accordance with the RFP and signing of the Share Purchase Agreement by all the parties thereto.

It is expressly understood that in the event of the Consortium being selected as Successful Bidder, this Power of Attorney shall remain valid, binding and irrevocable until the Bidding Consortium achieves execution of all RFP Project Documents.

We, as the Member of the Consortium, agree and undertake to ratify and confirm all whatsoever the said Attorney/Lead Member has done on behalf of the Consortium Members pursuant to this Power of Attorney and the same shall bind us and deemed to have been done by us.

IN WITNESS WHEREOF M/s , as the Member of the Consortium have executed these presents on this..... day ofunder the Common Seal of our company.

Common Seal of
has been affixed in my/our
presence pursuant to the
M/s.....

For and on behalf of
Consortium Member

Board of Director’s resolution
dated

.....
(Signature of the Authorized Signatory)

Name:
Designation:
Place:
Date:

.....
(Signature)
[To be signed by the person (s) authorized
by the Board in whose presence the
Common Seal can be affixed]

Name:
Designation:
Place:
Date:

Accepted
Specimen signatures of attorney attested

.....
(Signature)

.....
.....

(Signature of Notary Public)
.....

**(Name, Designation and Address
of the Attorney)**

Place:
Date:

Notes:

1. The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.
2. Also, wherever required, the executant(s) should submit for verification the extract of the charter documents and documents such as a Board resolution / power of attorney, in favour of the Person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

FORMAT FOR BIDDER’S COMPOSITION AND OWNERSHIP STRUCTURE

1. Corporate Details:

Please provide the following information for the Bidder. If the Bidder is a Consortium, please provide this information for each Member including the Lead Member:

a. Company’s Name, Address, and Nationality:

Name:

Address:

Website Address:

Country of Origin:

b. Year Organized:

c. Company's Business Activities:

d. Status as a Bidder:

- i. Bidding Company
- ii. Lead Member of the Bidding Consortium
- iii. Member of the Bidding Consortium

Note: tick the applicable serial number

e. Company's Local Address in India (if applicable):

.....

f. Name of the Authorised Signatory:

g. Telephone Number:

h. Email Address:

i. Telefax Number:

j. Please provide the following documents:

- i. Copy of the Memorandum and Articles of Association and certificate of incorporation or other equivalent organizational document (as applicable), including their amendments, certified by the Company Secretary as **Attachment 1** for Bidding Company / each Member of Bidding Consortium including Lead Member.

- ii. Authority letter (as per format for authorization given below) in favour of BPC from the Bidder/every Member of the Consortium authorising BPC to seek reference from their respective bankers & others as **Attachment 2** as per Clause 2.1.6 of the RFP.

2. Details of Ownership Structure:

Equity holding of Bidding Company/ each Member of Bidding Consortium including Lead Member owning 10% or more of total paid up equity.

Name of the Bidding Company / Consortium Member:

Status of equity holding as on

Name of the Equity Holder	Type and No. of Shares owned	Extent of Voting Control (%)
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
....		

Notes:

- 1. The above table is to be filled in separately for each Consortium Member.
- 2. Status of equity holding should be provided not earlier than thirty (30) days prior to Bid Deadline.

For and on behalf of Bidding Company / Lead Member of the Bidding Consortium

M/s.....

.....

(Signature of authorized representative)

Name:

Designation:

.....

(Stamp)

Date:

Place:

FORMAT FOR AUTHORISATION

**(In case of Bidding Consortium, to be given separately by each Member)
(On Non – judicial stamp paper duly attested by notary public. Foreign companies
submitting bids are required to follow the applicable law in their country)**

The undersigned hereby authorize(s) and request(s) all our Bankers, including its subsidiaries and branches, any person, firm, corporation or authority to furnish pertinent information deemed necessary and requested by **PFC Consulting Limited** to verify our Bid for selection of Transmission Service Provider to establish Transmission system for **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”**through tariff based competitive bidding process or regarding our project development experience, financial standing and general reputation.

For and on behalf of M/s..... (Insert Name of Bidding Company or Member of the Consortium)

.....
(Signature)

Name of Authorised Signatory:

(Signature and Name of the authorised signatory of the Company)

Place:
Date:

.....
(Company rubber stamp/seal)

.....
(Signature of Notary Public)

Place:
Date:

FORMAT FOR CONSORTIUM AGREEMENT

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign companies submitting bids are required to follow the applicable law in their country)

THIS CONSORTIUM AGREEMENT, executed on this..... day ofTwo thousand.....betweenM/s....., a company incorporated under the laws of and having its Registered Office at (hereinafter called the "Party 1", which expression shall include its successors, executors and permitted assigns) and M/s.....a Company incorporated under the laws of and having its Registered Office at (hereinafter called the "Party n", which expression shall include its successors, executors and permitted assigns) and for the purpose of submitting the Bid, acquisition of [SPV, which is under incorporation](in case of award) and entering into other Agreement(s) as specified in the RFP (hereinafter referred to as "Agreements") as may be entered into with the Long Term Transmission Customers.

WHEREAS, the Long Term Transmission Customers desired to procure transmission service through a tariff based competitive bidding process.

WHEREAS, the BPC had invited Response to RFP issued to (insert the name of purchaser of RFP) for selection of the Bidder as the Transmission Service Provider to establish Inter-StateTransmission System for **"Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G"**.

AND WHEREAS, Clause 2.2.4 of the RFP document stipulates that the Bidders qualifying on the strength of a Bidding Consortium will have to submit a legally enforceable Consortium Agreement in a format specified in the RFP document wherein the Consortium Members have to commit equity of a specific percentage in the Project.

AND WHEREAS, Clause 2.2.4of the RFP document also stipulates that the Bidding Consortium shall provide along with the Response to RFP, a Consortium Agreement as per prescribed format whereby the Consortium Members undertake to be liable for raising the required funds for its respective equity investment commitment as specified in Consortium Agreement.

NOW THEREFORE, THIS INDENTURE WITNESSTH AS UNDER:

In consideration of the above premises and agreement all the parties in this Consortium do hereby mutually agree as follows:

1. In consideration of the selection of the Consortium as the selected Bidder by the BPC, we the Members of the Consortium and parties to the Consortium Agreement do hereby unequivocally agree that M/s..... (Insert name of the Lead Member), shall act as the Lead Member as defined in the RFP for self and agent for and on behalf of,,, (the names of all the other Members of the Consortium to be filled in here).

2. The Lead Member is hereby authorized by the Members of Consortium and parties to the Consortium Agreement to bind the Consortium and receive instructions for and on behalf of the Members.
3. Notwithstanding anything contrary contained in this Consortium Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members, i.e., for both its own liability as well as the liability of other Members.
4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all their respective equity obligations. Each Consortium Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this agreement.
5. Subject to the terms of this agreement, the share of each Member of the Consortium in the “issued equity share capital of the project company” shall be in the following proportion: (if applicable)

Name	Percentage of equity holding in the Project
Party 1
.....
Party n
Total	100%

[**Note:** The percentage equity holding for any Consortium Member in the Project cannot be zero in the above table]

6. The Lead Member shall inter alia undertake full responsibility for liaising with lenders and mobilizing debt resources for the Project and achieving financial closure.
7. In case of any breach of any of the equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
8. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
9. It is further specifically agreed that the financial liability for equity contribution of Lead Member shall, not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of their scope of work or financial commitments.
10. It is expressly understood and agreed between the Members that the responsibilities and obligations of each of the Members shall be as delineated as annexed hereto as **Appendix-I**, forming integral part of this Agreement. It is further agreed by the Members that the above sharing of responsibilities and obligations shall not in any way be a limitation of joint and several responsibilities and liabilities of the Members, with regards to all matters relating to the Project.

11. It is clearly agreed that the Lead Member shall ensure performance under the Agreements and if one or more Consortium Members fail to perform its /their respective obligations under the Agreement(s), the same shall be deemed to be a default by all the Consortium Members.
12. This Consortium Agreement shall be construed and interpreted in accordance with the Laws of India and courts at **New Delhi** alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.
13. It is hereby agreed that if the Bidding Consortium is qualified to submit a Bid, the Lead Member shall furnish the bid bond, as stipulated in the RFP, on behalf of the Consortium Members.
14. It is hereby agreed that in case of selection of Bidding Consortium as the selected Bidder, the parties to this Consortium Agreement do hereby agree that they shall furnish the contract performance guarantee on behalf of the TSP in favor of the Long Term Transmission Customers, as stipulated in the RFP and TSA.
15. It is further expressly agreed that the Consortium Agreement shall be irrevocable and shall form an integral part of the RFP Project Document and shall remain valid till the execution of the TSA and the Share Purchase Agreement, unless expressly agreed to the contrary by the Long Term Transmission Customers. Over the term of the TSA, the provisions of TSA shall apply on the Consortium Members.
16. The Lead Member is authorized and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Consortium Members respectively from time to time in response to the RFP and for the purposes of the Project.
17. It is hereby expressly agreed between the parties to this Consortium Agreement that neither party shall assign or delegate its rights, duties or obligations under this Agreement except with the prior written consent of Long Term Transmission Customers.

This CONSORTIUM AGREEMENT:

- a. has been duly executed and delivered on behalf of each party hereto and constitutes the legal, valid, binding and enforceable obligation of each such party,
- b. sets forth the entire understanding of the parties hereto with respect to the subject matter hereof;
- c. may not be amended or modified except in writing signed by each of the parties and with prior written consent of Long Term Transmission Customers.

IN WITNESS WHEREOF, the parties to the Consortium Agreement have, through their authorized representatives, executed these present and affixed Common Seals of their respective companies on the Day, Month and Year first mentioned above.

Common Seal of M/s
(Insert name of Consortium Member
1) has been affixed in my/our presence
pursuant to the Board of

For and on behalf of Consortium
Member 1 (Party 1)
M/s.....

Director's resolution
dated.....

.....
(Signature of authorized signatory)

.....
(Signature)
[To be signed by the person (s) authorized by the Board in whose presence the Common Seal can be affixed]

Name:
Designation:.....
Place:
Date:

WITNESS⁴:

1.

.....
.....
(Signature)
Name:
Designation:.....

2.

.....
.....
(Signature)
Name:
Designation:

Common Seal of M/s
(Insert name of Consortium Member "n") has been affixed in my/our presence pursuant to the Board of Director's resolution dated.....

For and on behalf of Consortium Member n (Party n)
M/s.....

.....
(Signature of authorized signatory)

⁴ Separate witness for each Consortium Member should fill in the details

.....
(Signature)
 [To be signed by the person (s) authorized by the Board in whose presence the Common Seal can be affixed]

Name:
 Designation:
 Place:
 Date:

WITNESS:

1.

(Signature)
 Name:
 Designation:

2.

(Signature)
 Name:
 Designation:

Attested:

(Signature)
(Notary Public)

 Place:
 Date:

Appendix 1 to the Consortium Agreement:

Name of the Consortium Member	Responsibilities under the Consortium Agreement
M/s (Party 1)	
M/s	
M/s (Party n)	

FORMAT FOR QUALIFICATION REQUIREMENT**NET WORTH**

To,

**Chief Executive Officer,
PFC Consulting Limited**(A wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process**1. [Note: Applicable in case of Bidding Company]**

We certify that the Financially Evaluated Entity(ies) had a Net worth of Rs. Crore or equivalent USD* computed as per instructions in this RFP based on unconsolidated audited annual accounts (refer Note-2 below) of any of the last three (3) financial years, as provided in Clause 2.2.3, immediately preceding the Bid Deadline.

Name of Financially Evaluated Entity(ies)	Relationship with Bidding Company**	Net worth (Rs. Crore)
1.		
2.		
3.		
4.		
Total Net worth		

*Equivalent USD shall be calculated as per provisions of Clause 3.4.1.

** The column for “Relationship with Bidding Company” is to be filled in only in case financial capability of Parent/Affiliate has been used for meeting Qualification Requirements.

2. [Note: Applicable in case of Bidding Consortium]

We certify that the Financially Evaluated Entity(ies) had a minimum Net worth of Rs. Crore or equivalent USD* computed as per instructions in the RFP and based on

unconsolidated audited annual accounts (refer Note-2 below) of any of the last three (3) financial years, as provided in Clause 2.2.3, immediately preceding the Bid Deadline.

Name of Consortium Member	Equity Commitment in the Project (%)	Net worth of Member (Rs. Crore)	Net worth Requirement to be met by Member in proportion to the Equity Commitment (Rs. Crore)	Whether the Member meets the Networth Requirement
(1)	(2)	(3) (As per table below)	(4 = 2 x Total Net worth requirement for the Project)	(5)
1.				Yes / No
2.				Yes / No
3.				Yes / No
Total Networth for financial requirement				

Member – I (Lead Member)

[Note: Similar particulars for each Member of the Consortium is to be furnished, duly certified by the Member's Statutory Auditors]

- i. Name of Member:
- ii. Total Networth requirement: Rs Crore
- iii. Percentage of equity commitment for the Project by the Member:%
- iv. Networth requirement for the Member***: Rs. Crore
- v. Financial year considered for the Member:

Name of Financially Evaluated Entity(ies)	Relationship** with Member of Consortium	Networth (Rs. Crore)
1.		
2.		
3.		

Name of Financially Evaluated Entity(ies)	Relationship** with Member of Consortium	Networth (Rs. Crore)
Total Net worth		

- * Equivalent USD shall be calculated as per provisions of Clause 3.4.1;
- ** The column for “Relationship with Member of Consortium” is to be filled in only in case the financial capability of Parent/ Affiliate has been used for meeting Qualification Requirements;
- *** Net worth requirement to be met by Member should be in proportion to the equity commitment of the Member for the Project.

Yours faithfully

.....
(Signature and stamp of any whole-time Director/ Manager (supported by a specific Board Resolution) [refer Note-3& 4 below] of Bidding Company/ each Member of Consortium)

Name:
 Date:
 Place:

.....
(Signature and Stamp of statutory Auditors of Bidding Company/ each Member of Consortium)

Name:
 Date:
 Place:

Please also affix common seal of Bidding Company/ each Member in a Bidding Consortium

Common Seal of
 has been affixed in my/our
 presence, pursuant to the
 Board of Director’s
 resolution dated

.....
(Signature)

[To be signed by the person (s) authorized by the Board in whose presence the Common Seal can be affixed]

Date:

Notes:

1. Along with the above format, in a separate sheet, please provide details of computation of Net worth duly certified by Statutory Auditor.
2. Audited consolidated annual accounts of the Bidder may be used for the purpose of financial criteria provided the Bidder has at least 26% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.
3. Any whole-time Director/ Manager of the Bidding Company/ Lead Member in case of a Consortium (supported by a specific Board Resolution).
4. In case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.
5. The Company Secretary also certifies that the Company does not have any Managing Director.
6. In case Bidder or a Member of Consortium takes recourse to its Parent/Affiliate for meeting technical/ financial requirements, then the financial years considered for such purpose should be same for the Bidder/ Member of Consortium and their respective Parent/ Affiliate.

FORMAT FOR TECHNICAL REQUIREMENT**To,**

Chief Executive Officer,
PFC Consulting Limited
(A wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidders as Transmission Service Provider to establish Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process

We certify that M/s. (Insert name of Technically Evaluated Entity(ies)) have experience of development of projects (not necessarily in the power sector) in the last five (5) years whose aggregate capital expenditure is Rs. Crore or equivalent USD*. We further certify that the capital expenditure of each project considered for meeting the technical Qualification Requirement is not less than Rs.Crore or equivalent USD*. For this purpose, capital expenditure incurred on projects which have been either wholly completed/ commissioned or partly completed projects put under commercial operation and for which operation has commenced till at least seven (7) days prior to the Bid Deadline has been considered.

The project(s) considered for the purpose of technical experience (as per table given below) have been executed and owned to the extent as indicated in the table below (to be not less than twenty six (26%) percent) by the Bidding Company/ Lead Member of the Consortium/ our Parent/ our Affiliate(s) [strike off whichever is not applicable] on operation of the projects.

This technical requirement has been calculated as per the instructions provided in the RFP on the basis of following projects:

Name of Company whose technical capability has been used for Qualification Requirement	Relationship** with Bidding Company / Lead Member	Project name	Nature of Project	Date of Completion / Commissioning / Commercial Operation of partly completed projects	Project cost (Rs. Crore)	Percentage Equity Holding of Company at (1) in Completed project(s)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
..... (Project 1)				

Please also affix common seal of Bidding Company/ Lead Member in a Bidding Consortium

Common Seal of
has been affixed in my/ our
presence pursuant to the
Board of Director's
resolution dated

.....
(Signature)

[To be signed by the person (s) authorized by the Board in whose presence the Common Seal can be affixed]

Date:

Notes:

1. Along with the above format, in a separate sheet, please provide details of computation of capital expenditure of projects duly certified by Statutory Auditor.
2. Whole time Director/ Manager of the Biding Company/ each Member in case of a consortium (supported by a specific board resolution)
3. In case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.
4. The Company Secretary also certifies that the Company does not have any Managing Director.
5. The unconsolidated audited annual accounts of both the TEE and the Bidding Company / Lead Member for the respective financial years (financial years in which financial closure was achieved to the financial year in which the said project was completed / commissioned) should be submitted.

FORMAT FOR TECHNICAL & FINANCIAL REQUIREMENT – RELATIONSHIP & DETAILS OF EQUITY SHAREHOLDING

[To be filled by Bidding Company/ each Member of the Bidding Consortium including Lead Member if credentials of Parent and/ or Affiliates have been used by them]

To,

**Chief Executive Officer,
PFC Consulting Limited**
(A wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Transmission System for “Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G” through tariff based competitive bidding process

We certify that M/s. (insert name of the **Bidding Company/ Consortium Members**) have considered the technical and financial capability of its Parent and/ or Affiliates, for the purpose of meeting Qualification Requirements as per the instructions provided in the RFP. The name of Parent and/ or Affiliate, nature of relationship(s) with such Parent and/ or Affiliate and details of equity holding are as follows:

Name of Company whose credentials considered	Type of credentials considered (technical and/ or financial)	Relationship with Bidding Company/ Consortium Member (Parent/ Affiliate)	Details of equity shareholding (refer notes below)
Company 1			
.....			
.....			
.....			
.....			

NOTES:

- i. In case of Parent, the equity holding of the Parent in the Bidding Company/ Member of the Bidding Consortium, including the Lead Member of the Consortium, need to be specified.

- ii. In case of Affiliate under direct control of Bidder, the equity holding of the Bidding Company/ Member of the Bidding Consortium, including the Lead Member of the Consortium in the Affiliate, needs to be specified.
- iii. In case of Affiliate under common control of Parent, the equity holding of the Parent in the Affiliate of the Bidding Company/ Member of the Bidding Consortium, including the Lead Member of the Consortium, needs to be specified.
- iv. Relationship of Parent/ Affiliate with Bidding Company/ Member of Consortium to be as on seven (7) days prior to the Bid Deadline (as per Clause 2.1.4 of RFP)

Yours faithfully

.....
(Signature and stamp of any whole-time Director/ Manager (supported by a specific Board Resolution) (refer Note 1& 2 below) of Bidding Company/ each Member of Consortium)

Name:
 Date:
 Place:

Notes:

1. Whole- time Director/ Manager of the Bidding Company/ each member in case of a Consortium (supported by a specific Board Resolution)
2. In case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.

The Company Secretary also certifies that the Company does not have any Managing Director.

.....
(Signature and Stamp of statutory Auditors of Bidding Company/ each Member of Bidding Consortium)

Name:
 Date:
 Place:

Please also affix common seal of Bidding Company/ Member in a Bidding Consortium

Common Seal of
 has been affixed in my/ our
 presence, pursuant to the
 Board of Director’s
 resolution dated

.....
(Signature)

[To be signed by the person (s) authorized by the Board in whose presence the Common Seal can be affixed]

Date:

Annexure -7d

**ADDITIONAL INFORMATION FOR VERIFICATION OF FINANCIAL AND
TECHNICAL CAPABILITIES OF BIDDERS**

.....
(Name of Bidder (Bidding Company/ Bidding Consortium or Technically/Financially Evaluated Entity(ies))

(Note: In case of Consortium, details to be filled in by Lead Member for each Member of the Consortium including the Lead Member and in case of the qualification requirements of Technically / Financially Evaluated Entity(ies) being used, to be filled by each of such entity(ies)

i. Financial capability (Attachment 1):

- a. Bidders shall attach unconsolidated/ consolidated audited annual accounts, statements, as the case may be, (refer Clause 2.1.3) for the last three (3) financial years as Attachment 1. Such unconsolidated audited annual accounts shall include a Balance Sheet, Profit and Loss Account, Auditors Report and profit appropriation account.

ii. Technical capability (Attachment 2):

- a. This attachment shall include details of projects completed/ commissioned or partly completed projects for which commercial operation has commenced to be considered for the purpose of meeting Qualification Requirements.

S. No.	Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
1.	Name(s) of project(s)					
2.	Location(s) including country(s) where project was set up					
3.	Nature of Project					
4.	Voltage level (if any)					
5.	Capital cost of project(s) Rs. in Crore					
6.	*Status of the project					
7.	% of equity owned in the project(s)					

***Note 1:** Date of completion/commissioning/commercial operation to be mentioned

Note 2: For each project listed in the table, the Bidder shall furnish an executive summary including the following information:

1. Project model, i.e., BOO, BOOT, BOOM;
2. Debt financing and equity raised and provided by Bidder/ Bidder's Parent/ Bidder's Affiliate for the project, including names of lenders and investors;
3. Size and type of installation;
4. Technical data/information on major equipment installed
5. Description of role performed by the Bidder/ Bidder's Parent/Bidder's Affiliate on the project
6. Clearances taken by the Bidder/Bidder's Parent/Bidder's Affiliate including but limited to right-of-way (RoW), forest clearance and other statutory/ Govt. clearances.
7. Cost data (breakdown of major components)
8. Name of EPC and/or other major contractor
9. Construction time for the project
10. Names, addresses and contact numbers of owners of the projects
11. Operating reliability over the past five (5) years or since date of commercial operation
12. Operating environmental compliance history
13. Names of supervisory entities or consultant, if any
14. Date of commercial operation
15. Total duration of operation

iii. Attachment-3 :

- a. For each project listed in Attachment 2 above, certificates of final acceptance and/or certificates of good operating performance duly issued by owners for the project and the same shall be certified as true by any whole time Director/ Manager (supported by a specific Board resolution) of the Bidding Company or the Lead Member of Consortium).

For and on behalf of Bidding Company/Consortium

M/s.....

.....
(Signature of authorised signatory)

Name:

Designation:

Date:

Place:

UNDERTAKING AND DETAILS OF EQUITY INVESTMENT

Format 1: Bidders' Undertakings

[On the Letter Head of the Bidding Company/Lead Member of Bidding Consortium]

Date:

To,

**Chief Executive Officer,
PFC Consulting Limited**
(A wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

Sub: Bidders' Undertakings in respect of Bid for selection of TSP to establish transmission system for Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G

We hereby undertake on our own behalf and on behalf of the TSP, that if selected as the Successful Bidder for the Project:

1. The Project shall comply with all the relevant electricity laws, codes, regulations, standards and Prudent Utility Practices, environment laws and relevant technical, operational and safety standards, and we shall execute any agreements that may be required to be executed as per law in this regard.
2. We confirm that the Project shall also comply with the standards and codes as per Clause 1.6.1.2 of the RFP and the TSP shall comply with the provisions contained in the Central Electricity Regulatory Commission (Open Access in Interstate Transmission) Regulations, 2008, Central Electricity Regulatory Commission (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-state Transmission and related matters) Regulations, 2009 and the Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 made pursuant to section 177(2) of the Electricity Act, 2003.
3. We give our unconditional acceptance to the RFP dated March 06, 2020 issued by the BPC and the RFP Project Documents, as amended, and undertake to ensure that the TSP shall execute the Share Purchase Agreement as per the provisions of this RFP.
4. We have submitted the Bid on the terms and conditions contained in the RFP and the RFP Project Documents. Further, the Financial Bid submitted by us is strictly as per the format provided in Annexure 22 of the RFP, without mentioning any deviations, conditions, assumptions or notes in the said Annexure.
5. Our Bid is valid up to the period required under Clause 2.8 of the RFP.

6. Our Bid has been duly signed by authorized signatory and stamped in the manner and to the extent indicated in this RFP and the power of attorney / Board resolution in requisite format as per RFP has been enclosed in original with this undertaking.
7. We have assumed that if we are selected as the Successful Bidder, the provisions of the Consortium Agreement, to the extent and only in relation to equity lock in and our liability thereof shall get modified to give effect to the provisions of Clause 2.5.8 of this RFP and Article 18.2 of the TSA. (*Note: This is applicable only in case of a Bidding Consortium*)
8. We confirm that our Bid meets the Scheduled COD of each transmission Element and the Project as specified below:

Sr.	Name of the Transmission Element	Scheduled COD in months from Effective Date	Percentage of Quoted Transmission Charges recoverable on Scheduled COD of the Element of the Project	Element(s) which are pre-required for declaring the commercial operation (COD) of the respective Element
1.	Establishment of 765/400 kV, 3X1500 MVA GIS substation at Narela with 765 kV (2x330 MVAR) bus reactor and 400 kV (1x125 MVAR) bus reactor <i>Future provisions: Space for 765/400kV ICTs along with bays: 1 765 kV line bays along with switchable line reactor: 6 400 kV line bays: 6+4 765kV reactor along with bays:2 400/220 kV ICTs along with bays:8 220 kV line bays: 12 400 kV bus reactor along with bays:2</i>	18 Months (Dec' 2021) [#]	38.20	Elements marked at Sl. No. 1 to 3 are required to be commissioned simultaneously as their utilization is dependent on commissioning of each other.
2.	Khetri – Narela 765 kV D/c line 1x330MVAR Switchable line reactor for each circuit at Narela end of Khetri – Narela 765kV D/c line		52.10	
3.	2 nos. of 765 kV line bays at Khetri for Khetri – Narela 765 kV D/c line		2.47	
4.	LILO of 765 kV Meerut- Bhiwani S/c line at Narela		7.23	

[#]Scheduled COD in months is considering Effective Date in June 2020, it is agreed that in case there is delay in achieving effective date, the schedule shall be compressed accordingly to achieve Scheduled COD by December, 2021.

Note:

- i. As per MoP notification dated 24/01/2020, completion schedule of the scheme is Dec'21
- ii. *Developer of Khetri substation to provide space for 2 no of 765 kV bays at Khetri substation along with the space for 2 no of line reactors.*
- iii. *The line lengths mentioned above are approximate as the exact length shall be obtained after the detailed survey*
- iv. *Future Space provision to be kept for 2 Nos Bus Coupler bay: (1 no. for each Bus section), 2 Nos. Transfer Bus Coupler bay (1 no. for each Bus section) & 2 nos. Bus Sectionalizer (1 no. for each main Bus)*

We agree that the payment of Transmission Charges for any Element irrespective of its successful commissioning on or before its Scheduled COD shall only be considered after the successful commissioning of Element(s) which are pre - required for declaring the commercial operation of such Element as mentioned in the above table.

Scheduled COD for the Project: 18 months from the Effective Date. Scheduled COD in months is considering Effective Date in June 2020, it is agreed that in case there is delay in achieving effective date, the schedule shall be compressed accordingly to achieve Scheduled COD by December, 2021.

9. We confirm that our Financial Bid conforms to all the conditions mentioned in this RFP, and in particular, we confirm that:
 - a. Ratio of minimum and maximum Quoted Transmission Charges during the term of the TSA for which Transmission Charges have been quoted in the format at Annexure 22 of the Bid is not less than zero point seven (0.7) as provided in Clause 2.5.3.
 - b. Further, the Quoted Escalable Transmission Charges (after duly escalating the Quoted Escalable Transmission Charges on the basis of the escalation rates specified in Clause 3.5.1.3) for any Contract Year does not exceed fifteen percent (15%) of the corresponding Quoted Non-Escalable Transmission Charges for that Contract Year, for the entire term.
 - c. Financial Bid in the prescribed format of **Annexure - 22** has been submitted duly signed by the authorized signatory.
 - d. Financial Bid is unconditional.
 - e. Only one Financial Bid has been submitted.
10. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations,

declarations and representations made in our Bid are true and accurate. In case this is found to be incorrect after our acquisition of [SPV, which is under incorporation], pursuant to our selection as Selected Bidder, we agree that the same would be treated as a TSP's Event of Default under TSA, and relevant provisions of TSA shall apply.

- 11. We confirm that there are no litigations or other disputes against us which materially affect our ability to fulfill our obligations with regard to the Project as per the terms of RFP Project Documents.
- 12. Original power of attorney/ Board resolution as per Clause 2.5.2 is enclosed.

Signature and stamp of any Whole-time Director/ Manager (supported by a specific Board Resolution)

[refer Note 1 and 2 below] of Bidding Company or Lead Member of Consortium.

Please also affix common seal of Bidding Company/ Member in a Bidding Consortium

Common seal ofhas been affixed in my/ our presence pursuant to Board of Director's Resolution dated.....

WITNESS

1.
(Signature)

Name
Designation.....

2.
(Signature)

Name
Designation.....

Note:

- 1. To be signed by any Whole-time Director/ Manager (supported by specific board resolution) of the Bidding Company/ Lead Member in case of a Consortium.
- 2. In case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956 / Companies Act, 2013 (as the case may be) for the purpose in question.

The Company Secretary also certifies that the Company does not have a Managing Director.

Format 2: Details of equity investment in Project

1.1.a Name of the Bidding Company/ Bidding Consortium:

1.1.b Name of the Lead Member in the case of a Bidding Consortium:

1.2 Investment details of the Bidding Company/Member of the Bidding Consortium investing in [SPV, which is under incorporation]as per Clause 2.5.8.2.

Sl.No.	Name of the Bidding Company/ Member in case of a Bidding Consortium	Name of the Company investing in the equity of the [SPV, which is under incorporation]	Relationship with Bidding Company /Member of the Bidding Consortium	% of equity participation in the [SPV, which is under incorporation]
(1)	(2)	(3)	(4)	(5)
TOTAL	1.	2.	3.	100%

* In case the Bidder proposes to invest through its Affiliate(s) / Parent Company / Ultimate Parent Company, the Bidder shall declare shareholding pattern of such Affiliate(s) / Parent Company / Ultimate Parent Company and provide documentary evidence to demonstrate relationship between the Bidder and the Affiliate(s) / Parent Company / Ultimate Parent Company. These documentary evidences could be, but not limited to, demat account statement(s) / Registrar of Companies' (ROC) certification / share registry book, etc duly certified by Company Secretary.

Members of the Consortium or the Bidding Company making investment in the equity of the [SPV, which is under incorporation]themselves to fill in their own names in the column (3)

Signature and Name of authorized signatory in whose name power of attorney has been issued

Signature of authorized signatory

Name:

Designation:

Date.....

Company rubber stamp

AUTHORISATION FROM PARENT / AFFILIATE OF BIDDING COMPANY / MEMBER OF BIDDING CONSORTIUM WHOSE TECHNICAL / FINANCIAL CAPABILITY HAS BEEN USED BY THE BIDDING COMPANY / MEMBER OF BIDDING CONSORTIUM.

[On the Letter Head of the Parent/ Affiliate]

Name:.....
Full Address:
Telephone No.:.....
E-mail address:.....
Fax / No.:.....

To

Chief Executive Officer,
PFC Consulting Limited
(A wholly owned subsidiary of PFC Limited)
9th Floor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Dear Sir,

**Sub: Authorization for use of Technical/ Financial Capability of M/s.....
(Insert name of Parent / Affiliate) by M/s (Insert name of Bidding
Company / Member of Bidding Consortium).**

We refer to the RFP dated ('RFP') issued by you for selection of Transmission Service Provider for establishing the Transmission System for **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”**.

We confirm that M/s. (Insert name of Bidding Company/ Consortium Member) has been authorized by us to use our technical and/or financial capability [strikeout whichever is not applicable] for meeting the Qualification Requirements for “Selection of Transmission Service Provider for establishing the Transmission System for **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”**”.

We have carefully read and examined in detail the RFP including in particular, Clause 2.1.4 of the RFP, and we are also submitting legally binding undertaking supported by a board resolution that all the equity investment obligations of M/s..... (Insert Name of Bidding Company / Consortium Member), shall be deemed to be our equity investment obligations and in the event of any default the same shall be met by us. For and on behalf of M/s..... (Insert Name of Parent / Affiliate)

.....
(Signature and stamp of Any Whole-time Director/ Manager (supported by a specific Board Resolution) (refer Note 1 & 2 below) of Parent/ Affiliate)

Name:
Date:
Place:

Please also affix common seal of Parent/ Affiliate

Common Seal of
has been affixed in my/our
presence, pursuant to the
Board of Director's
resolution dated

.....
(Signature)
[To be signed by the person (s) authorized by the Board in whose presencethe Common Seal can be affixed]

Notes:

1. Any whole-time Director/ Manager of the Parent/Affiliate (supported by a specific Board Resolution).
2. In case of Manager, the Parent/ Affiliate should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.

The Company Secretary also certifies that the Parent/ Affiliate does not have any Managing Director.

3. The above undertaking can be furnished by Ultimate Parent of Technically Evaluated Entity or Financially Evaluated Entity, as the case maybe, if legally binding undertaking shall be furnished by the Ultimate Parent at the RFP stage on behalf of such Financially Evaluated Entity/Technically Evaluated Entity.

FORMAT OF UNDERTAKING BY TECHNICALLY / FINANCIALLY EVALUATED ENTITY //ULTIMATE PARENT COMPANY

[On the Letter Head of the Technically / Financially Evaluated Entity //Ultimate Parent Company]

Name:

Full Address:

Telephone No.:

E-mail address:

Fax/No.:

To:

Chief Executive Officer,
PFC Consulting Limited
(A wholly owned subsidiary of PFC Limited)
9thFloor, Wing-A, Statesman House,
Connaught Place, New Delhi - 110001

Sub: Undertaking for equity investment

Dear Sir,

We refer to the Request for Proposal dated March 06, 2020('RFP') issued by you regarding setting up of transmission system for **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”** Project on build, own, operate and maintain basis.

We have carefully read and examined in detail the RFP and the RFP, including in particular, Clause 2.1.4 of the RFP and Clauses 2.5.2 and 2.5.8 of the RFP, regarding submission of an undertaking regarding the investment in the equity share capital of [SPV, which is under incorporation]and provisions for minimum equity holding and equity lock-in. We have also noted the amount of the equity investment required to be made in [SPV, which is under incorporation]by the [Insert the name of the Bidder or the Consortium Member or investing Affiliate] for the Project.

In view of the above, we hereby undertake to you and confirm that in the event of failure of[Insert the name of the Bidder or the Consortium Member or investing Affiliate] to invest in full or in part, in the equity share capital of [SPV, which is under incorporation] as specified in the Bid, we shall invest the said amount not invested by.....[Insert the name of the Bidder or the Consortium Member or investing Affiliate] in [SPV, which is under incorporation] by purchase of existing shares or subscribing to the new shares of [SPV, which is under incorporation], as stipulated by you.

We have attached hereto certified true copy of the Board resolution whereby the Board of Directors of our Company has approved issue of this Undertaking by the Company.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the RFP.

Signature of any Whole-time Director/ Manager (supported by a specific Board Resolution

The above undertaking should be signed and certified as true by any Whole-time Director/ Manager (supported by a specific Board Resolution) (refer Note below) of the Bidding Company or of the Member, in case of a Consortium).

Common seal of.....has been affixed in my/ our presence pursuant to Board of Director's Resolution dated

WITNESS:

1.
(Signature)
Name.....
Designation.....

2.
(Signature)
Name.....
Designation.....

Note:

1. Deleted
2. In case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956 / Companies Act 2013 (as the case may be) for the purpose in question.
3. The Company Secretary also certifies that the Company does not have a Managing Director.
4. Wherever required, extract of the charter documents and documents such as a Board resolution should be submitted for verification.

FORMATS FOR BOARD RESOLUTIONS

Format 1

Format of the Board resolution for the Bidding Company / each Member of the Consortium / investing Affiliate / Parent Company / Ultimate Parent Company, where applicable

[Reference Clause 2.5.2 of the RFP and the illustrations in **Annexure - 11A**]

[**Note:** The following resolution no.1 needs to be passed by the Boards of each of the entity/(ies) making equity investment]

The Board, after discussion, at the duly convened Meeting on [Insert date], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 2013, passed the following Resolution:

1. RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 and compliance thereof and as permitted under the Memorandum and Articles of Association of the company, approval of the Board be and is hereby accorded for investment of.....% (.....per cent) of the total equity share capital of [SPV, which is under incorporation]representing the entire amount proposed to be invested by the company for the transmission system for “**Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G**”, partly by acquisition of the existing equity shares from PFC Consulting Limited and / or partly by subscribing to the new equity shares, as per the terms of the RFP.

[**Note:** Equity investment obligations by the Bidding Company/each Member of the Bidding Consortium/investing Affiliate or Parent or Ultimate Parent should add up to 100%.]

[**Note:** In the event the Bidder is a Bidding Consortium, the following Board resolution no. 2 also needs to be passed by the Lead Member of the Bidding Consortium]

2. RESOLVED THAT approval of the Board be and is hereby accorded to contribute such further amount over and above the said percentage limit to the extent becoming necessary towards the total equity share in the [SPV, which is under incorporation], obligatory on the part of the company pursuant to the terms and conditions contained in the Consortium Agreement datedexecuted by the company as per the provisions of the RFP.

[**Note:** In the event, the investing entity is an Affiliate or Parent or Ultimate Parent of the Selected Bidder, the following Board resolution no. 3 shall also be passed by the Selected Bidder]

3. FURTHER RESOLVED THAT the Board hereby acknowledges the Board Resolution(s) passed by the..... [Name of the Affiliate(s)/ Parent / Ultimate Parent] regarding the investment of.....(....%) of the equity share capital requirements of [SPV, which is under incorporation], which is to be invested by the[Name of the Affiliate(s)/ Parent / Ultimate Parent] for the [SPV, which is under incorporation], partly by acquisition of the existing equity shares from PFC Consulting Limited and partly by subscribing to the new equity shares, as per the terms of the RFP.

[**Note:** The following resolution no. 4 is to be provided by the Bidding Company / Lead Member of the Consortium only]

4. FURTHER RESOLVED THAT MR/MSbe and is hereby authorized to take all the steps required to be taken by the Company for submission of the Bid, including in particular, signing of the Bid, making changes thereto and submitting amended Bid, all the documents related to the Bid, certified copy of this Board resolution or letter or undertakings etc, required to be submitted to BPC as part of the Bid or such other documents as may be necessary in this regard.

Certified True Copy

Company rubber stamp to be affixed

[**Notes:**

- 1) This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary or Whole Time Director/ Manager (supported by specific board resolution) of the Bidding Company or the Lead Member of Consortium.

In case it is signed by the Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013(as the case may be) for the purpose in question. The Company Secretary also certifies that the Company does not have a Managing Director.

- 2) The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution, i.e., the Bidding Company, each Member of the Bidding Consortium.
- 3) This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956/ Companies Act 2013 (as the case may be) may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.]

Format 2**Format for the Board resolution of Technically/ Financially Evaluated Entity/ Parent Company/ Ultimate Parent Company**

The Board, after discussion, at the duly convened Meeting on [Insert date], with the consent of all the Directors present and in compliance of the provisions of the Companies Act, 2013, passed the following Resolution:

RESOLVED THAT pursuant to the provisions of the Companies Act, 2013 and compliance thereof and as permitted under the Memorandum and Articles of Association of the company, approval of the Board be and is hereby accorded for issuing an Undertaking to the BPC, in the format specified in the RFP issued by the BPC, draft of which is attached hereto and initialed by the Chairman whereby the company undertakes to investpercent (... %) of the total equity share capital of [SPV, which is under incorporation] representing the entire amount proposed to be invested by[insert the name of the Bidder or Member or investing Affiliate] for the said Project, in case of failure of[Insert the name of the Bidder or Member or investing Affiliate] to make such investment".

FURTHER RESOLVED THAT,be and is hereby authorized to take all the steps required to be taken by the Company, including in particular, signing the said Undertaking, submitting the same to the BPC through[Insert name of Bidding Company/Lead Member of the Consortium] of all the related documents, certified copy of this Board resolution or letter, undertakings etc., required to be submitted to BPC as part of the Bid or such other documents as may be necessary in this regard.

Certified True Copy**Company rubber stamp to be affixed****Note:**

1. This certified true copy should be submitted on the letterhead of the Company, signed by the Company Secretary or Whole-time Director/Manager (supported by specific board resolution) of Technically/ Financially Evaluated Entity/ Parent Company/ Ultimate Parent Company, as the case may be.

In case it is signed by the Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question. The Company Secretary also certifies that the Company does not have a Managing Director.

2. The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.
3. This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956/ Companies Act 2013 (as the case may be) may be suitably modified to refer to the law applicable to the entity submitting the resolution. However, in such case, the foreign entity shall submit an unqualified opinion issued by the

legal counsel of such foreign entity, stating that the Board resolutions are in compliance with the applicable laws of the respective jurisdictions of the issuing company and the authorizations granted therein are true and valid.

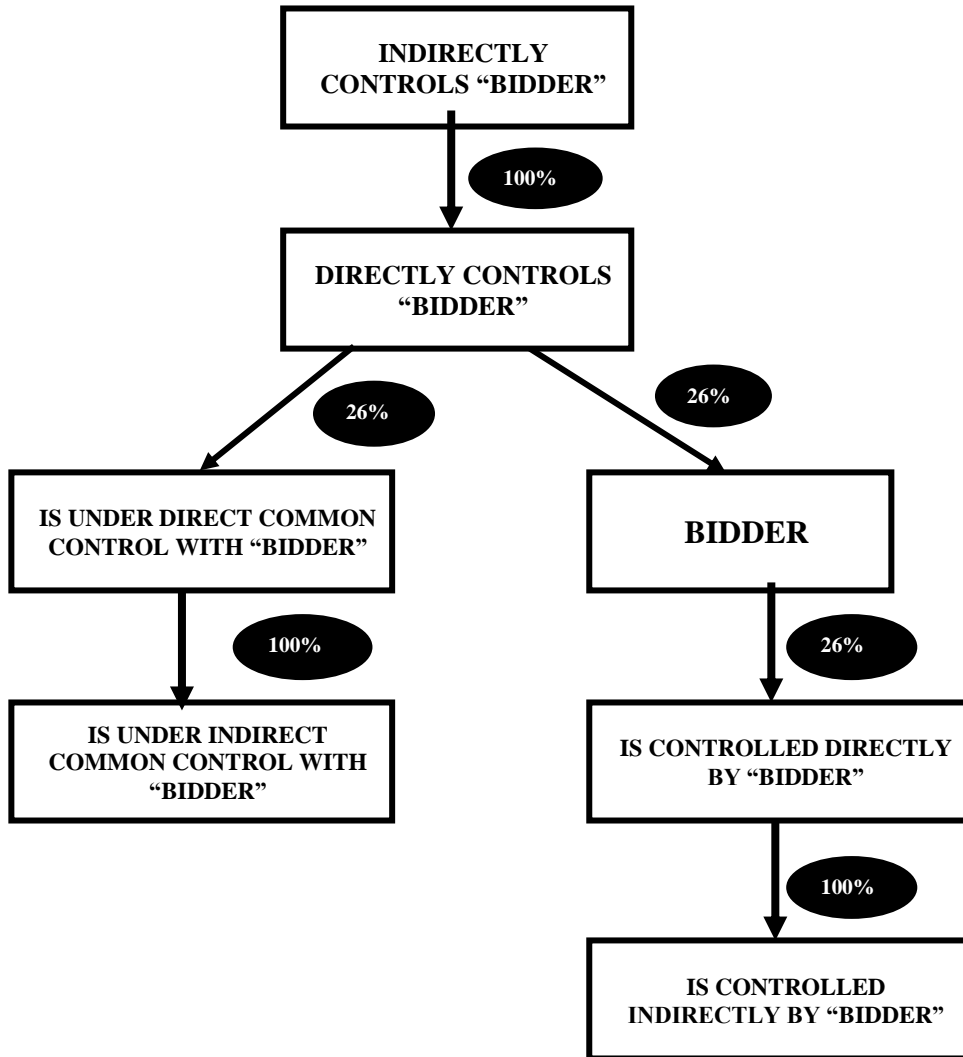
**ILLUSTRATION FOR APPLICABLE BOARD RESOLUTION REQUIREMENTS
UNDER CLAUSE 2.5.2**

Investor in the TSP	Entities (other than Bidder) whose credentials(financial and/or technical) used by the Bidder for meeting RFP criteria	Applicable Board Resolutions	Requirement of Undertaking (Annexure 10A)
Bidder himself for 100% equity	None	a) Format 1 of Annexure 11 - Resolution: 1, 2 and 4 from the Bidder	None
Bidder himself for 100% equity	Affiliate and/or Parent Company and/or Ultimate Parent	<p>a) Format 1 of Annexure 11 - Resolution: 1, 2, and 4 from the Bidder</p> <p>b) Format 2 of Annexure 11 by either Technically/ Financially Evaluated Entity(ies) whose credentials have been used, or Ultimate Parent.</p> <p>Provided, if the Bidder himself is the Ultimate Parent, then Format 2 need not be provided.</p>	<p>Yes, by either Technically / Financially Evaluated Entity(ies) Affiliate(s) whose credentials have been used, or Ultimate Parent.</p> <p>Provided, if the Bidder himself is the Ultimate Parent, then the undertaking need not be provided.</p>
Bidder himself + others (Affiliate and/or Parent Company and/or Ultimate Parent) in aggregate holding 100% equity	None	<p>a) Format 1 of Annexure 11 - Resolution: 1,2, 3 and4 from the Bidder.</p> <p>b) Format 1 of Annexure 11 - Resolution: 1 from the Affiliate and /or</p>	None

Investor in the TSP	Entities (other than Bidder) whose credentials(financial and/or technical) used by the Bidder for meeting RFP criteria	Applicable Board Resolutions	Requirement of Undertaking (Annexure 10A)
		Parent and /or Ultimate Parent investing in the equity	
Bidder himself + others (Affiliate and/or Parent Company and/or Ultimate Parent) in Aggregate holding 100% equity	Affiliate and/or Parent Company and/or Ultimate Parent	a) Format 1 of Annexure 11 - Resolution: 1,2, 3 and 4 from the Bidder. b) Format 1 of Annexure 11 - Resolution: 1 from the Affiliate and/or Parent and/or Ultimate Parent investing in the equity c) Format 2 of Annexure 11 by either Parent / Affiliate(s) whose credentials have been used and /or Ultimate Parent investing in the equity	Yes, by either Parent/ Affiliate(s) whose credentials have been used, or Ultimate Parent

FORMAT FOR ILLUSTRATION OF AFFILIATES

Date:(should be as on 7 days prior to submission of Bid)



NOTE: Bidder to provide the illustration, as applicable in their case, duly certified by the Company Secretary and supported by documentary evidence in this regard.

FORMAT FOR DISCLOSURE**[On the letter head of Bidding Company / Each Member in a Bidding Consortium]****DISCLOSURE**

We hereby declare that the following companies with which we/ have direct or indirect relationship are also separately participating in this Bid process as per following details

S.No.	Name of the Company	Relationship
1.		
2.		
3.		

In case there is no such company please fill in the column “name of the company” as Nil.

Further we confirm that we don't have any Conflict of Interest with any other company participating in this bid process.

Certified as True

.....
(Signature)

Name:

Signature & Name of any whole-time Director / Manager (supported by a specific Board Resolution)

The above disclosure should be signed and certified as true by the any whole-time Director / Manager (supported by a specific Board Resolution) (refer Note below) of the Bidding Company or of the Member, in case of a Consortium).

Note:

1. In case of Manager, the Company should confirm through a copy of Board Resolution attested by Company Secretary that the concerned person is appointed as Manager as defined under the Companies Act, 1956/ Companies Act, 2013 (as the case may be) for the purpose in question.

The Company Secretary also certifies that the Company does not have any Managing Director.

FORMAT OF THE BID BOND**FORMAT OF THE UNCONDITIONAL AND IRREVOCABLE BANK
GUARANTEE FOR BID BOND**

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.
Foreign entities submitting Bids are required to follow the applicable law in their country)

In consideration of the[Insert name of the Bidder] submitting the Bid inter alia for establishing the transmission system for **“Transmission System Strengthening Scheme for Evacuation of Power from Solar Energy Zones in Rajasthan (8.1 GW) under Phase-II Part-G”** on build, own, operate and maintain basis, in response to the RFP dated _____ issued by PFC Consulting Limited, and the Bid Process Coordinator (hereinafter referred to as BPC) agreeing to consider such Bid of [Insert the name of the Bidder] as per the terms of the RFP, the [Insert name and address of the bank issuing the Bid Bond, and address of the Head Office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to PFC Consulting Limited or its authorized representative at 9th Floor, Wing-A, Statesman House, Connaught Place, New Delhi - 110001 forthwith on demand in writing from PFC Consulting Limited or any representative authorized by it in this behalf, any amount up to and not exceeding Rupees Thirty One Crore One Lakh Only (Rs.31.01Crore), on behalf of M/s.....[Insert name of the Bidder].

This guarantee shall be valid and binding on the Guarantor Bank up to and including [Date to be inserted on the basis of Clause 2.11 of this RFP] and shall not be terminable by notice or any change in the constitution of the Guarantor Bank or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between concerned parties.

Our liability under this Guarantee is restricted to Rupees Thirty One Crore One Lakh Only (Rs31.01Crore). Our Guarantee shall remain in force until[Date to be inserted on the basis of Clause 2.11 of this RFP]. PFC Consulting Limited or its authorized representative shall be entitled to invoke this Guarantee until [Insert Date, which is 365 days after the date in the preceding sentence]. The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from PFC Consulting Limited or its authorized representative, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to PFC Consulting Limited or its authorized representative.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection, disputes, or disparities raised by the Bidder or any other person. The Guarantor Bank shall not require PFC Consulting Limited or its authorized representative to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against PFC Consulting Limited or its authorized representative in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly PFC Consulting Limited or its authorized representative shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder to enforce any security held by PFC Consulting Limited or its authorized representative or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rupees Thirty One Crore One Lakh Only (Rs31.01Crore) and it shall remain in force until [Date to be inserted on the basis of Clause 2.11 of RFP], with an additional claim period of three hundred sixty five (365) days thereafter. We are liable to pay the guaranteed amount or any part thereof under this BANK GUARANTEE only if PFC Consulting Limited or its authorized representative serves upon us a written claim or demand.

In witness whereof the Bank, through its authorized officer, has set its hand and stamp on this..... day of at.....

Witness:

1.....
Name and Address

Signature:
Name:

2.
Name and Address

Designation with Stamp:

Signature

Attorney as per power of attorney
No.....

For:
..... [Insert Name of the Bank]

Banker's Stamp and Full Address:

Dated this.....day of.....20.....

Notes:

- 1. The Stamp Paper should be in the name of the Executing Bank.

FORMAT FOR CONTRACT PERFORMANCE GUARANTEE

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign entities submitting Bids are required to follow the applicable law in their country. To be provided separately in the name of each of the Long Term Transmission Customers), in proportion to their Allocated Project Capacity as provided in Clause 2.12 of this document)

In consideration of the [Insert name of the Selected Bidder or Lead Member in case of the Consortium, with address] agreeing to undertake the obligations under the TSA dated and the other RFP Project Documents and PFC Consulting Limited, agreeing to execute the Share Purchase Agreement with the Selected Bidder, regarding setting up the Project, the.....[Insert name and address of the bank issuing the guarantee and address of the head office] (hereinafter referred to as "Guarantor Bank") hereby agrees unequivocally, irrevocably and unconditionally to pay to [Insert Name of the Long Term Transmission Customer] at.....Insert the Place from the address of the Long Term Transmission Customer indicated in the TSA] forthwith on demand in writing from [Name of the Long Term Transmission Customer] or any officer authorized by it in this behalf, any amount up to and not exceeding Rupees.....Crore (Rs.....) only [Insert the amount of the bank guarantee in respect of the Long Term Transmission Customer as per the terms of TSA separately to each Long Term Transmission Customer in the ratio of Allocated Project Capacities as on the date seven (7) days prior to the Bid Deadline] on behalf of M/s..... [Insert name of the Selected Bidder].

This guarantee shall be valid and binding on the Guarantor Bank up to and includingand shall not be terminable by notice or any change in the constitution of the Bank or the term of the TSA or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to RupeesCrores (Rs.....) only. Our Guarantee shall remain in force until..... [Insert the date of validity of the Guarantee as per Clause 2.12.1 of the RFP]. The Long Term Transmission Customer shall be entitled to invoke this Guarantee up to three hundred sixty five (365) days of the last date of the validity of this Guarantee.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand from the Long Term Transmission Customer, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to the Long Term Transmission Customer.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by [SPV, which is under incorporation]..... [Insert name of the Selected Bidder] and/or any other person. The Guarantor Bank shall not require the Long Term Transmission Customer to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against the Long Term Transmission Customer in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring, liquidation, winding up, dissolution or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly the Long Term Transmission Customer shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against [SPV, which is under incorporation] or the Selected Bidder, to make any claim against or any demand on [SPV, which is under incorporation] or the Selected Bidder or to give any notice to [SPV, which is under incorporation] or the Selected Bidder or to enforce any security held by the Long Term Transmission Customer or to exercise, levy or enforce any distress, diligence or other process against [SPV, which is under incorporation] or the Selected Bidder.

The Guarantor Bank acknowledges that this BANK GUARANTEE is not personal to the Long Term Transmission Customer and may be assigned, in whole or in part, (whether absolutely or by way of security) by Long Term Transmission Customer to any entity to whom the Lead Long Term Transmission Customer is entitled to assign its rights and obligations under the TSA.

The Guarantor Bank hereby agrees and acknowledges that the Long Term Transmission Customer shall have a right to invoke this Bank Guarantee either in part or in full, as it may deem fit.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to RupeesCrores (Rs) only and it shall remain in force until [Date to be inserted on the basis of Article 3.1.2 of TSA], with an additional claim period of three hundred sixty five (365) days thereafter. This BANK GUARANTEE shall be extended from time to time for such period, as may be desired by..... [Insert name of the Selected Bidder or Lead Member in case of the Consortium]. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if the Long Term Transmission Customer serves upon us a written claim or demand.

In witness where of:

Signature.....

Name:

Power of attorney No.:

For:

..... [Insert Name of the Bank]

Banker's Seal and Full Address, including mailing address of the Head Office

Notes:

1. The Stamp Paper should be in the name of the Executing Bank.

FORMAT OF CHECKLIST FOR TECHNICAL BID SUBMISSION REQUIREMENTS

[This format needs to be duly filled in, signed by the authorized signatory of the Bidder (Bidding Company / Lead Member in case of a Bidding Consortium) and submitted along with the Bidder's Technical Bid]

Technical Bid Submission Requirements	Response (Yes / No)
1. Format for the Covering Letter on the letterhead of Bidding Company or Lead Member of the Consortium, as applicable;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
2. Format for Letter of Consent from each Consortium Member, including Lead Member, on their respective letterheads;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
3. Format for evidence of authorized signatory's authority (Power of Attorney to be submitted in original);	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
4. Board resolution from the Bidding Company / Lead Member of the Consortium in favor of the person executing the Power of Attorney as per Annexure -3 ;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
5. Power of Attorney from each Consortium Member in favour of Lead Member to be provided by each of the other Members of the Consortium (to be submitted in original) as per Annexure - 4 ;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
6. Board Resolution from each Member of the Consortium, other than the Lead Member, in favor of their respective authorized representatives for executing the POA, Consortium Agreement and signing of the requisite formats;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
7. Format for Bidder's composition and ownership structure, along with status of equity holding (owning ten percent or more of the total paid up equity) not earlier than thirty (30) days prior to the Bid Deadline as per Annexure - 5 ;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
8. Consortium Agreement duly signed as per Annexure - 6 (to be submitted in original), along with Appendix-1, indicating the responsibilities and obligations of each Member of the Consortium;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
9. Format for Qualification Requirement:	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No

Technical Bid Submission Requirements	Response (Yes / No)
a. Calculation sheets, detailing computation of Net worth considered for meeting Qualifying Requirements, duly signed and stamped by the Statutory Auditor of the Bidding Company / each Member in case of a Bidding Consortium / FEE in cases where credentials of FEE is taken;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
b. Calculation sheets, detailing computation of capital expenditure of projects considered for meeting Qualification Requirements, duly signed and stamped by the Statutory Auditor of the Bidding Company / Lead Member in case of Bidding Consortium / TEE in cases where credentials of TEE is taken;	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
c. Last three (3) financial years' unconsolidated / consolidated audited annual accounts / statements, as the case may be, of the Financially Evaluated Entity / Technical Evaluated Entity	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
d. Unconsolidated audited annual accounts of both the TEE and the Bidding Company/Lead member, as applicable, for the financial years in which financial closure was achieved and the financial year in which the said project was completed / commissioned.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
10. Copy of the Memorandum and Articles of Association and certificate of incorporation or other organizational document (as applicable), including their amendments, certified by the Company Secretary of Bidding Company or each Member in case of a Consortium including Lead Member.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
11. Attachment of Annexure - 7(D) , detailing projects completed / commissioned and for which commercial operation has commenced including Executive Summary for each project.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
12. For each project listed in the attachment above, certified true copy of the certificates of final acceptance and / or certificates of good operating performance duly issued by owners or clients for the project, duly signed by any whole time Director/Manager (supported by a specific Board resolution) in support of technical capability as defined in Clause 2.1.2 of RFP.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
13. Authorization from Parent / Affiliate of Bidding Company / Member of Bidding Consortium whose technical / financial capability has been used by the Bidding Company / Member of Bidding Consortium.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
14. Undertaking from Technically Evaluated / Financially	8. <input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No

Technical Bid Submission Requirements	Response (Yes / No)
Evaluated Entity (ies) or from Ultimate Parent for Equity Investment	
15. Initialling of all pages of TechnicalBid by the Authorized Signatory in whose favour the POA (Annexure - 3) has been executed.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
16. Format for Illustration of Affiliates as on seven (7) days prior to the Bid Deadline, duly certified by Company Secretary and supported by documentary evidence.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
17. Certified copy of the Register of Members / Demat Account Statement, Share Certificate, Annual Return filed with ROC etc. submitted as documentary evidence along with Annexure - 12 .	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No
18. Format for Disclosure by Bidding Company / each Member of the Consortium.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No 9.
19. Format for Authorization submitted in Non-Judicial stamp paper duly notarized as per Annexure - 5 from the Bidding Company / each Member of the Consortium authorizing the BPC to seek reference from their respective bankers & others.	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No 12. 13.
20. Bidders Undertaking and details of Equity Investment	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No 14.
21. Proof of Payment of RFP Fees	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No 15.
22. Bid Bond	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No 16.
23. Contract Performance Guarantee	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No 17.
24. Board Resolution as per Annexure 11 (If required)	<input type="checkbox"/> <input type="checkbox"/> Yes <input type="checkbox"/> <input type="checkbox"/> No

[**Note:** The checklist is not exhaustive. Bidders are required to submit all the information/documents as per requirement of RFP]

For and on behalf of Bidder

M/s.

.....
(Signature of authorized signatory)

LIST OF BANKS

1. Scheduled Commercial Banks

Nationalised Banks

1. State Bank of India
2. Allahabad Bank
3. Andhra Bank
4. Bank of India
5. Bank of Maharashtra
6. Bank of Baroda
7. Canara Bank
8. Central Bank of India
9. Corporation Bank
10. Dena Bank
11. Indian Bank
12. Indian Overseas Bank
13. Oriental Bank of Commerce
14. Punjab National Bank
15. Punjab and Sind Bank
16. Syndicate Bank
17. Union Bank of India
18. United Bank of India
19. UCOBank
20. Vijaya Bank

Foreign Banks

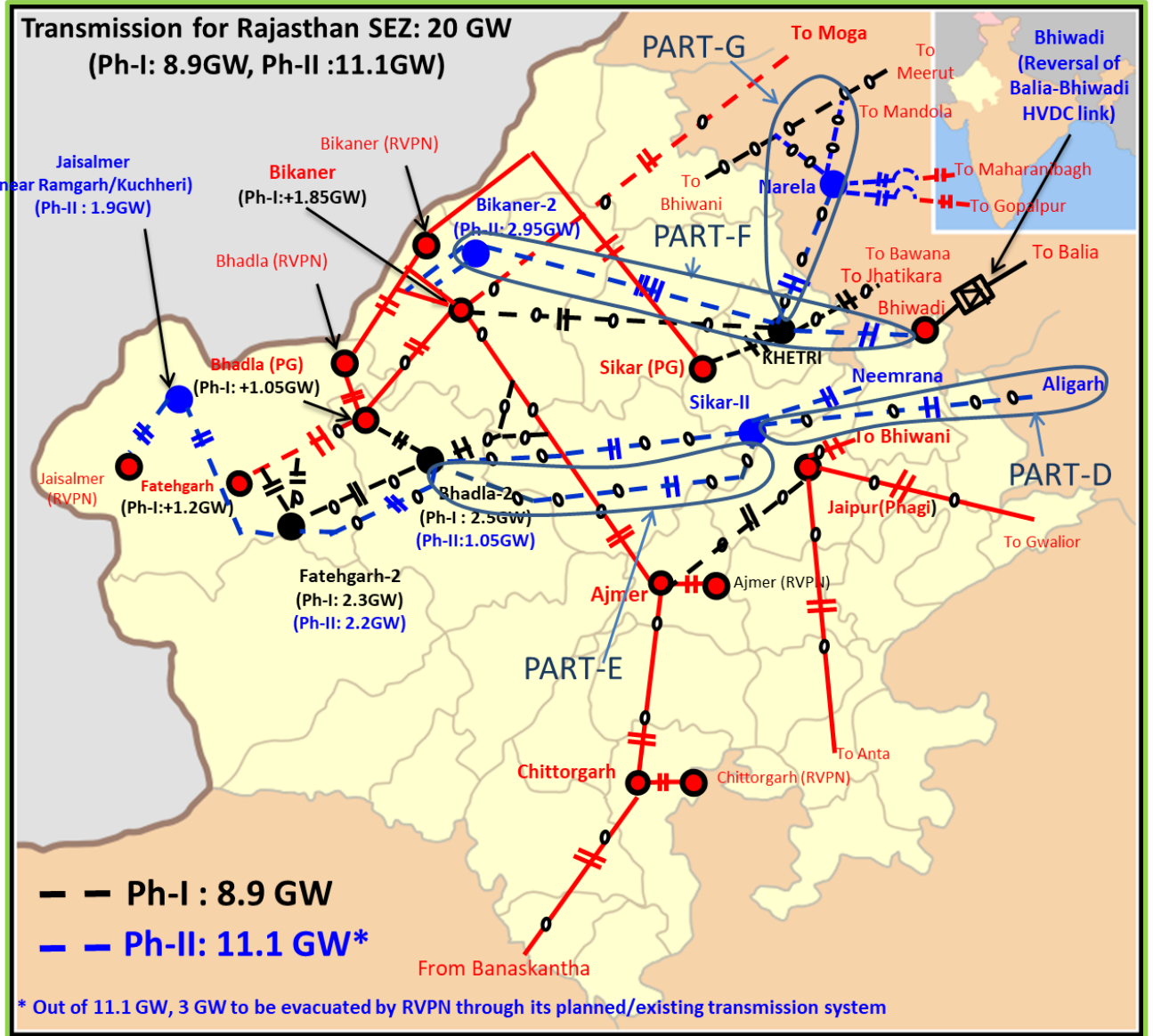
1. Banks of America NA
2. Bank of Tokyo Mitsubishi Ltd.
3. BNP Paribas
4. Calyon Bank
5. CitiBank N.A.
6. Deutsche Bank A.G.
7. The Hongkong and Shanghai Banking Corporation Ltd.
8. Standard Chartered Bank
9. Sumitomo Mitsui Banking Corporation
10. SocieteGenerale
11. Barclays Bank
12. ABN Amro Bank N.V.
13. Bank of Novascotia
14. Mizuho Bank Ltd.

Scheduled Private Banks

1. ING Vysya Bank Ltd.
2. ICICI Bank Ltd.
3. HDFC Bank Ltd.
4. IDBI Bank Ltd

5. Axis Bank
6. Kotak Mahindra Bank
7. IndusInd Bank
8. IDFC Bank

GRID MAP OF THE PROJECT



LIST OF LONG TERM TRANSMISSION CUSTOMERS

Sl. No.	Name of the Long Term Transmission Customer	Address of Registered Office	Law under which incorporated	Allocated Project Capacity (in MW)*
1.				
2.				
3.				
4.				
5.				
6.				
7.				

* While the bidding is being done on the basis of existing Standard Bidding Documents (SBDs), and the list of LTTC is being provided as per the format of the existing SBDs. It is clarified that the transmission charges will be shared and recovered as per the applicable CERC regulation.

Note: The above list of Long Term Transmission Customers subject to change. Any addition or deletion in this list after the award of Lol shall be duly notified to the parties to the TSA.

The new Long Term Transmission Customers shall become a party to the TSA after agreeing to the terms and conditions of the TSA and signing a Supplemental Agreement as annexed in Schedule 12 to the TSA.

FORMAT FOR CLARIFICATIONS/ AMENDMENTS ON THE RFP/ RFP PROJECT DOCUMENTS

Sl. No.	Name of the Document	Clause No. and Existing provision	Clarification required	Suggested text for the amendment	Rationale for the Clarification or Amendment

Signature

Name.....

For

Bidder's Rubber Stamp and Full Address.

(Note: This format shall be used for submission of requests for clarifications/ amendments on the draft RFP Project Documents as per the provisions of Clause 2.3.1)

FORMATS FOR RFP PROJECT DOCUMENTS

ENCLOSURE 1: - DRAFT TRANSMISSION SERVICE AGREEMENT (Provided separately)

ENCLOSURE 2: - SHARE PURCHASE AGREEMENT (Provided separately)

FORMAT FOR FINANCIAL BID**Quoted Transmission Charges**

Year (Term of License)	Commencement Date of Contract Year	End Date of Contract Year	Quoted Non-Escalable Transmission Charges (in Rupees Millions)	Quoted Escalable Transmission Charges (in Rupees Millions)
(1)	(2)	(3)	(4)	(5)
1	Scheduled COD 31.12.2021(Refer note 7 and 9)	31-March		
2	1-April	31-March		
3	1-April	31-March		
4	1-April	31-March		
5	1-April	31-March		
6	1-April	31-March		
7	1-April	31-March		
8	1-April	31-March		
9	1-April	31-March		

10	1-April	31-March	
11	1-April	31-March	
12	1-April	31-March	
13	1-April	31-March	
14	1-April	31-March	
15	1-April	31-March	
16	1-April	31-March	
17	1-April	31-March	
18	1-April	31-March	
19	1-April	31-March	
20	1-April	31-March	
21	1-April	31-March	

22	1-April	31-March	
23	1-April	31-March	
24	1-April	31-March	
25	1-April	31-March	
26	1-April	31-March	
27	1-April	31-March	
28	1-April	31-March	
29	1-April	31-March	
30	1-April	31-March	
31	1-April	31-March	
32	1-April	31-March	
33	1-April	31-March	

34	1-April	31-March	
35	1-April	31-March	
36	1-April	35 th anniversary of the Scheduled COD (Refer note 8 and 9)	

Notes

1. The Bidders are required to ensure compliance with the provisions of Clause 2.5.3 of this RFP.
2. Quotes to be in Rupees Millions and shall be up to two (2) decimal points.
3. The contents of this format shall be clearly typed.
4. All pages of this format shall be signed by the authorized signatory in whose name power of attorney as per Clause 2.5.2 is issued.
5. Ensure 36 values of the Quoted Non-Escalable Transmission Charges and only 1 value for Quoted Escalable Transmission Charges, unless firm Transmission Charges are quoted.
6. In the likely situation of Bidders quoting firm Transmission Charges, the single value for the Quoted Escalable Transmission Charges should be filled as Nil.
7. Charges quoted for the first Contract Year would be the charges applicable for the period from the immediately preceding 1 April from the Scheduled COD till the immediately succeeding 31 March.
8. Charges quoted for the last Contract Year would be the charges applicable from immediately preceding 1 April to the date of thirty-fifth anniversary of the Scheduled COD till the immediately succeeding 31 March.
9. However, in cases of both (7) and (8) above, total Transmission Charges payable to the TSP will be computed proportionately for the total number of days in the first and the last Contract Year respectively.

Name and signature of authorized signatory in whose name power of attorney/ Board resolution as per Clause 2.5.2 is issued.

Signature of authorized signatory

Name:

Designation:

Date:

Company rubber stamp

**ILLUSTRATION OF THE BID EVALUATION/ COMPUTATION OF LEVELIZED
TRANSMISSION CHARGES**

PROVIDED AS EXCEL FILE IN CD ENCLOSED HEREWITH

ANNEXURE A

Technical Details with respect to electronic bidding

Registration Methodology

In order to submit online bids in the e-bidding process for selection of Transmission Service Provider, interested Bidders are required to register themselves with the e-procurement website of MSTC Limited namely www.mstcecommerce.com/eprochome/tsp/index.jsp. To register with the website, the Bidder is required to fill up the online form available under the link Register as Vendor in the above website and fill up the same and click on Submit.

During this process, the Bidder shall create his user id and password and keep note of the same. The Bidder shall ensure that the secrecy of his user id and password is maintained at all time and he/she shall alone be responsible for any misuse of the user id and password.

The Bidder may check the details entered by it before final submission. On successful submission of the online registration Form, the Bidder shall receive a confirmation mail in the registered email address advising the Bidder to submit the following documents.

- i. Self attested Income Tax PAN Card. In case of a registered Company or Firm, the Firm's PAN card and in case of a proprietorship firm, proprietor's personal PAN card is required. In case of partnership firm, PAN of the firm and that of the authorized partner are to be submitted.
- ii. Copy of the confirmation email Letter received from MSTC after successful completion of on-line registration.
- iii. A non refundable registration fee of Rs 10,000/- plus GST as per applicable rate to be paid online to the following bank account.

Beneficiary Name: MSTC Limited

Bank Details: Axis Bank, Shakespeare Sarani Branch, Kolkata

Account Details: Axis Bank A/c.No.005010200057840

IFSC Code No.: UTIB0000005.

Please provide details of payment made like UTR No, remitting bank name, date of payment and amount in the covering letter.

The Bidder shall have to submit all the above documents to MSTC Limited for verification and activation of their login ids. The Bidders should send scanned copies of the above documents to the designated email id only which is given below.

tsp@mstcindia.co.in

It may be noted that Bidders need not visit any of the offices of MSTC Limited for submission of the documents.

Contact persons of MSTC Limited:

Mr. ChiragSindhu

9830336290

Mr. SetuDutt Sharma

7878055855

Once the complete set of documents and requisite registration fee are received from a Bidder, MSTC shall activate the Bidder's login after verification / scrutiny of the documents. MSTC Limited reserves the right to call for additional documents from the Bidder if needed and the Bidder shall be obliged to submit the same.

On completion of the above stated registration process, a Bidder shall be able to login to MSTC's website.

ANNEXURE B

Technical Specifications of Transmission System

SPECIFIC TECHNICAL REQUIREMENTS FOR TRANSMISSION LINE

- 1.0 The design, routing and construction of transmission lines shall be in accordance with Chapter V, Part A of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.
- 2.0 Selection of tower type shall be made as per CEA Regulations, however in case lattice type towers are used, the following shall also be applicable:
- 2.1 Steel section of grade E 250 and/or grade E 350 as per IS 2062, are only permitted for use in towers, extensions, gantry structures and stub setting templates. For towers in snowbound areas, steel sections shall conform to Grade-C of IS-2062.
- 2.2 Towers shall be designed as per IS-802:2015, however the drag coefficient of the tower shall be as follows:-

Solidity Ratio	Drag Coefficient
Upto 0.05	3.6
0.1	3.4
0.2	2.9
0.3	2.5
0.4	2.2
0.5 and above	2.0

- 3.0 Transmission Service Provider (TSP) shall adopt any additional loading/design criteria for ensuring reliability of the line, if so desired and /or deemed necessary.
- 4.0 Transmission line shall be designed considering wind zones as specified in wind map given in National Building Code 2016, Vol.1. The developer shall also make his own assessment of local wind conditions and frequent occurrences of high intensity winds (HIW) due to thunderstorms, dust-storms, downburst etc. along the line route and wherever required, higher wind zone than that given in wind map shall be considered for tower design for ensuring reliability of line.
- 5.0 A) For power line crossing of 400 kV or above voltage level, large angle & dead end towers (i.e. D/DD/QD) shall be used on either side of power line crossing.
- B) For power line crossing of 132 kV and 220 kV voltage level, angle towers (B/C/D/DB/DC/DD/ QB/QC/QD) shall be used on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.
- C) For power line crossing of 66 kV and below voltage level, suspension/tension towers shall be provided on either side of power line crossing depending upon the merit of the prevailing site condition and line deviation requirement.
- 6.0 The relevant conductor configuration shall be as follows:-

Transmission line	ACSR Conductor specified	Equivalent AAAC conductor based on 53.5% conductivity of Al Alloy	Equivalent AL59 conductor based on 59% conductivity of AL Alloy	Sub-conductor Spacing
765kV D/C (Hexa Zebra) transmission lines	Zebra : Stranding 54/3.18 mm-Al + 7/3.18 mm-Steel, 428 sq mm, Aluminium area, 28.62 mm diameter	Stranding details: 61/3.19mm 28.71 mm diameter; 487.5 sq.mm Aluminium alloy area	Stranding details: 61/3.08mm 27.7 mm diameter; 454 sq.mm Aluminium alloy area	457 mm

Note: The transmission lines shall have to be designed for a maximum operating conductor temperature of 85 deg C for ACSR as well as AAAC and AL59

- 7.0 The required phase to phase spacing and horizontal spacing for 765kV line shall be governed by the tower design as well as minimum live metal clearances for 765kV voltage level under different insulator swing angles. However, the phase to phase spacing for 765kV line shall not be less than 15 m.
- 8.0 All electrical clearances including minimum live metal clearance, ground clearance and minimum mid span separation between earth wire and conductor shall be as per Central Electricity Authority (Measures Relating to Safety & Electric Supply) Regulations as amended from time to time and IS:5613. Since these clearances for 765kV are not included in CEA Regulation/ Indian Standard, following values shall be considered:
- a) Minimum live metal clearances for 765 kV line:
- (i) Under stationary conditions
From tower body: For 765 kV D/C: 6.1 m
For 765 kV S/C: 5.6 m
- (ii) Under swing conditions
- | Wind pressure Condition | Minimum electrical clearance |
|-------------------------|------------------------------|
| a) Swing angle (25°) | 4.4 mtrs |
| b) Swing angle (55°) | 1.3 mtrs |
- b) Minimum ground clearance: 15 m
- c) Minimum mid span separation between earth wire and conductor: 9.0 m
- 9.0 Shielding angle shall not exceed 10deg for 765kV D/C Line transmission line.
- 10.0 The Fault current for design of line shall be 50kA for 1 sec for 765kV
- 11.0 In case of 765kV voltage class lines, at least one out of two earth wires shall be OPGW and second earth wire, if not OPGW, shall be either of galvanized standard steel (GSS) or ACSR or any other suitable conductor type depending upon span length and other technical consideration.
- 12.0 Each tower shall be earthed such that tower footing impedance does not exceed 10 ohms. Pipe type or Counterpoise type earthing shall be provided in accordance with relevant IS. Additional earthing shall be provided on every 7 to 8 kms distance at tension tower for direct earthing of both shield wires.

SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION

The proposed new substation shall be GIS type generally confirming to the requirement of CEA regulation for construction of substation.

The proposed augmentation at Khetri (PG) substation shall be AIS type generally confirming to the requirement of CEA regulation for construction of substation.

1.0 Salient features of Substation Equipment and Facilities

The design and specification of substation equipment are to be governed by the following factors:

1.1 Insulation Coordination

The system design parameters for substations/switchyards shall be as given below:

S. No	Description of parameters	765/400 kV Narela GIS S/s		765kV Khetri Extn.
		765 kV System	400 kV System	765 kV System
1.	System operating voltage	765kV	400kV	765kV
2.	Maximum voltage of the system (rms)	800kV	420kV	800kV
3.	Rated frequency	50Hz	50Hz	50Hz
4.	No. of phase	3	3	3
5.	Rated Insulation levels			
i)	Impulse withstand voltage for (1.2/50 micro sec.) - Transformer and Reactors - for Other Equipment - for Insulator String	1950kVp 2100kVp 2100kVp	1300kVp 1425kVp 1550kVp	1950kVp 2100kVp 2100kVp
ii)	Switching impulse withstand voltage (250/2500 micro sec.) dry and wet	1550kVp	1050kVp	1550kVp
iii)	One minute power frequency dry withstand voltage (rms)	830kV	630kV	830kV
iv)	One minute power frequency dry and wet withstand voltage (rms)	-	-	-
6.	Corona extinction voltage	508 kV	320kV	508 kV
7.	Max. radio interference voltage for frequency between 0.5 MHz and 2 MHz	2500 micro-volts at 508 kV rms	1000 micro-volts at 266kV rms	2500 micro-volts at 508 kV rms
8.	Minimum creepage distance for insulator string/ longrodinsulators/	24800 mm	13020 mm (31mm)	24800 mm (31mm/kV)

S. No	Description of parameters	765/400 kV Narela GIS S/s		765kV Khetri Extn.
		765 kV System	400 kV System	765 kV System
	outdoor bushings	(31mm/kV)	/kV)	
9.	Minimum creepage distance for switchyard equipment	20000 (25mm/kV)	10500mm (25mm/kV)	20000 (25mm/kV)
10.	Max. fault current	50 kA	63kA	50kA
11.	Duration of fault	1 sec	1 Sec	1 Sec

1.2 Switching Scheme

The switching schemes, as mentioned below, shall be adopted at various voltage levels of substation/switchyard:

Substation	765kV side	400kV side
765/400/220kV Narela GIS S/s	One & half breaker (GIS)	One & half breaker (GIS)
765kV Khetri (PG) S/s Extn.	One & half breaker (AIS)	-----

- i) At 765kV & 400kV voltage level, each circuit of a double circuit transmission line shall be terminated in different diameters.
- ii) Transformers of same HV rating shall be placed in different diameters.

1.0 Substation Equipment and facilities (Voltage level as applicable):

The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All equipment shall be designed considering the transmission line capacity.

Sl. No	Description of bay	765/400/220kV Narela GIS S/s		765kV Khetri (PG) S/S Extn.
		765kV	400kV	765kV
1.	Bus Bar	4000A	4000A	4000A
2.	Line bay	3150A	3150A	3150A
3.	ICT bay	3150A	3150A	-
4.	Bus Reactor bay	3150A	3150A	-
5.	Line Reactor Bay	3150A	-	-

However, current rating of all equipment in one diameter shall be the highest current rating required for connected line/ICT so that the system could operate without any constraint in case of outage of any bus bar.

1.1 $(765/\sqrt{3}) / (400/\sqrt{3}) / 33$ kV Single Phase Autotransformer

Transformer shall conform to IEC-60076 in general. The transformer and all its accessories including bushing/ built in CTs etc. shall be designed to withstand thermal and mechanical stresses caused by symmetrical or asymmetrical faults on any terminals. Mechanical strength of the transformer shall be such that it can withstand 3-phase and 1- phase through fault for transformer rated voltage applied to HV and/or IV terminals of transformer. The short circuit shall alternatively be considered to be applied to each of the IV, HV and tertiary (LV) terminals of the transformer. The tertiary is not considered to be connected to source. The maximum short circuit output current at the tertiary terminals shall be limited to a safe value to make the transformer short circuit proof. The Tertiary winding shall be designed to withstand mechanical and thermal stresses due to dead short circuit on its terminals. However, the cooling for continuous thermal rating of the tertiary winding shall be of at least 5 MVA capacity.

Core shall be constructed from high grade, non-ageing cold rolled super grain oriented silicon steel laminations with requisite BIS certification (HI-B or better grade). The maximum flux density in any part of the core and yoke at the rated MVA, voltage and frequency shall not exceed 1.9 Tesla at all tap positions during 10% continuous over voltage condition. The Transformers shall withstand without damage and over-heating due to over fluxing conditions of 105% for continuous, 125% for 1 minute and 150% for 5 seconds.

All the windings shall be capable of withstanding the dielectric, mechanical and thermal stresses which may be caused by switching, dead short circuit on its terminals. Transfer surge at tertiary shall not exceed 250kVp during impulse from HV & IV Terminals. The air core reactance of the HV winding shall be not less than 25%. External or internal reactors shall not be used to achieve the specified HV/IV, HV/LV and IV/LV impedances.

Transformer shall be fitted with 4x33.3 % independent cooler banks, out of which 3x33.3 % shall be capable of dissipating total losses at continuous maximum rating and 1x33.3% radiator bank shall be used as stand by. Each cooler bank (1x33.3%) shall be capable of dissipating 33.3 per cent of the loss at continuous maximum rating independently. Cooling shall be so designed that during total failure of power supply to cooling fans and oil pumps (considering only three cooler bank (3x33%), the transformer shall be able to operate at full load for at least twenty (20) minutes without the calculated winding hot spot temperature exceeding 140 deg C. Transformer shall be designed so that tank hotspot shall not exceed 110 deg C, considering maximum ambient temperature of 50 Deg. C.

The transformer shall be complete with all required accessories, Bushing CTs, Neutral CT (outdoor type), cooler control cabinet, individual and common marshalling box, RTCC etc. as required for satisfactory operations of transformer. The transformer shall be provided with IEC 61850 compliant digital RTCC relay having automatic voltage regulating features using Bay control and protection unit used for SAS to operate OLTC including parallel operation of transformers. Neutral of the transformer shall be solidly grounded.

HV & IV bushings shall be porcelain / composite type and hermetically sealed oil filled condenser type. LV bushing shall be of RIP (resin impregnated paper condenser) with composite insulator type. 36kV Neutral bushing shall be solid or oil communicating type with porcelain housing.

The Technical Particulars / Parameters of Transformer are given below:

S. No.	Description	Unit	Parameters
1	Rated Capacity: HV/IV	MVA	500MVA, 1- phase
2	Voltage ratio (Phase Voltage)	kV	$(765/\sqrt{3}) / (400/\sqrt{3}) / 33$ kV
3	Vector Group (3 –ph)		YNaOd11
4	Cooling		ONAN/ONAF/(OFAF or ODAF) OR ONAN/ONAF1/ONAF2
5	Rating at different cooling	%	60/80/100
6	Frequency	Hz	50
7	Impedance at 75 Deg C		Tolerances as per IEC
	HV – IV	%	At Max. / Principal / Min. Voltage tap: 12.8 / 14.0 / 16.3
	HV – LV	%	At Max. / Principal / Min. Voltage tap: 160 / 195 / 240
	IV – LV	%	At Max. / Principal / Min. Voltage tap: 150 / 180 / 220
8	Temp. rise over 50deg C Ambient Temp	Deg. C	Top oil: 40, Winding: 45, Hotspot:59
9	Losses		
a)	Maximum No-Load Loss at rated voltage and frequency	kW	70
b)	Maximum Load Loss at rated current and 75 ⁰ C	kW	450
c)	Maximum Auxiliary Loss at rated voltage and frequency	kW	10
10	Windings		
i)	Insulation Level (LI/SI/PF)		kVp/kVp/kVrms
	HV		1950/1550/-
	IV		1300/1050/570
	LV		250/-/95
	Neutral		170/-/70
ii)	Tan delta of windings	%	< 0.5
11	Tap Changer on the neutral side of the winding & Tapping		OLTC with range $\pm 5.5\%$ for HV variation in step of 0.5%, 22
12	Partial discharge (PD) level at $1.58 \times 765\text{kV} / \sqrt{3}$	pC	≤ 100
13	Noise level at rated voltage and at principal tap at full load and all cooling active	dB	≤ 80
14	Insulating oil		virgin high grade inhibited, conforming to IEC-60296
15	Bushing		
A	Rated voltage	kV	800/420/52/36

S. No.	Description	Unit	Parameters
B	Rated current (Min.): HV/IV/LV/Neutral	A	2500/2500/3150/3150
C	Insulation Level (LI/SI/PF)		kVp/kVp/kVrms
	HV		2100/1550/970
	IV		1425/1050/695
	LV		250/-/105
	Neutral		170/-/77
D	Tan delta of bushings	%	< 0.5
E	PD Level of Bushing at Um	pC	≤ 10

1.2 765/√3 kV Single Phase Shunt Reactor

Reactor shall conform to IEC-60076 in general. The reactor shall be designed to withstand the over-voltages repeatedly without risk of failure at 1.05 Um continuously, 1.25 Um for 1 minute and 1.50 Um for 5 seconds (where Um is 800/√3 kV). The reactors shall be designed for switching surge overvoltage of 1.9 p.u. and temporary over voltage of the order of 1.4 p.u. for about 10 cycles followed by power frequency overvoltage upto 830 kVrms for about five minutes. The reactor shall withstand the stress due to above transient dynamic conditions which may cause additional current flow as a result of changed saturation characteristics/slope beyond 1.25 p.u. voltage.

The shunt reactor shall be of either gapped core type or magnetically shielded air core type (shell type) construction. The impedance ratio (X0/X1) specified shall be achieved adopting by either single phase construction in separate tanks or 3 limb core construction. In case of coreless construction, a magnetic shield shall be provided around the coreless coils and non-magnetic material sheet shall form the central core to minimize the vibrations. Core shall be constructed from non-ageing, cold rolled grain oriented silicon steel laminations with requisite BIS certification.

Shunt Reactors shall be capable of operating continuously at a voltage 5% higher than their rated voltage and the thermal & cooling system shall be designed accordingly considering maximum ambient temperature as 50 Deg C.

Reactor shall be designed so that tank hotspot shall not exceed 110 deg C, considering maximum ambient temperature of 50 Deg. C.

The reactor shall be complete with all required accessories, Bushing CTs, Neutral CT (outdoor type) (if required), individual and common marshalling box etc. as required for satisfactory operations of reactor. HV bushing shall be porcelain/composite type and hermetically sealed oil filled condenser type. Neutral Bushing shall be 145kV RIP (resin impregnated paper condenser) with composite insulator type.

The Technical Particulars / Parameters of Reactor are given below:

Sr. No.	Description	Unit	Parameters

Sr. No.	Description	Unit	Parameters
1	Rated Capacity at 765/ $\sqrt{3}$ kV	MVAR	110, 1-phase
2	Rated Voltage (Ur)	kV	765/ $\sqrt{3}$
3	Maximum continuous operating voltage (Um)	kV	800/ $\sqrt{3}$
4	Cooling System		ONAN
5	Permissible current unbalance among different phases		$\pm 1\%$
6	Crest value of Third Harmonic content in phase current at rated voltage with sinusoidal wave form	%	$\leq 3\%$ of the crest value of fundamental
7	Range of constant current		Up to 1.25 p.u. voltage
8	Tolerance on current	%	(i) 0 to +5% for a single phase unit (ii) $\pm 1\%$ for between units
9	Ratio of zero sequence reactance to positive reactance (X0/X1)	Range	0.9 - 1.0
10	Max. Temp. rise over 50 deg C Ambient Temp and Voltage at 800/ $\sqrt{3}$ kV		Top oil/Winding/Hots 140/145/150
11.	Losses		
a)	Maximum Permissible Losses at rated Voltage, Frequency and at 75 ⁰ C (kW)	kW	120
12	Windings		
i)	Insulation level (LI/SI/PF)		kVp / kVp / kVrms
	HV		1950/1550/830 (Ph-Earth) for 5 min.
	Neutral		550/-/230
ii)	Tan delta of windings	%	< 0.5
13	Vibration at 800/ $\sqrt{3}$ kV and rated	micron	≤ 200 microns peak to
14	Noise level at at 800/ $\sqrt{3}$ kV and rated frequency	dB	≤ 80 dB
15	Insulating Oil		virgin high grade inhibited,
16	Partial discharge (PD) level at 1.58	pC	< 100
17	Bushing		
i)	Rated voltage: HV / Neutral	kV	800/145
ii)	Rated current (Min.): HV / Neutral	A	2500/1250
iii)	Insulation level (LI/SI/PF)		kVp / kVp / kVrms

Sr. No.	Description	Unit	Parameters
	HV		2100/1550/970
	Neutral		650/-/305
iv)	Tan delta of bushings: HV/Neutral	%	< 0.5
v)	PD of Bushing at Um: HV/Neutral	pC	< 10

The neutral of shunt reactor shall be insulated to 550 kVp for lightning impulse. The neutral of the line reactors (wherever provided) shall be grounded through adequately rated Neutral Grounding Reactors (NGR) to facilitate single phase auto-reclosure, provided that the NGR shall be provided with bypass arrangement through a breaker so that the line reactor can be used as Bus Reactor as and when required. The neutral of Bus Reactor shall be solidly grounded.

Neutral Grounding Reactor (NGR) and Surge Arrester for 765kV line reactors

The neutral grounding reactors are required for grounding of the neutral point of shunt reactors to limit the secondary arc current and the recovery voltage to a minimum value. TSP shall provide NGR of suitable value (Ohm) as per actual line length. NGR shall be dry type air core for outdoor application. Line and ground side of NGR shall be rated for 145kV and 36kV class of insulation respectively. NGR shall be rated for continuous current of 20A and short time current of 240A r.m.s for 1 minute. However, the NGR shall be designed for a short time current of 600 Amp r.m.s to ensure mechanical robustness. It shall be solidly connected between neutral of shunt reactor and earth. The NGR shall be mounted on support structure (non-magnetic material) high above ground level (2.55 meter) to allow free and safe access at ground level for personnel. Further, a suitable bypass switching arrangement should be provided across NGR so that neutral of line reactor can be solidly grounded by bypassing NGR and line reactor can be used as bus reactor, if required.

The surge arresters (rated voltage 132kV) shall be of heavy duty station class type. It shall be physically located between the neutral of shunt reactor (brought out at 145kV class bushing) and neutral grounding reactor. The surge arresters shall conform in general to IEC-60099-4. Surge arresters shall be of gapless type without any series or shunt gap. Arresters shall be hermetically sealed units, of self-supporting construction, suitable for mounting on structures.

1.3 420kV, 3-Phase, Shunt Reactor

Reactor shall conform to IEC 60076-6 in general. The reactor shall be designed to withstand the over-voltages repeatedly without risk of failure at 1.05 Ur continuously, 1.25 Ur for 1 minute and 1.50 Ur for 5 seconds (where Ur is 420kV). The reactors shall be designed for switching surge overvoltage of 2.5 p.u. and temporary overvoltage of 2.3 p.u. for few cycles followed by power frequency overvoltage up to 1.5 p.u. The reactor must withstand the stress due to above transient dynamic conditions which may cause additional current flow as a result of changed saturation characteristics/slope beyond 1.5 p.u. voltage.

The reactor shall be of either gapped core type or magnetically shielded air core type (shell type) construction. The impedance ratio (X0/X1) specified shall be achieved by adopting either single phase construction in separate tanks or three phase with 3 limb or 5 limb core construction. In

case of coreless construction, a magnetic shield shall be provided around the coreless coils and non-magnetic material sheet shall form the central core to minimize the vibrations. Core shall be constructed from non-ageing, cold rolled grain oriented silicon steel laminations with requisite BIS certification.

Shunt Reactors shall be capable of operating continuously at a voltage 5% higher than their rated voltage without exceeding winding and tank hot spot temperature 140 Deg and 110 Deg Celsius respectively, considering maximum ambient temperature as 50 Deg C.

The reactor shall be complete with all required accessories, Bushing CTs, marshalling box etc as required for satisfactory operations of reactor. HV and Neutral bushings shall be RIP (resin impregnated paper condenser) with composite insulator type.

The Technical Particulars / Parameters of Shunt Reactor are given below:

Sl. No.	Description	Unit	Parameters
1.1	Rated Voltage, Ur (1p.u)	kV	420
1.2	Rated Capacity at 420 kV	MVAR	125
1.3	Cooling System		ONAN
1.4	Permissible current unbalance among different phases	%	± 2
1.5	Crest value of Third Harmonic content in phase current at rated voltage with sinusoidal wave form	%	$\leq 3\%$ of the crest value of fundamental
1.6	Range of constant Impedance		Up to 1.5 p.u. voltage
1.7	Tolerance on current	%	0 to +5%
1.8	Ratio of zero sequence reactance to positive reactance (X0/X1)	Range	0.9 - 1.0
1.9	Max. Temperature rise over 50 deg C Ambient Temp at rated voltage	Deg.C	Top oil: 40 & Winding: 45
1.10	(a) Maximum Permissible load Losses at rated Voltage, Frequency and at 75° C (kW) for 420kV, 125 MVAR, 3-Phase Reactor	kW	160
	(b) Maximum Permissible I ² R Losses of Reactor at rated Voltage, Frequency and at 75° C	kW	90
1.11	Windings		
a)	Insulation level (LI/SI/PF)		kVp/ kVp/kVrms
	HV		1300/1050/-

Sl. No.	Description	Unit	Parameters
	Neutral		550/-/230
b)	Tan delta of windings	%	< 0.5
1.11	Partial discharge (PD) level at $1.58 U_r / \sqrt{3}$	pC	< 100
1.12	Vibration & Tank stress level at rated voltage and frequency		≤ 200 microns peak to peak; Average: ≤ 60 microns peak to peak. Stress: ≤ 2.0 kg/sq.mm at any point on tank.
1.13	Noise level at rated voltage and frequency	dB	< 80
1.14	g		
a)	voltage : HV / Neutral	kV	420/145
b)	Rated current (Min.) HV / Neutral	A	800/800
c)	Insulation level (LI/SI/PF)		kVp/ kVp / kVrms
	HV		1425/1050/695
	Neutral		650/-/305
d)	Tan delta of bushings : HV / Neutral	%	< 0.5
e)	PD of bushings at level U_m	pC	<10
1.15	Insulating Oil		virgin high grade inhibited, conforming to IEC-60296

The neutral of shunt reactor shall be insulated to 550 kVp for lightning impulse. The neutral of the line reactors (wherever provided) shall be grounded through adequately rated Neutral Grounding Reactors (NGR) to facilitate single phase auto-reclosure, provided that the NGR shall be provided with bypass arrangement through a breaker so that the line reactor can be used as Bus Reactor as and when required. The neutral of Bus Reactor shall be solidly grounded.

Neutral Grounding Reactor (NGR) and Surge Arrester for 400kV Line Reactors (as applicable)

The neutral grounding reactors are required for grounding of the neutral point of shunt reactors to limit the secondary arc current and the recovery voltage to a minimum value. TSP shall provide NGR of suitable value (Ohm) as per actual line length. NGR shall be oil filled type suitable for outdoor application. Line and ground side of NGR shall be rated for 145kV and 36kV class of insulation respectively. NGR shall be rated for continuous current of 10A and short time current of 60A r.m.s for 10 seconds. It shall be solidly connected between neutral of shunt reactor and earth. Further, a suitable bypass switching arrangement should be provided across NGR so that neutral of line reactor can be solidly grounded by bypassing NGR and line reactor can be used as bus reactor, if required.

The surge arresters (rated voltage 120kV) shall be of heavy duty station class type. It shall be physically located between the neutral of shunt reactor (brought out at 145kV class bushing) and neutral grounding reactor. The surge arresters shall conform in general to IEC-60099-4. Surge

arresters shall be of gapless type without any series or shunt gap. Arresters shall be hermetically sealed units, of self-supporting construction, suitable for mounting on structures.

1.4 765kV / 400kV GIS Substation equipment

GIS (Gas Insulated Switchgear) shall be Indoor type in accordance to IEC: 62271-203. The switchgear shall be designed and specified to withstand operating conditions and duty requirements. All the switchgear such as Circuit Breaker, isolator, earth switch including CT, PT etc. shall be GIS type. Outdoor Surge Arrestor and Voltage Transformer shall be AIS or GIS type. The GIS assembly shall consist of separate modular compartments e.g. Circuit Breaker compartment, Bus bar compartment filled with SF₆ Gas and separated by gas tight partitions so as to minimize risk to human life, allow ease of maintenance and limit the effects of gas leaks failures & internal arcs etc. These compartments shall be designed to minimize the risk of damage to adjacent sections and protection of personnel in the event of a failure occurring within the compartments. Rupture diaphragms with suitable deflectors shall be provided to prevent uncontrolled bursting pressures developing within the enclosures under worst operating conditions, thus providing controlled pressure relief in the affected compartment. The arrangement of gas sections or compartments shall be such as to facilitate future extension of any make without any drilling, cutting or welding on the existing equipment. To add equipment, it shall not be necessary to move or dislocate the existing switchgear bays.

The bus bar modules including auxiliary bus modules (wherever applicable) shall be provided with suitable End Piece (Interface) module with the test link facility for future extension as per provisions of future requirement. The end piece module shall be designed in such a way so that future GIS module may be tested without extending test voltage to existing bus and vice-versa by removing the test link.

TSP shall make available the complete details for the design of interface module such as cross section, enclosure material, enclosure dimensions (inner & outer), Flange diameter (inner & outer), conductor cross-section & connection arrangement, bolt spacing & dimension, rated gas pressure, Gasket detail etc. Further, adequate space for GIS busbar interface module shall be taken into account for future scope.

Each section shall have plug-in or easily removable connection pieces to allow for easy replacement of any component with the minimum disturbance to the remainder of the equipment. Inspection windows (View Ports) shall be provided for Disconnect Switches and both type of earth switches i.e. Maintenance and fast operating.

Local control cabinets (LCC) shall be provided as per requirement. The alarm & annunciation of GIS equipment shall be wired to SCADA System.

The material and thickness of the enclosures shall be such as to withstand an internal flash over without burns through for a period of 300 ms at rated short time withstand current. The material shall be such that it has no effect of environment as well as from the by-products of SF₆ breakdown under arcing condition. This shall be validated with Type Test.

Service continuity requirement for GIS:

The GIS equipment with the given bus switching arrangement shall be divided into different gas compartments. During the work such as a fault repair or major maintenance, requiring the dismantling of a gas compartment for which more than one compartments may need to be de-gassed.

TSP shall meet following Service continuity conditions (to the extent possible) with ensuring equipment and operating personnel's safety:

- For One & half breaker bus switching scheme, during a fault in Circuit Breaker compartment, no bus bar and feeder is permitted out of service during maintenance and repair/replacement.
- For Double Main bus switching scheme, during a fault in Circuit Breaker compartment, no bus bar is permitted out of service during maintenance and repair/replacement.
- During a fault in GIS compartment other than Circuit Breaker compartment, maximum one bus bar and/or one feeder is permitted out of service during maintenance and repair/replacement.

UHF sensors in GIS for PD (Partial Discharge) detection:

Adequate number of UHF sensors shall be provided in the offered GIS along with suitable portable type PD measuring instrument for detection of Partial discharge (of 5 pC and above as per IEC 60270). The number and location of these sensors shall be based on laboratory test on typical design of GIS as per recommendations of CIGRE Document No. 654 (Application Guide for sensitivity verification for UHF Partial discharge detection system for GIS).

2.4.1 Circuit Breakers

GIS Circuit breakers shall in general be of C2-M2 class and comply to IEC-62271-100. The rated break time shall not exceed 40 ms for 765kV & 400kV. Circuit breakers shall be provided with single phase and three phase auto reclosing. The Circuit breakers controlling 765kV lines shall be provided with pre insertion closing resistor of about 450 ohms with 9 ms insertion time or Controlled Switching Device (CSD). The Circuit breakers controlling 400kV lines wherever required shall be provided with pre insertion closing resistor of about 400 ohms with 8 ms insertion time or Controlled Switching Device (CSD) for lines longer than 200 km. The short line fault capacity shall be same as the rated capacity and this is proposed to be achieved without use of opening resistors. Control switching device shall be provided in Circuit Breaker of switchable line reactor bay and in Main & Tie bay circuit breakers of line with non-switchable line reactors, Bus reactors and 765/400kV Transformers (wherever applicable).

2.4.2 Isolators

The isolators shall comply to IEC 62271-102 in general. Isolators shall be motor (DC powered) operated. Earth switches are provided at various locations to facilitate maintenance. Main blades and earth blades shall be interlocked and interlock shall be fail safe type. All earth switches shall be motor operated type.

Isolator shall be suitable for Bus Transfer Current Switching duty as per IEC standard. High speed earthing switches shall be provided for grounding purpose at overhead line terminations & cable terminations & cable terminations and shall have fault making capability as specified. Earth switch for line isolator shall be of earthing switch class E1 and shall be suitable for induced current switching duty as defined for Class-B as per relevant standard.

2.4.3 Current Transformers

Current Transformers shall comply with IEC 61869 in general. All ratios shall be obtained by secondary taps only. Generally, Current Transformers (CT) shall have five cores (four for protection and one for metering) whereas; CT in Tie bays shall have six cores (four for protections & two for metering) suitably distributed on both sides of CB (for 400kV and above voltage class). The burden and knee point voltage shall be in accordance with the requirements of the system including possible feeds for telemetry. Accuracy class for protection core shall be PX and for metering core it shall be 0.2S. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system for better sensitivity and accuracy.

2.4.4 Voltage Transformer

The voltage transformers shall conform to IEC-61869. Voltage transformers shall be of electromagnetic type with SF₆ gas insulation. The earth end of the high voltage winding and the ends of the secondary winding shall be brought out in the terminal box. The voltage transformers shall be located as a separate bay module and will be connected phase to ground and shall be used for protection, metering and synchronization. The voltage transformers shall be of inductive type, nonresistant and shall be contained in their own-SF₆ compartment, separated from other parts of installation. The voltage transformer shall be effectively shielded against high frequency electromagnetic transients. The voltage transformer shall have three secondary windings. The voltage transformer should be thermally and dielectrically safe when the secondary terminals are loaded with the guaranteed thermal burdens. The accuracy class for protection cores shall be 3P. The accuracy of 0.2 on metering core should be maintained throughout the entire burden range on all the three windings without any adjustments during operation. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system for better sensitivity and accuracy.

2.4.5 SF₆ to Air Bushing

Outdoor bushings, for the connection of conventional external conductors to the SF₆ metal enclosed switchgear, shall be provided. Bushings shall generally be in accordance with the requirements of IEC -60137. The creepage distance over the external surface of outdoor bushings shall not be less than 31 mm/kV. SF₆ to air Bushing shall be of Polymer / composite type and shall be robust and designed for adequate cantilever strength to meet the requirement of seismic condition. The electrical and mechanical characteristics of bushings shall be in accordance with IEC 60137. Polymer / composite insulator shall be seamless sheath of silicone rubber compound. The housing & weather sheds should have silicon content of minimum 30% by weight. It should protect the bushing against environmental influences, external pollution and humidity. The hollow silicone composite insulators shall comply with the requirements of IEC 61462 and the relevant parts of IEC 62217.

1.5 Circuit Breakers (AIS)

The circuit breakers and accessories shall conform to IEC: 62271-100, IEC: 62271-1 and shall be of SF₆ Type. The rated break time shall not exceed 40 ms for 765kV & 400kV circuit breakers and 60 ms for 220kV circuit breakers. 765kV, 400kV and 220kV Circuit breakers shall be provided with single phase and three phase auto reclosing. The Circuit breakers controlling 765kV lines shall be provided with pre insertion closing resistor of about 450 ohms maximum with 9 ms minimum insertion time or Controlled Switching Device. The Circuit breakers controlling 400kV lines of more than 200km length shall be provided with pre insertion closing resistor of about 400 ohms maximum with 8 ms minimum insertion time or Controlled Switching Device. The short line fault capacity shall be same as the rated capacity and this is proposed to be achieved without use of opening resistors. Control switching device shall be provided in Circuit Breaker of switchable line reactor bay and in Main & Tie bay circuit breakers of line with non-switchable line reactors, Bus reactors and 765/400kV Transformers (wherever applicable).

1.6 Isolators (AIS)

The isolators shall comply to IEC 62271-102 in general. 765kV Isolator design shall be double break or vertical break or knee-type. 400 kV and 220kV Isolators shall be double break type. All Isolators and earth switches shall be motor operated. Earth switches shall be provided at various locations to facilitate maintenance. Isolator rated for 765kV, 400kV and 220kV shall be of extended mechanical endurance class-M2 and all earth switches shall be class M0 as per IEC-

62271-102. Main blades and earth blades shall be interlocked and interlock shall be fail safe type. 765kV, 400kV and 220kV earth switch for line isolator shall be suitable for induced current switching duty as defined for Class-B.

1.7 Current Transformers (AIS)

Current Transformers shall comply with IEC 61869 in general. All ratios shall be obtained by secondary taps only. Generally, Current Transformers (CT) for 765kV & 400kV shall have six cores (four for protection and two for metering). The burden and knee point voltage shall be in accordance with the requirements of the system including possible feeds for telemetry. Accuracy class for protection core shall be PX and for metering core it shall be 0.2S. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system for better sensitivity and accuracy.

1.8 Capacitor Voltage Transformers (AIS)

Capacitive Voltage transformers shall comply to IEC 61869 in general. These shall have three secondaries out of which two shall be used for protection and one for metering. Accuracy class for protection cores shall be 3P and for metering core it shall be 0.2. The Capacitive voltage transformers on lines shall be suitable for Carrier Coupling. The Capacitance of CVT for 765kV shall be 8800 pF. The Capacitance of CVT for 400kV and 220kV shall be of 4400/8800 pF depending on PLCC requirements. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system for better sensitivity and accuracy.

1.9 Surge Arresters (AIS)

624kV, 336kV & 216kV Station class, current limiting, heavy duty gapless type Surge arresters conforming to IEC 60099-4 in general shall be provided for 800kV, 420kV & 245kV systems respectively. The rated voltage of Surge arrester and other characteristics are chosen in accordance with system requirements. Surge arresters shall be provided near line entrances, transformers & Reactor so as to achieve proper insulation coordination. Surge Arresters shall be provided with porcelain/ polymer housing fitted with pressure relief devices. A leakage current monitor with surge counter shall be provided with each surge arrester.

1.10 Protection Relaying & Control System

The protective relaying system proposed to be provided for transmission lines, auto-transformers, reactors and bus bars to minimize the damage to the equipment in the events of faults and abnormal conditions, is dealt in this section. All main protective relays shall be numerical type with IEC 61850 communication interface. All numerical relays shall have built in disturbance recording feature.

a) Transmission Lines Protection

765kV, 400kV and 220kV lines shall have Main-I numerical three zone distance protection scheme with carrier aided inter-tripping feature. 765kV, 400kV and 220kV lines shall also have Main-II numerical distance protection scheme like Main-I but from different make that of Main-I. The Main-I and Main-II protection relays of same make may be provided only if they are of different hardware & manufacturing platform

Line Current Differential relay (with back up distance protection feature) as Main-I and Main-II shall be considered at both ends for short lines (line length below 30kM) having Fibre Optic communication link.

Differential relay at remote end shall be provided by the TSP. Associated power & control cabling and integration with SAS at remote end shall be provided by respective bay owner.

In case of 220kV line bays where the line lengths are not indicated, Numerical Distance protection relay as Main-I and Line Current differential relay (with back up distance protection feature) as Main-II shall be provided. Further, in such case, the matching line current differential relay for remote end shall be provided by the remote end bay owner.

In case of loop in loop out of transmission lines, the existing protection scheme shall be studied and suitable up-gradation (if required) shall be carried out.

Further, all 765kV, 400kV and 220kV lines shall be provided with single and three phase auto-reclosing facility to allow reclosing of circuit breakers in case of transient faults. These lines shall also be provided with distance to fault locators to identify the location of fault on transmission lines.

All 765kV & 400kV lines shall also be provided with two stages over voltage protection. Over voltage protection & distance to fault locator may be provided as in-built feature of Main-I & Main-II protection relays. Auto reclose as built in function of Bay Control Unit (BCU) is also acceptable.

The Main-I and Main-II protection relays shall be fed from separate DC sources and shall be mounted in separate panels.

For 765kV, 400kV and 220kV transmission lines, directional IDMT earth fault relay should be provided as standalone unit or in-built feature of Main-I and Main -II feature.

b) Auto Transformer Protection

These shall have the following protections:

- i) Numerical Differential protection
- ii) Numerical Restricted earth fault protection
- iii) Numerical Back-up Over-current and earth fault protection on HV & MV side
- iv) Numerical Over fluxing protection on HV & MV side
- v) Numerical Overload alarm
- v) Numerical Back up Impedance protection (HV Side)

Further, Numerical Back-up Over-current and earth fault protection on HV & MV side of autotransformer shall not be combined with other protective functions (except back up Impedance protection) in the main relays and shall be independent relays. Besides these, power transformers shall also be provided with Buchholz relay, protection against high oil and winding temperature and pressure relief device etc.

Suitable monitoring, control (operation of associated circuit breaker & isolator) and protection for LT auxiliary transformer connected to tertiary winding of auto-transformer for the purpose of auxiliary supply shall be provided. The Over current and open delta protection is required to be provided for the auxiliary transformer. These protection and control may be provided as built in feature either in the bay controller to be provided for the auxiliary system or in the control & protection IEDs to be provided for autotransformer.

c) 765kV & 400kV Reactor Protection

Reactor shall be provided with the following protections:

- i) Numerical Differential protection.
- ii) Numerical Restricted earth fault protection
- iii) Numerical Back-up impedance protection

Besides these, reactors shall also be provided with Buchholz relay, MOG with low oil level alarm, protection against oil and winding temperatures & pressure relief device, etc.

d) Bus bar Protection

The high speed low impedance type bus bar differential protection, which is essential to minimize the damage and maintain system stability at the time of bus bar faults, shall be provided for 765kV, 400kV and 220kV buses. Duplicated bus bar protection is envisaged for 765kV & 400kV bus-bar protection. Bus bar protection scheme shall be such that it operates selectively for each bus and incorporate necessary features required for ensuring security. The scheme shall have complete bus bar protection for present as well as future bays envisaged i.e. input / output modules for future bays shall also be provided.

Bus Bar protection system for new substation shall be de-centralized (distributed) type.

In case, the bus section is provided, then each side of bus section shall have separate set of bus bar protection schemes.

For existing substations, the existing bus bar protection shall be augmented as per requirement.

e) Local Breaker Back up Protection

This shall be provided for each 765kV, 400kV and 220kV circuit breakers and will be connected to de-energize the affected stuck breaker from both sides.

Notes:

1. LBB & REF relays shall be provided separately from transformer differential relay.
2. LBB relay may also be provided as built-in protection function of distributed bus bar protection scheme; however in such case separate LBB relay shall be provided for tie bays (in case of One and Half breaker scheme).
3. Over fluxing & overload protection can be provided as built-in feature of differential relay.
4. In 765kV & 400kV switchyard, if spare bay of half diameter is identified as future, Tie CB relay panel shall be with Auto-reclosure feature.

1.11 Substation Automation System

- a) For all the new substations, state of art Substation Automation System (SAS) conforming to IEC-61850 shall be provided. The distributed architecture shall be used for Substation Automation system, where the controls shall be provided through Bay control units. The Bay control unit is to be provided bay wise for voltage level 220kV and above. All bay control units as well as protection units are normally connected through an Optical fibre high speed network.

The control and monitoring of circuit breaker, dis-connector, re-setting of relays etc. can be done from Human Machine Interface (HMI) from the control room.

The functions of control, annunciation, disturbance recording, event logging and measurement of electrical parameters shall be integrated in Substation Automation System.

The Automation System shall be provided with the facility of communication and control for remote end operation so that by providing remote HMI and suitable communication link, the substation can be controlled from a remote location. Mode of communication shall be considered as optical fibre or leased line based on IEC-60870-5-104 communication protocol.

At new substations, the Substation Automation System (SAS) shall be suitable for operation and monitoring of the complete substation including proposed future bays/elements.

In existing substations with Substation automation system (SAS), augmentation of existing SAS shall be done for bays under present scope.

In existing Substations where Substation automation is not provided, control functions shall be done through control panels.

Necessary gateway & modems (as required) shall be provided to send data to RLDC/SLDC as per their requirement. Any augmentation work at RLDC/SLDC is excluded from TSP's scope. However, all the configuration work at substation end required to send data to RLDC/SLDC shall be in the scope of TSP.

b) Time synchronization equipment

Time synchronization equipment complete in all respect including antenna, cable, processing equipment required to receive time signal through GPS or from National Physical Laboratory (NPL) through INSAT shall be provided at new substations. This equipment shall be used to synchronize SAS & IEDs etc.

2.0 Substation Support facilities

Certain facilities required for operation & maintenance of substations as described below shall be provided at new substation. In existing substation, these facilities have already been provided and would be extended/ augmented as per requirement.

2.1 AC & DC power supplies

For catering the requirements of three phase & single phase AC supply and DC supply for various substation equipment, the following arrangement is envisaged:-

- i) For LT Supply at each new Substation, two (2) nos. of LT Transformers (minimum 800kVA for substations with highest voltage rating as 765kV and minimum 630kVA for substations with highest voltage rating as 400kV) shall be provided out of which one shall be connected with SEB/DISCOM supply and other one shall be connected to tertiary of Transformer.

Metering arrangement with Special Energy Meters (SEMs) shall be provided by TSP at 33kV tertiary of 765/400/220 kV Transformer for drawing auxiliary supply at new substation. Such

SEMs shall be provided by CTU at the cost of the TSP. Accounting of such energy drawn by the TSP shall be done by RLDC/RPC as part of Regional Energy Accounting.

Additionally, Active Energy Meters may be provided at the same point in the 33kV tertiary of 765/400/33 kV Transformer by local SEB/DISCOM for energy

- ii) 2 sets of 220V battery banks for control & protection and 2 sets of 48V battery banks for PLCC/ communication equipment shall be provided at each new Substation. Each battery bank shall have a float-cum-boost charger. Battery shall be of VRLA type.
- iii) Suitable AC & DC distribution boards and associated LT Switchgear shall be provided at new substation. For new substation, following switch boards with minimum rating as specified here under shall be considered with duplicate supply:
 - (a) 415V Main Switch board – 2 nos. (two sections separated by one bus coupler)
 - (b) AC distribution board – 2 nos. (two sections separated by one bus coupler)
 - (c) Main lighting distribution board – 1 no.
 - (d) Emergency lighting distribution board – 1 no.
 - (e) 220 Volt DC distribution board – 2 nos.
 - (f) 48 Volt DC distribution board – 2 nos.

Sizing of LT Switchgear shall be suitable to cater the requirement for all present and future bays. AC & DC distribution boards shall have modules for all the feeders (including future as specified).

- iv) At new Substation, one no. of DG set (minimum 500 kVA for substations with highest voltage rating as 765kV and minimum 250kVA for substations with highest voltage rating as 400kV) shall be provided for emergency applications.
- v) At new substation, sizing of battery and battery charger shall be done based on the number of bays specified (including future bays).
- vi) For substation extensions, existing facilities shall be augmented as required.

2.2 Fire Fighting System

Fire-fighting system for substation including transformer & reactor shall conform to CEA (Measures Relating to Safety & Electric Supply) Regulations.

Further, adequate water hydrants and portable fire extinguishers shall be provided in the substations. The main header of firefighting system shall be suitable for extension to bays covered under the future scope; necessary piping interface in this regard shall be provided.

Beam type heat detection for GIS hall fire protection system shall be provided for all the GIS halls.

At existing substations, the fire-fighting systems as available shall be extended to meet the additional requirements.

2.3 Oil evacuating, filtering, testing & filling apparatus

To monitor the quality of oil for satisfactory performance of transformers, shunt reactors and for periodical maintenance necessary oil evacuating, filtering, testing and filling apparatus would be provided at new substations. Oil storage tanks of adequate capacities for storage of transformer oil would be provided.

2.4 Illumination

Normal & emergency AC & DC illumination shall be provided adequately in the control room & other buildings of the substation. The switchyard shall also be provided with adequate illumination.

Lighting of the entire control room building, fire-fighting pump house, other building (if any) and switchyard shall be done by LED based low power consumption luminaries.

2.5 Control Room

For new substation, substation control room shall be provided to house substation work stations for station level control (SAS) along with its peripheral and recording equipment, AC & DC distribution boards, DC batteries & associated battery chargers, Fire Protection panels, Telecommunication panels & other panels as per requirements. Air conditioning shall be provided in the building as functional requirements. Main cable trenches from the control room shall have adequate space provision for laying of cables from control room for all the future bays also.

At existing substations, the adequacy of size of control room shall be ascertained and the same shall be augmented as per requirement.

2.6 GIS hall

The Gas Insulated Switchgear (GIS) of each voltage along with other associated equipment shall be housed inside the GIS building separately. The panels i.e. Bay level units, bay mimic, relay and protection panels, RTCC panels, PLCC panels etc. are to be placed in a separate room in the GIS building. The size of the room shall be such that all the panels for the bays under present scope shall be accommodated. The panel room shall be air-conditioned. Further, the temperature of the room shall be monitored through substation automation system by providing necessary temperature transducers. Ventilation system of suitable capacity shall be provided for each GIS hall.

One EOT Crane of suitable capacity for erection & Maintenance of largest GIS component/assembly and all plant installed in the GIS switchgear room shall be provided in each GIS hall. The crane shall be capable of fulfilling all special requirements for erection & maintenance of GIS equipment. The capacity of the crane shall be sized to lift the heaviest GIS switchgear component.

For extension of existing GIS, existing facilities shall be suitably augmented/ extended for GIS equipment under present scope.

2.7 Control Concept

All the EHV circuit breakers in substation/switching stations shall be controlled and synchronized from the switchyard control room/remote control center. Each breaker would have two sets of trip circuits which would be connected to separate DC supplies for greater reliability.

All the isolators shall have control from remote/local whereas the earth switches shall have local control only.

2.8 Visual monitoring system for watch and ward of substation premises:

Visual monitoring system for effective watch and ward of substation premises covering the areas of entire switchyard, Control room building, other buildings/stores and main gate, shall be provided. The Visual Monitoring System shall have provision of WAN connectivity for remote monitoring.

The number of cameras and their locations shall be decided in such a way that any location covered in the substation area can be scanned. The cameras shall be located in such a way to monitor at least:

1. The operation of each and every isolator pole of the complete yard in case of AIS Sub-station.
2. The Operation of each bay bays of GIS Hall as applicable.
3. All the Transformer and Reactors, all the Entrance doors of Control Room Building, GIS hall and any other building as applicable.
4. All the gates of switchyard.
5. Main entrance Gate
6. All other major AIS Equipment (such as CB, CT, CVT, SA etc. as applicable)

At existing substations, the visual monitoring system as available shall be augmented as required.

4.0 General Facilities

- a) Line Gantry/Towers are envisaged for bays under present scope only. However, for adjacent future line bay, tower shall be designed for extension (considering Quad conductors for 400kV future lines and single conductor for 220kV future lines) wherever applicable.
- b) Bay extension works at existing substation shall be executed by TSP in accordance with the requirement/provisions mentioned above. However, interface points shall be considered keeping in view the existing design/arrangement at the substation.
- c) TSP has to arrange for construction power and water on its own.
- d) All outdoor steel structures including anchor/foundation bolts shall be fully galvanized. The weight of the zinc coating shall be at least 610 gm/sq.m.

- e) In 765 & 400kV switchyard, if spare bay of half diameter is identified as future, all the equipment for Tie & Future bay shall be designed considering the current rating of line bay i.e. 3000A.

PLCC

PLCC & PBAX: Power line carrier communication (PLCC) equipment complete for speech, teleprotection commands and data channels shall be provided on each transmission line. The protections for transmission line and the line compensating equipment shall have hundred percent back up communication channels i.e. two channels for tele- protection in addition to one channel for speech plus data for each direction.. The PLCC equipment shall in brief include the following:-

Coupling device, line traps, carrier terminals, protection couplers, HF cables, PABX (if applicable) and maintenance and testing instruments.

A telephone exchange (PABX) of 24 lines shall be provided at new substations as means of effective communication among various buildings of the substation, remote end substations and with control centers (RLDC/SLDC) etc.

Coupling devices shall be suitable for phase to phase coupling for 765kV & 400kV Transmission lines. The pass band of coupling devices shall have sufficient margin for adding communication channel in future if required. Necessary protection devices for safety of personnel and low voltage part against power frequency voltages and transient over voltage shall also be provided.

The line traps shall be broad band tuned suitable for blocking the complete range of carrier frequencies. Line Trap shall have necessary protective devices such as lightning arresters for the protection of tuning device. Decoupling network consisting of line traps and coupling capacitors may also be required at certain substation in case of extreme frequency congestion.

The carrier terminals shall be of single side-band (SSB) amplitude modulation (AM) type and shall have 4 kHz band width. PLCC Carrier terminals and Protection couplers shall be considered for both ends of the line.

PLCC equipment for all the transmission lines covered under the scheme (consisting of one set of analog PLCC channel along with circuit protection coupler and one set of Digital protection coupler for both ends) shall be provided by TSP.

TSP shall provide/undertake necessary addition/modification/shifting/re-commissioning etc. of PLCC equipment due to LILO of transmission lines.

All other associated equipment like cabling, coupling device and HF cable shall also be provided by the TSP. The wave trap and CVT required for PLCC at remote end shall be provided by respective bay owner.

Technical Requirement of Communication System

Transmission system strengthening scheme for evacuation of power from solar energy zones in Rajasthan (8.1 GW) under Phase II –Part G

Khetri – Narela 765kV D/c line

On Khetri – Narela 765kV D/c line one OPGW containing 24 Fibres is to be installed by the TSP in place of conventional earth wire during the construction of line. The installation of OPGW shall be done from gantry of Khetri up to gantry of Narela and shall be terminated in a Joint Box to be provided by TSP at both the ends. In case of requirement of repeater to establish link between Khetri - Narela, the OPGW (48F) connectivity from power line crossing point upto repeater station shall also be in the scope of TSP.

LILO of 765kV Meerut – Bhiwani S/C line at Narela

On LILO of 765kV Meerut – Bhiwani S/c line at Narela, two (02) nos OPGW containing 24 Fibres is to be installed in LILO portion (1 no 24-F OPGW for Line-In and 1 No OPGW for Line-Out portion) by the TSP in place of conventional earth wire during the construction of line. The installation of OPGW shall be done from LILO IN and LILO Out Tapping Points of Meerut – Bhiwani 765kV S/c line to gantry at Narela and shall be terminated in Joint Boxes to be provided by TSP at Narela Gantry. In case of requirement of repeater to establish link between Meerut – Narela or Bhiwani – Narela, the OPGW (48F) connectivity from power line crossing point upto repeater station shall also be in the scope of TSP. Maintenance of OPGW shall be responsibility of TSP.

**There is no OPGW in 765kV Meerut – Bhiwani S/c line and ownership of the line is with POWERGRID.*

Establishment of 765/400kV, 3x1500 MVA GIS substation at Narela with 765kV (2x330MVAR) bus reactor and 400kV (1x125MVAR) bus reactor

- (I) TSP shall provide FODP(96 F) and Approach Cable (24F) at Narela S/s and repeater station(if any) which shall be connected with OPGW fibres to be installed on Khetri-Narela 765kV D/c line and LILO of 765kV Meerut – Bhiwani S/C line at Narela.
- (II) TSP (Transmission Service Provider) shall provide STM-16 SDH equipment for Narela S/s and for repeater stations (if required) along with necessary interfaces to meet the voice and data communication requirement of these stations and shall be integrated with remote ends i.e. Meerut, Bhiwani & Khetri.
- (III) In case of repeater requirement, TSP shall provide Repeater shelter alongwith DG set, provisioning for AC and DC supply and other associated systems.
- (IV) The integration of Communication equipment with centralized NMS at regional level shall be responsibility of TSP. Configuration work in centralized NMS for integration of new Communication equipment is not in scope of TSP, however all necessary support to integrate new Communication equipment in the Centralized NMS shall be ensured by TSP.

- (V) TSP shall install required no. of Phasor Measurement Units (PMUs) for all 765kV feeders (under the scope of this project) at Narela S/s and PMUs shall support latest IEEE C-37.118 protocols. These PMUs shall be integrated with the PDC (Phasor Data Concentrator) located at respective RLDC/SLDC.
- (VI) TSP shall install RTU/SAS with necessary interfaces which shall be integrated with respective RLDC SCADA System on IEC 60870-5-101/104 protocol.
- (VII) The maintenance of all the communication equipments including FODP and approach cable, PMUs, RTU/SAS & repeater stations shall be the responsibility of TSP.

2 no. of 765 kV line bays each at Khetri for Khetri – Narela 765kV D/c line

- (I) TSP shall provide FODP (96 F) and Approach Cable (24F) at Khetri S/s and repeater station(if any) which shall be connected with OPGW fibres to be installed on Khetri – Narela 765kV D/c line.
- (II) TSP (Transmission Service Provider) shall provide optical interface and/or new STM-16 SDH equipment for Khetri S/s and for repeater stations (if required) along with necessary interfaces to meet the voice and data communication requirement of these stations.
- (III) In case of repeater requirement, TSP shall provide Repeater shelter alongwith DG set, provisioning for AC and DC supply and other associated systems.
- (IV) The integration of Communication equipment with centralized NMS at regional level shall be responsibility of TSP. Configuration work in centralized NMS for integration of new Communication equipment is not in scope of TSP, however all necessary support to integrate new Communication equipment in the Centralized NMS shall be ensured by TSP.
- (V) TSP shall install required no. of Phasor Measurement Units (PMUs) for all 765kV feeders (under the scope of this project) at Khetri S/s and PMUs shall support latest IEEE C-37.118 protocols. These PMUs shall be integrated with the PDC (Phasor Data Concentrator) located at respective RLDC/SLDC.
- (VI) TSP shall install RTU/SAS with necessary interfaces which shall be integrated with respective RLDC SCADA System on IEC 60870-5-101/104 protocol.
- (VII) The maintenance of all the communication equipments including FODP and approach cable, PMUs, RTU/SAS & repeater stations shall be the responsibility of TSP.