STANDARD SINGLE STAGE REQUEST FOR PROPOSAL DOCUMENT

FOR

SELECTION OF BIDDER AS TRANSMISSION SERVICE PROVIDER THROUGH TARIFF BASED COMPETITIVE BIDDING PROCESS

TO

ESTABLISH INTRA-STATE TRANSMISSION SYSTEM

FOR

DEVELOPMENT OF INTRA-STATE TRANSMISSION WORK IN M.P. THROUGH TARIFF BASED COMPETITIVE BIDDING: PACKAGE - I

ISSUED BY

REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)

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31.12.2021

REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
Core-4, SCOPE Complex,
7, Lodhi Road, New Delhi – 110 003

Request for Proposal Document for selection of Bidder as Transmission Service Provider through tariff based competitive bidding process to establish Intra-State Transmission System for "Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I" is issued by REC Power Development and Consultancy Limited.

This RFP document is issued to -

M/s. _____

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Chief Executive Officer

REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)

Email: …….

Place: ……

Date: ……

Signature: ……

REQUEST FOR PROPOSAL NOTIFICATION

REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
Core-4, SCOPE Complex,
7, Lodhi Road, New Delhi – 110 003

1. The Government of Madhya Pradesh vide its notification no. F-3/02/2020/13 dated 08.05.2020 has notified REC Transmission Projects Company Limited (presently known as REC Power Development and Consultancy Limited) to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish Intra-State transmission system for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I**" through tariff based competitive bidding process.

2. REC Power Development and Consultancy Limited (hereinafter referred to as BPC) hereby invites all prospective Bidders for issue of Request for Proposal (RFP) for selection of Bidder as 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 from time to time. The responsibility of the TSP would be to establish the following Intra-State Transmission System - "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I**" (hereinafter referred to as 'Project') on build, own, operate & transfer basis and to provide transmission service:

Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I

S. No.	Transmission Elements		Completion Target
1	**400/220/132/33kV GIS Substation at Mandideep (District-Raisen)**		24 Months
i	Construction of 400/220/132/33kV GIS substation at Mandideep		
	400kV		
	· ICT (500MVA, 400/220/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Bus Reactor (125MVAR)	1 No.	
	· Bus Reactor bay	1 No.	
	· Transfer Bus Coupler / Bus Tie	As required	
	· Space for 400/220kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	220kV		
	· ICT (160MVA, 220/132/33kV)	2 Nos.	
	· ICT bays (2 for 400kV ICT + 2 for 220kV ICT)	4 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler / Bus Tie	As required	

S. No.	Transmission Elements		Completion Target
	· Space for 220/132kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future) (2+2)	4 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	132kV		
	· ICT (50MVA, 132/33kV)	1 No.	
	· ICT bays (2 for 220kV ICT + 1 for 132kV ICT)	3 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler / Bus Tie	As required	
	· Space for 132/33kV ICT (Future)	3 Nos.	
	· Space for ICT bays (Future) (2+3)	5 Nos.	
	· Space for Line bays (Future)	8 Nos.	
	33kV		
	· ICT bays	1 No.	
	· Line bays	4 Nos.	
	· Transfer Bus Coupler	As required	
	· HT Shunt Capacitor Bank (12 MVAR)	1 No.	
	· HT Shunt Capacitor Bank bays	1 No.	
	· Station Transformer (500KVA, 33/0.4kV)	2 Nos.	
	· Space for ICT bays (Future)	3 Nos.	
	· Space for Line bays (Future)	12 Nos.	
ii	LILO of both circuit of Itarsi (PGCIL) – Bhopal 400kV line (on Twin Moose) at Mandideep GIS 400kV S/s		
iii	LILO of both circuit of Hoshangabad – Mandideep - Adampur 220kV line at Mandideep GIS 400kV S/s a. LILO of Hosangabad – Adampur 220kV line at Mandideep GIS 400 kV S/s. b. LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400 kV S/s.		
iv	LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400kV S/s		
v	LILO of Mandideep132 – Bagroda 132kV line at Mandideep GIS 400kV S/s		
v	LILO of Mandideep220 – MACT Bhopal 132kV line at Mandideep GIS 400kV S/s		
2	**220/132/33kV substation Bisonikala (District-Hoshangabad)**		
i	Construction of 220/132/33kV substation at Bisonikala		
	220kV		
	· ICT (160MVA, 220/132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	24 Months
	· Transfer Bus Coupler	1 No.	
	· Bus Tie	1 No.	
	· Space for 220/132kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	

S. No.	Transmission Elements		Completion Target
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays (2 for 220kV ICT+2 for 132kV ICT)	4 Nos.	
	· Line bays (2 for LILO+1 for Sodalpur)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future) (2+2)	4 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of both circuits of Satpura-Itarsi-Handiya 220kV line at Bisonikala 220kV S/s		
iii	LILO of SeoniMalwa-Harda 132kV S/c line at Bisonikala 220kV S/s		
3	**220/132/33kV Substation at Khargone (District-Khargone)**		
i	Construction of 220/132/33kV substation at Khargone		
	220kV		
	· ICT (160MVA, 220/132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Bus Tie	1 No.	
	· Space for 220/132kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	132kV		
	· ICT (63MVA, 132/33kV)	1 No.	
	· ICT bays (2 for 220V ICT+1 for 132kV ICT)	3 Nos.	24 Months
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	3 Nos.	
	· Space for ICT bays (Future) (2+3)	5 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	1 No.	
	· Line bays	5 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	1 No.	
	· HT Shunt Capacitor Bank bays	1 No.	
	· Station Transformer (200KVA, 33/0.4kV)	2 Nos.	
	· Space for ICT bays (Future)	3 Nos.	

S. No.	Transmission Elements		Completion Target
	· Space for Line bays (Future)	12 Nos.	
ii	LILO of both circuits of Chhegaon - Nimrani 220kV line at Khargone 220kV S/s		
iii	LILO of Khargone – Julwaniya (Talakpura) 132kV line at Khargone 220kV S/s		
iv	LILO of Bhikangaon - Bistan 132kV line at Khargone 220kV S/s		
4	**132/33kV substation at Sodalpur (District-Harda)**		
i	Construction of 132/33kV substation at Sodalpur		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Bisonikala+1 for Sultanpur)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	18 Months
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Bisonikala – Sodalpur – Sultanpur 132kV DCSS line.		
5	**132/33kV substation at Jawarjod (District-Sehore)**		
i	Construction of 132/33kV substation at Jawarjod		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO+1 for Ashta)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	18 Months
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Ashta - Sonkatch 132kV S/C line at Jawarjod 132kV S/s		

S. No.	Transmission Elements		Completion Target
6	**132/33kV substation at Pathari (District-Raisen)**		18 Months
i	Construction of 132/33kV substation at Pathari		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Gairatganj)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Gairatganj-Pathari 132kV DCDS line		
7	**132/33kV substation at Badi (District-Raisen)**		18 Months
i	Construction of 132/33kV substation at Badi		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Bareli + 1 for Shahganj)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Bareli - Badi - Shahganj 132kV DCSS line		
8	**132/33kV substation at Semrahat (District-Guna)**		18 Months
i	Construction of 132/33kV substation at Semrahat		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	

S. No.	Transmission Elements		Completion Target
	· Line bays (1 for Ashoknagar + 1 for Aron)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Ashoknagar - Semrahat - Aron 132kV DCSS line		
9	**132/33kV GIS substation at HOD Bhopal (District-Bhopal)**		
i	Construction of 132/33kV GIS Substation at HOD Bhopal		
	132kV		
	· ICT (63MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Bhopal220 or Mugaliyachhap)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	33kV		24 Months
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	12 Nos.	
ii	Mugaliya Chhap - HOD Bhopal 132kV DCDS line (with Monopole Towers)		
10	**220/33kV substation at Shahpur (District-Betul)**		
i	Construction of 220/33kV substation at Shahpur		
	220kV		
	· ICT (50MVA, 220/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO)	2 Nos.	24 Months
	· Transfer Bus Coupler	1 No.	
	· Bus Tie	1 No.	
	· Space for 220/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	

S. No.	Transmission Elements		Completion Target
	· Space for Line bays (Future)	4 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO one circuit of Satpura TPS-Itarsi 220 kV line at Shahpur 220/33kV S/s		
11	**132/33kV substation at Chhapiheda (District-Rajgarh)**		18 Months
i	Construction of 132/33kV substation at Chhapiheda		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Khujner+1 for Nalkheda)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Khujner-Chhapiheda-Nalkheda 132kV DCSS line		
12	**132/33kV substation Bhatpachlana (District-Ujjain)**		18 Months
i	Construction of 132/33kV substation at Bhatpachlana		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO + 1 for future Badnagar line)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	

S. No.	Transmission Elements		Completion Target
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana 132kV S/s (on Multi Circuit tower or separate double circuit towers)		
13	**132/33kV substation at Dhodhar (District-Ratlam)**		
i	Construction of 132/33kV substation at Dhodhar		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	18 Months
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Jaora -Daloda 132kV line at Dhodhar 132kV S/s		
14	**132/33kV substation at Pipalgaon (District-Khargone)**		
i	Construction of 132/33kV substation at Pipalgaon		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Kasrawad)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	18 Months
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	

S. No.	Transmission Elements		Completion Target
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Kasrawad - Pipalgaon 132kV DCDS line		
15	**132/33kV substation at Ambaja (District-Alirajpur)**		18 Months
i	Construction of 132/33kV substation at Ambaja		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Barwani – Kukshi 132kV line at Ambaja 132kV S/s		
16	**132/33kV substation at Choubara Dheera (District-Dewas)**		18 Months
i	Construction of 132/33kV substation at Choubara Dheera		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Sonkatch + 2 for LILO)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Sonkatch-ChoubaraDheera 132kV DCSS line		
17	**132/33kV GIS substation at Pithampur Sector-III (District-Dhar)**		24 Months

S. No.	Transmission Elements		Completion Target
i	Construction of 132/33kV GIS substation at Pithampur Sector-III		
	132kV		
	· ICT (63MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Pithampur)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Pithampur220 - Pithampur Sector-III 132kV DCDS line		
18	**System Strengthening Works**		18 Months
i	Bahadurpur - Badgaon 132kV DCSS line		

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 the provisions of the Transmission Service Agreement and applicable Rules/ Regulations, Orders, Codes and Guidelines issued by the State Government and State Commission and other relevant Orders, Rules/ Regulations of Central Government and Central Commission, as applicable.

4. **Transmission License**: The TSP shall obtain the Transmission License from the State Commission.

5. **Bidding Process:** The Transmission Service Provider shall be selected 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 Quoted Transmission Charges discovered from Final Offers quoted during the e-reverse bidding. The selection of the TSP shall be subject to it obtaining Transmission License from the State Commission, which, after expiry, may be further extended by such period as deemed appropriate by the State Commission under powers vested with it to amend the conditions of the Transmission License.

   The entire bidding process shall be conducted on electronic platform created by MSTC Limited.

   The Bid shall be a single stage two envelope bid comprising the Technical Bid and the Financial Bid. The Bidders shall submit the Bid online through the electronic bidding platform. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure

6 (if applicable) and Annexure 14 before issuance of LoI. There shall be no physical submission of the Financial Bid.

The Technical Bid shall be opened first and the Financial Bid of only the bidder who have qualified in the Technical Bid shall be opened. The Financial Bid will comprise of two rounds. In the first round the Initial Offer of the responsive bids would be opened and Quoted Transmission Charges of Initial Offer shall be ranked on the basis of ascending order. The Bidders, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Bidders, whichever is higher, shall qualify for participating in the electronic reverse auction stage and submit their Final Offer.

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 MP Power Transmission Package-I Limited 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 MP Power Transmission Package-I Limited, of which one hundred percent (100%) equity shares will be 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 as per the terms of the RFP Project Documents.

   The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to an agency as decided by the Government of Madhya Pradesh after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which Government of Madhya Pradesh shall be entitled to take over the project assets Suo moto.

7. **Commencement of Transmission Service**: The Bidder shall have to commence Transmission Service in accordance with the provisions of the Transmission Service Agreement.

8. **Transmission Charges**: The Transmission Charges shall be payable by the Long Term Transmission Customer in Indian Rupees. Bidders shall quote the Transmission Charges as per the pre-specified structure, as mentioned in the 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 Chief Executive Officer, pshariharan@recl.in & pshariharan@recpdcl.in at the address given in para 12 below with a non-refundable fee of Rs. 5,00,000/- (Rupees Fibve Lakh Only) or US$ 7,000 (US Dollars Seven Thousand Only) plus GST @18%, to be paid via electronic transfer to the following Bank Account:

Bank Name, Address & Branch	IDFC First Bank Limited Wholesale Banking Outlet Express Building, 2nd Floor, 9-10 Bahadur Shah Zafar Marg, New Delhi-110002
Bank Account Name	REC Power Development & Consultancy Limited (formerly REC Power Distribution Company Limited)
Bank Account No	10000697415
Bank IFSC Code No	IDFB0020101

latest by 03.03.2022. Immediately after issuance of RFP document, the Bidder shall submit the Pre-Award Integrity Pact in the format as prescribed in Annexure B, which shall be applicable for and during the bidding process, duly signed on each page by any whole-time Director / Authorized Signatory, duly witnessed by two persons, and shall be submitted by the Bidder in two (2) originals in a separate envelope, duly superscripted with Pre-Award Integrity Pact. The Bidder shall submit the Pre-Award Integrity Pact on non-judicial stamp paper of Rs. 100/- each duly purchased from the National Capital Territory of Delhi. In case the Bidder is in a consortium, the Pre-Award Integrity Pact shall be signed and submitted by each member of the Consortium separately.

The RFP document shall be issued to the Bidders on any working day from 31.12.2021 to 03.03.2022 between 1030 hours (IST) to 1600 hours (IST). The 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:** The Bid must be uploaded online through the electronic bidding platform on or before 1200 hours (IST) on 04.03.2022. Technical Bid will be opened by the Bid Opening Committee on the same day at 1230 hours (IST) in the office of Bid Process Coordinator, in the online 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 opened on the next working day at the same time and venue. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI. 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 Bidder as 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 and clarification in respect of RFP document shall be addressed to:

Chief Executive Officer,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001
Email: pshariharan@recl.in, pshariharan@recpdcl.in

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 expressed 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 it has not been induced to enter into such agreement by any representation or

warranty, expressed 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 15 days 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.

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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, 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 entity of at least twenty six percent (26%) of the voting rights of the entity. As an illustration a chart is annexed hereto as Annexure – 12;

"Bid" shall mean Technical Bid and Financial Bid (Initial Offer and Final Offer) 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 under Section – 63 of Electricity Act as amended from time to time;

"Bid Bond" shall mean the unconditional and irrevocable bank guarantee for Rupees …… (Rs……...) 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 online 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 Madhya Pradesh, responsible for carrying out the process for selection of Bidder who will acquire Transmission Service Provider;

"Bid Security Declaration" shall mean the declaration to be submitted along with the Technical Bid by the Bidder in lieu of the Bid Bond, as per the format prescribed in Annexure 14A**;**

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

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

"Central Government" shall mean the Government of India;

"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.

Provided that if two or more bidders in the bidding process have formed a Joint Venture Company or Consortium to execute another project, the Bidders will not be considered to have Conflict of Interest;

"Commercial Operation Date (COD)" shall mean the date as per Article 6.2 of the Transmission Service Agreement;

"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 Transmission Service Agreement;

"CTU/Central Transmission Utility" shall have same meaning as defined in the Electricity Act, 2003;

"Infrastructure sector" shall mean such sectors notified by Department of Economic Affairs in its Gazette Notification no. 13/1/2017-INF dated 14**th** November, 2017 and as amended from time to time;

"Effective Date" shall have the meaning as ascribed thereto in the Transmission Service Agreement;

"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, including ICTs, Reactors, SVC, FSC, etc. forming part of the Intra-State Transmission System which will be owned, operated and maintained by the concerned Licensee, and which may have a separate scheduled COD as per Schedule 2 of the Transmission Service Agreement and may have a separate percentage for recovery of Transmission Charges on achieving COD as per Schedule 5 of the Transmission Service Agreement;

"Empowered Committee" shall mean the committee constituted by the Government of Madhya Pradesh in terms of the "Guidelines for Encouraging Competition in Development of Transmission Projects", as notified from time to time;

"Final Offer" shall mean the Quoted 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 – 21 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 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 as applicable;

"Initial Offer" shall mean the Quoted 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 have same meaning as defined in the Electricity Act, 2003;

"Intra-State Transmission System" shall have same meaning as defined in the Electricity Act, 2003;

"Lead Member of the Bidding Consortium" or "Lead Member" shall mean a company who commits at least twenty six percent (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;

"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;

"Long Term Transmission Customer" shall have the meaning as described in MPERC (Terms & Conditions for Determination of Transmission Tariff) (Revision-IV), Regulations, 2020 as amended from time to time, and for the purpose of this Project, shall refer to the

entities listed in Annexure-23 of this RFP or any such other person who executes a Supplementary Agreement for availing transmission service as per the provisions of the Transmission Service Agreement;

"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;

"Technical Bid" shall mean the bid submitted online through the electronic bidding platform, containing the documents as listed out in Clause 2.5.2 of this RFP;

"Parent Company" shall mean an entity 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 quoted single annual Transmission Charges submitted online through the electronic bidding platform by the Bidder as part of its Financial Bid as per the format in Annexure – 21 of this RFP;

"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 bidder who will acquire the TSP through e-reverse bidding 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. Transmission Service Agreement (TSA),
b. Share Purchase Agreement,
c. Any other agreement, as may be required;

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

"State Commission" or "MPERC" shall mean the Madhya Pradesh Electricity Regulatory Commission constituted under Section-82 of The Electricity Act, 2003 and any successors and assigns;

"State Government" shall mean the Government of Madhya Pradesh;

"Statutory Auditor" shall mean the auditor appointed under the provisions of the Companies Act, 1956 / Companies Act, 2013 (as the case may be) or under the provisions of any other applicable governing law;

"STU" or **"State Transmission Utility"** shall have same meaning as defined in the Electricity Act, 2003;

"Share Purchase Agreement" shall mean the agreement amongst REC Power Development and Consultancy Limited, MP Power Transmission Package-I Limited and the Successful Bidder for the purchase of one hundred (100%) per cent of the shareholding of the MP Power Transmission Package-I Limited for the Acquisition Price, by the Successful Bidder on the terms and conditions as contained therein;

"Successful Bidder" or **"Selected Bidder"** shall mean the Bidder selected pursuant to this RFP to acquire one hundred percent (100%) equity shares of MP Power Transmission Package-I Limited, along with all its related assets and liabilities, which will be responsible as the TSP to establish the Project on build, own, operate and transfer basis as per the terms of the Transmission Service Agreement 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 1.6.2.1.1 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 Final Offer quoted by Selected Bidder and adopted by the State Commission, and as computed in terms of the provisions of Schedule 4 of the TSA, payable to the Licensee by the Long Term Transmission Customer as per provisions of Transmission Service Agreement;

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

"Transmission Service Agreement" or **"TSA"** shall mean the agreement entered into between Long Term Transmission Customer and the TSP, pursuant to which the TSP shall build, own, operate and transfer the Project and make available the assets of the Project on a commercial basis;

"Transmission Service Provider" or "TSP" shall mean MP Power Transmission Package-I Limited which has executed the Transmission Service Agreement and which shall be acquired by the Selected Bidder;

"Ultimate Parent Company" shall mean an entity 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 entity.

SECTION – 1

INTRODUCTION

SECTION 1

1. INTRODUCTION

1.1 The Government of Madhya Pradesh vide its notification no. F-3/02/2020/13 dated 08.05.2020 has notified REC Transmission Projects Company Limited (presently known as REC Power Development and Consultancy Limited) to be the Bid Process Coordinator (BPC) for the purpose of selection of Bidder as Transmission Service Provider (TSP) to establish Intra-State transmission system for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I"** 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 of Madhya Pradesh. The TSP will make the Project available against payment of Transmission Charges, as adopted by the State Commission, payable to the TSP, as per provisions of Transmission Service Agreement.

1.2 The TSP will be required to establish the following Intra State Transmission System for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I"** (hereinafter referred to as 'Project') on build, own, operate and transfer basis, and to provide transmission service.

S. No.	Transmission Elements		Completion Target
1	**400/220/132/33kV GIS Substation at Mandideep (District-Raisen)**		24 Months
i	Construction of 400/220/132/33kV GIS substation at Mandideep		
	400kV		
	· ICT (500MVA, 400/220/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Bus Reactor (125MVAR)	1 No.	
	· Bus Reactor bay	1 No.	
	· Transfer Bus Coupler / Bus Tie	As required	
	· Space for 400/220kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	220kV		
	· ICT (160MVA, 220/132/33kV)	2 Nos.	
	· ICT bays (2 for 400kV ICT + 2 for 220kV ICT)	4 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler / Bus Tie	As required	
	· Space for 220/132kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future) (2+2)	4 Nos.	
	· Space for Line bays (Future)	6 Nos.	

S. No.	Transmission Elements		Completion Target
	132kV		
	· ICT (50MVA, 132/33kV)	1 No.	
	· ICT bays (2 for 220kV ICT + 1 for 132kV ICT)	3 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler / Bus Tie	As required	
	· Space for 132/33kV ICT (Future)	3 Nos.	
	· Space for ICT bays (Future) (2+3)	5 Nos.	
	· Space for Line bays (Future)	8 Nos.	
	33kV		
	· ICT bays	1 No.	
	· Line bays	4 Nos.	
	· Transfer Bus Coupler	As required	
	· HT Shunt Capacitor Bank (12 MVAR)	1 No.	
	· HT Shunt Capacitor Bank bays	1 No.	
	· Station Transformer (500KVA, 33/0.4kV)	2 Nos.	
	· Space for ICT bays (Future)	3 Nos.	
	· Space for Line bays (Future)	12 Nos.	
ii	LILO of both circuit of Itarsi (PGCIL) – Bhopal 400kV line (on Twin Moose) at Mandideep GIS 400kV S/s		
iii	LILO of both circuit of Hoshangabad – Mandideep - Adampur 220kV line at Mandideep GIS 400kV S/s c. LILO of Hosangabad – Adampur 220kV line at Mandideep GIS 400 kV S/s. d. LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400 kV S/s.		
iv	LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400kV S/s		
v	LILO of Mandideep132 – Bagroda 132kV line at Mandideep GIS 400kV S/s		
v	LILO of Mandideep220 – MACT Bhopal 132kV line at Mandideep GIS 400kV S/s		
2	**220/132/33kV substation Bisonikala (District-Hoshangabad)**		
i	Construction of 220/132/33kV substation at Bisonikala		
	220kV		
	· ICT (160MVA, 220/132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Bus Tie	1 No.	
	· Space for 220/132kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays (2 for 220kV ICT+2 for 132kV ICT)	4 Nos.	

S. No.	Transmission Elements		Completion Target
	· Line bays (2 for LILO+1 for Sodalpur)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future) (2+2)	4 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of both circuits of Satpura-Itarsi-Handiya 220kV line at Bisonikala 220kV S/s		
iii	LILO of SeoniMalwa-Harda 132kV S/c line at Bisonikala 220kV S/s		
3	**220/132/33kV Substation at Khargone (District-Khargone)**		24 Months
i	Construction of 220/132/33kV substation at Khargone		
	220kV		
	· ICT (160MVA, 220/132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Bus Tie	1 No.	
	· Space for 220/132kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	132kV		
	· ICT (63MVA, 132/33kV)	1 No.	
	· ICT bays (2 for 220V ICT+1 for 132kV ICT)	3 Nos.	
	· Line bays (2+2 for LILO)	4 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	3 Nos.	
	· Space for ICT bays (Future) (2+3)	5 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	1 No.	
	· Line bays	5 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	1 No.	
	· HT Shunt Capacitor Bank bays	1 No.	
	· Station Transformer (200KVA, 33/0.4kV)	2 Nos.	
	· Space for ICT bays (Future)	3 Nos.	
	· Space for Line bays (Future)	12 Nos.	
ii	LILO of both circuits of Chhegaon - Nimrani 220kV line at Khargone 220kV S/s		

S. No.	Transmission Elements		Completion Target
iii	LILO of Khargone – Julwaniya (Talakpura) 132kV line at Khargone 220kV S/s		
iv	LILO of Bhikangaon - Bistan 132kV line at Khargone 220kV S/s		
4	**132/33kV substation at Sodalpur (District-Harda)**		18 Months
i	Construction of 132/33kV substation at Sodalpur		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Bisonikala+1 for Sultanpur)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Bisonikala – Sodalpur – Sultanpur 132kV DCSS line.		
5	**132/33kV substation at Jawarjod (District-Sehore)**		18 Months
i	Construction of 132/33kV substation at Jawarjod		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO+1 for Ashta)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Ashta - Sonkatch 132kV S/C line at Jawarjod 132kV S/s		
6	**132/33kV substation at Pathari (District-Raisen)**		18 Months
i	Construction of 132/33kV substation at Pathari		

S. No.	Transmission Elements		Completion Target
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Gairatganj)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Gairatganj-Pathari 132kV DCDS line		
7	**132/33kV substation at Badi (District-Raisen)**		
i	Construction of 132/33kV substation at Badi		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Bareli + 1 for Shahganj)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	18 Months
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Bareli - Badi - Shahganj 132kV DCSS line		
8	**132/33kV substation at Semrahat (District-Guna)**		
i	Construction of 132/33kV substation at Semrahat		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	18 Months
	· ICT bays	2 Nos.	
	· Line bays (1 for Ashoknagar + 1 for Aron)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	

S. No.	Transmission Elements		Completion Target
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Ashoknagar - Semrahat - Aron 132kV DCSS line		
9	**132/33kV GIS substation at HOD Bhopal (District-Bhopal)**		
i	Construction of 132/33kV GIS Substation at HOD Bhopal		
	132kV		
	· ICT (63MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Bhopal220 or Mugaliyachhap)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	33kV		24 Months
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	12 Nos.	
ii	Mugaliya Chhap - HOD Bhopal 132kV DCDS line (with Monopole Towers)		
10	**220/33kV substation at Shahpur (District-Betul)**		
i	Construction of 220/33kV substation at Shahpur		
	220kV		
	· ICT (50MVA, 220/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO)	2 Nos.	
	· Transfer Bus Coupler	1 No.	24 Months
	· Bus Tie	1 No.	
	· Space for 220/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	4 Nos.	
	33kV		
	· ICT bays	2 Nos.	

S. No.	Transmission Elements		Completion Target
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO one circuit of Satpura TPS-Itarsi 220 kV line at Shahpur 220/33kV S/s		
11	**132/33kV substation at Chhapiheda (District-Rajgarh)**		18 Months
i	Construction of 132/33kV substation at Chhapiheda		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Khujner+1 for Nalkheda)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Khujner-Chhapiheda-Nalkheda 132kV DCSS line		
12	**132/33kV substation Bhatpachlana (District-Ujjain)**		18 Months
i	Construction of 132/33kV substation at Bhatpachlana		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO + 1 for future Badnagar line)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	

S. No.	Transmission Elements		Completion Target
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana 132kV S/s (on Multi Circuit tower or separate double circuit towers)		
13	**132/33kV substation at Dhodhar (District-Ratlam)**		
i	Construction of 132/33kV substation at Dhodhar		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	18 Months
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Jaora -Daloda 132kV line at Dhodhar 132kV S/s		
14	**132/33kV substation at Pipalgaon (District-Khargone)**		
i	Construction of 132/33kV substation at Pipalgaon		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for Kasrawad)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	18 Months
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Kasrawad - Pipalgaon 132kV DCDS line		

S. No.	Transmission Elements		Completion Target
15	**132/33kV substation at Ambaja (District-Alirajpur)**		18 Months
i	Construction of 132/33kV substation at Ambaja		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (2 for LILO)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	LILO of Barwani – Kukshi 132kV line at Ambaja 132kV S/s		
16	**132/33kV substation at Choubara Dheera (District-Dewas)**		18 Months
i	Construction of 132/33kV substation at Choubara Dheera		
	132kV		
	· ICT (50MVA, 132/33kV)	2 Nos.	
	· ICT bays	2 Nos.	
	· Line bays (1 for Sonkatch + 2 for LILO)	3 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Sonkatch-ChoubaraDheera 132kV DCSS line		
17	**132/33kV GIS substation at Pithampur Sector-III (District-Dhar)**		24 Months
i	Construction of 132/33kV GIS substation at Pithampur Sector-III		
	132kV		
	· ICT (63MVA, 132/33kV)	2 Nos.	

S. No.	Transmission Elements		Completion Target
	· ICT bays	2 Nos.	
	· Line bays (2 for Pithampur)	2 Nos.	
	· Transfer Bus Coupler	1 No.	
	· Space for 132/33kV ICT (Future)	2 Nos.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	6 Nos.	
	33kV		
	· ICT bays	2 Nos.	
	· Line bays	7 Nos.	
	· Transfer Bus Coupler	1 No.	
	· HT Shunt Capacitor Bank (12 MVAR)	2 Nos.	
	· HT Shunt Capacitor Bank bays	2 Nos.	
	· Station Transformer (200KVA, 33/0.4kV)	1 No.	
	· Space for ICT bays (Future)	2 Nos.	
	· Space for Line bays (Future)	8 Nos.	
ii	Pithampur220 - Pithampur Sector-III 132kV DCDS line		
18	**System Strengthening Works**		18 Months
i	Bahadurpur - Badgaon 132kV DCSS line		

Note:

a. TSP shall have to construct the new Substation within the radius of Three (3) kilometers considering the coordinates of the Village (Location) given hereunder as center and intimate the same to MPPTCL:

Sl. No.	Name of Substation	Name of Village/tehsil/district where new S/s is Proposed	New Substation to be constructed within the radius of 3 km from location whose coordinates are given here under	
			Latitude	Longitude
1	400/220/132/33kV GIS substation at Mandideep*	Village - Bhojpur (Mandideep) Tehsil - Goharganj District - Raisen	23° 08'09.23"N	77°36'14.93"E
2	220/132/33kV substation at Bisonikala	Village - BisoniKalan Tehsil - SeoniMalwa District - Hoshangabad	2°28'43.00"N	77°19'49.00"E
3	220/132/33kV substation at Khargone	Village - Khargone Tehsil - Khargone District - Khargone	21°50'24.00"N	75°36'7.00"E
4	132/33kV substation at Sodalpur	Village - Sodalpur Tehsil - Rahatgaon District - Harda	22°19'20.00"N	77°13'16.00"E
5	132/33kV substation at Jawarjod	Village - PipaliyaSalarsi Tehsil - Jawar District - Sehore	22°58'10.00"N	76°31'29.00"E

Sl. No.	Name of Substation	Name of Village/tehsil/district where new S/s is Proposed	New Substation to be constructed within the radius of 3 km from location whose coordinates are given here under	
			Latitude	Longitude
6	132/33kV substation at Pathari	Village - Pathari Tehsil - Raisen District - Raisen	23°18'37.00"N	78° 1'19.00"E
7	132/33kV substation at Badi	Village - AmrawadKalan Tehsil - Badi District - Raisen	22°57'47.00"N	78° 4'35.00"E
8	132/33kV substation at Semrahat	Village - Semrahat Tehsil - Ashoknagar District - Ashoknagar	24°27'60.00"N	77°34'10.00"E
9	132/33kV GIS Substation at HOD Bhopal **(Govt. land shall be allocated)**	Place - Arera Hills, Bhopal City Tehsil - Bhopal District - Bhopal	23°14'5.00"N	77°25'12.00"E
10	220/33kV substation at Shahpur	Village - Shahpur Tehsil - Shahpur District - Betul	22°11'47.00"N	77°54'45.00"E
11	132/33kV substation at Chhapiheda	Village - Chhapiheda Tehsil - Jeerapur District - Rajgarh	23°53'40.00"N	76°27'20.00"E
12	132/33kV substation at Bhatpachlana	Village - Bhatpachlana Tehsil - Badnagar Distt. - Ujjain	23°15'4.00"N	75°17'34.00"E
13	132/33kV substation at Dhodhar	Village - Dhodhar Tehsil - Jaora Distt. - Ratlam	23°46'28.00"N	75° 6'31.00"E
14	132/33kV substation at Pipalgaon	Village - Pipalgaon Tehsil - Kasrawad Distt. - Khargone	22° 6'49.00"N	75°45'21.00"E
15	132/33kV substation at Ambaja	Village - Ambaja Tehsil - Alirajpur Distt. - Alirajpur	22° 6'18.00"N	74°15'18.00"E
16	132/33kV substation at ChoubaraDheera	Village - ChoubaraDheera Tehsil - TonkKhurd Distt. - Dewas	23° 5'55.00"N	76°19'47.00"E
17	132/33kV GIS substation at Pithampur Sector-III **(Govt. land shall be allocated)**	Village - Pithampur Tehsil - Dhar Distt. - Dhar	22°37'20.00"N	75°34'55.00"E

* In case of construction of new 400/220/132kV S/s at Manidideep beyond above boundary limit, concurrence from STU has to be obtained by TSP for selection of S/s land.

b. Bidders may visit the existing Sub-Stations in order to familiarize themselves with the existing system. Based on the request of the bidders, BPC will arrange Sub-Station visit.

c. The requisite number of line bays in MPPTCL substations for termination of associated transmission lines covered under the scope of TBCB shall be provided by MPPTCL at its cost. The matching communication equipment and protection equipment/C&R panels/relays at both ends of the transmission line terminating at MPPTCL's substation, along with its O&M, shall be in the scope of the TSP.

d. For LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana 132kV S/s, TSP has to use Multi Circuit towers or separate double circuit towers. Two (02) circuits of multi Circuit tower have to be used for undertaking LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana 132kV S/s and on one circuit, TSP has to only lay the 132kV Conductor from the tap point (i.e. from tapping point of LILO of Badnagar-Orange Berchha 132kV DCSS line) to corresponding bay location at proposed Bhatpachlana S/s in the scope of TSP. In future, MPPTCL may extend this line from the tap point to Badnagar / any substation to utilize this circuit.

1.3 Project Description

Demand of Madhya Pradesh has reached 14555MW in FY 2019-20 and expected to grow upto 18000MW by year 2022-23. The demand is expected to reach about 21000 MW by the end of 14th Plan.

Accordingly, system studies were carried out to evolve transmission system requirement for the end of 13th Plan period considering load demand of Madhya Pradesh as 18000MW. The studies, inter alia, recommended establishment of 1No. 400/220kV S/s, 5Nos. 220/132kV S/s, 2Nos. 220/33kV S/s and 27Nos. 132/33kV S/s in the MP network. The details of work under Package-I are as follows:

Package-1 : The transmission works under Package-1 are spread in the area of Central Discom and West Discom. These works covers construction of 1No. 400kV GIS S/s, 2 Nos. 220/132kV S/s, 1No. 220/33kV S/s, 11 Nos. 132kV S/s and 2 Nos. 132/33kV GIS S/s. The abstract of transmission works covered under Package-1 is as under:

400/220/132/33kV S/s	1 No. (Mandideep GIS S/s)
220/132/33kV S/s	2 Nos. (Bisonikala, Khargone)
220/33kV S/s	1 No. (Shahpur)
132/33kV S/s	11 Nos. (Sodalpur, Jawarjod, Pathari, Badi, Semrahat, Chhapiheda, Bhatpachlana, Dhodhar, Pipalgaon, Ambaja, Choubara Dheera)
132/33kV GIS S/s	2 Nos. (HOD Bhopal, Pithampur Sector-III)

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 MP Power Transmission Package-I Limited 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 MP Power Transmission Package-I Limited, of which one hundred percent (100%) equity shares will be 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 as per the terms of the RFP Project Documents.

The TSP shall ensure transfer of all project assets along with substation land, right of way and clearances to an agency as decided by the Government of Madhya Pradesh after 35 years from COD of project at zero cost and free from any encumbrance and liability. The transfer shall be completed within 90 days after 35 years from COD of project failing which Government of Madhya Pradesh shall be entitled to take over the project assets Suo moto.

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 transfer 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 Transmission Service Agreement and applicable Rules/ Regulations, Orders, Codes and Guidelines issued by State Government and State Commission and other relevant Orders, Rules/ Regulations of Central Government and Central Commission, as applicable.

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 State Commission, as per the provisions of the Electricity Act and regulations made thereunder.

1.6.1.5 The TSP shall seek approval under Section 164 of Electricity Act, from Energy Department, Government of Madhya Pradesh after acquisition of MP Power Transmission Package-I Limited. The approval shall be granted by Energy Department, Government of Madhya Pradesh upon receipt of application (complete in all aspects).

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:

1. Provide to the Bidders a Survey Report for the Project at least forty five (45) days prior to the Bid Deadline. The Survey Report shall include the suggested route with approximate route length, type of terrain likely to be encountered and its likely implication in terms of Right of Way (ROW), statutory clearances, location of substations or converter stations and land area to be acquired for the substation or converter station.

2. To obtain approval for laying of overhead transmission lines under Section 68 of Electricity Act, from the State Government at least twenty (20) days prior to Bid Deadline.

3. To initiate acquisition of land for location specific substations, switching stations or HVDC terminal or inverter stations, if required.

4. To initiate process of seeking forest clearance, if required

5. The BPC shall intimate to the Bidders, the Acquisition Price payable by the Selected Bidder to the REC Power Development and Consultancy Limited for the acquisition of one hundred percent (100%) of the equity shareholding of MP Power Transmission Package-I Limited, along with all its related assets and liabilities at least twenty (20) days prior to the Bid Deadline.

6. The BPC shall ensure issuance of all finalized RFP Project Documents, at least fifteen (15) 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.

1.6.2.2 The details and documents as may be obtained by the BPC/ project specific SPV in relation to the Project shall be handed over to the TSP on an 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/ project specific SPV 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 MP Power Transmission Package-I Limited 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) shall 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/ project specific SPV 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 as per the terms and conditions of the Transmission Service Agreement.

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 Quoted Transmission Charges discovered 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. Bidder who agree and undertake to procure the products associated with the Transmission System as per provisions of Public Procurement (Preference to Make in India) orders issued by Ministry of Power vide orders No. 11/5/2018 - Coord. dated 28.07.2020 for transmission sector, as amended from time to time read with Department for Promotion of Industry and Internal Trade (DPIIT) orders in this regard, shall be eligible hereunder. Further, it is clarified that Procuring Entity as defined in orders shall deemed to have included Selected Bidder and/ or TSP.

Besides, Department of Expenditure, Ministry of Finance vide Order (Public Procurement No 1) bearing File No. 6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No 2) bearing File No. 6/18/2019-PPD dated 23.07.2020 and Order (Public Procurement No. 3) bearing File No. 6/18/2019-PPD, dated 24.07.2020, as amended from time to time, have issued directions regarding public procurement from a bidder of a country, which shares land border with India are also applicable.

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

The Bidder must fulfill any one of the following technical requirements:

(i) Experience of development of projects in the Infrastructure Sector in the last five (5) years with aggregate capital expenditure of not less than Rs**. 963.25 Crore** 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. 192.65 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1).

For this purpose, capital expenditure incurred on projects that have been commissioned/completed at least seven (7) days prior to 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 have held directly or indirectly at least twenty six percent (26%) of the shareholding in the company that has executed the project(s) from the date of financial closure of the project(s) till the time of commissioning/completion of such project(s).

OR

(ii) Experience in construction of project in infrastructure sector: The Technically Evaluated Entity should have received aggregate payments not less than **Rs. 963.25 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1) from its client(s) for construction works fully completed during the last 5(five) financial years. However, the payment received from each project shall not be less than **Rs. 192.65 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1).

For this purpose, payments received on projects that have been commissioned/ completed at least seven (7) days prior to Bid Deadline shall be considered. Further only the payments (gross) actually received, during such 5 (five) financial years shall qualify for purposes of computing the technical capacity. For the avoidance of doubt, construction works shall not include cost of land, supply of goods or equipment except when such goods or equipment form part of a turn-key construction contract/ EPC contract for the project. Further, in cases where different individual contracts are signed between same entities for the same project, the cumulative payments received under such individual contracts shall be considered for meeting the qualification requirement.

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.

Bidders shall furnish documentary evidence duly certified by authorized signatory of the Bidder who has been issued Power of Attorney 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:

A. Networth:

Networth should be not less than Rs**. 385.30 Crore** or equivalent USD (calculated as per provisions in Clause 3.4.1**)** computed as the Networth 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. Also, the Networth of any of the last three (3) financial years should not be negative.

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 prescribed Annexure 7 (A) duly certified by authorized signatory of the Bidder who has been issued Power of Attorney and the Statutory Auditor and separate computation sheet for Networth duly certified by Statutory Auditor in support of their financial capability as defined in Clause 2.1.3 of this RFP.

2.1.3.2 The Networth shall be computed in the following manner by the Bidder:

A. Networth

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

2.1.3.3 If the Technical Bid is submitted by a Bidding Consortium the financial requirement shall 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/ particular project, including its Parents and/or Affiliates, shall not be used directly or indirectly by more than one Bidder/ Member of a Bidding Consortium/ Bidding Company. However, development and construction experience of a particular project may be used by more than one 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 at the most 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. 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 the Transmission Service Agreement. Where the Technically Evaluated Entity 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 Entity and/or Financially Evaluated Entity till the execution of the Transmission Service Agreement. Failure to comply with the aforesaid provisions shall make the Bid liable for rejection at any stage.

2.1.8 The Selected Bidder will be required to continue to maintain compliance with the Qualification Requirements till the COD of the Project. Where the Technically Evaluated Entity 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 Entity and/or Financially Evaluated Entity till the COD of the Project. Failure to comply with the aforesaid provisions shall be dealt as per provisions of Transmission Service Agreement.

2.1.9 On the Bid Deadline, for the Bidder to be eligible to participate in the bidding process:

a. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate, their directors or key personnel should not have been barred or included in the blacklist by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc or the United Nations or any of its agencies; or

b. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate or their directors should not have been convicted of any offence in India or abroad.

In case any investigation is pending against the Bidder, including any Consortium Member or Affiliate, or CEO or any of the directors/ manager/key managerial personnel of the Bidder /Consortium /Member or their Affiliates, full details of such investigation including the name of the investigating agency, the charge/offence for which the investigation has been launched, name and designation of persons against whom the investigation has been launched and other relevant information should be disclosed while submitting the Bid.

The Bidders shall confirm the above though a notarized affidavit as per Annexure 22.

2.2 Submission of Bid by the Bidder

2.2.1 The information and documents in Technical Bid 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 Technical Bid 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 or the Financially Evaluated Entity for the last three (3) financial years immediately preceding the last date for submission of Bid for the purpose of calculation of Networth.

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

2.2.4 Bid submitted by a Bidding Consortium:

2.2.4.1 The Technical Bid 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 upto one (1) year 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 Technical Bid 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 equity contribution as well as the equity contribution 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 Share Purchase Agreement. Settlement of any dispute amongst the Consortium Members shall not be the responsibility of the BPC and/or the Long Term Transmission Customer and the BPC and/or the Long Term Transmission Customer shall not bear any liability whatsoever on this account.

2.2.4.2 The Lead Member should designate at the most two persons to represent the Consortium in its dealings with the BPC. The person(s) 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 Technical Bid on behalf of the Consortium, etc. The Bidding Consortium shall provide board resolutions from their respective Boards for committing their respective portion of equity requirement for the Project. Additionally, the Lead member shall provide a Board resolution committing to make good any shortfall in the equity for the project, in case of any member not meeting its equity commitment.

2.2.4.3 The Technical Bid 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.

In addition, the Technical Bid should also contain Board Resolution from each Member of the Consortium other than the Lead Member in favour of their respective authorized representatives for executing the POA, Consortium Agreement and signing of the requisite formats.

2.2.5 Bid submitted by a Bidding Company

2.2.5.1 The Bidding Company should designate at the most two persons to represent the Bidding Company in its dealings with BPC. The person(s) 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 Technical Bid, 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 Technical Bid.

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 – 19.

2.3.2 Only those Bidders or their authorized representatives, who have purchased the RFP documents are 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 request for such clarification is submitted through e-mail 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 before the timeline mentioned in Clause 2.7.1, 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

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 Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI. There shall be no physical submission of the Financial 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 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. The BPC shall also upload the list of all Qualified Bidders and Non-Qualified Bidders on the bidding portal along with the reasons for non-qualification. Also, the Financial Bids of Qualified Bidders shall be opened after at least 24 hours from the date of declaration of the Technically Qualified Bidders.

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 Quoted 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, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall qualify 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 Bid as 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 State 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 Quoted Transmission Charges discovered 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, all the Qualified Bidders who share the same rank till 50% of the rank (with any fraction rounded off to higher integer) determined above, shall qualify to participate in the electronic e-reverse auction stage. In case 50% of the ranks (with any fraction rounded off to higher integer) is having less than 4 (four) Bidders and the rank of the fourth (4^{th}) Bidder is shared by more than one (1) Bidder, then all such Bidders who share the rank of the fourth (4^{th}) Bidder shall qualify to participate in the electronic reverse auction.

The applicable ceiling for electronic reverse bidding shall be the lowest Quoted Transmission Charges discovered 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 two five (0.25) % of the prevailing lowest Quoted Transmission Charges.

The initial period for conducting the e-reverse bidding should be 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 technical details with respect to access to such electronic platform are provided in Annexure-A (Technical Details with respect to electronic reverse auction).

In case of any technical clarification regarding access to the electronic reverse 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. 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 format 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 as per format attached hereto as **Annexure 4**. Further, the Lead Member shall furnish Board resolution(s) from each Member of the Consortium other than the Lead Member in favour of their respective authorized representatives for executing the POA and signing of the requisite formats.

   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 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 MP Power Transmission Package-I Limited.

    Note: The effective Equity holding of the Selected Bidder in the MP Power Transmission Package-I Limited, 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 any 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 **Annexure 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 an independent legal counsel practicing in the relevant country, 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 at the most 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 or** Bid Security Declaration as per prescribed format at **Annexure-14A (as applicable)**;

15. Checklist for Technical Bid submission requirements as per **Annexure 16**.

16. Last three (3) financial years' unconsolidated / consolidated audited annual accounts / statements, as the case may be, of the Financially Evaluated Entity / Technical Evaluated Entity

17. 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.

18. 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.

19. 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 duly signed by authorized signatory.

In addition to the online submission of above formats through the electronic platform, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI. In case, there is a discrepancy between the online submission and physical documents, the bid would be out rightly rejected and the bidder shall be construed to have engaged in the fraudulent practice as defined in Clause 2.19.3 with consequences as mentioned in Clause 2.19.2.

2.5.3 Financial Bid (as per prescribed format at Annexure-21)

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 Quoted 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 reverse auction and submit their Final Offer.

The applicable ceiling for electronic reverse bidding shall be the lowest Quoted Transmission Charges discovered 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 two five (0.25) % of the prevailing lowest Quoted Transmission Charges.

The initial period for conducting the e-reverse bidding should be 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 single annual Quoted Transmission Charges for a period of 35 years commencing from the Scheduled COD of the Project.

b. The Quoted Transmission Charges as per the format at Annexure-21 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.

c. Annexure 21 duly digitally 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 specified in the Transmission Service Agreement and shall be payable to the TSP in Indian Rupees only. The Bidders shall quote single Transmission Charges as per the format at Annexure – 21.

2.5.5.2. The Transmission Charges of the Selected Bidder shall be inserted in Schedule 5 of the Transmission Service Agreement.

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 / particular project (Parent and/ or Affiliate) shall not be used directly or indirectly by more than one Bidder/ Member of a Bidding Consortium including Lead Member / Bidding Company.

f) This Request for Proposal (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 BPC shall have no obligation to return the same to the Bidder.

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 Transmission Service Agreement shall apply.

j) If for any reason the Bid of the Bidder with the lowest Quoted Transmission Charges is not selected or Letter of Intent issued to such Selected Bidder is cancelled or such Bidder withdraws its Bids, the BPC may :-

   i. Invite all the remaining Bidders to revalidate or extend their respective Bid Security, as necessary, and match the Bid of the Bidder with the lowest Quoted Transmission Charges (the "second round of bidding") with following cases:

      - If in the second round of bidding, only one Bidder matches the Bid of the Bidder with lowest Quoted Transmission Charges, it shall be the Selected Bidder.

      - If two or more Bidders match the Bid of the Bidder with the lowest Quoted Transmission Charges in the second round of bidding, then the Bidder whose Quoted Transmission Charges was lower as compared to other Bidder(s) in the first round of bidding shall be the Selected Bidder. For example, if the third and fifth lowest Bidders in the first round of bidding offer to match the Bid of the Bidder with lowest Quoted Transmission Charges in the second round of bidding, the said third lowest Bidder shall be the Successful Bidder.

      - In the event that no Bidder offers to match the Bid of the Bidder with the lowest Quoted Transmission Charges in the second round of bidding, the BPC may, in its discretion, invite fresh Bids (the "third round of bidding") from all Bidders except the Bidder which quoted the lowest Quoted Transmission Charges in the first round of bidding. In case the Bidders are invited for the third round of bidding to revalidate or extend their Bid Security, as necessary, and offer fresh Bids, they shall be eligible for submission of fresh Bids provided, however, that in such third round of bidding only such Bids shall be eligible for consideration which are lower than the Quoted Transmission Charges of the second lowest Bidder in the first round of bidding; or;

ii. Annul the bid process; or

iii. Take any such measure as may be deemed fit in the sole discretion of the BPC[1]

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.

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 Bidder as TSP to execute the Project without assigning any reason. BPC shall not bear any liability, whatsoever, in this regard.

p) Foreign companies submitting the Bid are required to follow the applicable law in their country for execution of POA, Consortium Agreement and affixation of Common Seal (wherever required) and in such cases, their Bid should be supported by an unqualified opinion issued by an independent legal counsel practicing in the relevant country, stating that execution of such POA, Consortium Agreement and the authorizations granted therein are true and valid. Foreign companies executing POA outside India shall necessarily pay the adequate stamp charges in India as per the provisions of Stamp Act.

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

[1] BPC shall record reasons for the same.

hundred percent (100%) of the equity shares of the MP Power Transmission Package-I Limited, 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 (as the case may be), 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 the Central Commission, State Commission 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, MPERC (Terms & Conditions for Intra State Open Access in Madhya Pradesh) Regulations, 2005, Central Electricity Authority (Technical Standards for construction of Electrical Plants and Electric Lines) Regulation, 2010, Central Electricity Authority (Technical Standards for Communication System in Power System Operation) Regulations, 2020, and other relevant Rules/ Regulations/ Guidelines issued by the Central Government, State Government, Central Commission, State Commission and the CEA and amendments thereof.

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. The Survey Report has been prepared in good faith, and on best endeavor basis. Neither BPC & Long Term Transmission Customer nor their 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.

2.5.7.4. Bidders shall make best efforts and carry out its own due diligence upon survey report provided by BPC and shall consider all possible techno-commercial factors before submission of Bid. Bidders may also 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. Bidders may also carry out required surveys and field investigation for submission of their Bid. Bidders may also opt for any other route and is not bound to follow the route suggested in survey report provided by BPC.

2.5.7.5. Failure to investigate, examine and to 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)/ State Grid Code. 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 Centres.

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 MP Power Transmission Package-I Limited shall not be less than Fifty one percent (51%) up to a period of (1) one year after COD of the Project;

(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 (a) 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 MP Power Transmission Package-I Limited 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 MP Power Transmission Package-I Limited shall not be less than fifty one percent (51%) up to a period of one (1) year 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%). 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) above.

(d) All transfer(s) of shareholding of MP Power Transmission Package-I Limited by any of the entities referred to above, shall be after prior written intimation to the Long Term Transmission Customer.

2.5.8.2. The Selected Bidder may invest in the equity share capital of MP Power Transmission Package-I Limited 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 MP Power Transmission Package-I Limited 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 MP Power Transmission Package-I Limited then holding of Selected Bidder A in MP Power Transmission Package-I Limited 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 MP Power Transmission Package-I Limited, then for the purposes of ascertaining the minimum equity/equity lock-in requirements specified above, the effective holding of Bidder A in MP Power Transmission Package-I Limited 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 19.1 of the Transmission Service Agreement 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;

S. 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	**400/220/132/33kV GIS Substation at Mandideep (District-Raisen)**	24	30%	All Elements from Sl. No. 1(i) to 1(v).
i	Construction of 400/220kV GIS substation at GIS Mandideep			

S. 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
ii	LILO of both circuit of Itarsi (PGCIL) - Bhopal 400kV line (on Twin Moose) at MandideepGIS400kV S/s			
iii	LILO of both circuits of Hoshangabad - Mandideep - Adampur 220kV line at Mandideep GIS 400kV S/s a. LILO of Hosangabad – Adampur 220kV line at Mandideep GIS 400 kV S/s. b. LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400 kV S/s.			
iv	LILO of Mandideep132 - Bagroda 132kV line at Mandideep GIS 400kV S/s			
v	LILO of Mandideep220 - MACT Bhopal 132kV line at MandideepGIS400kV S/s			
2	**220/132/33kV substation at Bisonikala (District-Hoshangabad)**	24	6%	All Elements from Sl. No. 2(i) to 2(iii).
i	Construction of 220/132/33kV substation at Bisonikala			
ii	LILO of both circuits of Satpura-Itarsi-Handiya 220kV line at Bisonikala 220kV S/s			
iii	LILO of SeoniMalwa-Harda 132kV S/c line at Bisonikala 220kV S/s			
3	**220/132/33kV Substation at Khargone (District-Khargone)**	24	10%	All Elements from Sl. No. 3(i) to 3(iv).
i	Construction of 220/132kV substation at Khargone			
ii	LILO of both circuits of Chhegaon - Nimrani 220kV line at Khargone 220kV S/s			
iii	LILO of Khargone - Julwaniya(Talakpura) 132kV line at Khargone 220kV S/s			
iv	LILO of Bhikangaon - Bistan 132kV line at Khargone 220kV S/s			
4	**132/33kV substation at Sodalpur(District-Harda)**	18	3%	All Elements from Sl. No. 4(i) to 4(ii).
i	Construction of 132/33kV substation at Sodalpur			

S. 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
ii	Bisonikala – Sodallpur-Sultanpur 132kV DCSS line.			
5	**132/33kV substation at Jawarjod (District-Sehore)**	18	2%	All Elements from Sl. No. 5(i) to 5(ii).
i	Construction of 132/33kV substation at Jawarjod			
ii	LILO of Ashta - Sonkatch 132kV S/C line at Jawarjod 132kV S/s			
6	**132/33kV substation at Pathari (District-Raisen)**	18	3%	All Elements from Sl. No. 6(i) to 6(ii).
i	Construction of 132/33kV substation at Pathari			
ii	Gairatganj-Pathari 132kV DCDS line			
7	**132/33kV substation at Badi (District-Raisen)**	18	4%	All Elements from Sl. No. 7(i) to 7(ii).
i	Construction of one No. 132/33kV substation at Badi			
ii	Bareli-Badi-Shahganj 132kV DCSS line			
8	**132/33kV substation at Semrahat (District-Guna)**	18	4%	All Elements from Sl. No. 8(i) to 8(ii).
i	Construction of 132/33kV substation at Semrahat			
ii	Ashoknagar-Semrahat-Aron 132kV DCSS line			
9	**132/33kV GIS substation at HOD Bhopal (District-Bhopal)**	24	10%	All Elements from Sl. No. 9(i) to 9(ii).
i	Construction of 132/33kV GIS Substation at HOD Bhopal			
ii	MugaliyaChhap-HOD Bhopal 132kV DCDS line (with Monopole Towers)			
10	**220/33kV substation at Shahpur (District-Betul)**	24	4%	All Elements from Sl. No. 10(i) to 10(ii).
i	Construction of 220/33kV substation at Shahpur			
ii	LILO one circuit of Satpura TPS-Itarsi 220 kV line at Shahpur 220/33kV S/s			
11	**132/33kV substation at Chhapiheda (District-Rajgarh)**	18	3%	All Elements from Sl. No.

S. 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
i	Construction of 132/33kV substation at Chhapiheda			11(i) to 11(ii).
ii	Khujner-Chhapiheda-Nalkheda 132kV DCSS line			
12	**132/33kV substation Bhatpachlana (District-Ujjain)**	18	3%	All Elements from Sl. No. 12(i) to 12(ii).
i	Construction of 132/33kV substation Bhatpachlana			
ii	LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana132kV S/s (on Multi Circuit tower or separate double circuit towers)			
13	**132/33kV substation at Dhodhar (District-Ratlam)**	18	2%	All Elements from Sl. No. 13(i) to 13(ii).
i	Construction of 132/33kV substation at Dhodhar			
ii	LILO of Jaora -Daloda 132kV line at Dhodhar 132kV S/s			
14	**132/33kV substation at Pipalgaon (District-Khargone)**	18	3%	All Elements from Sl. No. 14(i) to 14(ii).
i	Construction of 132/33kV substation at Pipalgaon			
ii	Kasrawad - Pipalgaon 132kV DCDS line			
15	**132/33kV substation at Ambaja (District-Alirajpur)**	18	4%	All Elements from Sl. No. 15(i) to 15(ii).
i	Construction of 132/33kV substation at Ambaja			
ii	LILO of Barwani – Kukshi 132kV line at Ambaja 132kV S/s			
16	**132/33kV substation at ChoubaraDheera (District-Dewas)**	18	3%	All Elements from Sl. No. 16(i) to 16(ii).
i	Construction of 132/33kV substation at ChoubaraDheera			
ii	Sonkatch-ChoubaraDheera 132kV DCSS line			
17	**132/33kV GIS substation at Pithampur Sector-III (District-Dhar)**	24	5%	All Elements from Sl. No. 17(i) to 17(ii).
i	Construction of 132/33kV GIS substation at Pithampur Sector-III			

S. 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
ii	Pithampur220-Pithampur Sector-III 132kV DCDS line			
18	**System Strengthening Works**	18	1%	
i	Bahadurpur - Badgaon 132kV DCSS line			

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: 24 months from Effective Date.

2.7 Due dates

2.7.1. The Bidders should submit the Bids online through the electronic bidding platform before the Bid Deadline i.e. on or before 1200 Hrs (IST) on 04.03.2022. In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI.

2.7.2. Important timelines are mentioned below:

Date	Event
31.12.2021	Issuance of RFP
20.01.2022	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.
27.01.2022	Pre-Bid meeting(s)
07.02.2022	Issue of written clarifications and revised RFP documents
17.02.2022	Issue of final RFP Project Documents
04.03.2022	Submission of Bid (Online submission of Bid through electronic bidding portal)
04.03.2022	Opening of Technical Bid
14.03.2022	Shortlisting and announcement of Qualified Bidders on bidding portal
15.03.2022	Opening of Financial Bid - Initial Offer
16.03.2022	Electronic reverse auction (Financial Bid – Final Offer) for the Qualified Bidders.
21.03.2022	Submission of original hard copies of Annexure 3, Annexure 4, Annexure 6, as applicable and Annexure 14 by the bidder with

Date	Event
	lowest Final Offer
24.03.2022	Selection of Successful Bidder and issue of LOI
04.04.2022	Signing of RFP Project Documents and transfer of MP Power Transmission Package-I Limited

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. The BPC reserves the right to reject any Bid which does not meet aforementioned validity requirement.

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. 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.

2.9.3. No change or supplemental information to a Bid already submitted 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. No Technical Bid or Initial Offer shall be modified, substituted or withdrawn by the Bidder on or after the Bid Deadline.

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 RFP Project Documents (other than the TSA), etc. BPC shall not be responsible in any way for such costs, regardless of the conduct or outcome of the process of tariff based competitive bidding for selection of Bidder as TSP as per Bidding Guidelines.

2.10.2. The cost of this RFP is Rs. 5,00,000/- (Rupees Fibve Lakh Only) or US$ 7,000 (US Dollars Seven Thousand Only) plus GST as per applicable rate, which shall be non-refundable. This amount shall be paid via electronic transfer to the following Bank Account:

Bank Name, Address & Branch	IDFC First Bank Limited Wholesale Banking Outlet Express Building, 2nd Floor, 9-10 Bahadur Shah Zafar Marg, New Delhi-110002
Bank Account Name	REC Power Development & Consultancy Limited (formerly REC Power Distribution Company Limited)
Bank Account No	10000697415
Bank IFSC Code No	IDFB0020101

Immediately after issuance of RFP document, the Bidder shall submit the Pre-Award Integrity Pact in the format as prescribed in Annexure B, which shall be applicable for and during the bidding process, duly signed on each page by any whole-time Director / Authorized Signatory, duly witnessed by two persons, and shall be submitted by the Bidder in two (2) originals in a separate envelope, duly superscripted with Pre-Award Integrity Pact. The Bidder shall submit the Pre-Award Integrity Pact on non-judicial stamp paper of Rs. 100/- each duly purchased from the National Capital Territory of Delhi. In case the Bidder is in a consortium, the Pre-Award Integrity Pact shall be signed and submitted by each member of the Consortium separately.

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:

- 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
- Failure to execute the Share Purchase Agreement as per the provisions of Clause 2.15.2; or
- Failure to furnish the Contract Performance Guarantee as per Clause 2.12; or
- Failure to acquire one hundred percent (100%) equity shares of MP Power Transmission Package-I Limited, along with all its related assets and liabilities, in accordance with the provisions of Clause 2.15.2; or

- Failure to comply with the provisions of Clause 2.15.5 and Clause 2.15.6, leading to annulment of the award of the Project.

- 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 Transmission Service Agreement.

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 MP Power Transmission Package-I Limited 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 Transmission Service Agreement.

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 Customer the Contract Performance Guarantee for an amount of Rs. 28.90 Crore (Rupees Twenty Eight Crore Ninety Lakh Only). 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 Transmission Service Agreement. 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-17, the Selected Bidder may obtain the same from not more than three (3) banks specified in Annexure-17.

2.13 Opening of Bids

2.13.1. Technical Bid will be opened by the Bid Opening Committee as per the following time schedule and in the office of BPC, in the online presence of Bidders' representatives who wish to attend:

Opening of Envelope (Technical Bid): 1230 hours (IST) on 04.03.2022

or such other dates as may be intimated by BPC to the Bidders.

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.

Opening of Initial Offer: Initial Offer shall be opened by the Bid Opening Committee in presence of the Bid Evaluation Committee at 1230 hours (IST) on 15.03.2022 in the office of BPC.

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:

- Name of the Bidding Company / Consortium Members in case of Bidding Consortium.

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 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:

Chief Executive Officer,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001
Email: pshariharan@recl.in, pshariharan@recpdcl.in

2.15 Other Aspects

2.15.1. The draft of the Transmission Service Agreement has been attached to this RFP. In addition to above, the following documents have also been attached to this RFP:

a) Share Purchase Agreement

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 Formats – 1 & 2 of Annexure 20.

Upon finalization of the RFP Project Documents after incorporating the amendments envisaged in Clause 2.4 of this RFP, all the finalized RFP Project Documents shall be provided by BPC to the Bidders at least fifteen (15) days prior to the Bid Deadline.

The Transmission Service Agreement and Share Purchase Agreement shall be signed in required number of originals so as to ensure that one (1) original is retained by each party to the Agreement(s) on the date of transfer of SPV.

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 Customer as per the provisions of Clause 2.12;

b) execute the Share Purchase Agreement and the Transmission Service Agreement;

c) acquire, for the Acquisition Price, one hundred percent (100%) equity shareholding of MP Power Transmission Package-I Limited from REC Power Development and Consultancy Limited, who shall sell to the Selected Bidder, the equity shareholding of MP Power Transmission Package-I Limited, along with all its related assets and liabilities;

Stamp duties payable on purchase of one hundred percent (100%) of the equity shareholding of MP Power Transmission Package-I Limited, along with all its related assets and liabilities, shall also be borne by the Selected Bidder.

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 of ten (10) days shall be extended, on a day for day basis till the end of the Bid validity period.

2.15.3. After the date of acquisition of the equity shareholding of MP Power Transmission Package-I Limited, 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 Long Term Transmission Customer,

ii. all rights and obligations of MP Power Transmission Package-I Limited, 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 Customer and

iv. contractual obligations undertaken by the BPC shall continue to be fulfilled by the TSP.

2.15.4. Within five (5) working days of the issue of the acquisition of the SPV by the Successful Bidder, the TSP shall apply to the State Commission for grant of Transmission License and make an application to the State Commission for the adoption of Transmission Charges, as required under Section – 63 of The Electricity Act 2003.

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 other parties are willing to execute the Share Purchase Agreement and REC Power Development and Consultancy Limited is willing to sell the entire equity shareholding of MP Power Transmission Package-I Limited, 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 State Commission, it will constitute sufficient grounds for annulment of award of the Project.

2.15.7. The annulment of award, as provided in Clauses 2.15.5 and 2.15.6 of this RFP, will be done by the State Government on the recommendations of Empowered Committee. However, before recommending so, Empowered Committee will give an opportunity to the Selected Bidder / TSP to present their view point.

2.15.8. The annulment of the award, under Clause 2.15.5 or 2.15.6 of this RFP, shall be sufficient grounds for blacklisting the bidder, whose award has been annulled, for a period of five years or more, as decided by the Empowered Committee, provided that the blacklisting shall be done only after giving the bidder an opportunity for showing cause.

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 the Long Term Transmission Customer 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 any BPC for an indefinite period 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 Transmission Service Agreement 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 Transmission Service Agreement, as the case may be, any person in respect of any matter relating to the Project or the LoI or the Transmission Service Agreement, 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

3.1. The evaluation process of Technical Bid comprises the following five 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

3.2. 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 not signed by authorized signatory and / or stamped in the manner indicated in this RFP.

c) All pages of the Technical Bid submitted but not initialed by the authorized signatories on behalf of the Bidder.

d) Technical Bid not including the covering letter as per Annexure 1.

e) Technical Bid submitted by a Bidding Consortium not including the Consortium Agreement.

f) Technical Bid contains material inconsistencies in the information and documents submitted by the Bidder, affecting the Qualification Requirements.

g) Bidder submitting or participating in more than one Bid either as a Bidding Company or as a Member of Bidding Consortium.

h) More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.

i) Information not submitted in formats specified in the RFP.

j) Applicable Board resolutions, or any other document, as provided in Clause 2.5.2, not being submitted;

k) Bid not accompanied by a valid Bid Bond or Bid Security Declaration, as applicable;

l) Non submission of power of attorney, supported by a Board resolution;

m) Bid validity being less than that required as per Clause 2.8 of this RFP;

n) Bid not containing Format-1 (Bidders' Undertakings) of Annexure-8;

o) Bidder having Conflict of Interest

p) The Bidder has not submitted a disclosure as per Annexure 13.

q) Bidders delaying in submission of additional information or clarifications sought by the BPC.

r) If the Bidder makes any misrepresentation as specified in Clause 3.7.

s) Bid being conditional in nature.

t) More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.

3.3. 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 Technical Bid is taken up. Annexure 16 and Annexure 11A shall be used to check whether each Bidder meets the stipulated requirements.

3.4. 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 Networth 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/construction experience 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. Such Bidders shall submit necessary certification from their Banker for the exchange rate used in the conversation.

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.

3.4.3. The BPC shall upload the list of all Qualified Bidders and Non-Qualified Bidders on the bidding portal along with the reasons for non-qualification.

3.5. STEP IV - Evaluation of Financial Bids

3.5.1. The Bids which have 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 Quoted 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, in the first fifty per cent of the ranking (with any fraction rounded off to higher integer) or four Qualified Bidders, whichever is higher, shall qualify for participating in the electronic reverse 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 State 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 Quoted Transmission Charges discovered 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, all Qualified Bidders who shares the same rank till 50% of the rank (with any faction rounded off to higher integer) determined above, shall qualify to participate in the electronic reverse auction stage. In case 50% of the rank is having less than four (4) Bidders and the rank of the fourth (4^{th}) Bidder is shared by more than one Bidder, then all such all such Bidders who share the rank of the fourth Bidder shall qualify to participate in the electronic reverse auction.

3.5.2. The Financial Bids comprising of both Initial Offer and Final Offer 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) of Clause 2.5.3 of this RFP shall be rejected.

3.5.3 The Bidders shall quote the single annual Quoted Transmission Charges as specified in the format at Annexure – 21.

3.6. STEP V - Bidder Selection

3.6.1. The prevailing lowest Quoted Transmission Charges discovered from Final Offers shall only be displayed during the e-reverse bidding and the Bidder quoting such Final Offer will

always remain anonymous during the e-reverse bidding. The Bidder with the prevailing lowest Quoted Transmission Charges discovered from Final Offers 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, subject to verification of the original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14. 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 transmission charges ("Initial Offer") during e-bidding stage shall be declared as the Successful Bidder, subject to verification of the original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14. The Letter of Intent shall be issued to such Successful Bidder in two (2) copies.

In case, there is a discrepancy between the online submission and physical documents, the bid would be out rightly rejected and the bidder shall be construed to have engaged in the fraudulent practice as defined in Clause 2.19.3 with consequences as mentioned in Clause 2.19.2. Further, in such a case, the provisions of Clause 2.5.6 (j) shall apply.

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 prices.

3.7. 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.

3.8. 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.

- Technical Bid that is incomplete.
- Technical Bid not signed by authorized signatory and / or stamped in the manner indicated in this RFP.
- All pages of the Technical Bid submitted but not initialed by the authorized signatories on behalf of the Bidder.
- Technical Bid not including the covering letter as per Annexure 1.
- Technical Bid contains material inconsistencies in the information and documents submitted by the Bidder, affecting the Qualification Requirements.

- Information not submitted in formats specified in the RFP.
- The Bidder has not submitted a disclosure as per Annexure 13**.**
- Bidders delaying in submission of additional information or clarifications sought by the BPC.

3.8.2. Technical Bid found to be Non-responsive as per Clause **3.2,** due to any of the following conditions, shall be rejected.

- Technical Bid not received by the scheduled date and time.
- Technical Bid submitted by a Bidding Consortium not including the Consortium Agreement.
- Bidder submitting or participating in more than one response either as a Bidding Company or as a Member of Bidding Consortium.
- More than one Member of the Bidding Consortium or a Bidding Company using the credentials of the same Parent/Affiliate.
- Technical Bid having Conflict of Interest.
- If the Bidder makes any misrepresentation as specified in Clause **3.7.**

3.9. 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 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

14A. Format for Bid Security Declaration

15. Format for Contract Performance Guarantee
16. Checklist for Technical Bid submission requirements
22. Format for Affidavit
23. List of Long Term Transmission Customer

In addition to the online submission, the Bidder with lowest Final Offer will be required to submit original hard copies of Annexure 3, Annexure 4 (if applicable), Annexure 6 (if applicable) and Annexure 14 before issuance of LoI.

Financial Bid

21. 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. Format for clarification/amendments on the RFP/RFP Project Documents
20. Formats for RFP Project Documents

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

ANNEXURE 1 - 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,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: **Bid for selection of Bidder as Transmission Service Provider to establish Intra-State Transmission System for "Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I" 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 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 hereby agree and undertake to procure the products associated with the Transmission System as per provisions of Public Procurement (Preference to Make in India) orders issued by Ministry of Power vide orders No. 11/5/2018 - Coord. dated 28.07.2020 for transmission sector, as amended from time to time read with Department for Promotion of Industry and Internal Trade (DPIIT) orders in this regard.

We hereby also agree and undertake to comply with Department of Expenditure, Ministry of Finance vide Order (Public Procurement No 1) bearing File No. 6/18/2019-PPD dated 23.07.2020, Order (Public Procurement No 2) bearing File No. 6/18/2019-PPD dated 23.07.2020 and Order (Public Procurement No. 3) bearing File No. 6/18/2019-PPD, dated 24.07.2020, as amended from time to time, regarding public procurement from a bidder of a country, which shares land border with India.

5. We hereby agree to comply with Ministry of Power order no. 25-11/6/2018 – PG dated 02.07.2020 as amended from time to time.

6. We are herewith submitting legally binding board resolution for the total equity requirement of the Project.

7. 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 7 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]

8. 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.

9. We hereby confirm that we shall continue to maintain compliance with Qualification Requirements till the execution of the Transmission Service Agreement. Further, in case we emerge as Selected Bidder for the Project, we shall continue to maintain compliance with Qualification Requirements till the COD of the Project.

10. We confirm that we have studied the provisions of relevant Indian laws and regulations required to enable us to build, own, operate and transfer the said Project and to prepare this Bid.

11. 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.

12. We confirm that the Bid shall remain valid for a period of one eighty (180) days from the Bid Deadline.

13. 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: …….

14. Bid Bond

We have enclosed a Bid Bond of Rupees ……. Crores (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 to …….in terms of Clause 2.11 of the RFP.

Or

We have enclosed a Bid Security Declaration as per your proforma (Annexure-14A) [To be inserted for projects wherein RFP has been issued before 31.12.2021 otherwise to be deleted]

15. 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.

16. 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 RFP Project Documents (other than TSA), in the event of our selection as the TSP. 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,

…….

(Name and Signature of the authorized signatory in whose name Power of Attorney/ Board Resolution as per Clause 2.5.2 is issued)

Name: ……
Designation: ……
Address: ……

Date: …….
Place: ……

Company Rubber Stamp

ANNEXURE 2 - 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,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: **Bid for selection of Bidder as Transmission Service Provider to establish Intra-State Transmission System for "Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I" 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 Intra-State Transmission System for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I"** 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: …….

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

ANNEXURE 3 - 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 Intra-State Transmission System for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I"** 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.

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

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)

……..
(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 when it is so required, 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.

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).

4) In case of foreign Bidders, refer to clause 2.5.6 (p)

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 of ……..……and having its Registered / Head Office at ……..…….as 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, 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.

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

IN WITNESS WHEREOF M/s ……., as the Member of the Consortium have executed these presents on this…….. day of .....

For and on behalf of
Consortium Member

……
(Signature of the Authorized Signatory)

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

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 when it is so required, 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).

3. In case of foreign Bidders, refer to clause 2.5.6 (p)

ANNEXURE 5 - 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 Authorized 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 authorizing 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 **_____[Name of BPC]** to verify our Bid for selection of Bidder as Transmission Service Provider to establish Intra-State Transmission system for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I"** 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 Authorized Signatory: …….

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

Place: ……
Date: ……

……..
(Company rubber stamp/seal)

…….
(Signature of Notary Public)

Place: ……
Date: ……

ANNEXURE 6 - 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 of .....Two thousand.....between M/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 **{Name of the SPV Company or "Project specific SPV to be incorporated by the BPC"}**(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 Customer.

WHEREAS, the BPC had invited Bid in response to RFP issued to …… (insert the name of purchaser of RFP) for selection of the bidder as the Transmission Service Provider to establish Intra-State Transmission System for **"_____[Name of Project]"**.

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 2.2.4 of the RFP document also stipulates that the Bidding Consortium shall provide along with the Bid, 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 equity contribution as well as the equity contribution 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 **Delhi** alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.

13. It is hereby agreed that, the Lead Member shall furnish the bid bond, as stipulated in the RFP, on behalf of the Consortium Members.

    Or

    It is hereby agreed that, the Lead Member shall furnish the bid security declaration, as stipulated in the RFP, on behalf of the Consortium Members. [To be inserted for projects wherein RFP has been issued before 31.12.2021 otherwise to be deleted]

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 Customer, as stipulated in the RFP and Transmission Service Agreement.

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 Share Purchase Agreement, unless expressly agreed to the contrary by the Long Term Transmission Customer.

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 the Long Term Transmission Customer.

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 the Long Term Transmission Customer.

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

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

.....

(Signature of authorized signatory)

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

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

.....
(Signature of authorized signatory)

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

Attested:
……..
(Signature)
(Notary Public)

Place: …….
Date: …….

Note: In case of foreign Bidders, refer to clause 2.5.6 (p)

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)	

ANNEXURE 7 A - FORMAT FOR QUALIFICATION REQUIREMENT

A. NET WORTH

To,
Chief Executive Officer,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Intra-State Transmission System for "Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I" through tariff based competitive bidding process

1. [Note: Applicable in case of Bidding Company]

We certify that the Financially Evaluated Entity(ies) had a Networth 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. Also, the Networth of any of the last three (3) financial years is not negative.

Name of Financially Evaluated Entity(ies)	Relationship with Bidding Company**	Financial Year	Networth (Rs. Crore)
1. ……..			
2. ……..			
3. ……..			
….			
Total Networth			

*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 Networth 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. Also, the Networth of any of the last three (3) financial years is not negative.

Name of Consortium Member	Equity Commitment in the Project (%)	Networth of Member (Rs. Crore)	Networth 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 Networth requirement for the Project)	(5)
1. ……				Yes / No
2. ……				Yes / No
..				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	Financial Year	Networth (Rs. Crore)
1. …….			
2. …….			
3. …….			
Total Networth			

* 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;

*** Networth requirement to be met by Member should be in proportion to the equity commitment of the Member for the Project.

Yours faithfully

……
(Signature and name of the authorized signatory of the Company and Stamp)

Name: …….
Date: …….
Place: …….

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

Name: …….
Date: …….
Place: …….

Date: …….

Notes:

1. Along with the above format, in a separate sheet, please provide details of computation of Networth of last three (3) financial years 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. 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.

ANNEXURE 7B - FORMAT FOR TECHNICAL REQUIREMENT

To,

Chief Executive Officer,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Intra-State Transmission System for "Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I" through tariff based competitive bidding process

1. To be used by Bidder using the development experience in infrastructure sector

We certify that M/s. …….. (Insert name of Technically Evaluated Entity(ies)) have experience of development of projects in the Infrastructure 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 any single 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 atleast twenty – six percent (26%)) 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 (which has executed the project at (3)) whose technical capability has been used for Qualification Requirement	Relationship** with Bidding Company / Lead Member	Project name	Nature of Project (BOOT, BOT, BOOM, DBFOT etc.)	Relevant Infrastructure sector	Date of Financial Closure of the Project (in DD / MM / YYYY)	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)	(8)	(9)
……		……. (Project 1)						
……		…….						
Total (Rs. Crore)								

* Equivalent USD shall be calculated as per provisions of Clause ____

** The column for "Relationship with Bidding Company / Lead Member" is to be filled in only in case technical capability of Parent/Affiliate has been used for meeting Qualification Requirements.

We further certify that the Company(ies) as indicated in column (1) of the above table, whose technical capability has / have been used for meeting the qualification requirement, has / have held shareholding respectively of atleast twenty – six percent (26%)from the date of financial closure till the date of commissioning / completion of the above project(s).

2. To be used by Bidder using construction experience in infrastructure sector.

We certify that M/s. …….. (Insert name of Technically Evaluated Entity(ies)) have received aggregate payments not less than Rs. ……. Crore or equivalent USD (calculated as per provisions in Clause 3.4.1) from its client(s) for construction works fully completed during the last 5(five) financial years. We further certify that the payment received from each project shall not be less than Rs. ……. Crore or equivalent USD (calculated as per provisions in Clause 3.4.1). For this purpose, payments received on projects that have been commissioned/completed at least seven (7) days prior to the Bid Deadline shall be considered. Further only the payments (gross) actually received, during such 5 (five) financial years shall qualify for purposes of computing the technical capacity.

We also confirm that construction works does not include cost of land supply of goods or equipment except when such goods or equipment form part of a turn-key construction contract/ EPC contract for the project.

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

Name of Company (which has executed the project at (3)) whose technical capability has been used for Qualification Requirement	Relationship** with Bidding Company / Lead Member	Project name	Nature of Project (EPC, Turnkey etc)	Relevant Infrastructure sector	Date of award of contract (in dd/mm/yy)	Date of Completion / Commissioning	Payment received (Rs. Crore)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
……		……. Project 1					
……		…….					
……		…….					
	Total (Rs. Crore)						

Yours faithfully

……..
(Signature and name of the authorized signatory of the Company and stamp)

Name: ……..
Date: ……..
Place: ……..

……
(Signature and Stamp of statutory Auditors of Bidding Company/ Lead Member of Consortium)
Name: ……..
Date: ……..
Place: ……..

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 of the project company. In addition, the Statutory Auditor of the project company should also certify that the capital expenditure of projects commissioned or completed 7 days prior to Bid Deadline has been capitalized in the books of accounts.

   Additionally, in case construction experience is used, a certificate(s) from the statutory auditors stating the payments received and the concerned client(s) stating the works commissioned during the past 5 years in respect of the projects specified above. In case a particular job/ contract has been jointly executed by the Bidder (as part of a consortium), it should further support its claim for the share in work done for that particular job/ contract by producing a certificate from its statutory auditor or the client.

2. In case the accounts for the financial year in which the project claimed for meeting qualification requirement has been commissioned are not audited, the Bidder shall give declaration in this regard duly certified by its statutory auditor. In such a case, Bidder shall provide details of computation of capital expenditure of such project(s) duly certified by Statutory Auditor of the project company and the Statutory Auditor of the project company should also certify that the capital expenditure of projects commissioned or completed shall be capitalized in the books of accounts upon finalization.

3. 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.

ANNEXURE 7C - 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,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: Bid for selection of Bidder as Transmission Service Provider to establish Intra-State Transmission System for "Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I" 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 at the most seven (7) days prior to the Bid Deadline (as per Clause 2.1.4 of RFP)

Yours faithfully

……
(Signature and name of the authorized signatory of the Company and stamp)

Name: ……
Date: ……
Place: ……

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

Name: ……..
Date: ……..
Place: ……..
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):

1. 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.

1. To be used by Bidder using development experience in infrastructure sector

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Name(s) of project(s) from Infrastructure sectors					
Location(s) including country(s) where project was set up					
Nature of Project					
Voltage level (if any)					
Capital cost of project(s) Rs. in Crore					
*Status of the project					
% 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:

- Project model, i.e., BOO, BOOT, BOOM;
- Debt financing and equity raised and provided by Bidder/Bidder's Parent/Bidder's Affiliate for the project, including names of lenders and investors;

- Size and type of installation;
- Technical data/information on major equipment installed
- Description of role performed by the Bidder/Bidder's Parent/Bidder's Affiliate on the project
- 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.
- Cost data (breakdown of major components)
- Name of EPC and/or other major contractor
- Construction time for the project
- Names, addresses and contact numbers of owners of the projects
- Operating reliability over the past five (5) years or since date of commercial operation
- Operating environmental compliance history
- Names of supervisory entities or consultant, if any
- Date of commercial operation
- Total duration of operation

2. To be used by Bidder using construction experience in infrastructure sector

Particulars	Year 1	Year 2	Year 3	Year 4	Year 5
Name(s) of project(s) from Infrastructure sectors					
Location(s) including country(s) where project was set up					
Nature of Project					
Voltage level (if any)					
Revenue received Rs. in Crore					
*Status of the project					
% 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:

- Project model, i.e., EPC, Turnkey;
- Size and type of installation;
- Technical data/information on major equipment installed
- Description of role performed by the Bidder/Bidder's Parent/Bidder's Affiliate on the project
- Cost data (breakdown of major components)
- Name of sub-contractor
- Construction time for the project
- Names, addresses and contact numbers of owners of the projects
- Operating reliability over the past five (5) years or since date of commercial operation
- Operating environmental compliance history
- Names of supervisory entities or consultant, if any
- Date of commercial operation
- 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 authorized signatory of the Bidding Company or the Lead Member of Consortium). In case the project listed in Attachment 2 is under BOOT / DBFOT mechanism, the certificates of final acceptance and/or certificates of good operating performance must be issued by the authority / independent engineer of the project as defined in the respective project agreement.

For and on behalf of Bidding Company/Consortium

M/s…….

…….
(Signature of authorized signatory)

Name: ……
Designation: ……
Date: ……
Place: ……

ANNEXURE 8 -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,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: Bidders' Undertakings in respect of Bid for selection of Bidder as TSP to establish Intra-State transmission system for Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I.

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 also comply with the provisions contained in the MPERC (Terms & Conditions for Intra State Open Access in Madhya Pradesh) Regulations, 2005 and as amended from time to time.

3. We give our unconditional acceptance to the RFP dated 31.12.2021 issued by the BPC and the RFP Project Documents, as amended, and undertake to ensure that the TSP shall execute all the RFP Project Documents, 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 21 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 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 18.1 of the Transmission Service Agreement. ***(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:

S. 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	**400/220/132/33kV GIS Substation at Mandideep (District-Raisen)**	24	30%	All Elements from Sl. No. 1(i) to 1(v).
i	Construction of 400/220kV GIS substation at GIS Mandideep			
ii	LILO of both circuit of Itarsi (PGCIL) - Bhopal 400kV line (on Twin Moose) at MandideepGIS400kV S/s			
iii	LILO of both circuits of Hoshangabad - Mandideep - Adampur 220kV line at Mandideep GIS 400kV S/s a. LILO of Hosangabad – Adampur 220kV line at Mandideep GIS 400 kV S/s. b. LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400 kV S/s.			
iv	LILO of Mandideep132 - Bagroda 132kV line at Mandideep GIS 400kV S/s			
v	LILO of Mandideep220 - MACT Bhopal 132kV line at MandideepGIS400kV S/s			
2	**220/132/33kV substation at Bisonikala (District-Hoshangabad)**	24	6%	All Elements from Sl. No. 2(i) to 2(iii).
i	Construction of 220/132/33kV substation at Bisonikala			
ii	LILO of both circuits of Satpura-Itarsi-Handiya 220kV line at Bisonikala 220kV S/s			
iii	LILO of SeoniMalwa-Harda 132kV S/c line at Bisonikala 220kV S/s			
3	**220/132/33kV Substation at Khargone (District-Khargone)**	24	10%	All Elements from Sl. No. 3(i) to 3(iv).
i	Construction of 220/132kV substation at Khargone			

S. 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
ii	LILO of both circuits of Chhegaon - Nimrani 220kV line at Khargone 220kV S/s			
iii	LILO of Khargone - Julwaniya(Talakpura) 132kV line at Khargone 220kV S/s			
iv	LILO of Bhikangaon - Bistan 132kV line at Khargone 220kV S/s			
4	**132/33kV substation at Sodalpur(District-Harda)**	18	3%	All Elements from Sl. No. 4(i) to 4(ii).
i	Construction of 132/33kV substation at Sodalpur			
ii	Bisonikala – Sodallpur-Sultanpur 132kV DCSS line.			
5	**132/33kV substation at Jawarjod (District-Sehore)**	18	2%	All Elements from Sl. No. 5(i) to 5(ii).
i	Construction of 132/33kV substation at Jawarjod			
ii	LILO of Ashta - Sonkatch 132kV S/C line at Jawarjod 132kV S/s			
6	**132/33kV substation at Pathari (District-Raisen)**	18	3%	All Elements from Sl. No. 6(i) to 6(ii).
i	Construction of 132/33kV substation at Pathari			
ii	Gairatganj-Pathari 132kV DCDS line			
7	**132/33kV substation at Badi (District-Raisen)**	18	4%	All Elements from Sl. No. 7(i) to 7(ii).
i	Construction of one No. 132/33kV substation at Badi			
ii	Bareli-Badi-Shahganj 132kV DCSS line			
8	**132/33kV substation at Semrahat (District-Guna)**	18	4%	All Elements from Sl. No. 8(i) to 8(ii).
i	Construction of 132/33kV substation at Semrahat			
ii	Ashoknagar-Semrahat-Aron 132kV DCSS line			
9	**132/33kV GIS substation at HOD Bhopal (District-Bhopal)**	24	10%	All Elements from Sl. No. 9(i) to 9(ii).
i	Construction of 132/33kV GIS Substation at HOD Bhopal			
ii	MugaliyaChhap-HOD Bhopal 132kV DCDS line (with Monopole Towers)			

S. 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
10	**220/33kV substation at Shahpur (District-Betul)**	24	4%	All Elements from Sl. No. 10(i) to 10(ii).
i	Construction of 220/33kV substation at Shahpur			
ii	LILO one circuit of Satpura TPS-Itarsi 220 kV line at Shahpur 220/33kV S/s			
11	**132/33kV substation at Chhapiheda (District-Rajgarh)**	18	3%	All Elements from Sl. No. 11(i) to 11(ii).
i	Construction of 132/33kV substation at Chhapiheda			
ii	Khujner-Chhapiheda-Nalkheda 132kV DCSS line			
12	**132/33kV substation Bhatpachlana (District-Ujjain)**	18	3%	All Elements from Sl. No. 12(i) to 12(ii).
i	Construction of 132/33kV substation Bhatpachlana			
ii	LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana132kV S/s (on Multi Circuit tower or separate double circuit towers)			
13	**132/33kV substation at Dhodhar (District-Ratlam)**	18	2%	All Elements from Sl. No. 13(i) to 13(ii).
i	Construction of 132/33kV substation at Dhodhar			
ii	LILO of Jaora -Daloda 132kV line at Dhodhar 132kV S/s			
14	**132/33kV substation at Pipalgaon (District-Khargone)**	18	3%	All Elements from Sl. No. 14(i) to 14(ii).
i	Construction of 132/33kV substation at Pipalgaon			
ii	Kasrawad - Pipalgaon 132kV DCDS line			
15	**132/33kV substation at Ambaja (District-Alirajpur)**	18	4%	All Elements from Sl. No. 15(i) to 15(ii).
i	Construction of 132/33kV substation at Ambaja			
ii	LILO of Barwani – Kukshi 132kV line at Ambaja 132kV S/s			
16	**132/33kV substation at ChoubaraDheera (District-Dewas)**	18	3%	All Elements from Sl. No. 16(i) to 16(ii).
i	Construction of 132/33kV substation at ChoubaraDheera			

S. 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
ii	Sonkatch-ChoubaraDheera 132kV DCSS line			
17	**132/33kV GIS substation at Pithampur Sector-III (District-Dhar)**	24	5%	All Elements from Sl. No. 17(i) to 17(ii).
i	Construction of 132/33kV GIS substation at Pithampur Sector-III			
ii	Pithampur220-Pithampur Sector-III 132kV DCDS line			
18	**System Strengthening Works**	18	1%	
i	Bahadurpur - Badgaon 132kV DCSS line			

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: 24 months from the Effective Date

9. We confirm that our Financial Bid conforms to all the conditions mentioned in this RFP, and in particular, we confirm that:
   a. Financial Bid in the prescribed format of Annexure 21 has been submitted duly signed by the authorized signatory.
   b. Financial Bid is unconditional.
   c. 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 MP Power Transmission Package-I Limited, pursuant to our selection as Selected Bidder, we agree that the same would be treated as a TSP's Event of Default under Transmission Service Agreement, and relevant provisions of Transmission Service Agreement 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. Power of attorney/ Board resolution as per Clause 2.5.2 is enclosed.

Signature and name of the authorized signatory of the Company and stamp of Bidding Company or Lead member of Consortium

Note:

1. In case of foreign Bidders, refer to clause 2.5.6 (p)

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 _____[Name of SPV] as per Clause 2.5.8.2.

S. No.	Name of the Bidding Company/ Member in case of a Bidding Consortium	Name of the Company investing in the equity of the _____[Name of SPV]	Relationship with Bidding Company /Member of the Bidding Consortium	% of equity participation in the _____[Name of SPV]
(1)	(2)	(3)	(4)	(5)
TOTAL				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 _____[Name of SPV] 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

ANNEXURE 9 -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,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

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 31.12.2021 ('RFP') issued by you for selection of Bidder as Transmission Service Provider for establishing the Intra-State Transmission System for "**Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I**".

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 "_____[Name of Project]**"**.

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 Name of the authorized signatory of the Company and stamp)

Name: …….
Date: …….
Place: …….

Notes:

1. 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 is also furnished by the Ultimate Parent on behalf of such Financially Evaluated Entity/Technically Evaluated Entity.

ANNEXURE 10- 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,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Sub: <u>Undertaking for equity investment</u>

Dear Sir,

We refer to the Request for Proposal dated _____ ('RFP') issued by you regarding setting up of Intra-State transmission system for _____[Name of Project] Project on build, own, operate and transfer basis.

We have carefully read and examined in detail the RFP and the RFP Project Documents, 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 _____[Name of SPV] 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 MP Power Transmission Package-I Limited _____ [Name of SPV] by the ……. [Insert the name of the Bidder or the Consortium Member] 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] to invest in full or in part, in the equity share capital of _____[Name of SPV] as specified in the Bid, we shall invest the said amount not invested by……..[Insert the name of the Bidder or the Consortium Member] in _____[Name of SPV] by purchase of existing shares or subscribing to the new shares of _____[Name of SPV], 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.

Certified as true.

……..

(Signature and Name of the authorized signatory of the Company and stamp)

Note:

1. Wherever required, extract of the charter documents and documents such as a Board resolution should be submitted for verification.

ANNEXURE 11 - 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, 1956/2013, passed the following Resolution:

1. RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 / Companies Act 2013 (as the case may be) 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 _____[Name of SPV] representing the entire amount proposed to be invested by the company for the transmission system for _____[Name of Project], partly by acquisition of the existing equity shares from _____[Name of BPC] 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 ;……. percentage (__%) limit to the extent becoming necessary towards the total equity share in the _____[Name of SPV], obligatory on the part of the company pursuant to the terms and conditions contained in the Consortium Agreement dated …….executed 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 Bidder, the following Board resolution no. 3 shall also be passed by the 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 _____[Name of SPV], which is to be invested by the …….[Name of the Affiliate(s)/ Parent / Ultimate Parent] for the _____[Name of SPV], partly by acquisition of the existing equity shares from _____[Name of BPC] 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/MS ……..be 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 any Whole Time Director/ Manager (supported by a specific board resolution) of the Bidding Company or the Lead Member of Consortium.

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 / Ultimate Parent Company (in case credentials of such TEE/ FEE has been utilized by the Bidding Company or Bidding Consortium)

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, 1956 / 2013, passed the following Resolution:

RESOLVED THAT pursuant to the provisions of the Companies Act, 1956 / Companies Act, 2013 (as the case may be) 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 invest …….percent (.... %) of the total equity share capital of _____[Name of SPV] representing the entire amount proposed to be invested by ……[insert the name of the Bidder or Member] for the said Project, in case of failure of ……[Insert the name of the Bidder or Member] 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 any Whole-time Director/Manager (supported by a specific board resolution) of Bidding Company or Lead Member of the Consortium.

2. The contents of the format may be suitably re-worded indicating the identity of the entity passing the resolution.

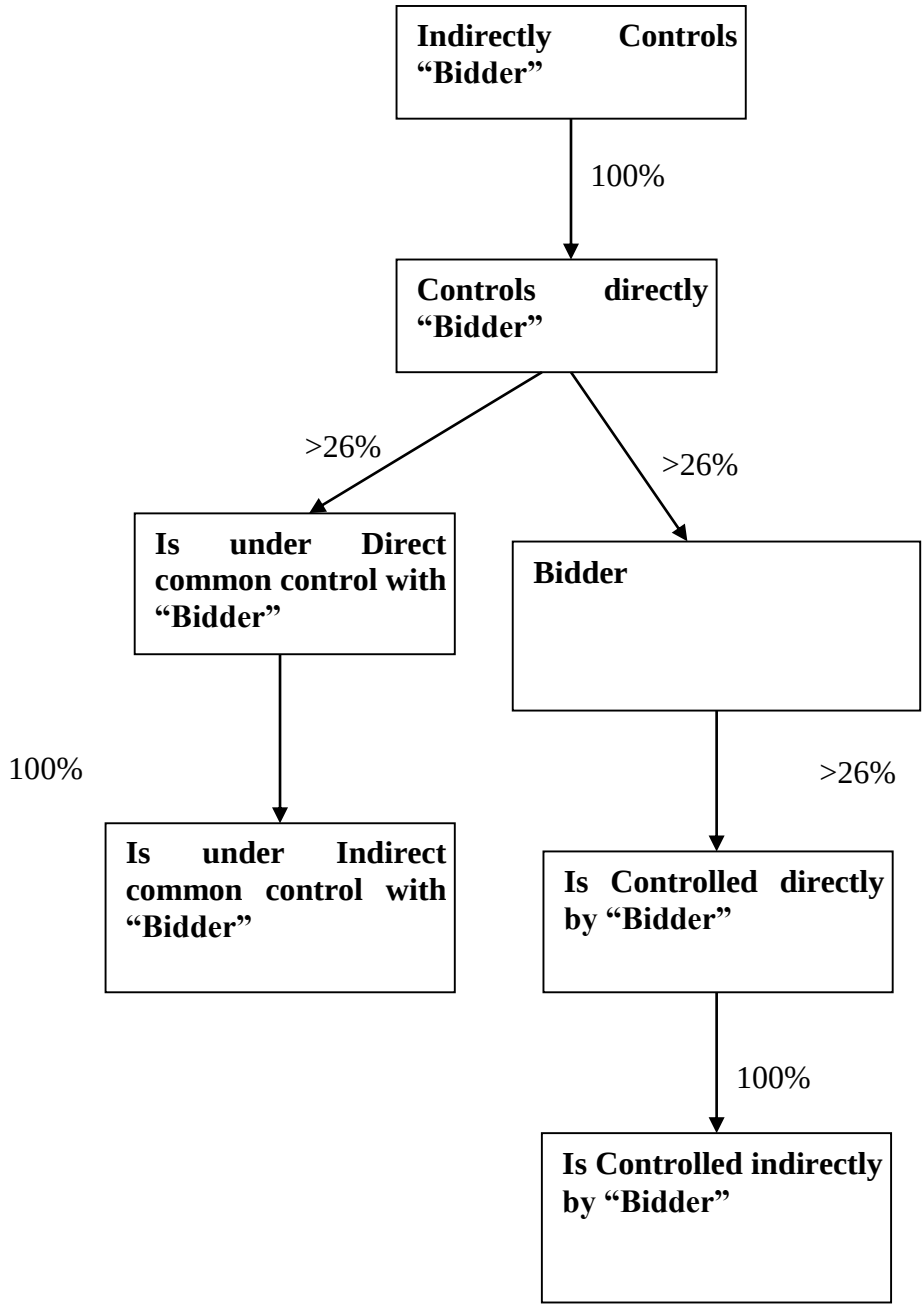
3. This format may be modified only to the limited extent required to comply with the local regulations and laws applicable to a foreign entity submitting this resolution. For example, reference to Companies Act 1956 / Companies Act 2013 (as the case may be) may be suitably modified to refer to the law 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.

ANNEXURE 11A – 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 10)
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	a) Format 1 of Annexure 11 - Resolution: 1, 2, and 4 from the Bidder b) Format 2 of Annexure 11 by either Technically/ Financially Evaluated Entity(ies) whose credentials have been used, or Ultimate Parent. Provided, if the Bidder himself is the Ultimate Parent, then Format 2 need not be provided.	Yes, by either Technically / Financially Evaluated Entity(ies) Affiliate(s) whose credentials have been used, or Ultimate Parent. Provided, if the Bidder himself is the Ultimate Parent, then the undertaking need not be provided.
Bidder himself + others (Affiliate and/or Parent Company and/or Ultimate Parent) in aggregate holding 100% equity	None	a) Format 1 of Annexure 11 - Resolution: 1,2, 3 and4 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	None
Bidder himself + others (Affiliate and/or Parent Company and/or Ultimate Parent) in	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	Yes, by either Parent/ Affiliate(s) whose credentials have been used, or Ultimate Parent

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 10)
aggregate holding 100% equity		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	

ANNEXURE 12 - FORMAT FOR ILLUSTRATION OF AFFILIATES



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.

ANNEXURE 13 - FORMAT FOR DISCLOSURE

[On the letter head of Bidding Company / Each Member in a Bidding Consortium]

Date: ……

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 authorized signatory of the Company and Stamp

The above disclosure should be signed and certified as true by the authorized signatory of the Bidding Company or of the Member, in case of a Consortium).

ANNEXURE 14 - 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.)

In consideration of the .....[Insert name of the Bidder] submitting the Bid inter alia for establishing the Intra-State transmission system for _____[Name of Project] on build, own, operate and transfer basis, in response to the RFP dated _____ issued by _____[Name of BPC], 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 _____[Name of BPC] or its authorized representative at _____[Address of BPC] forthwith on demand in writing from _____[Name of BPC] or any representative authorized by it in this behalf, any amount up to and not exceeding Rupees _____ Only (Rs _____ Crore),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 _____ Only (Rs ____ Crore). Our Guarantee shall remain in force until ……..[Date to be inserted on the basis of Clause 2.11 of this RFP]. _____[Name of BPC] or its authorized representative shall be entitled to invoke this Guarantee until …… [Insert Date, which is three sixty five days (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 _____[Name of BPC] 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 _____[Name of BPC] 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 _____[Name of BPC] or its authorized representative to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against _____[Name of BPC] 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 _____[Name of BPC] 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 _____[Name of BPC] 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 _____ Only (Rs ____ Crore) 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 _____[Name of BPC] 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……. Signature: ……..
Name and Address Name: ……..……..

2. …….. Designation with Stamp:
Name and Address

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.

ANNEXURE 14 A- FORMAT OF THE BID SECURITY DECLARATION [VALID TILL RFP ISSUED ON OR BEFORE 31.12.2021]

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

Date: .....

To,

Chief Executive Officer,
REC Power Development and Consultancy Limited
(formerly REC Power Distribution Company Limited)
(A wholly owned subsidiary of REC Limited)
REC Corporate Head Quarter,
D Block, Plot No. I – 4,
Sec – 29 Gurugram – 122 001

Dear Sir,

Sub: Bid Security Declaration in lieu of Bid Bond in respect of Bid for selection of Bidder as TSP to establish transmission system for "……. [Insert Name of the Project]"

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 agree the following:

1. We, ... (insert name of Bidding Company / Bidding Consortium) are submitting the Bid for establishing the transmission system for "……[Insert Name of the Project]" on build, own, operate and transfer basis, in response to the RFP dated 31.12.2021 issued by_____ [Name of BPC], as per the terms of the RFP.

2. We, ... (insert name of Bidding Company / Bidding Consortium) are submitting this Bid Security Declaration in lieu of the Bid Bond.

3. We, ... (insert name of Bidding Company / Bidding Consortium) have read the terms & conditions of RFP in particular regarding invocation/ forfeiting of the Bid Bond by the BPC under various circumstances.

We agree that, ... (insert name of Bidding Company / Bidding Consortium) shall be suspended from participation in the bidding process for future Intra-State transmission projects of Government of Madhya Pradesh to be developed through tariff based competitive bidding route for a period of two years from the bid submission date upon occurrence of a situation that otherwise would have led to revocation/forfeiture of Bid Bond as per provisions of RFP.

For and on behalf of Bidding Company/Consortium

M/s.....
.....

(Signature of authorised signatory)
Name: .....
Designation: .....
Date: .....
Place: .....

ANNEXURE 15 - 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)

In consideration of the …… [Insert name of the SPV or Selected Bidder on behalf of SPV or Lead Member in case of the Consortium, with address] agreeing to undertake the obligations under the Transmission Service Agreement dated …… and the other RFP Project Documents and the Long Term Transmission Customer and ……_[Name of BPC], agreeing to execute the RFP Project Documents 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 the Long Term Transmission Customer at…… [Insert Place and Address of the Long Term Transmission Customer indicated in TSA] forthwith on demand in writing from the Long Term Transmission Customer or any Officer authorized by it in this behalf, any amount up to and not exceeding Rupees……Crores (Rs…….) only [Insert the amount of the bank guarantee] on behalf of M/s…… [Insert name of the Selected Bidder / SPV].

This guarantee shall be valid and binding on the Guarantor Bank up to and including ……..and shall not be terminable by notice or any change in the constitution of the Bank or the term of the Transmission Service Agreement 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 Rupees ……. Crores (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 _____[Name of SPV], …… [Insert name of the Selected Bidder], ……. [Insert name of the TSP] 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 _____[Name of SPV] or the Selected Bidder, to make any claim against or any demand on _____[Name of SPV] or the Selected Bidder, as the case may be, or to give any notice to _____[Name of SPV] or the Selected Bidder, as the case may be, 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 …….[Name of SPV] or the Selected Bidder, as the case may be.

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 Long Term Transmission Customer is entitled to assign its rights and obligations under the Transmission Service Agreement.

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 Rupees ……..Crores (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 or SPV]. 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.

ANNEXURE 16 – 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;	
2. Format for Letter of Consent from each Consortium Member, including Lead Member, on their respective letterheads;	
3. Format for evidence of authorized signatory's authority ;	
4. Board resolution from the Bidding Company / Lead Member of the Consortium in favour of the person executing the Power of Attorney as per **Annexure 3**;	
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 as per **Annexure 4**;	
6. Board Resolution from each Member of the Consortium, other than the Lead Member, in favour of their respective authorized representatives for executing the POA, Consortium Agreement and signing of the requisite formats;	
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**;	
8. Consortium Agreement duly signed as per **Annexure 6**, along with Appendix-1, indicating the responsibilities and obligations of each Member of the Consortium;	
9. Format for Qualification Requirement: a. Calculation sheets, detailing computation of Networth 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; b. Calculation sheets, detailing computation of capital expenditure of projects and revenue received in construction 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	

Technical Bid Submission Requirements	Response (Yes / No)
cases where credentials of TEE is taken; c. Last financial year unconsolidated / consolidated audited annual accounts / statements, as the case may be, of the Financially Evaluated Entity / Technical Evaluated Entity d. Unconsolidated audited annual accounts of both the TEE and the Bidding Company/Lead member, as applicable, from the financial years in which financial closure was achieved till the financial year in which the said project was completed / commissioned. 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. 11. Attachment of **Annexure 7(D)**, detailing projects completed / commissioned and for which commercial operation has commenced including Executive Summary for each project. 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 authorized signatory in support of technical capability as defined in Clause 2.1.2 of RFP. 13. Authority letter in favour of BPC from the Bidder/every Member of the Consortium authorizing the BPC to seek reference from their respective bankers & others. 14. 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. 15. Initialing of all pages of Technical Bid by the Authorized Signatory in whose favour the POA (**Annexure 3**) has been executed. 16. Format for Illustration of Affiliates at the most seven (7) days prior to the Bid Deadline, duly certified by Company Secretary and supported by documentary evidence. 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**.	

Technical Bid Submission Requirements		Response (Yes / No)
18.	Format for Disclosure by Bidding Company / each Member of the Consortium.	
19.	Format for Affidavit by the Bidding Company / each Member of the Consortium	
20.	Format for Authorization submitted in Non-Judicial stamp paper duly notarized.	
21.	Bidders Undertaking and details of Equity Investment	
22.	Proof of Payment of RFP Fees	
23.	Bid Bond/ Bid Security Declaration (As applicable)	
24.	Board Resolution as per Annexure 11 (If required)	

[**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. …….

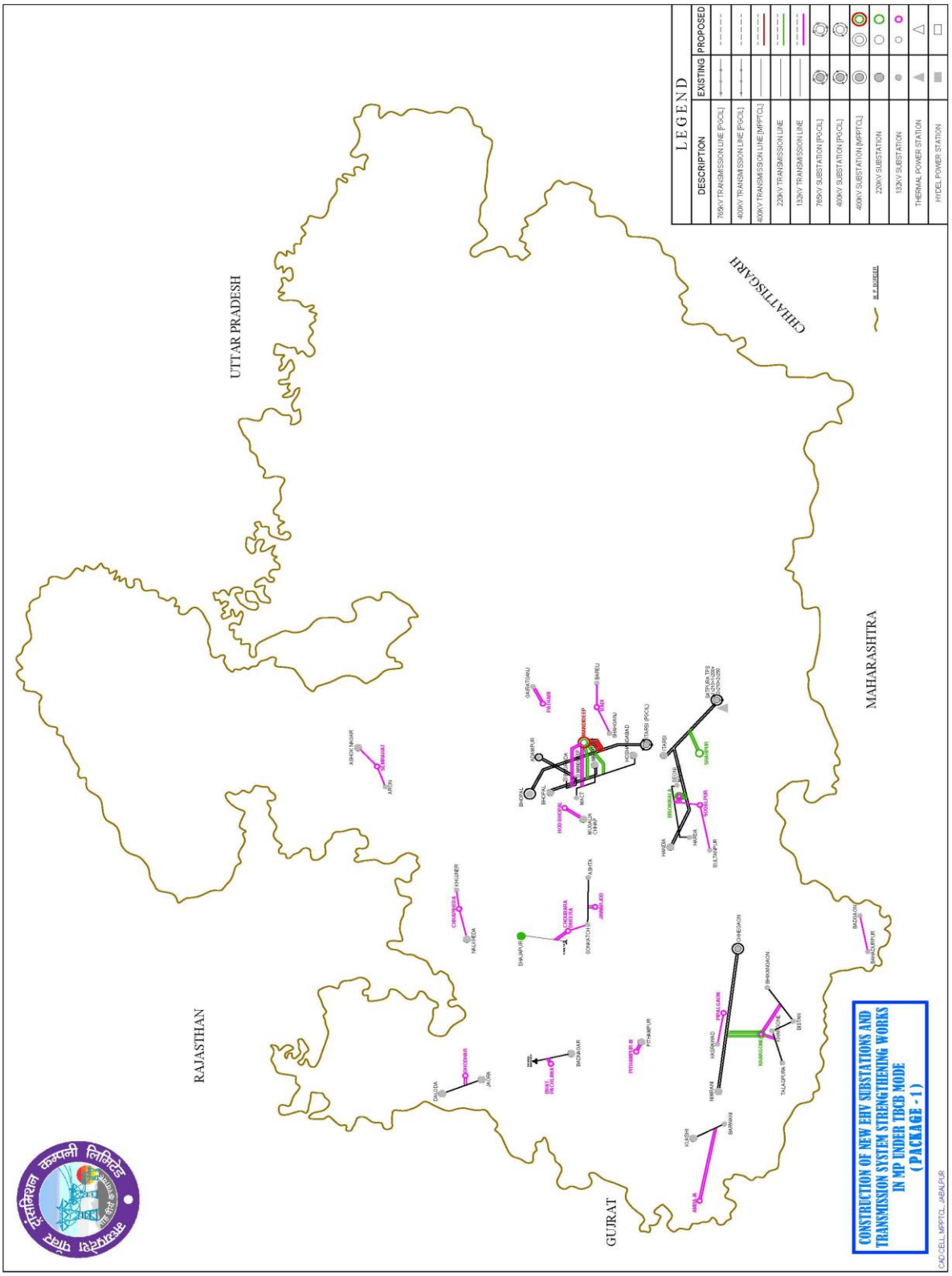
……..
(Signature of authorized signatory)

ANNEXURE 17 – LIST OF BANKS

The list of banks shall include all Scheduled Commercial Banks as per Second Schedule of RBI Act-1934 and any amendments thereof.

Note:
The above list of banks is indicative and can be modified by the BPC as required and any such change shall not be construed as a deviation from this document.

ANNEXURE 18 - GRID MAP OF THE PROJECT



ANNEXURE 19 - FORMAT FOR CLARIFICATIONS / AMENDMENTS ON THE RFP / RFP PROJECT DOCUMENTS

S. 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)

ANNEXURE 20 - LIST FOR RFP PROJECT DOCUMENTS

ENCLOSURE 1: TRANSMISSION SERVICE AGREEMENT (Provided separately)

ENCLOSURE 2: SHARE PURCHASE AGREEMENT (Provided Separately)

……..

[To be inserted by the BPC]

ANNEXURE 21 - FORMAT FOR FINANCIAL BID

[To be uploaded online]

Quoted Transmission Charges ……..

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. The Financial Bid shall be digitally signed by the authorized signatory in whose name power of attorney as per Clause 2.5.2 is issued.
5. Ensure only one value for annual Transmission Charges is quoted. The same charge shall be payable every year to TSP for the term of TSA.

ANNEXURE 22 – FORMAT FOR AFFIDAVIT

[On non-judicial stamp paper. Foreign companies submitting bids are required to follow the applicable law in their country]

AFFIDAVIT

We [including any of our Affiliate and Consortium Member & any of its Affiliate], hereby declare that as on Bid Deadline:

a. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate, their directors or key personnel have not been barred or included in the blacklist by any government agency or authority in India, the government of the jurisdiction of the Bidder or Members where they are incorporated or the jurisdiction of their principal place of business, any international financial institution such as the World Bank Group, Asian Development Bank, African Development Bank, Inter-American Development Bank, Asian Infrastructure Investment Bank etc. or the United Nations or any of its agencies; or

b. the Bidder & any of its Affiliate including any Consortium Member & any of its Affiliate or their directors have not been convicted of any offence in India or abroad.

We further declare that following investigations are pending / no investigation is pending [strike off whichever is not applicable] against us [including any of our Consortium Member or Affiliate or Parent or Ultimate Parent or Affiliate] or CEO or any of our directors/ manager/key managerial personnel of the Applicant /Consortium Member or their Affiliates.

We further undertake to inform the BPC of any such matter as mentioned above on its occurrence after the date of this affidavit till the Effective Date.

We undertake that, in case, any information provided in relation to this affidavit is found incorrect at any time hereafter, our BID / Letter of Intent / contract (if entered) would stand rejected / recalled / terminated, as the case may be.

…….
Signature and Name of the authorized signatory of the Company Bidding Company / Lead Member of the Bidding Consortium

……..
(Signature of Notary Public)

Place: ……
Date: ……

Note: In case any investigation is pending against the Applicant, including any Consortium Member or Affiliate, or CEO or any of the directors/ manager/key managerial personnel of the Applicant /Consortium /Member or their Affiliates, full details of such investigation including the name of the investigating agency, the charge/offence for which the investigation has been launched, name and designation of persons against whom the investigation has been launched and other relevant information should be disclosed under this affidavit.

ANNEXURE 23 – LIST OF LONG TERM TRANSMISSION CUSTOMER

Sl. No.	Name of the Long Term Transmission Customer	Address of Registered Office	Law under which incorporated	Allocated Project Capacity (in MW)
1.	M.P. Power Management Company Limited (MPPMCL) on behalf of: i. MP Poorv Kshetra Vidyut Vitran Compant Limited, Jabalpur ii. MP Madhya Kshetra Vidyut Vitran Compant Limited, Bhopal iii. MP Paschim Kshetra Vidyut Vitran Compant Limited, Indore	Shakti Bhavan, MPSEB Colony, Rampur, Jabalpur, Madhya Pradesh 482008	Companies Act, 2013	100%

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

The new Long Term Transmission Customer 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 11 to the TSA.

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 applicable GST to be paid online.

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. Chirag Sindhu, 9830336290

Mr. Setu Dutt 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

Draft Pre-Award Integrity Pact

[Can be suitably modified by BPC]

GENERAL

This pre-bid contract Agreement (herein after called the Integrity Pact) is made on …….. day of the month of ……. 20……, between, on one hand, ……. [Insert name of BPC] through Shri …….. [Insert Name & designation of representative of BPC] (hereinafter called the "Bid Process Coordinator/ BPC", which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) of the First Part and M/s …… represented by Shri …….. [Insert Name & Designation of Authorized Signatory of the Bidder/ Lead Member of Consortium] (hereinafter called the "Bidder" which expression shall mean and include, unless the context otherwise requires, his successors and permitted assigns) of the Second Part.

WHEREAS the BPC is conducting the bidding process for selection of bidder as Transmission Service Provider (TSP) to establish Intra-State transmission system for Development of Intra-State Transmission Work in M.P. through Tariff Based Competitive Bidding: PACKAGE – I, who will be responsible to set up the transmission project on build, own, operate and transfer (BOOT) basis and to provide Transmission Service.

WHEREAS the Bidder is a Private Company/Public Company/Government Undertaking/ Partnership, constituted in accordance with the relevant law in the matter and the BPC is a Public Sector Undertaking (PSU) performing its function on behalf of the Ministry of Power, Government of India.

NOW, THEREFORE,

To avoid all forms of corruption by following a system that is fair, transparent and free from any influence/prejudiced dealings during the complete bidding process with a view to:-

Enabling the BPC to select the bidder as TSP in conformity with the defined procedures by avoiding the high cost and the distortionary impact of corruption on public procurement, and

Enabling Bidder to abstain from bribing or indulging in any corrupt practice in order to emerge as selected bidder by providing assurance to them that their competitors will also abstain from bribing and other practices and the BPC will commit to prevent corruption, in any form, by its officials by following transparent procedures.

The parties hereto hereby agree to enter into this Integrity Pact and agree as follows:

Commitments of BPC

1.1 The BPC undertakes that no official of the BPC, connected directly or indirectly with the bidding process, will demand, take a promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefit or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the bidding process in exchange for an advantage in the bidding process, bid evaluation, contracting or implementation process related to the contract.

1.2 The BPC will, during the bidding stage, treat all bidders alike, and will provide to all bidders the same information and will not provide any such information to any particular bidder which could afford an advantage to that particular bidder in comparison to the other bidders.

1.3 All the officials of the BPC will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

2. In case of any such preceding misconduct on the part of such official(s) is reported by the Bidder to the BPC with the full and verifiable facts and the same is *prima facie* found to be correct by the BPC, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BPC and such a person shall be debarred from further dealings related to the bidding process. In such a case while an enquiry is being conducted by the BPC the proceedings under the bidding process would not be stalled.

Commitments of Bidder

3. The Bidder commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any pre award stage in order to emerge as Selected Bidder or in furtherance to secure it and in particular commits itself to the following:-

3.1 The Bidder will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BPC, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the bidding process in exchange for any advantage in the bidding, evaluation, contracting and implementation of the bidding process.

3.2 The Bidder further undertakes that it has not given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BPC or otherwise in bidding process or for bearing to do or having done any act in relation to bidding process or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the bidding process or any other contract with the Government.

3.3 The Bidder shall disclose the name and address of agents and representatives and Indian Bidder shall disclose their foreign principals or associates.

3.4 The Bidder shall disclose the payments to be made by them to agents/brokers or any other intermediary, in connection with this bid .

3.5 The Bidder further confirms and declares to the BPC that the Bidder has not engaged any individual or firm or company whether Indian or foreign to intercede, facilitate or in any way to recommend to the BPC or any of its functionaries, whether officially or unofficially for selection of Bidder as TSP, nor has any amount been paid, promised or intended to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

3.6 The Bidder, either while presenting the bid or during pre-award negotiations or before signing the Share Purchase Agreement, shall disclose any payments he has made, is committed to or intends to make to officials of the BPC or their family members, agents, brokers or any other intermediaries in connection with the bidding process and the details of services agreed upon for such payments.

3.7 The Bidder will not collude with other parties interested in the bidding process to impair the transparency, fairness and progress of the bidding process.

3.8 The Bidder will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

3.9 The Bidder shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the BPC as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The Bidder also undertakes to exercise due and adequate care lest any such information is divulged.

3.10 The Bidder commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

3.11 The Bidder shall not instigate or cause to instigate any third person to commit any of the

actions mentioned above.

3.12 The Bidder shall not lend to or borrow any money from or enter into any monetary dealings or transactions, directly or indirectly, with any employee of the BPC.

4. Previous Transgression

4.1 The Bidder declares that no previous transgression occurred in the last three years immediately before signing of this Integrity Pact, with any other company in any country in respect of any corrupt practices envisaged hereunder or with any Public Sector Enterprise in India or any Government Department in India that could justify Bidder's exclusion from the bidding process.

4.2 The Bidder agrees that if it makes incorrect statement on this subject, Bidder can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

5. Bid Bond (Security Deposit)/ Bid Security Declaration (as applicable)

5.1 Along with the technical bid, the Bidder shall submit Bid Bond for an amount of Rs. ……. (as per the amount specified in Request for Proposal (RFP) Document) issued by …… [Insert Name of the Banks from the list provided in RFP Document] as Earnest Money/Security Deposit, with the BPC.

5.2 The Earnest Money/Security Deposit shall be valid & retained by the BPC for such period as specified in the RFP Document.

5.3 No interest shall be payable by the BPC to the Bidder on Earnest Money/Security Deposit for the period of its currency.

[In case of projects for which RFP has been issued before 31.12.2021, the above clauses shall be replaced by following:

Along with the technical bid, the Bidder shall submit Bid Security Declaration in lieu of Bid Bond as per the format specified in Request for Proposal (RFP) Document.]

6. Sanctions for Violations

6.1 Any breach of the aforesaid provisions by the Bidder or any one employed by it or acting on its behalf (whether with or without the knowledge of the Bidder) shall entitle the BPC to take all or anyone of the following actions, wherever required:-

(i) To immediately call off the pre-award negotiations without assigning any reason or

giving any compensation to the Bidder. However, the proceedings with the other Bidder (s) would continue.

(ii) The Bid Bond (in pre-award stage) shall stand forfeited either fully or partially, as decided by the BPC and the BPC shall not be required to assign any reason therefore.

(iii) To immediately cancel the award, if already awarded, without giving any compensation to the Bidder.

(iv) To cancel all or any other contracts with the Bidder. The Bidder shall be liable to pay compensation for any loss or damage to the BPC resulting from such cancellation/rescission.

(v) To debar the Bidder from participation in any tender or RFP issued by any BPC for an indefinite period.

(vi) To recover all sums paid in violation of this Pact by Bidder to any middleman or agent or broker with a view to securing the award.

6.2 The BPC will be entitled to take all or any of the actions mentioned at para 6.1 (i) to (vi) of this Pact also on the Commission by the Bidder or anyone employed by it or acting on its behalf (whether with or without the knowledge of the Bidder), of an offence as defined in Chapter IX of the Indian Penal code, 1860 or Prevention of Corruption Act, 1988 or any other statute enacted for prevention of corruption.

6.3 The decision of the BPC to the effect that a breach of the provisions of this Pact has been committed by the Bidder shall be final and conclusive on the Bidder. However, the Bidder can approach the Independent Monitor(s) appointed for the purposes of this Pact.

7. Independent Monitors

7.1 The BPC has appointed Independent Monitors (hereinafter referred to as Monitors) for this Pact in consultation with the Central Vigilance Commission (Names and Addresses of the Monitors to be given).

7.2 The task of the Monitors shall be to review independently and objectively, whether and to what extent the parties comply with the obligations under this Pact.

7.3 The Monitors shall not be subject to instructions by the representatives of the parties and perform their functions neutrally and independently.

7.4 Both the parties accept that the Monitors have the right to access all the documents relating to the project/procurement, including minutes of meetings.

7.5 As soon as the Monitor notices, or has reason to believe, a violation of this Pact, he will so inform the Authority designated by the BPC.

7.6 The Bidder accepts that the Monitors has the right to access without restriction to all Project documentation of the BPC including that provided by the Bidder. The Monitor shall be under contractual obligation to treat the information and documents of the Bidder /Subcontractors(s) with confidentially. [As all the bid documents are with BPC only]

7.7 The BPC will provide to the Monitors sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the parties. The parties will offer to the monitor the option to participate in such meetings.

7.8 The Monitor will submit a written report to the designated Authority of the BPC/Secretary in the Department within 8 to 10 weeks from the date of reference or intimation to him by the BPC / Bidder and, should the occasion arise, submit proposals for correcting problematic situations.

8. Facilitation of Investigation

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BPC or its agencies shall be entitled to examine all the documents including the Books of Accounts of the Bidder and the Bidder shall provide necessary information and documents in English and shall extend all possible help for the purpose of such examination.

9. Law and Place of Jurisdiction

This Pact is subject to Indian Law. The place of performance and jurisdiction is the seat of the BPC.

10. Other Legal Actions

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the any extent law in force relating to any civil or criminal proceedings.

11. Validity

11.1 The validity of this Integrity Pact shall be from date of its signing and upto 6 months from the date of transfer of project specific SPV i.e. signing of Share Purchase Agreement with BPC. In case Bidder is unsuccessful, this Integrity Pact shall expire after 15 days from the date of transfer of project specific SPV to successful bidder.

11.2 Should one or several provisions of this Pact turn out to be invalid, the remainder of this

Pact shall remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

12. The Parties hereby sign this Integrity Pact at on _____

Bid Process Coordinator (BPC)	BIDDER
Name of the Officer Designation Name of the BPC with address Witness: 1._____ 2. _____	Name of Whole time Director/Authorized Signatory Name of the Bidder with address Witness: 1._____ 2. _____

ANNEXURE C

Technical Specifications of Transmission System

SPECIFIC TECHNICAL REQUIREMENTS FOR TRANSMISSION LINES

1.0 The Tower shall be fully galvanized using mild steel or/and high tensile steel sections. Bolts and nuts with spring washer are to be used for connection.

2.0 IS Steel section of tested quality in conformity with IS 2062:2011, grade E 250 (Designated Yield Strength 250 Mpa) and/or grade E 350 (Designated Yield Strength 350 MPa) only are permitted to be used in towers, extensions, gantry structures and stub setting templates. The contractor can use other equivalent grade of structural steel angle sections and plates conforming to the latest International standards. However, use of steel grade having designated yield strength more than 350 MPa is not permitted. The steel used for fabrication of towers shall be manufactured by primary steel producers only. For Steel Monopole following materials shall be used:

Pole shaft	: A572-65 or Equivalent
Base plate	: A572-50 or Equivalent
Ladder & Other	: A572-36 or Equivalent
Anchor bolts	: 6.8 Grade (132kV poles) and 8.8 Grade (220/132kV MC poles)
Connection bolts	: 8.8 Grade
Galvanizing	: ASTM A123 (Structure: Avg. coating 85 micron) / A153 (Hardware)

3.0 Towers shall be designed as per IS-802:2015 considering wind zone-4, Reliability Level-2 for Multi Circuit Tower/Monopole and Reliability Level – 1 for Double Circuit & Single Circuit Towers, Terrain category-2. However, 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

As per Clause 12.1.2.1 b) 2) of IS 802:2015, Under security condition for tension and dead end towers, the transverse loads due to line deviation shall be the component of 100 percent mechanical tension of conductor and ground wire/ OPGW corresponding to 100% of design wind pressure at everyday temperature or 36% design wind pressure at minimum temperature after accounting for drag coefficient and gust response factor. The above loading shall also be considered for design of suspension tower.

Transmission Service Provider (TSP) shall adopt any additional loading/ design criteria for ensuring reliability of the line, if so desired and/ or deemed necessary in accordance with CEA "Technical Standard for Construction of Electrical Plants and Electric Lines" Regulation 2010, as amended from time to time.

4.0 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 (i.e. D/DD/QD-D/DD/QD arrangement).

B) For overhead crossing of existing power line of 132kV and 220kV voltage level, only (D/DD/QD) angle towers shall be used on either side of power line crossing depending on the merits 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.

D) For crossing of railways, national highways and state highways, the rules/regulations of appropriate authorities shall be followed.

5.0 The conductor configuration shall be as follows: -

5.01: <u>For transmission lines with ACSR/AAAC/AL59 conductor</u>: -

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**
400kV D/C (Twin Moose) transmission lines	Moose: Stranding 54/3.53 mm-Al + 7/3.53 mm-Steel, 528.5 sq mm, Aluminium area, 31.77mm diameter	**Stranding Details:** 61/3.55 mm 31.95mm Diameter; 604 sq.mm Aluminum alloy area	**Stranding Details:** 61/3.31 mm 29.79mm Diameter; 525 sq.mm Aluminum alloy area	450 mm
220 kV D/C (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:** 61/3.19 mm 28.71 mm diameter; 487.5 sq.mm Aluminum alloy area	**Stranding Details:** 61/3.08 mm 27.7 mm diameter; 454 sq.mm Aluminium alloy area	NA
132 kV D/C (Panther)	Panther: Stranding 30/3.0	**Stranding Details:**37/3.15 mm	**Stranding Details:** 37/3.08 mm	NA

transmission lines	mm-Al + 7/3.0 mm-Steel, 261.5 sq mm, Aluminium area, 21.05 mm diameter	22.05mm Diameter; 288.3 sq.mm Aluminum alloy area	21.56mm Diameter; 275.66 sq.mm Aluminum alloy area	

Note:

i. The transmission lines shall have to be designed for a maximum operating conductor temperature of 85 deg C.

6.0 The required phase to phase spacing and horizontal spacing for 400kV, 220kV, 132kV line shall be governed by the tower design as well as minimum live metal clearances for each voltage level respectively under different insulator swing angles. 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.

For 400 kV transmission lines:

The minimum live metal clearances for 400 kV D/C transmission lines shall be considered as follows:

(i) Under stationary conditions

From tower body: 3.05m

(ii) Under swing conditions

Wind pressure Condition	Minimum electrical clearance
a) Swing angle (22º)	3.05 mtrs
b) Swing angle (44º)	1.86 mtrs

However, the phase to phase spacing for 400 kV D/C Line shall not be less than 8m.

For 220 kV Transmission Lines:

The minimum live metal clearances for 220 kV D/C transmission lines shall be considered as follows:

(i) Under stationary conditions

From tower body: 2.13m

(ii) Under swing conditions

Wind pressure Condition	Minimum electrical clearance
a) Swing angle (15º)	1.98 mtrs
b) Swing angle (30º)	1.83 mtrs
c) Swing angle (45º)	1.675 mtrs

However, the phase to phase spacing for 220 kV D/C Line shall not be less than 5m.

For 132 kV Transmission Lines:

The minimum live metal clearances for 132 kV D/C transmission lines shall be considered as follows:

(i) Under stationary conditions

From tower body: 1.53 m

(ii) Under swing conditions

Wind pressure Condition	Minimum electrical clearance
a) Swing angle (15º)	1.53 mtrs
b) Swing angle (30º)	1.37mtrs
c) Swing angle (45º)	1.22 mtrs
d) Swing angle (60º)	1.07 mtrs

However, the phase to phase spacing for 132 kV D/C Line shall not be less than 4m.

7.0 The minimum ground clearance for 400kV D/C transmission lines shall be 8.84m, for 220 kV D/C line shall be 7.015 m and for 132 kV D/C line shall be 6.10 m so that maximum electric field does not exceed 10kV/m within the ROW and does not exceed 5kV/m at the edge of the ROW as per international guidelines.

8.0 The minimum mid span separation between earthwire and conductor shall be 9.0 m for 400 kV D/C transmission lines, 8.5 m for 220 kV D/C transmission lines & 6.1 m for 132 kV D/C transmission lines. Shielding angle shall not exceed 20 deg for 400 kV D/C & 30 deg for 220 kV D/C lines and 132 kV D/C lines.

9.0 Transposition is to be done for all transmission lines whose length is greater than 100km. Transposition should be carried out at 1/3 and 2/3 of line length tower positions.

10.0 The switching impulse withstand voltage (wet) for 400kV line shall be 1050 kVp. Lightning impulse withstand voltage (dry) for 400kV line shall be 1550 kVp, for 220 kV line shall be 1050 kVp & for 132kV line shall be 650 kVp.

11.0 The Fault current for design of line shall be 63 kA for 1 sec for 400 kV, 50 kA for 1 sec for 220 kV and 40 kA for 1 sec for 132 kV.

12.0 Porcelain / glass / polymer insulators shall be used in the line as per requirement and site conditions However, porcelain /glass disc insulators string shall be required to be used for Pilot string irrespective of type of insulators used for suspension/tension location.

13.0 Each tower shall be earthed such that tower footing resistance 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. If site condition demands, multiple earthing or use of earthing enhancement compound shall be used. The line surge arrester, if required , may be used in lightning prone areas.

14.0 The factors of safety for design of towers/Monopoles and extensions shall be as under:-

Normal condition - 1.1

Broken wire condition- 1.1

15.0 The minimum factors of safety/overload factor based on the ultimate strength of the foundation material when the towers are under full Ultimate loads under various conditions of loadings combined with the other loads specified for the foundations shall be as given below:-

Normal condition- 1.2

Broken wire condition- 1.2

The above factor of safety will be considered on design loads of tower without factor of safety (1.1).

16.0 Pile type foundation shall be used for towers located in river or creek bed or on bank of river having scourable strata or in areas where river flow or change in river course is anticipated, based on detailed soil investigation and previous years' maximum flood discharge of the river, maximum velocity of water, highest flood level, scour depth & anticipated change in course of river based on river morphology data of at least past 20 years to ensure availability and reliability of the transmission line..

17.0 In case of 400kV 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 AACSR or any other suitable conductor type depending upon span length and other technical consideration.

18.0 Transmission line route shall be finalized, in consultation with appropriate authorities so as to avoid the habitant zones of endangered species and other protected species. Bird diverters, wherever required, shall be provided on the line.

19.0 The raised chimney foundation is to be provided in areas prone to flooding/water stagnation like paddy field /agricultural field & undulated areas to avoid direct contact of water with steel part of tower. The top of the chimney of foundation should be at least above HFL (High Flood Level) or the historical water stagnation/ logging level (based on locally available data) or above High Tide Level or 500 mm above Natural Ground level (whichever is higher).

20.0 For transmission line sections passing within a distance of 50 km from the boundary of the two wind zones, higher of the two wind zones shall be considered for design of towers located in such sections.

SPECIFIC TECHNICAL REQUIREMENTS FOR SUBSTATION

The proposed new substation shall be generally conforming to the requirement of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.

2.1 Salient features of 400/220/132KV Sub Station Equipment and Facilities

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

2.2 Insulation Coordination

420kV System would be designed to limit the Switching over voltage to 2.5 p.u and is expected to decay to 1.5 p.u. in 5 to 6 cycles. Consistent with these values and protective levels provided by lightning arrestors, the following insulation levels shall be adopted for 420kV, 245kV, 145 kV and 36 kV systems:

SL No	Description of parameters	400kV System	220kV System	132kV System	33kV System
1.	System operating voltage (rms)	400kV	220kV	132kV	33kV
2.	Maximum voltage of the system (rms)	420kV	245kV	145kV	36kV
3.	Rated frequency	50Hz	50Hz	50Hz	50Hz
4.	No. of phases	3	3	3	3
5.	Impulse withstand voltage for - Transformer and reactors - for other Equipment - for insulator strings	 1300 kVP 1425 kVP 1550 kVP	 950 kVP 1050 kVP 1050 kVP	 650 kVP 650 kVP 650 kVP	 250kVP 170kVP
6.	Switching surge withstand voltage	1050 kVP	-NA-	-NA-	-NA-
7.	Minimum creepage distance - for insulator strings - for other Equipment	 13020 mm 10500 mm	 7595 mm 6125 mm	 4495 mm 3625 mm	 900 mm 900 mm
8.	Max. fault current	63 kA	50 KA	40 KA	31.5 KA
9.	Duration of fault	1 Sec	1 Sec	1 Sec	3 Sec
10.	Corona extinction voltage	320kV rms	156kV rms	105kV rms	NA

2.3 Switching Schemes

It is essential that the system should remain secured even under conditions of major equipment or bus-bar failure. Sub-stations being the main connection points have large influence on the security of the

system as a whole. The selection of the bus switching scheme is governed by the various technical and other related factors. One & Half breaker bus scheme for 400kV system, Double Main and Transfer bus scheme for the 220kV system, and Single Main and Transfer bus scheme for the 132kV system have been considered for all proposed AIS substations under present scope of work & One & Half breaker bus scheme for 400kV system, Double Main for the 220kV system, and 132kV system have been considered for all proposed GIS substations under present scope of work due to their merits in terms of reliability, security, operational flexibility and ease of maintenance of equipment's. 132kV and 33kV switching system (bus) is required to include section isolators at suitable locations for sectionalization of bus. In 400kV substations, each circuit of a double circuit transmission line shall be terminated in different diameter. Similarly, 400kV ICTs shall also be terminated in different diameter. Accordingly, following switching schemes shall be adopted.

Voltage / Type of Substation	400kV side	220kV side	132kV side	33kV side
AIS Type	One & half breaker	Double Main & Transfer (DMT)	Single Main & Transfer (SMT)	Single Main & Transfer (SMT)
GIS Type	One & half breaker	Double Main	Double Main	Double Main

Note: All the proposed substations under present scope shall be AIS type except for proposed substations at Mandideep (District – Raisen), HOD Bhopal (District – Bhopal) and Pithampur Sector-III (District - Dhar) which shall be GIS Type.

2.4 Substation Equipment and facilities:

The switch-gear shall be designed to withstand operating conditions and duty requirements. The equipment shall be designed considering the transmission line capacity.

Sl. No	Description of Bay	400kV	220kV	132kV	33kV
1	Bus Bar	4000A	3000A	3000A	1600A
2	Line bays	3150A	1600A	1250A	400A
3	ICT bays	3150A	1600A (for 400/220kV) & 800A (for 220/132kV)	1250A	1200A
4	Bus Reactor bays	2000A	NA	NA	NA
5	Bus coupler bays	NA/4000A	2500A	NA	NA

400/220/132/33KV GIS Substation equipment

GIS (Gas Insulated Switchgear) shall be indoor type and 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. The Surge Arrestors and Voltage transformer connections shall be either GIS or Outdoor AIS type. 400kV scheme shall be designed in such a way that it shall be possible to use line reactors (if provided) as bus reactors, in case of outage of line, to control bus voltage. Local control cabinets (LCC) shall be provided as per requirement. The alarm & annunciation of GIS equipment shall be wired to SCADA System.

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 such that maintenance on one feeder may be performed without de-energizing the adjacent feeders. 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 layout of the Gas Insulated Bus Ducts shall be properly planned to optimize the length of bus ducts and for easy accessibility for maintenance. The length of the busbars, bus ducts, and isolator sections shall be optimized considering effects of fast transient voltage due to isolator operations.

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 can be tested without extending test voltage to existing bus and vice-versa by removing the test link.

As the GIS is likely to be extended in future the 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 Bus bar Interface module shall be taken into account for future scope.

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 milliseconds 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.

Each section shall have plug- in or easily removable connection pieces to allow for easy replacement of any component with the minimum of disturbance to the remainder of the equipment. Inspection windows (View Ports) shall be provided for Disconnector 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.

Service continuity requirement for GIS:

The GIS equipment with the given bus switching arrangement is 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.

During the above, following Service continuity conditions shall be ensured by TSP to the extent possible:

- For One & half breaker bus switching scheme during a fault in CB 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 CB compartment, no bus bar 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 permitted out of service during maintenance and repair/replacement.

UHF sensors in GIS for PD (Partial Discharge) detection: Online partial discharge monitoring system:

The PDM system shall be provided with all its hardware and software, with readily interfacing to the UHF PP coupler installed in the GIS substation.

Adequate number of UHF sensors shall be provided in the offered GIS along with suitable 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).*

2.5 GIS Circuit Breakers

GIS Circuit breakers shall in general be of C2-M2 class and comply to IEC-62271-100 & IEC62271-1. The rated break time shall not exceed 40 milliseconds for 420KV and 60 milliseconds for 245kV. 420 kV & 245 kV Circuit breakers shall be provided with single phase and three phase auto reclosing. The Circuit breakers controlling 400 KV lines wherever required shall be provided with pre insertion closing resistor of about 400 ohms with 8 miliseconds insertion time or Controlled Switching Device (CSD) for lines longer than 200 kilometers. 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 and Bus reactors. Further, it shall be possible to use line reactors as bus reactors, in case of outage of line.

2.6 GIS Isolators

The isolators shall comply to IEC 62271-102 in general. 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 isolators and earth switches shall be motor operated type.

Isolator shall be of extended mechanical endurance class - M2 and 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 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.

2.7 Maintenance Grounding Switches:

Grounding switches shall comply latest version of the relevant specification IEC 60129, 61128, 61129, 61259. Disconnector switches & Grounding switches shall have electrical & Mechanical interlock to prevent grounding switch from closing on an energized section.

2.8 GIS 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 six cores (four cores for PX class for protection and two cores of 0.2S class accuracy for metering) and, CT in Tie bays shall have six cores (four cores for PX class for protections & two cores of 0.2S class accuracy for metering) suitably distributed on both sides of CB. The burden and knee point voltage shall be in accordance with the requirements of the system including possible feeds for telemetry.

The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system (not more than 20VA for metering core) for better sensitivity and accuracy. Rating for 400kV CT shall be 3000-2000-500/1-1-1-1-1-1 and for 220kV CT it shall be 1600-800/1-1-1-1-1-1. The current transformer shall be provided on both side of circuit breaker so that the fault location can be easily identified. The instrument security factor shall be less than 5.

2.9 GIS Voltage Transformer

The voltage transformers shall conform to IEC- 61869. Voltage transformers shall be of the 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 transformers shall be effectively shielded against high frequency electromagnetic transients. The voltage transformers 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 core –I & II for 400 kV shall be 0.2/3P and for

220 kV shall be 3P. The accuracy of 0.2 on secondary III should be maintained throughout the entire burden range up to 100 VA 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 (not more than 100 VA for metering core) for better sensitivity and accuracy.

2.10 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 and in highly polluted area it shall not be less than 31mm/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 a 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 the IEC publications IEC 61462 and the relevant parts of IEC 62217.The design of composite insulator shall be tested and verified according to IEC 61462.

2.11 Power Transformer

500MVA, 400/220/33 kV 3-Phase Auto Transformer shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above)" available on CEA website.

Further, the major technical particulars/parameters of **160MVA, 220/132/33, 50MVA, 220/33 kV, 63MVA, 132/33 kV and 50MVA, 132/33 kV** are given below and shall be read in conjunction with CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above)" available on CEA website

A. 160MVA, 220/132/33 kV, 3-Phase Auto Transformer

Sl. No.	Description	Unit	Technical Parameters
1.	Rated Capacity : HV/IV/LV (tertiary: Active Loading)	MVA	160/160/53.33
2.	Voltage ratio (Line to Line)	kV	220/132/33
3.	Vector Group (unless specified differently elsewhere)		YNaOd11
4.	Cooling		ONAN/ONAF ONAN/ONAF1/ONAF2
5.	Rating at different cooling above	%	60/80/100
6.	Type of Transformer		Constant Ohmic impedance type
7.	Impedance at 75° C		
a.	HV-IV		
	Maximum Voltage Tap	%	7.5
	Principal Tap	%	8.35
	Minimum Voltage Tap	%	10.5
b.	HV-LV		
	Principal Tap	%	30
c.	IV-LV		
	Principal Tap	%	20
8.	Max. Temperature rise over 50° C ambient Temp	°. C	Top oil: 45ºC& Winding: 50ºC
9.	Windings		
i).	Insulation Level (LI/SI/PF)		kVp/kVp/kVrms
a)	HV		950/750/395
b)	IV		650/-/230
c)	LV		250/-/95
d)	Neutral		250/-/95
ii)	Tan delta of winding	%	< 0.45 @ 20° C
10.	Tap Changer & Tappings		OLTC with ±10% of HV variation in the step of 1.25%, 16 steps, on 132kV side of series winding (Bidirectional flow of power linear type)
11.	Maximum Partial discharge (PD) level at 1.58*Ur/√3	pC	<100

Sl. No.	Description	Unit	Technical Parameters
12.	Noise level at rated voltage and at principal tap at no load and all cooling active	dB	< 75
13.	Bushing		
i)	Rated voltage (HV/IV/LV/Neutral)	kV	245/145/72.5/72.5
ii)	Rated current(Min.) HV/IV/LV/Neutral	A	1250/1250/1250/1250
iii)	Insulation Level (LI/SI/PF)		kVp/kVp/kVrms
a)	HV		1050/850/505
b)	IV		650/-/305
c)	LV		325/-/140
d)	Neutral		325/-/140
iv)	Insulation Level of 33kV equipment to be installed on tertiary winding	kV	72.5
v)	Tan delta of bushings HV/LV (at ambient temperature)	%	< 0.4
vi)	Max. PD of bushings at level Um (Um=245kV)	pC	<10
14.	Insulating Oil		Unused inhibited or uninhibited transformer oil, conforming to IEC-60296-2012/ IS:335
15.	Losses		
a)	Maximum No-Load Loss at rated voltage and frequency	kW	30
b)	Maximum Load Loss at rated current and 75ºC	kW	180
c)	Maximum Auxiliary Loss at rated voltage and frequency	kW	

B. 50MVA, 220/33 kV, 3-Phase Transformer (Two Winding Transformer)

Sl. No.	Description	Unit	Technical Parameters
1.	Rated Capacity: HV/LV	MVA	50
2.	Voltage ratio (Line to Line)	kV	220/33
3.	Vector Group(unless specified differently elsewhere)		YNyn0
4.	Cooling		ONAN/ONAF
5.	Rating at different cooling above	%	80/100
6.	Type of Transformer		CFVV
7.	Impedance at 75° C		

Sl. No.	Description	Unit	Technical Parameters
a)	HV – LV (with tolerance as per IEC)	%	10
8.	Max. Temperature rise over 50° C ambient Temp	°. C	Top oil: 45& Winding: 50
9.	Windings		
i).	Insulation Level (LI/PF)		kVp/kVrms
a)	HV		950/395
b)	LV		250/95
c)	Neutral		250/95
ii)	Tan delta of winding	%	< 0.45 @ 20° C
10.	Tap Changer &Tappings		OLTC with range -15% to +5% of HV variation in the step of 1.25%, 16 steps, on 132kV side of series winding (170kV, 500Amp.)
11.	Maximum Partial discharge (PD) level at 1.58*Ur/√3	pC	<100
12.	Noise level at rated voltage and at principal tap at no load and all cooling active	dB	<75
13.	Bushing		
i)	Rated voltage (HV/LV/Neutral)	kV	245/72.5/72.5
ii)	Rated current(Min.) HV/LV/Neutral	A	1250/1250/1250
iii)	Insulation Level (LI/PF)		kVp/kVrms
a)	HV		1050/460
b)	LV		325/140
c)	Neutral		325/140
iv)	Tan delta of bushings HV/LV (at ambient temperature)	%	< 0.4
v)	Max. PD of bushings at level Um (Um=245kV)	pC	<10
14.	Insulating Oil		Unused inhibited or uninhibited transformer oil, conforming to IEC-60296:2012/ IS:335
15.	Losses		
a)	Maximum No-Load Loss at rated voltage and frequency	kW	27
b)	Maximum Load Loss + Auxiliary Loss at rated current and 750C	kW	150

C. 63MVA, 132/33 kV, 3-Phase Transformer (Two Winding Transformer)

Sl. No.	Description	Unit	Technical Parameters
1.	Rated Capacity: HV/LV	MVA	63
2.	Voltage ratio (Line to Line)	kV	132/33
3.	Vector Group (unless specified differently elsewhere)		YNyn0
4.	Cooling		ONAN/ONAF
5.	Rating at different cooling above	%	80/100
6.	Type of Transformer		Constant Flux
7.	Impedance at 75° C		
a)	HV – LV (with tolerance as per IEC)	%	10
8.	Max. Temperature rise over 50° C ambient Temp	Deg. C	Top oil: 45 & Winding: 50
9.	Windings		
i).	Insulation Level (LI/PF)		kVp/kVrms
a)	HV		550/230
b)	LV		250/95
c)	Neutral		250/95
ii)	Tan delta of winding	%	<0.45%
10.	Tap Changer & Tappings		OLTC with range -15% to +5% of HV variation in the step of 1.25%, 16 steps, on 132kV side of winding (66kV/132kV suitable for neutral end) 500Amp.
11.	Maximum Partial discharge (PD) level at 1.58*Ur/√3	pC	<100
12.	Noise level at rated voltage and at principal tap at no load and all cooling active	dB	< 75
13.	Bushing		
i)	Rated voltage (HV/LV/Neutral)	kV	145/72.5/72.5
ii)	Rated current(Min.) HV/LV/Neutral	A	1250/2000
iii)	Insulation Level (LI/PF)		kVp/kVrms
a)	HV		650/275
b)	LV		325/140
c)	Neutral		325/140
iv)	Tan delta of bushings HV/LV (at	%	< 0.4

Sl. No.	Description	Unit	Technical Parameters
	ambient temperature)		
v)	Max. PD of bushings at level Um (Um=245kV)	pC	<10
14.	Insulating Oil		Unused inhibited or uninhibited transformer oil, conforming to IEC-60296-2012/ IS:335
15.	Losses		
a)	Maximum No-Load Loss at rated voltage and frequency	kW	25
b)	Maximum Load Loss + Auxiliary Loss at rated current and 75°. C	kW	145

D. 50MVA, 132/33 kV, 3-Phase Transformer (Two Winding Transformer)

Sl. No.	Description	Unit	Technical Parameters
1.	Rated Capacity: HV/LV	MVA	50
2.	Voltage ratio (Line to Line)	kV	132/33
3.	Vector Group(unless specified differently elsewhere)		YNyn0
4.	Cooling		ONAN/ONAF
5.	Rating at different cooling above	%	80/100
6.	Type of Transformer		Constant Flux
7.	Impedance at 75° C		
a)	HV – LV (with tolerance as per IEC)	%	10
8.	Max. Temperature rise over 50° C ambient Temp	Deg. C	Top oil: 45& Winding: 50
9.	Windings		
i).	Insulation Level (LI/PF)		kVp/kVrms
a)	HV		550/230
b)	LV		250/95
c)	Neutral		250/95
ii)	Tan delta of winding	%	0.45 @20ºC

Sl. No.	Description	Unit	Technical Parameters
10.	Tap Changer &Tappings		OLTC with range -15% to +5% of HV variation in the step of 1.25%, 16 steps, on 132kV side of winding
11.	Maximum Partial discharge (PD) level at 1.58*Ur/√3	pC	<100
12.	Noise level at rated voltage and at principal tap at no load and all cooling active	dB	< 75
13.	Bushing		
i)	Rated voltage (HV/LV/Neutral)	kV	145/72.5/72.5
ii)	Rated current(Min.) HV/LV/Neutral	A	1250/2000
iii)	Insulation Level (LI/PF)		kVp/kVrms
a)	HV		650/275
b)	LV		325/140
c)	Neutral		325/140
iv)	Tan delta of bushings HV/LV (at ambient temperature)	%	< 0.4
v)	Max. PD of bushings at level Um (Um=245kV)	pC	<10
14.	Insulating Oil		Unused inhibited or uninhibited transformer oil, conforming to IEC-60296-2012/ IS:335
15.	Losses		
a)	Maximum No-Load Loss at rated voltage and frequency	kW	25
b)	Maximum Load Loss + Auxiliary Loss at rated current and 75°. C	kW	125

2.12 Shunt Reactors

125 MVAR, 420 KV, 3-Phase Reactor shall conform to CEA's "Standard Specifications and Technical Parameters for Transformers and Reactors (66 kV and above)" available on CEA website.

A. Controlled Switching Device at Bus & Line Reactor

The controlling relay shall record and monitor the switching operations and make adjustments to the switching instants to optimize the switching behavior as necessary. It shall provide self-diagnostic facilities, signaling of alarms and enable downloading of data captured from the switching events.

The controller shall be designed to operate at the correctly and satisfactorily with the excursion of auxiliary A/C & DC voltages and frequency as specified in section – GTR which are stated below:

Normal Voltage	Variation in Voltage	Frequency in Hz	Phase/Wire	Neutral Connection
415V	±10%	50±5%	3/4 Wire	Solidly Earthed
240V	±10%	50±5%	1/2 Wire	Solidly Earthed
220V	190V to 240V	DC	-	Isolated 2 wire system
240V	95V to 120V	DC	-	Isolated 2 wire system
50V	-	DC	-	2 wire system(+) Earthed

The controller shall meet the requirements of IEC-60255-4 Appendix 'E' class III regarding HF disturbance test, and fast transient test shall be as per IEC-61000 – 4 level III and insulation test as per 60255 – 5.

2.13 SF6 Circuit Breakers (AIS)

The circuit breakers and accessories shall conform to IEC: 62271-100, IEC: 62271-01 and shall be of SF6 Type. The circuit breakers shall be class C2-M2 (as per IEC) with regard to restrike probability during capacitive current breaking and mechanical endurance. The rated break time shall not exceed 40 ms for 400kV circuit breakers and 60 ms for 220kV & 132kV circuit breakers. 400kV and 220kV Circuit breakers shall be provided with single phase and three phase auto reclosing. The Circuit breakers controlling 400kV lines wherever required shall be provided with pre insertion closing resistor of about 450 ohms maximum with 8 milliseconds minimum insertion time for lines longer than 200km. The short line fault capacity shall be same as the rated capacity and this is proposed to be achieved without use of opening resistors. 400kV Circuit Breaker shall be equipped with controlled switching device for controlling of transformer and shunt reactor. The controlled switching device shall be provided in 400kV Circuit breakers of switchable line reactor and in Main & Tie bay circuit breakers of line with non-switchable line reactors and Bus reactors.

The Technical Particulars / Parameters of Circuit Breakers:

Sl. No.	Parameter	400kV system	220kV system	132kV system	33kV system
1.	Rated voltage (Umax) kV (rms)	420	245	145	36
2.	Rated frequency (Hz)	50	50	50	50

Sl. No.	Parameter	400kV system	220kV system	132kV system	33kV system
3.	No. of poles	3	3	3	3
4.	Type of circuit breaker	SF6 gas insulated	SF6 gas insulated	SF6 gas insulated	Vacuum
5.	Rated continuous current (A) at an ambient temperature of 50°. C	3150	3150	2000	1250
6.	Rated short circuit capacity with percentage of DC component as per IEC-62271-100 corresponding to minimum opening time under operating conditions specified.	63kA	50 kA	40kA	31.5kA
7.	Symmetrical interrupting capability (rms)	63kA	50 kA	40kA	25kA
8.	Rated short circuit making current	157.5 kAp	125 kAp	100 kAp	62.5 kAp
9.	Short time current carrying capability (rms)	63 for one second	50 for one second	40 for one second	31.5 For three second
10.	Out of phase breaking current carrying capability (rms)	15.75	As per IEC	As per IEC	As per IEC
11.	Rated line charging interrupting current at 90°. Leading power factor angle (rms) (The breaker shall be able to interrupt the rated line charging current with test voltage immediately before opening equal to the product of U/√3 and 1.4 as per IEC-62271-100	600 A	As per IEC	As per IEC	As per IEC
12.	First pole to clear factor	1.3	1.3	1.3	1.5
13.	Temperature rise over an ambient temperature of 50°.C	As per IEC: 62271-100	As per IEC: 62271-100	As per IEC: 62271-100	As per IEC: 62271-100
14.	Rated break time as IEC (with limiting auxiliary voltage at all duties)	40 ms	60 ms	60 ms	NA

Sl. No.	Parameter	400kV system	220kV system	132kV system	33kV system
15.	Total break time	40ms	50ms	60ms	40±15ms
16.	Total closing time	Not more than 110ms	Not more than 100ms	Not more than 100ms	60±15ms
17.	Operating mechanism or a combination of these	Spring	Spring	Spring	Spring
18.	Rated operating duty cycle	O-0.3s-CO-3 min-CO	O-0.3s-CO-3 min-CO	O-0.3s-CO-3 min-CO	O-0.3s-CO-3 min-CO
19.	Reclosing	Single phase &Three phase auto reclosing.	Single phase &Three phase auto reclosing.	Three phase auto reclosing.	3 Pole Reclosing
20.	Pre-insertion resistor requirement				
i)	Rating (ohms)	400(max.) with tolerance as applicable	NA	NA	NA
ii)	Minimum electrical (mechanical insertion time +pre-arcing time) pre-insertion time (ms)	8	NA	NA	NA
iii)	Opening of PIR contacts	PIR contacts should open immediately after closing of main contacts OR At least 5 ms prior to opening of main contacts at rated air/gas pressure where the PIR contacts remain closed	NA	NA	NA

Sl. No.	Parameter	400kV system	220kV system	132kV system	33kV system
21.	Max. difference in the instants of closing/opening of contacts (ms) between poles at rated control voltage and rated operating & quenching media pressures	2.5 (within a pole) 3.3 (opening) 5.0 (closing)	3.3 (opening) 5.0 (closing)	3.3 (opening) 3.3 (closing)	NA
22.	Maximum allowable switching over voltage under any switching condition	2.3 p.u.	As per IEC	As per IEC	As per IEC
23.	Trip coil and closing coil voltage with variation as specified	220V DC	220V DC	220V DC	
24.	Noise level at base and up to 50 m distance from base of circuit breaker	140dB (max.)	140dB (max.)	140dB (max.)	140dB (max.)
25.	Rating of Auxiliary contacts	10A	10A	10A	
26.	Breaking capacity of Aux. Contacts	10A DC with circuit time constant not less than 20ms	10A DC with circuit time constant not less than 20ms	10A DC with circuit time constant not less than 20ms	10A DC with circuit time constant not less than 20ms
27.	Rated insulation levels				
i)	Full wave impulse withstand (1.2 /50 µs) between line terminals and ground	±1425 kVp	±1050 kVp	±650 kVp	±170 kVp
ii)	Full wave impulse withstand (1.2 /50 µs) between terminals with circuit breaker open	1425 kVp impulse on one terminal & 240 kVp power frequency voltage of opposite polarity on the other terminal	±1050 kVp	+ 650kVp	±170 kVp

Sl. No.	Parameter	400kV system	220kV system	132kV system	33kV system
iii)	Rated switching impulse withstand voltage (250/2500 µs) Dry & wet between line terminals and ground	+1050 kVp .	NA	NA	NA
iv)	Rated switching impulse withstand voltage (250/2500 µs) Dry &wet Between terminals with circuit breaker open voltage of opposite polarity on the other terminal	900 kVp impulse on one terminal & 345 kVp power frequency	NA	NA	NA
v)	One minute power frequency dry withstand voltage between line terminals and ground	520 kV rms.	460 kV rms.	275 kV rms	70 kV rms
vi)	One minute power frequency dry withstand voltage between terminals with circuit breaker open	610 kV rms.	460 kV rms.	275 kVrms	70 kV rms
28.	Minimum corona extinction voltage with CB in all positions	320kV rms	156 kV rrms	92 kV rms	
29.	Max. radio interference voltage for frequency between 0.5 MHz and 2 MHz (Micro volts)	1000 µV (at 266kV rms)	1000 µV (at 156kV rms)	500µV (at 92kV rms)	
30.	Minimum Creepage distance				
i)	Phase to ground (25mm/kV)	10500mm	6125mm	3625mm	
ii)	Between CB terminals	10500mm	6125mm	3625mm	
31.	Rated capacitance current switching duty	C2	C2	C2	
32.	Rated Mechanical Endurance duty	M2	M2	M2	

2.14 Isolators (AIS)

The isolators shall comply to IEC 62271-102 in general. 400 kV, 220kV & 132kV isolators shall be double break type, All Isolators and earth switches shall be motor operated. Earth switches are provided at various locations to facilitate maintenance. Isolator rated for 400kV, 220kV, 132kV &

33kV shall be of extended mechanical endurance class-M2 and suitable for bus transfer current switching duty as per IEC-62271-102 Main blades and earth blades shall be interlocked and interlock shall be fail safe type. 400kV, 220kV & 132kV earth switch for line isolator shall be suitable for induced current switching duty as defined for Class-B as per relevant standard.

The Technical Particulars / Parameters of Isolators:

Sl. No.	Description	Unit	420kV Isolator	245kV Isolator	145kV Isolator	33kV Isolator
1	Rated voltage	kVrms	420	245	145	36
2	Rated frequency	Hz	50	50	50	50
3	No. of poles	Nos.	3	3	3	3
4	Design ambient temperature	°C	50	50	50	50
5	Type		Outdoor, AC Motor Operated	Outdoor, AC Motor Operated	Outdoor, AC Motor Operated	Manually Operated
6	Rated current at 50°. C ambient temperature	A	2000A/ 3150A (as applicable)	1600A /2500A (as applicable)	2000A/ 1600A (as applicable)	1200A/ 800A (as applicable)
7	Rated short time withstand current of isolator and earth switch	kA	63 for 1 sec	50 for 1 sec	40 for 1 sec	31.5 for 3 sec
8	Rated dynamic short time withstand current of isolator and earth switch	kAp	157.5 kAp	125 kAp	80kAp	65.5kAp
9	Temperature rise over design ambient temperature	-	-	-	-	-
10	Operating mechanism of isolator/earth switch		A.C. Motor operated	A.C. Motor operated	A.C. Motor operated	Manually Operated
11	Max. Operating time	secs	20 secs or less	12 secs or less	12 secs or less	NA
12	Rated Insulation levels					
a)	Full wave impulse withstand voltage (1.2/50 microsec.)					
i)	between line terminals and ground	kVp	±1425	±1050	±650	±170

Sl. No.	Description	Unit	420kV Isolator	245kV Isolator	145kV Isolator	33kV Isolator
ii)	between terminals with isolator open	kVp	±1425 kVp impulse on one terminal and 240 kVp power frequency voltage of opposite polarity on other terminal	±1200	±750	±195
b)	Switching impulse withstand voltage (250/2500 micro-second) dry and wet					
i)	between line terminals and ground	kV peak	± 1050	-NA	-NA	NA
ii)	between terminals with Isolator open	kV peak	900 kVp impulse on one terminal and 345 kVp power frequency voltage of opposite polarity on other terminal	-NA	-NA	-NA
c)	One minute power frequency dry withstand voltage					
i)	between line terminals and ground	kV rms	520	460	275	70
ii)	between terminals with isolator open	kV rms	610	530	315	-
13	Minimum Corona extinction voltage with Isolator in all positions	KV rms	320	156	92	-
14	Max. radio interference voltage for frequency between0.5 MHz and 2 MHz in all positions	Micro volts	500 at 320 kVrms	500 at 156 kVrms	500 at 92 kVrms	-

Sl. No.	Description	Unit	420kV Isolator	245kV Isolator	145kV Isolator	33kV Isolator
15	Seismic acceleration		As per	As per	As per	-
			IS:1893	IS:1893	IS:1893	
16	Thermal Rating of Auxiliary Contacts	A	10 A at 220 V DC	10 A at 220 V DC	10 A at 220 V DC	10A at 220V DC
17	Breaking Capacity of auxiliary contacts		2 A DC with circuit time constant not less than 20 ms	2 A DC with circuit time constant not less than 20 ms	2 A DC with circuit time constant not less than 20 ms	2A DC with circuit time constant not less than 20ms
18	System neutral earthing		Effectively Earthed	Effectively Earthed	Effectively Earthed	Effectively earthed

2.15 Current Transformers (AIS)

Current Transformers shall comply with IEC 60044-1 in general. All ratios shall be obtained by secondary taps. Generally, Current Transformers (CT) for 400kV & 220 kV shall have six cores (four for protection and two for metering) and for 132kV shall have five cores (three nos. for Protection & two nos. 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 PS 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 (not more than 20VA for metering core) for better sensitivity and accuracy. The instrument security factor shall be less than 5 for CTs upto 400 kV voltage class.

The Technical Particulars / Parameters of Current Transformers:

Sl. No.	Description	400kV system	220kV system	132 kV system	33 kV system
1	Rated voltage, Um (kVrms)	420	245	145	36
2	Rated frequency (Hz)	50	50	50	50
3	No. of Poles	1	1	1	1
4	Design ambient temperature (°C)	50	50	50	50
5	Rated Primary Current (A)	3150-1000/1A	1600-800/1A	1250-400/1A	1200/1A (for Xmr) 400/1A (for feeder)
6	Rated extended primary current	125%	125%	125%	125%

Sl. No.	Description	400kV system	220kV system	132 kV system	33 kV system
7	Rated short time thermal withstand current (kA)	63 for 1 sec	50 for 1 sec	40 for 1 sec	31.5 for 3 Sec
8	Rated dynamic current	157.5 kAp	125 kAp	80 kAp	65.5 kAP
i)	between line terminals and ground (kVpeak)	±1425	±1050	±650	±170
i)	between line terminals and ground (kVpeak)	± 1050	-NA-	-NA-	-NA-
i)	between line terminals and ground (kVrms)	630 (dry only)	460	275	70
9	No. of Cores	6 (4 nos. for Protection & 2 nos. for metering)	6 (4 nos. for Protection & 2 nos. for metering)	5 (3 nos. for Protection & 2 nos. for metering)	4for Xmr. (2 No. for protection 2 No.for metering) 2 for feeder (1 No.for protection, 1 No.for metering)

2.16 Capacitor Voltage Transformers (CVT) / Potential Transformers (PT)

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 0.5 and for metering core shall be 0.2. The voltage transformers on lines shall be suitable for Carrier Coupling. The Capacitance of CVT shall be 4400/8800 pF depending on PLCC requirements. The rated burden of cores shall be closer to the maximum burden requirement of metering & protection system (not more than 100 VA for metering core) for better sensitivity and accuracy.

The Technical Particulars / Parameters of Capacitor Voltage Transformers:

Sl. No.	Description	420kV CVT	245kV CVT	145kV CVT	36kV PT
1	Rated primary voltage (kV rms)	420	245	145	36
2	Rated frequency (Hz)	50	50	50	50
3	No. of Poles	1	1	1	1
4	Design ambient temperature (°C)	50	50	50	50
5	System fault level (kA for 1 sec)	63 for 1 sec	50 for 1 sec	40 for 1 sec	31.5 for 3 sec.

Sl. No.	Description	420kV CVT	245kV CVT	145kV CVT	36kV PT
6	Standard reference range of frequencies for which the accuracy are valid	96% to 102%for protection and 99% to 101 % for measurement		-	
7	High frequency capacitance for entire carrier frequency range (for CVT only)	Within 80% to 150% of rated capacitance		-	
8	Equivalent series resistance over entire carrier frequency range (for CVT)	Less than 40 Ohms		-	
9	Stray capacitance and stray conductance of HF terminal over entire carrier frequency range (for CVT)	As per IEC-60358		-	
10	Temperature rise over design ambient temperature	As per IEC-61869			
11	Rated Insulation levels				
a)	Full wave impulse withstand voltage (1.2/50 microsec.)				
i)	between line terminals and ground	±1425 kVp	±1050 kVp	±650 kVp	±170kVP
ii)	between terminals with isolator open	±1425 kVp impulse on one terminal and 240 kVp power frequency voltage of opposite polarity on other terminal	±1200 kVp	±750 kVp	
b)	Switching impulse withstand voltage (250/2500 micro-second) dry and wet				
i)	between line terminals and ground	± 1050 kVp	-NA	-NA	-NA-
ii)	between terminals with Isolator open	900 kVp impulse on one terminal	-NA	-NA	-NA-

Sl. No.	Description	420kV CVT	245kV CVT	145kV CVT	36kV PT
		and 345 kVp power frequency voltage of opposite polarity on other terminal			
c)	One minute power frequency dry withstand voltage				
i)	between line terminals and ground (kVrms)	630 (dry only)	460	275	70
d)	One minute power frequency withstand voltage between secondary terminals & earth				
i)	between LV (HF) terminal and earth terminal (kVrms)	10kVrms for exposed terminals and 4kVrms for terminals enclosed in a weather proof box			
ii)	For secondary winding	3kVrms			5kVrms
12	Max. radio interference voltage for frequency between0.5 MHz and 2 MHz at (microvolts)	1000 at 266kV rms	1000 at 156kV rms	500 at 92kV rms	-NA-
13	Minimum Corona extinction voltage (kVrms)	320	176	106	-NA-
14	Partial Discharge	As per IEC	As per IEC	As per IEC	As per IEC
15	Type	Single phase Electromagnetic or capacitor VT			
16	No. of secondaries	3 cores	3 cores	3 cores	2 cores
17	Rated voltage factor	1.2 - continuous 1.5 -30 seconds	1.2 - continuous 1.5 -30 seconds	1.2 - continuous 1.5 -30 seconds	1.2 continuous 1.5-30 sec.
18	Phase angle error	± 10 minutes (For metering core)	± 10 minutes (For metering core)	± 10 minutes (For metering core)	± 10 mintutes(for metering core)
19	Capacitance (pf) (for CVT)	8800/4400 (+10%/-5%)	8800/4400 (+10%/-5%)	4400 (+10%/-5%)	-
20	Core details	Core-1, Core-2 & Core-3	Core-1, Core-2 & Core-3	Core-1, Core-2 & Core-3	Core 1 & Core 2
a)		Core-1:-	Core-1:-	Core-1:-	Core1-

Sl. No.	Description	420kV CVT	245kV CVT	145kV CVT	36kV PT
	Voltage Ratio	(400/√3)/(0.1 1/√3) Core-2:- (400/√3)/(0.1 1/√3) Core-3:- (400/√3)/(0.1 1/√3)	(220/√3)/(0.1 1/√3) Core-2:- (220/√3)/(0.1 1/√3) Core-3:- (220/√3)/(0.1 1/√3)	(132/√3)/(0.1 1/√3) Core-2:- (132/√3)/(0.1 1/√3) Core-3:- (132/√3)/(0.1 1/√3)	33kV/ √3/0.11/√3 Core2-33 √3/0.11/√3
b)	Application	Core-1:- Protection Core-2:- Protection Core-3:- Metering	Core-1:- Protection Core-2:- Protection Core-3:- Metering	Core-1:- Protection Core-2:- Protection Core-3:- Metering	Core1- protection Core2- Metering
c)	Accuracy	Core-1:-3P Core-2:-3P Core-3:- 0.2	Core-1:-3P Core-2:-3P Core-3:- 0.2	Core-1:-3P Core-2:-3P Core-3:- 0.2	Core1- 3P Core2-0.2
d)	Min. Output burden (VA)	Core-1:- 100VA Core-2:- 100VA Core-3:- 100VA	Core-1:- 100VA Core-2:- 100VA Core-3:- 100 VA	Core-1:- 100VA Core-2:- 100VA Core-3:- 100 VA	Core1- 100VA Core2- 100VA
21	Rated Total Thermal Burden (VA)	300 VA (100 VA/winding)		-	
22.	Minimum Cantilever Strength	500 KG			

2.17 Surge Arresters (AIS)

Station class, heavy duty gapless type Surge arresters conforming to IEC 60099-4 in general shall be provided. 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. Porcelain/Polymer housing if provided for SA shall be fitted with pressure relief devices and diverting ports suitable for preventing shattering of Porcelain/Polymer housing provide path for the flow of rated currents in the event of arrestor failure. A leakage current monitor with surge counter shall be provided with each surge arrestor.

The Technical Particulars / Parameters of Surge Arresters:

Sl. No.	Description	Unit	420kV SA	245kV SA	145kV SA	36kV SA

Sl. No.	Description	Unit	420kV SA	245kV SA	145kV SA	36kV SA
1	Nominal System Operating voltage	kV, rms	400	220	132	33
2	Rated frequency	Hz	50	50	50	50
3	No. of Poles	No.	1	1	1	1
4	Design ambient temperature	°C	50	50	50	50
5	Rated arrester voltage	kV	336	198	120	30
6	Continuous operating voltage at 50°.C	kV	267	168	96	24
7	Nominal discharge current		20 kA of 8/20 microsecond wave	10 kA of 8/20 microsecond wave	10 kA of 8/20 microsecond wave	10kA of 8/20 micro sec. wave
8	Discharge current at which insulation co-ordination will be done		20 kA of 8/20 microsecond wave	10 kA of 8/20 microsecond wave	10 kA of 8/20 microsecond wave	10kA of 8/20 micro sec. wave
9	Minimum discharge capability (referred to rated arrester Voltage) or corresponding to minimum discharge voltage as per clause-2.0 (d) whichever is higher	kJ/kV	12kJ/kV	5kJ/kV	5kJ/kV	2.83kJ/kV
10	Max. switching surge residual voltage	kVp	670 (at 2kA) 650 (at 500A)	500 (at 1kA)	280 (at 1kA)	
11	Max. residual voltage at					
i)	5kA	kVp	-	560	310	
ii)	10 kA nominal discharge current	kVp	800	480	300	90
iii)	20 kA nominal discharge current	kVp	850	-	-	-
12	Cantilever Strength (for 1 minute withstand	kg	1000	1000	1000	300

Sl. No.	Description	Unit	420kV SA	245kV SA	145kV SA	36kV SA
	test)					

2.18 33kV Shunt Capacitors:

The 36kV, 12MVAr Shunt Capacitor Banks shall be connected in double star formation and each star connected bank shall be unearthed with a floating neutral, but interconnected by a neutral protective current transformer (NCT) of suitable ratio to operate protective relay at its 20% current setting whenever one capacitor unit fails.

The Technical Particulars / Parameters of 36kV Shunt Capacitor Bank:

Sl.No.	Particulars	Parameters
1	Nominal System Voltage	33 kV
2	Highest System Voltage	36 kV
3	Rated capacitor bank voltage	36 kV
4	Basic Insulation level	170 kVp
5	P.F. withstand voltage	70 kV
6	Type of connection	Double Star
7	Rating of Shunt Capacitor at highest voltage	12 MVAR
8	Number of phases	3
9	KVAR and voltage rating of each unit	166.67 KVAR / 6.93 kV
10	Total number of units in each bank of 12MVAR	72
11	Total number of Series Group per phase per Star group	3
12	Number of units in parallel per series group per phase	4
13	Type of fuse	Internal Fuse

2.19 Protection & Control

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. The auto transformer protection should be provided with two no. differential relays of different make &algorithm.

The protection circuits and relays of transformer and reactor shall be electrically and physically segregated into two groups each being independent and capable of providing uninterrupted protection

even in the event of one of the protection groups failing, to obtain redundancy, and to take protection systems out for maintenance while the equipment remains in service.

a) Transmission Lines Protection

400kV and 220kV lines shall have MAIN-I numerical four zones distance protection scheme with carrier aided inter-tripping feature. The fourth zone shall be the reverse zone. 400 kV and 220 kV lines shall also have MAIN-II numerical distance protection scheme like Main-I but from different make that of MAIN-I. 132kV lines shall have MAIN-I numerical four zones distance protection scheme with carrier aided inter-tripping feature. The fourth zone shall be the reverse zone. 132 kV lines shall also have independent back up over current & earth fault protection. However, Line Current Differential relay (with back up distance protection feature) as Main–I & Main-II may be considered, for short lines (line length less than 10 KM) having Fibre Optic communication link for which line differential relay have to be arrange by Transmission Service Provider (TSP) for remote end also. 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. The Main-I and Main-II protection relays of same make may be provided only if they are of different hardware, manufacturing platform or different principle of operation. Associated power & control cabling and integration with SAS at remote end shall be provided by respective bay owner.

All 400kV lines shall also be provided with two stages over voltage protection. Further, all 400kV & 220kV lines shall be provided with single and three phase auto-reclosing facility to allow reclosing of circuit breakers in case of transient faults. 132kV lines should not have auto-reclosing facility. These lines shall also be provided with distance to fault locators to identify the location of fault on transmission lines.

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 400kV, 220kV and 132kV 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/Transformer protection:

These shall have the following protections:

(i) Numerical Differential protection
(400/220 KV and 220/132 KV ICTs shall have two differential protection relays. The second differential relay shall be provided on IV side C&R panel to avoid congestion on HV side C&R panel. The differential relay shall have different make and algorithm.)
(ii) Numerical Restricted earth fault protection
(iii) Numerical Over-current and earth fault protection on HV & MV side
(iv) Numerical Over fluxing protection on HV & MV side

(v) Numerical Overload alarm
(vi) Neutral displacement

Further, Numerical Back-up Over-current and earth fault protection on HV & MV side of auto-transformer shall not be combined with other protective functions in the main relays and shall be independent relays. Besides these, power transformers shall also be provided with BUCHOLZ relay, protection against high oil and winding temperature and pressure relief device, OSR etc. The auto transformer protection should be provided with two no. differential relays of different make & algorithm.

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 other necessary protection shall 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) 400 kV 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
(iv) Numeric back up – over current & Earth fault protection

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

d) Numerical Bus Bar Protection

The high speed low impedance 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 400kV, 220kV and 132kV buses. Duplicated bus bar protection is envisaged for 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 the complete bus bar protection for present as well for present as well as for 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. For existing substations, the existing bus bar protection shall be augmented wherever required.

e) Numerical Local Breaker Back up Protection

This shall be provided for each 400kV, 220KV and 132kV breakers and will be connected to de-energize the affected stuck breaker from both sides.

f) Substation Automation System (optional)

For new substations, state of art Substation Automation System (SAS) conforming to IEC-61850 may be provided by TSP as per requirement. 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 132kV and above. All bay control units as well as protection units are normally connected through an Optic fiber 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.

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

At existing substations with Substation automation system (SAS), augmentation of existing SAS shall be done for bays under present scope. At existing Substations where Substation automation is not provided, control functions shall be done through control panels.

Necessary gateway, modems, data channel (as required) shall be provided to send data to SLDC & backup SLDC & TRANSCO SCADA CENTER through IEC 60870-5-104/101 protocol and data points as per SLDC requirements. Any augmentation work at SLDC is excluded from TSP's scope. However, all the configuration work at substation end required to send data to SLDC & TRANSCO SCADA CENTER shall be in the scope of TSP.

g) 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. This equipment shall be used to synchronize SAS, PMUs & IEDs etc.

2.20 Control Concept

All the EHV breakers in substation/switching stations shall be controlled and synchronized from the switchyard control room and remote control center. Each breaker would have two sets of trip circuits which would be connected to separately fused DC supplies for greater reliability. All the isolators shall have control from remote/local whereas the earth switches shall have local control only.

2.21 PLCC & PBAX

Power line carrier communication (PLCC) equipment complete for speech, tele-protection 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 (100%) 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.

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

- Coupling devices shall be suitable for 8800/4400pF for 400kV CVT with phase to phase coupling, 8800/4400pF for 220kV CVT with phase to phase coupling. 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. CVT & Wave trap for all line bays under present scope 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 (wherever applicable).

- All other associated equipment like cabling, coupling device and HF cable shall also be provided by the TSP.

- Adequate number of Fiber Optic/OPGW based terminal equipments are required to be provided at each Substation under present scope of work and the same shall be utilized for Data, Voice and line protection applications. For protection purposes, both end Digital Protection Couplers (DPCs) shall be included at both ends. However, for line protection application, back up communication channel/link may be considered as per requirement so as to take care of OPGW/Telecommunication equipment outage.

Bidders are also required to familiarize themselves with the protection & communication scheme of existing transmission lines. Before finalizing the Protection scheme and Sub-Station Automation system, bidder is requested to get fully familiarized with the site condition and General arrangement & scheme etc of the existing Substations.

2.22 Substation Support facilities

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

2.23 AC & DC power supplies

For catering to the requirements of three phase & single phase AC supply and DC supply for various substation equipment's, the following arrangement is envisaged. However, for substation extension / augmentation, existing facilities shall be augmented as required -

i) For LT Supply at 400/220kV New Substation, two (2) nos. 500 kVA, 33/0.4kV Transformers shall be provided which shall be connected with two different sources either on 33kV bus of substation or on DISCOM supply or on tertiary of 400/220/33kV Auto-transformer. The maximum permissible losses shall be as per Table 6 of IS-1180.

ii) For LT Supply at 220/132kV New Substation, two (2) nos. 200 kVA, 33/0.4kV Transformers shall be provided which shall be connected with two different sources either on 33kV bus of substation or on DISCOM supply or on tertiary of 220/132/33kV Auto-transformer. The maximum permissible losses shall be as per Table 6 of IS-1180.

iii) For LT Supply at 220/33kV or 132/33kV New Substation, one (1) No. 200 kVA, 33/0.4kV Transformer shall be provided which shall be connected on 33kV bus of substation. The maximum permissible losses shall be as per Table 6 of IS-1180.

iv) Metering arrangement with Special Energy Meters (SEMs) shall be provided by TSP at 33kV tertiary of Transformer for drawing auxiliary supply at new substation. Such SEMs may be provided by STU at the cost of the TSP. Accounting of such energy drawn by the TSP shall be done by SLDC as part of State Energy Accounting. Additionally, Active Energy Meters may be provided at the same point in the 33kV tertiary of Transformer by local SEB/DISCOM for energy accounting,

v) 2 Sets batteries of 220V for control & protection and 2 Sets 48V batteries for PLCC/ Communication equipment shall be provided at each new Substation with at least 10 hours battery backup and extended back up as required. Each battery bank would have a float-cum-boost charger. Battery shall be of VRLA type.

vi) Suitable AC & DC distribution boards and associated LT Switchgear would be provided at new Substations. 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 present and future feeders as specified.

For Substation Extensions, existing facilities shall be augmented as required. For new substations following switchboards shall be considered with duplicate supply with bus

coupler/ sectionalizer and duplicate outgoing feeders except for Emergency lighting distribution board which shall have only one incoming feeder:

(a) 415V Main Switch board – 1 no.
(b) AC distribution board – 1 no.
(c) Main lighting distribution board – 1no.
(d) Emergency lighting distribution board – 1no.
(e) 220 Volt DC distribution board – 2nos.
(f) 48 Volt DC distribution board – 2nos.

415V Main Switch Board & AC distribution board shall be provided with at least two incomers with one bus coupler and AC supply shall have redundancy.

vii) In new Substations, one No. 250 KVA DG set shall be provided for emergency applications.
vii) Sizing of Auxiliary system (like battery, charger, LT switchgear) may be done considering future bay requirements to avoid replacement in future with higher sizes.

2.24 Installation of Interface ABT Meters:

a. Metering (Main & Check at arrangement with AMR facility shall be provided on the LV side of EHV Power Transformers i.e. 33kV side of 220/33kV & 132/33kV transformers installed inEHV substations.

b. The standby metering with AMR facility shall be provided on the HV side of EHV Power transformers i.e.220/33kV, 132/33kV and 132/1lkV transformers installed in EHV substations.

c. In case of EHV consumers of Distribution Licensee directly connected with 220kV or 132kV Substation of Licensee, tariff metering with AMR facility shall be provided on outgoing feeder emanating from EHV substation of Licensee. In case of Railway Traction feeders, standby meters with AMR facility shall be provided at Licensee substation.

d. The Interface meters shall be of open protocol confirming to IS 15959 and of point 0.2S accuracy class. The accuracy class of Current transformers (CTs) and voltage transformers (VTs) shall not be inferior to that of associated meters. The meters shall have a non-volatile memory in which following shall be automatically stored: -

- Average frequency for each successive 15/5 minutes block, as a two digit code (00 to 99 for frequency from 49.0 to 51.0Hz).
- Net Watthour transmitted during each successive 15/5 minutes block, up to second decimal, with plus/minus sign.
- Cumulative Watthour transmittal at each midnight, in six digits including one decimal.
- Cumulative VArh transmittal for voltage high condition, at each midnight, in six digits including one decimal.
- Cumulative VArh transmittal for voltage low condition, at each midnight, in six digits

including one decimal.

- Date and time blocks of failure of VT supply on any phase, as a star (*) mark.
- The interface meters shall have the provision of recording of energy in 15 minutes' time block as well as 5 minutes' time block as configured through software. In addition to the existing provisions of frequency resolution of 0.01Hz and they must be capable of recording Voltage and Reactive Energy at every 5 minute and have feature of auto-time synchronization through GPS.

e. The provisions of MPEGC (Revision-II), 2019 and CEA (Installation and operation of Meters) Regulation 2006 and subsequent amendments thereof shall be applicable for metering of interface points.

2.25 Fire Fighting System

Fire-fighting system in general conforms to fire insurance regulations of India. The fire-fighting system is proposed with both AC motor & diesel engine driven pump house in a fire fighting pump house building along with water storage tank of adequate capacity and oil soak pit of adequate capacity to drain transformer oil in case of fire. Automatic heat actuated emulsifying system to be provided for fire protection of Transformers. However, Nitrogen Injection Fire Protection System (NIFPS) shall be required for 400 kV and 220 kV Class Transformers. In addition, for alarm system based on heat/smoke detectors are proposed to be installed at sensitive points in a substation e.g. Cable Vault, Control Room building and other buildings etc. 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.

Optical Beam type heat detection for GIS hall fire protection system shall be provided for all the GIS halls. All fire protection system shall also comply with the requirement of CEA (Measures Relating to Safety & Electric Supply) regulations.

2.26 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 tanks of adequate capacities for storage of transformer oil would be provided.

2.27 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.

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

2.28 Control Room

Substation control room shall be provided to house substation work station for station level control (SAS) along with its peripheral and recording equipment's, AC & DC distribution boards, DC batteries & associated battery chargers, Fire Protection panels, Telecommunication panels & other panels as per present 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.

2.29 GIS hall

The Gas Insulated Switchgear (GIS) of each voltage other associated equipment shall be housed separately and inside in the GIS buildings. 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/diameters under present scope and future bays/diameters shall be accommodated in the above room. 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 each for GIS hall of suitable capacity shall be provided for erection &Maintenance of largest GIS component/assembly and all plant installed in the GIS switchgear room. The crane shall 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.

2.30 PT Distribution Scheme

A suitable PT distribution scheme for 400kV, 220 kV & 132 kV has to be provided by TSP. TSP may visit the existing Sub-Stations in order to familiarize themselves with the existing system. The PT distribution board must be suitable for distributing the main bus PTs to all the feeder/transformers. The Potential transformers shall comply with the relevant codes/standards. The number of secondary cores, accuracy class and burden shall be in accordance with the requirements of the protection and metering system. Rated burden shall be nearest to the burden computed; however it shall not exceed 50 VA. The accuracy class for metering core shall be equal to or better than the accuracy class of the meter specified in the Central Electricity Authority (Installation and Operation of Meters) Regulations. Digital optical voltage transformers shall also be acceptable in place of conventional voltage transformers.

2.31 Visual monitoring system (VMS) for watch and ward of substation premises:

Visual monitoring system for effective watch and ward of substation premises shall cover all the transformers and reactors, all other major AIS Equipment (such as CB, isolators, CT, CVT, SA etc. as applicable), GIS bays, panel room, all the gates of switchyard and all entry and exit points of control room building and accordingly the location of cameras shall be decided. The camera shall be high definition color CCD camera with night vision feature. The VMS data partly/completely shall be

recorded (minimum for 15 days) at least @25fps (or better) and stored on network video recorder. The system shall use video signals from various cameras installed at different locations, process them for viewing on workstations/monitors in the control room and simultaneously record all the cameras. Mouse/keyboard controllers shall be used for pan, tilt, zoom and other functions of the desired camera. The Visual Monitoring System shall have provision of WAN connectivity for remote monitoring.

All camera recordings shall have Camera ID & location/area of recording as well as date/time stamp. The equipment should generally conform to Electromagnetic compatibility requirement for outdoor equipment in EHV substation. At existing substations, the visual monitoring system if available shall be augmented as per existing or better specification as required.

2.32 Fibre Optic Communication Network

The Fibre Optic Communication Network configuration and the equipment characteristics for communication system to be installed under the project as per relevant IS standard & CEA Guidelines. The sub-systems addressed within this section are:

1. Fibre Optic Transmission System (FOTS).
2. Termination Equipment Subsystems.
3. Network Management System (NMS).
4. MDF, DDF and Cabling.

The above are applicable to and in support of network configurations and Network Management System (NMS) for monitoring and control of the communication network. TMN/NMS and NMS have been interchangeably used in this specification. The security related requirements of the equipment shall be as per DoT (Department of Telecommunication) guidelines and all similar security requirements as amended by DoT on time to time basis shall be followed/complied by the TSP at no additional cost to MPPTCL till the implementation of the project. It shall be the responsibility of TSP to integrate the Fibre Optic Terminal Equipment's to existing MPPTCL Fibre Optic Network and NMS System and all necessary SFP/interface equipment's (if any) for integration, are to be arranged by TSP.

2.33 Phasor Measurement Unit (PMU)

The substations/Generating stations are provided with CTs on each bay of the switchyard and CVTs/PTs in each transmission line bay and on each bus. The CTs have one metering core and four protection cores. The CVTs are provided with three cores for metering/protection. The offered Phasor Measurement Unit (PMU) shall be connected to either of these CT and CVT cores. PMUs shall be suitable for measurement on both the cores (Meter & Protection).

The PMUs to be installed at the Substations / Power stations, shall communicate to the existing Phasor Data Concentrator (PDC) installed at SLDC as per IEEE C37.118.1-2011, IEEE C37.118.2-2011 & C37.118.1a-2014 standard or IEC/IEEE 60255-118-1:2018 Standard with all amendments. PMU complying IEC/IEEE 60255-118-1:2018 Standard shall be preferred. The PMU shall be capable of reporting with its full features to the existing PDC installed at SLDC under the Unified Real Time

Dynamic State Monitoring (URTDSM) Project. The PMU's are to be provided for each feeder bays and transformers in 400kV & 220kV substations as well as specifically identified 132kV substations and the data is to be transferred through single channel to SLDC. The details of existing PDC installed at SLDC is as under:

Contract Item No as per BOQ		Main and Backup SLDCs : B.4 a, c, d, e
Application		Real Time PDC, Analytics Server and PDS (Part-1)
Sr.No.	Item	Characteristics
1	Manufacturer	CISCO
2	Model	C240-M3
3	Application	Real Time PDC and Analytics
4	Country of Origin	America(North & Latin)/Europe
5	No. of CPU and Cores: 2 x 8 cores	2 x 10C Processor, E5-2670v2, 2.5GHz (2 Socket)
6	Installed 128 GB	8 x 16 GB DDR3 (128 GB), 12 DIMM Slots per Processor Socket total of 24 DIMM Slots
7	Internal Auxillary Memory : 500 Gb Delivered expendable upto 1 TB	2 x 600GB 15K , SAS HDDs. (RAID 1), 16 no. HDD Slots
8	Internal optical drive : DVD (R+W)	DVD +/-RW, SATA, External (HP Make)
9	Input Ports :2 x 1Gbps Ethernet Ports (Minimum)	4 x 1Gb Ethernet Ports
10	Power Supply : Dual AC Power Supply	DualPower Supply, 650W
11	User interface : Through a common TFT monitor , keyboard & mouse connected through KVM Switch in a server rack	Yes
12	Mounting : Rack mountable	Yes, 2U

2.34 Remote Terminal Unit (RTU)

The TSP shall provide the complete RTUs, interface cabinets, transducers, Multi-Function meters, cabling, installation and implementation and associated support requirements.

The TSP is required to provide the data to SLDC & backup SLC and TRANSCO SCADA CENTER either through IEC gateway of Substation Automation System (SAS) or through separate RTUs. In case telemetry to SLDC/ TRANSCO SCADA CENTER is to be provided through RTU, then TSP shall provide complete RTU, interface cabinets, transducers/MFMs, modems for both ends, data channel, and integration with SLDC through IEC 60870-5-104/101 protocol along with support requirement with support requirement. The Modems and Data Channels required for TRANSCO SCADA shall be in the scope of TSP.

3.0 GENERAL FACILITIES

Following facilities shall be provided:

- Substation Gantry/Towers are envisaged for present scope of bays only. However, for adjacent future bay, gantry/towers shall be designed for extension (considering Quad conductor for 400kV future lines, Single conductor for 220kV & 132kV future lines) wherever required.

- The sub-station shall be confirming to the requirement of CEA (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations 2010, as amended from time to time.
- In addition, the scope for development of communication system at the Substations & Transmissions lines is in the scope of TSP. The communication equipment at both ends of the transmission line terminating at MPPTCL's substation, along with its O&M, shall be in the scope of the TSP. For all the new substations, PLCC, Substation Automation System (SAS) & Time synchronization equipment, shall be provided by the TSP as per guidelines & amendments thereof.
- TSP has to arrange for construction power and water on its own.
- Space for storage of O&M spares shall be arranged by TSP on its own.
- Shutdown for crossing of existing transmission lines of STU will be given to TSP free of cost. For any other transmission licensee, TSP has to coordinate with other transmission licensee during the execution stage.

At Transmission Lines:

On the proposed transmission line one OPGW containing 48 Fibers is to be installed by the TSP during the construction of line. The installation of OPGW shall be done from gantry to gantry and shall be terminated in a Joint Box to be provided by TSP at both the ends. OPGW shall be installed as per the design approved of MPPTCL.

At Substations:

TSP shall provide FODP and Approach Cable (48F) for each line which shall be connected with OPGW fibers to be installed on the proposed transmission lines. Further, FODP and approach cable shall also to be provided at all the sub stations for terminating OPGW fibers from lines. TSP (Transmission Service Provider) shall provide STM-16/STM-4 SDH equipment (as per available communication plan of MPPTCL as approved by MPPTCL) at all substations, along with necessary interfaces to meet the voice and data communication requirement and shall be integrated with wideband network of MPPTCL. TSP shall install required no. of Phasor Measurement Units (PMUs) at all 400kV and 220kV substation and specifically identified 132kV substations for all the 400kV, 220kV & 132 kV bays (line/feeders) and transformers of the substation and shall support latest IEEE C-37.118 protocols. These PMUs shall be integrated with the PDC (Phasor Data Concentrator) located at SLDC (State Load Dispatch Center). TSP shall install RTU/SAS with necessary interfaces which shall be integrated with SLDC SCADA System on IEC 60870-5-101/104 protocol. The maintenance of all the communication equipment including FODP and approach cable, PMUs, RTU/SAS shall be the responsibility of TSP.

4.0 SPECIFIC TECHNICAL REQUIREMENTS FOR COMMUNICATION:

A. Laying of OPGW on 400kV, 220kV and 132kV lines:

(1) TSP shall have to install one OPGW containing 48 Fibers on all the lines to be constructed by TSP.

(2) Earth wire during the construction of line. The installation of OPGW shall be done from gantry of one substation up to the gantry of second substation and shall be terminated in a Joint Box to be provided by TSP at both the ends. TSP shall provide FODP and Approach Cable (48F) at both ends which shall be connected with OPGW fibers to be installed on each line:

Sl.No.	Name of the Line / Transmission Element
1	Bisonikala —Sodallpur—Sultanpur 132kV DCSS line.
2	Gairatganj—Pathari 132kV DCDS line
3	Bareli—Badi—Shahganj 132kV DCSS line
4	Ashoknagar—Semrahat—Aron 132kV DCSS line
5	MugaliyaChhap-HOD Bhopal 132kV DCDS line (with Monopole Towers)
6	Khujner—Chhapiheda—Nalkheda 132kV DCSS line
7	Kasrawad—Pipalgaon 132kV DCDS line
8	Sonkatch—ChoubaraDheera 132kV DCSS line
9	Pithampur220—Pithampur (Sector-III) 132kV DCDS line
10	Bahadurpur—Badgaon 132kV DCSS line

(3) TSP shall have to install one OPGW containing 48 Fibers on the following lines (LILO Section) in place of conventional earth wire during the construction of line. The installation of OPGW shall be done from gantry of the new substation up to the LILO point of the existing line and shall be terminated in a Joint Box to be provided by TSP at the substation end. TSP shall provide FODP and Approach Cable (48F) at terminating substations which shall be connected with OPGW fibers to be installed on each LILO section:

Sl.No.	Name of the Line / Transmission Element	Type of OPGW on Existing Line
1	LILO of both circuit of Itarsi (PGCIL) - Bhopal 400kV line (on Twin Moose) at Mandideep GIS 400kV S/s	8 fiber (E) (additional 24 Fiber being added)
2	LILO of Hoshangabad – Adampur 220kV line at Mandideep GIS 400kV S/s	24 fiber (P)
3	LILO of Mandideep – Bhopal 220kV line at Mandideep GIS 400kV S/s	24 fiber (P)
4	LILO of Mandideep132 - Bagroda 132kV line at Mandideep GIS 400kV S/s	24 fiber (P)
5	LILO of Mandideep220 - MACT Bhopal 132kV line at Mandideep GIS 400kV S/s	24 fiber (P)
6	LILO of both circuits of Satpura-Itarsi-Handiya 220kV line at Bisonikala 220kV S/s	24 fiber (P)
7	LILO of SeoniMalwa-Harda 132kV S/c line at Bisonikala 220kV S/s	Not Available
8	LILO of both circuits of Chhegaon - Nimrani 220kV line at Khargone 220kV S/s	Not Available

Sl.No.	Name of the Line / Transmission Element	Type of OPGW on Existing Line
9	LILO of Khargone - Julwaniya(Talakpura) 132kV line at Khargone 220kV S/s	Not Available
10	LILO of Bhikangaon - Bistan 132kV line at Khargone 220kV S/s	Not Available
11	LILO of Ashta - Sonkatch 132kV S/C line at Jawarjod 132kV S/s	24 fiber (P)
12	LILO one circuit of Satpura TPS-Itarsi 220 kV line at Shahpur 220/33kV S/s	24 fiber (P)
13	LILO of Badnagar-Orange Berchha 132kV DCSS line at Bhatpachlana 132kV S/s(on Multi Circuit tower).	Not Available
14	LILO of Jaora -Daloda 132kV line at Dhodhar 132kV S/s	Not Available
15	LILO of Barwani – Kukshi 132kV line at Ambaja 132kV S/s	Not Available
(E) – Existing, (P) – Proposed under PSDF Earth Wire replacement scheme		

B. Other SCADA and Communication Equipment:

i. TSP shall provide FODP (96F) and Approach Cable (48/24F) at all the proposed & existing substations under the present scope and repeater station (if any) which shall be connected with OPGW fibers to be installed on the 400 kV, 220 kV and 132 kV transmission lines.

ii. TSP shall provide STM-16 SDH equipment at all the proposed & existing substations under the present scope, and at repeater stations (if any), along with necessary interfaces to meet the voice and data communication requirement and shall be integrated with remote end wideband network of MPPTCL.

iii. In case of repeater requirement, TSP shall provide Repeater shelter along with DG set, provisioning for AC and DC supply and other associated systems.

iv. The integration of Communication equipment with centralized NMS of MPPTCL 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. The Substations (under present of work) FOTE equipment's are to be integrated with MPPTCL NMS, proposed to be commissioned.

v. TSP shall install required no. of Phasor Measurement Units (PMUs) at each 400kV and 220kV substation and specifically identified 132kV substations for all the 400kV, 220kV & 132 kV bays (line/feeders) and transformers of the substation and shall support latest IEEE C-37.118 protocols. These PMUs shall be integrated with the PDC (Phasor Data Concentrator) located at SLDC (State Load Dispatch Center).

vi. TSP shall install RTU/SAS with necessary interfaces which shall be integrated with SLDC SCADA System on IEC 60870-5-101/104 protocol.

vii. The maintenance of all the communication equipment including FODP and approach cable, PMUs, RTU/SAS & repeater stations shall be the responsibility of TSP.