

SCOPE OF WORK (SOW)

TABLE OF CONTENT

1. GENERAL.....	3
2. SCOPE OF WORK	3
3. BID PRICE SCHEDULE:.....	6
4. PHYSICAL AND OTHER PARAMETERS	6
5. DIFFERENT SECTIONS OF TECHNICAL SPECIFICATION.....	7
6. SPECIFIC REQUIREMENT	7

1. GENERAL

➤ Name of scheme:

Upgrading STM-1 FOTE to STM-16 FOTE at Bhopal (BDTCL), Dhule (BDTCL), Indore (PG), Aurangabad (PG) and Vadodara (PG) S/s.

2. SCOPE OF WORK

➤ The scope of work shall cover following:

Survey, planning, design, engineering, supply, testing at manufacturer's works, transportation, unloading and delivery at site including insurance & storage, supervision of erection/installation, installation of FOTE and its accessories including all associated works, splicing, termination, testing, training, and demonstration for acceptance, commissioning and documentation for the Communication System defined below:

- Supply and installation of 5 no's, STM-16 (FOTE) equipment supporting minimum five (5) directions with MSP (Multiplex Section Protection 1+1) along with necessary interfaces and cards at following Locations (1 No. FOTE at each location) and integration with existing ISTS Communication network:
- (i)Bhopal(BDTCL)
(ii)Indore(PG)
(iii)Dhule(BDTCL)
(iv)Vadodara(PG)
(v)Aurangabad(PG)
- Supply and installation of approach cable, FODP and other accessories at Indore (PG) and Vadodara (PG) S/s.

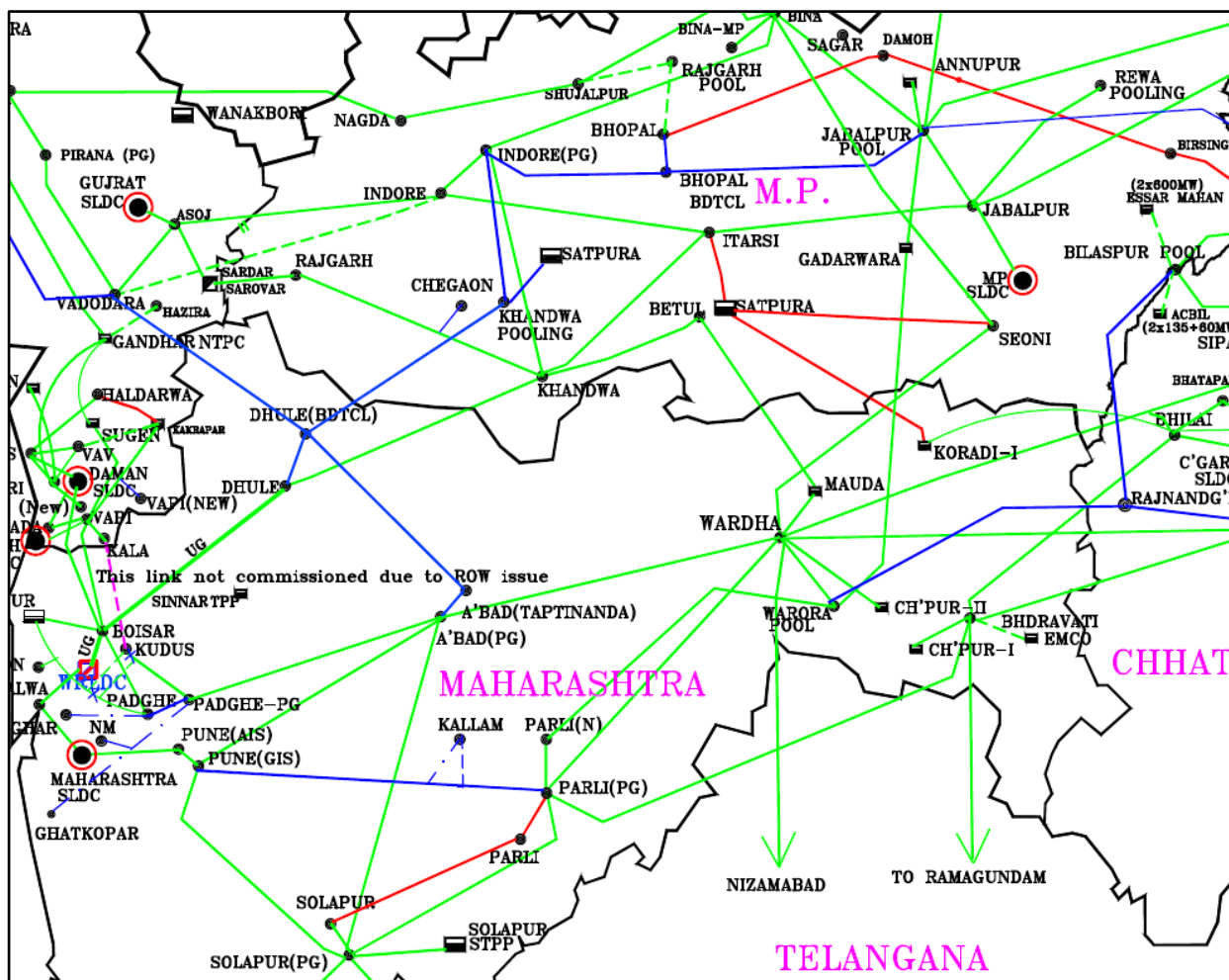
➤ TENTATIVE BoQ

SR. NO.	ITEM	UNIT	BHOPAL SS (BDTCL)	INDORE SS (PG)	VADODARA SS (PG)	DHULE SS (BDTCL)	AURANGABAD SS (PG)
1	For 765kV Transmission Lines						
2	Protection Coupler (Digital) including Panel for 765KV Line with Amplifier, E1/Optical converter, Control card, Optical Interface as per requirement	SETS	1	1	1	2	1
3	Dismantled Scrap FOTE Equipment along with its accessories	SETS	1	1	1	2	1

SR. NO.	ITEM	UNIT	BHOPAL SS (BDTCL)	INDORE SS (PG)	VADODARA SS (PG)	DHULE SS (BDTCL)	AURANGABAD SS (PG)
4	FODP with Panel	SETS	0	1	1	0	0
5	Fiber Optic Cable	LS	1	1	1	1	1
6	Fiber Optic Tele-Protection and Communication Equipment 5 MSP (1+1) including NGFW Firewall as applicable	LS	1	1	1	1	1
7	Complete FOTE for Protection Inter-tripping, data and voice communication inclusive of STM-16 MUX, Ethernet Cards, Optical Transmitter (SFP), Optical Interface Cards, Data Communication Cards, Voice Cards, Sub-racks, Panel Cabinets, Patch Cords, Power Cables, Fiber Optic Approach Cable upto Transmission Line termination Gantry along with Splice Box mounted on the Line Gantry and Power Supply.	LS	1	1	1	1	1
8	Integration with existing Substation FOTE System with New SDH	LS	1	1	1	1	1
9	Data Communication to relevant RLDC using Layer-3 MPLS based existing network and integration with existing network at CCR Noida, this includes provision of Tower with mounted Antenna, Ethernet Router and Ethernet to Serial Convertor, Serial Cable with DB9 connector at substation end.	LS	1	1	1	1	1
10	The integration of Communication equipment with centralized NMS at regional level. (Including Configuration work in centralized NMS for integration of new Communication equipment)	LS	1	1	1	1	1
11	Additional work required for interconnecting "S/c 765kV line Bhopal to Indore" present FOTE at Indore end "installed	LS		1			

SR. NO.	ITEM	UNIT	BHOPAL SS (BDTCL)	INDORE SS (PG)	VADODARA SS (PG)	DHULE SS (BDTCL)	AURANGABAD SS (PG)
	in Bay Kiosk" with Control Room FOTE at Indore "require additional equipment/ work".						
12	DCP for Dhule PS shall be Dhule (BDTCL) S/s and ULDC data of Dhule PS (SCADA, VoIP, PMU, Line protection etc.) shall be integrated with Dhule (BDTCL) for reporting to WRLDC through Dhule (MSETCL).	LS				1	
13	Spare as per CEA Guidelines	LS	1	1	1	1	1
14	Any additional Items required to complete the Scope	LS	1	1	1	1	1

➤ NETWORK DAIGRAM:



- Standard FOTE designs are to be used for various voltage levels of substation that are mentioned in Technical Specifications. the Contractor may propose customized design(s) during detailed engineering to meet the requirement.
- Installation The bill of quantities for the same is specified in the appendices accordingly. However, the actual quantities for the requirement may vary during implementation which shall be finalized after detailed survey. The Contractor has to carry out the detailed survey and collect the required data for preparation of FOTE BoQ.
- If incase ambiguity between RFP & BOQ during the project, RFP will be superseded
- All other associated works/items described in the technical specifications for a viable and fully functional communication network.
- The above scope of work is indicative and the detailed scope of work is given in the Technical Specification (Volume-II) of the Bidding Documents.

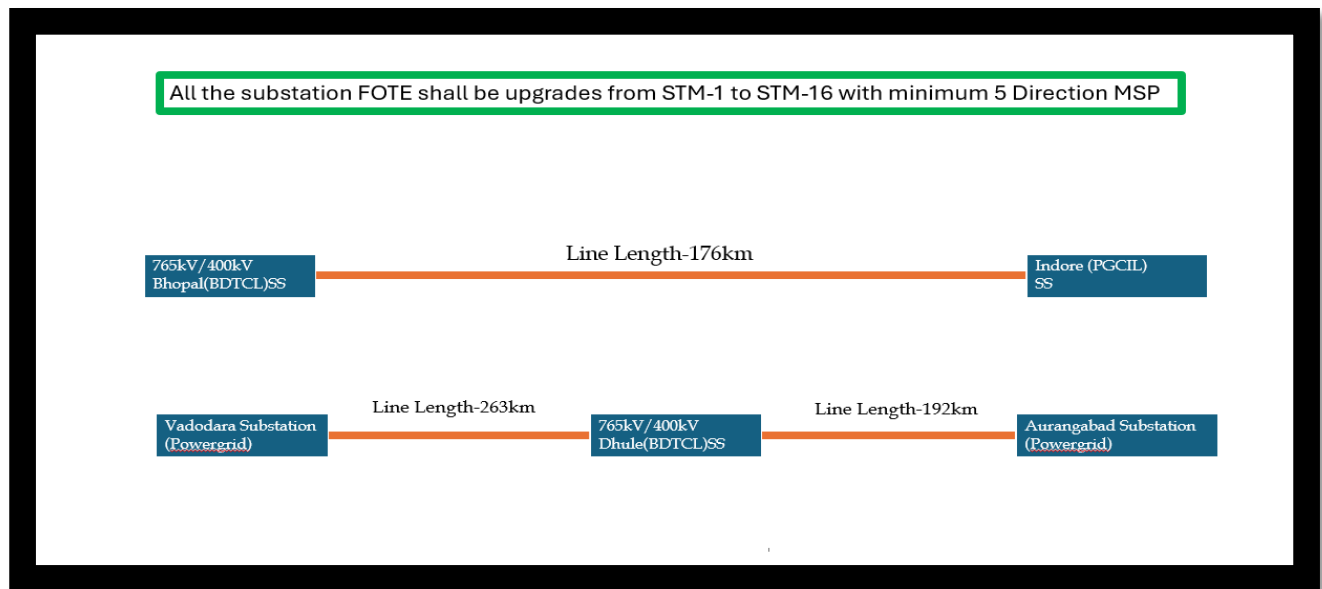
3. BID PRICE SCHEDULE:

The Bid Price Schedule is attached separately in Volume-III.

4. PHYSICAL AND OTHER PARAMETERS

- **Details of the Transmission Line** - The details of the transmission line are indicated below:

Name of Substation	Line Length (KM)
Bhopal (BDTCL) SS to Indore (PGCIL) SS	176
Vadodara (PGCIL) SS to Dhule (BDTCL) SS	263
Dhule (BDTCL) SS to Aurangabad (PGCIL) SS	192



➤ **Access to Site -**

The requisite support will be arranged to the successful Bidder to access the site/locations for performing the Scope of Work.

5. DIFFERENT SECTIONS OF TECHNICAL SPECIFICATION

For the purpose of scope of work, technical specification shall consist of following:

- Section - Telecom

6. SPECIFIC REQUIREMENT

{Left Blank}

----- End of Scope of Work -----