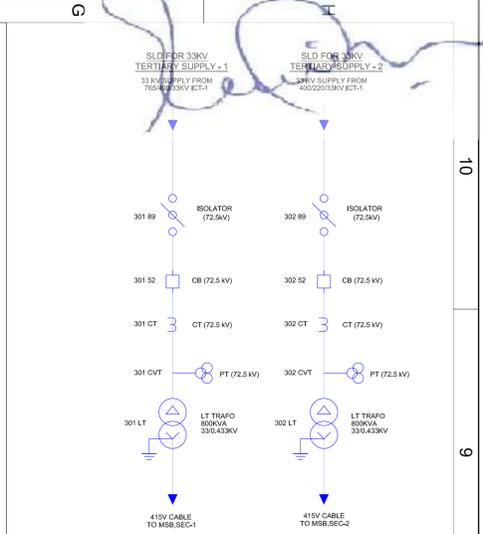
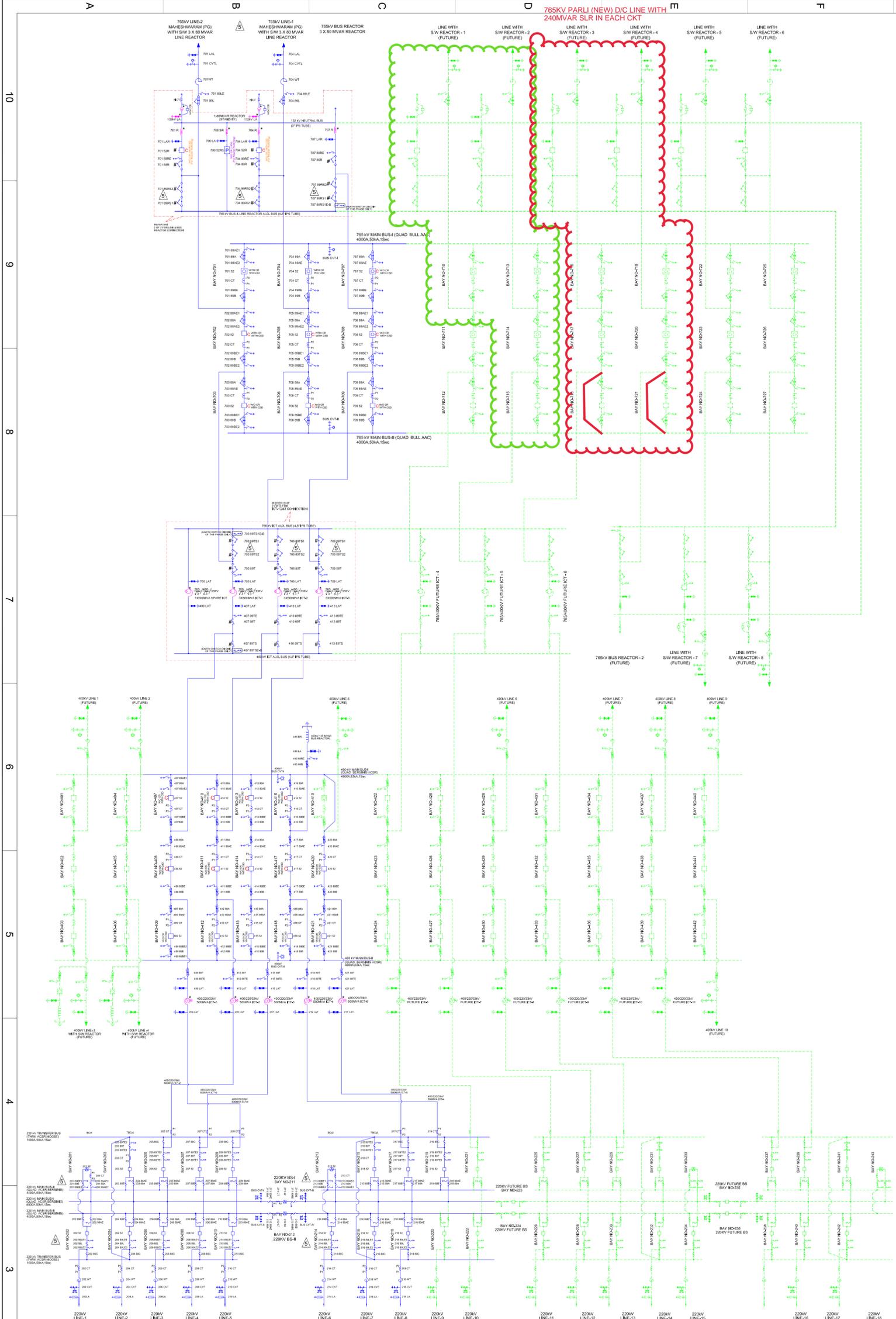


Amendment-V dated 29.08.2025 to the RFP Documents for selection of bidder as Transmission Service Provider to establish Inter-State Transmission system for “Inter-Regional Strengthening between SR Grid and WR Grid” through tariff based competitive bidding process.

Sl. No.	Clause No.	Existing Clause	New/Revised Clause																																																																
1	RFP Specific Technical Requirements for Substation Clause no. B.1.2	<p><b>B.1.2 Switching Scheme</b></p> <p>vi) <b>765 kV Bidar S/s Extn.:</b></p> <p><u>One circuit of Parli New – Bidar 765 kV D/c line shall be terminated in new diameter for which Main &amp; Tie bays shall be constructed under present scope. Other circuit of Parli New – Bidar 765 kV D/c line shall be terminated in existing diameter for which Main bay shall be under present scope.</u></p>	<p><b>B.1.2 Switching Scheme</b></p> <p>vi) <b>765 kV Bidar S/s Extn.:</b></p> <p><u>Refer attached SLD ref. no. TB202364-1002364-SC3530-SY-SLD Rev 5. Both circuits of Parli New – Bidar 765 kV D/c line shall be terminated in new diameters for which Main &amp; Tie bays shall be constructed under present scope.</u></p>																																																																
2	Specific Technical Requirements for Substation Of RFP & TSA Documents	<p><b>B.5 EXTENSION OF EXISTING SUBSTATION</b></p> <p>.....</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Drawing Title</th> <th>Drawing No./Details</th> <th>Rev. No.</th> </tr> </thead> <tbody> <tr> <td><b>B.</b></td> <td colspan="3"><b>765 kV Bidar S/s</b></td> </tr> <tr> <td><b>1.0</b></td> <td><b>Single Line Diagram</b></td> <td><b><u>TB202364-1002393-SC3530-SY-SLD</u></b></td> <td></td> </tr> <tr> <td>2.0</td> <td>General Arrangement</td> <td>TB202364-1002393-SC3530-ELECT-LAY-PLAN</td> <td>3</td> </tr> <tr> <td><b>3.0</b></td> <td><b>Earthmat Layout</b></td> <td></td> <td></td> </tr> <tr> <td>4.0</td> <td>Visual Monitoring System (VMS)</td> <td></td> <td></td> </tr> <tr> <td>5.0</td> <td>Bus Bar Protection</td> <td></td> <td></td> </tr> <tr> <td>6.0</td> <td>Substation Automation System (SAS)</td> <td></td> <td></td> </tr> </tbody> </table>	Sl. No.	Drawing Title	Drawing No./Details	Rev. No.	<b>B.</b>	<b>765 kV Bidar S/s</b>			<b>1.0</b>	<b>Single Line Diagram</b>	<b><u>TB202364-1002393-SC3530-SY-SLD</u></b>		2.0	General Arrangement	TB202364-1002393-SC3530-ELECT-LAY-PLAN	3	<b>3.0</b>	<b>Earthmat Layout</b>			4.0	Visual Monitoring System (VMS)			5.0	Bus Bar Protection			6.0	Substation Automation System (SAS)			<p><b>B.5 EXTENSION OF EXISTING SUBSTATION</b></p> <p>.....</p> <table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Drawing Title</th> <th>Drawing No./Details</th> <th>Rev. No.</th> </tr> </thead> <tbody> <tr> <td><b>B.</b></td> <td colspan="3"><b>765 kV Bidar S/s</b></td> </tr> <tr> <td><b>1.0</b></td> <td><b>Single Line Diagram</b></td> <td><b><u>TB202364-1002393-SC3530-SY-SLD</u></b></td> <td><b><u>5</u></b></td> </tr> <tr> <td>2.0</td> <td>General Arrangement</td> <td>TB202364-1002393-SC3530-ELECT-LAY-PLAN</td> <td>3</td> </tr> <tr> <td>3.0</td> <td>Earthmat Layout</td> <td>TB202364-1002393-SC3530-EMAT-LAY</td> <td>2</td> </tr> <tr> <td><b>4.0</b></td> <td><b>Visual Monitoring System (VMS)</b></td> <td><b><u>Not yet finalized by TSP.</u></b></td> <td></td> </tr> <tr> <td><b>5.0</b></td> <td><b>Bus Bar Protection</b></td> <td><b><u>Make: Siemens and model: (CU/PU) 7SS85/6MU85</u></b></td> <td></td> </tr> <tr> <td><b>6.0</b></td> <td><b>Substation Automation System (SAS)</b></td> <td><b><u>Siemens make</u></b></td> <td></td> </tr> </tbody> </table>	Sl. No.	Drawing Title	Drawing No./Details	Rev. No.	<b>B.</b>	<b>765 kV Bidar S/s</b>			<b>1.0</b>	<b>Single Line Diagram</b>	<b><u>TB202364-1002393-SC3530-SY-SLD</u></b>	<b><u>5</u></b>	2.0	General Arrangement	TB202364-1002393-SC3530-ELECT-LAY-PLAN	3	3.0	Earthmat Layout	TB202364-1002393-SC3530-EMAT-LAY	2	<b>4.0</b>	<b>Visual Monitoring System (VMS)</b>	<b><u>Not yet finalized by TSP.</u></b>		<b>5.0</b>	<b>Bus Bar Protection</b>	<b><u>Make: Siemens and model: (CU/PU) 7SS85/6MU85</u></b>		<b>6.0</b>	<b>Substation Automation System (SAS)</b>	<b><u>Siemens make</u></b>	
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**800 KV CT (3000A) CORE DETAILS (TABLE - IIA)**

CORE NO	APPLICATION	CURRENT RATIO	OUTPUT BURDEN(VA)	ACCURACY CLASS	MIN. KNEE POINT (VOLT/V)	MAX. CT S.W.R (OHM)	MAX. EXCITING CURRENT AT 50% BURDEN (A)	I.S.F.
01	BUS DIFFERENTIAL CHECK	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-
02	BUS DIFFERENTIAL MAIN	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-
03	METERING	3000/500	20	0.2S	-	-	-	+10
04	METERING	3000/500	20	0.2S	-	-	-	+10
05	TRANSF. OFF-LINE PROTECTION	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-
06	TRANSF. OFF-LINE PROTECTION	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-

NOTE: 1. PROTECTION CORES SHALL BE OF ACCURACY CLASS PX AS PER IEC 61869.  
2. METERING CORE SHALL BE OF ACCURACY CLASS 0.2S AS PER IEC 61869.

**420 KV CT (3000A) CORE DETAILS (TABLE - IIB)**

CORE NO	APPLICATION	CURRENT RATIO	OUTPUT BURDEN(VA)	ACCURACY CLASS	MIN. KNEE POINT (VOLT/V)	MAX. CT S.W.R (OHM)	MAX. EXCITING CURRENT AT 50% BURDEN (A)	I.S.F.
01	BUS DIFFERENTIAL CHECK	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-
02	BUS DIFFERENTIAL MAIN	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-
03	METERING	3000/500	20	0.2S	-	-	-	+10
04	METERING	3000/500	20	0.2S	-	-	-	+10
05	TRANSF. OFF-LINE PROTECTION	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-
06	TRANSF. OFF-LINE PROTECTION	3000/500	500	PX	3000/15	15	20 on 3000T TAP	-

NOTE: 1. PROTECTION CORES SHALL BE OF ACCURACY CLASS PX AS PER IEC 61869.  
2. METERING CORE SHALL BE OF ACCURACY CLASS 0.2S AS PER IEC 61869.

**220KV CT (1800A) CORE DETAILS (TABLE-IC) WITH 120% EXTENDED CURRENT RATING (FOR LINE, ICT & TBC BAY)**

CORE NO	APPLICATION	CURRENT RATIO	OUTPUT BURDEN(VA)	ACCURACY CLASS	MIN. KNEE POINT (VOLT/V)	MAX. CT S.W.R (OHM)	MAX. EXCITING CURRENT AT 50% BURDEN (A)	I.S.F.
01	BUS DIFFERENTIAL CHECK	1800/800	800	PX	1800/800	800	25 on 1800T tap & 50 on 800T tap	-
02	BUS DIFFERENTIAL MAIN	1800/800	800	PX	1800/800	800	25 on 1800T tap & 50 on 800T tap	-
03	METERING	1800/800	20	0.2S	-	-	-	+10
04	TRANSF. BACKUP LINE PROTECTION	1800/800	800	PX	1800/800	800	25 on 1800T tap & 50 on 800T tap	-
05	TRANSF. OFF-LINE PROTECTION	1800/800	800	PX	1800/800	800	25 on 1800T tap & 50 on 800T tap	-

**220KV CT (2500A) CORE DETAILS (TABLE-IF) WITH 120% EXTENDED CURRENT RATING (FOR BC & BS BAY)**

CORE NO	APPLICATION	CURRENT RATIO	OUTPUT BURDEN(VA)	ACCURACY CLASS	MIN. KNEE POINT (VOLT/V)	MAX. CT S.W.R (OHM)	MAX. EXCITING CURRENT AT 50% BURDEN (A)	I.S.F.
01	BUS DIFFERENTIAL CHECK	2500/800	800	PX	2500/800	800	16 on 2500T tap & 25 on 1600T tap & 50 on 800T tap	-
02	BUS DIFFERENTIAL MAIN	2500/800	800	PX	2500/800	800	16 on 2500T tap & 25 on 1600T tap & 50 on 800T tap	-
03	METERING	2500/800	20	0.2S	-	-	-	+10
04	BUS DIFFERENTIAL CHECK	2500/800	800	PX	2500/800	800	16 on 2500T tap & 25 on 1600T tap & 50 on 800T tap	-
05	BUS DIFFERENTIAL MAIN	2500/800	800	PX	2500/800	800	16 on 2500T tap & 25 on 1600T tap & 50 on 800T tap	-

**72.5KV CT (50A) CORE DETAILS (TABLE-IG) (FOR LT TRAF)**

CORE NO	APPLICATION	CURRENT RATIO	OUTPUT BURDEN(VA)	ACCURACY CLASS	MIN. KNEE POINT (VOLT/V)	MAX. CT S.W.R (OHM)	MAX. EXCITING CURRENT AT 50% BURDEN (A)	I.S.F.
01	OC & EF	50/1	10	5P10	-	-	-	-
02	METERING	50/1	10	0.5	-	-	-	-

**800KV, 4400pF CVT CORE DETAILS (TABLE-IA)**

PARTICULARS	SECONDARY-1	SECONDARY-2	SECONDARY-3
RATED SECONDARY VOLTAGE (V)	110√3	110√3	110√3
APPLICATION	PROTECTION	PROTECTION	METERING
ACCURACY	0.5P	0.5P	0.2
OUTPUT BURDEN(MVA)	50 VA	50 VA	50 VA
VOLTAGE RATIO	765/0.11√3	765/0.11√3	765/0.11√3

**420KV, 4400pF CVT CORE DETAILS (TABLE-IB)**

PARTICULARS	SECONDARY-1	SECONDARY-2	SECONDARY-3
RATED SECONDARY VOLTAGE (V)	110√3	110√3	110√3
APPLICATION	PROTECTION	PROTECTION	METERING
ACCURACY	0.5P	0.5P	0.2
OUTPUT BURDEN(MVA)	50 VA	50 VA	50 VA
VOLTAGE RATIO	420/0.11√3	420/0.11√3	420/0.11√3

**220KV CVT CORE DETAILS (TABLE-IC)**

PARTICULARS	SECONDARY-1	SECONDARY-2	SECONDARY-3
RATED SECONDARY VOLTAGE (V)	110√3	110√3	110√3
APPLICATION	PROTECTION	PROTECTION	METERING
ACCURACY	3P	3P	0.2
OUTPUT BURDEN(MVA)	50 VA	50 VA	50 VA
VOLTAGE RATIO	220/0.11√3	220/0.11√3	220/0.11√3

**72.5KV VT CORE DETAILS (TABLE-ID)**

PARTICULARS	SECONDARY-1	SECONDARY-2
RATED SECONDARY VOLTAGE (V)	110√3	110√3
APPLICATION	PROTECTION	METERING
ACCURACY	3P	0.5
OUTPUT BURDEN(MVA)	10 VA	10 VA
VOLTAGE RATIO	33/0.11√3	33/0.11√3

**BILL OF QTY. FOR 765KV MAIN EQUIPMENTS:**

SL.NO.	DESCRIPTION	UNIT	QUANTITY	AS PER LOA	AS PER ACTUAL	REMARKS
1	AUTO TRANSFORMER (3PH) (500MVA, 765/220KV)	EA	05	05	05	OWNER'S SUPPLY
2	120MVAR, 420V, 3PH BLU REACTOR INCLUDING INSULATING OIL	EA	01	01	01	
3	420KV, 3150A, 50KA CIRCUIT BREAKER(3PH) WITH CLOSING RESISTOR (WITH SUPPORT STRUCTURE)	EA	04	04	04	
4	420KV, 3150A, 50KA CIRCUIT BREAKER(3PH) WITHOUT CLOSING RESISTOR (WITH SUPPORT STRUCTURE)	EA	05	05	05	
5	765 KV 3150 A, 50 KA 3 PH CIRCUIT BREAKER WITH CLOSING RESISTOR WITH 120% EXTENDED CURRENT RATING	EA	02	02	02	
6	765KV, 3150A, 50KA SINGLE PHASE BREAKER(1PH) WITHOUT CLOSING RESISTOR (WITH SUPPORT STRUCTURE)	EA	01	01	01	
7	CONTROLLED SWITCHING DEVICE FOR 420V, 3PH CIRCUIT BREAKER	EA	08	08	08	
8	420KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 2 E/S	EA	02	02	02	
9	420KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 1 E/S	EA	10	10	10	
10	420KV, 3150A, 50KA ISOLATOR (1PH) (DOUBLE BREAK) WITHOUT E/S	EA	08	08	08	
11	420KV, 3150A, 50KA ISOLATOR (1PH) (DOUBLE BREAK) WITH 1 E/S	EA	08	08	08	
12	33kV SURGE ARRESTER (1PH)	EA	28	28	28	

**BILL OF QTY. FOR 400KV MAIN EQUIPMENTS:**

SL.NO.	DESCRIPTION	UNIT	QUANTITY	AS PER LOA	AS PER ACTUAL	REMARKS
1	AUTO TRANSFORMER (3PH) (200MVA, 400/220KV)	EA	05	05	05	OWNER'S SUPPLY
2	120MVAR, 420V, 3PH BLU REACTOR INCLUDING INSULATING OIL	EA	01	01	01	
3	420KV, 3150A, 50KA CIRCUIT BREAKER(3PH) WITH CLOSING RESISTOR (WITH SUPPORT STRUCTURE)	EA	01	01	01	
4	420KV, 3150A, 50KA CIRCUIT BREAKER(3PH) WITHOUT CLOSING RESISTOR (WITH SUPPORT STRUCTURE)	EA	13	13	13	
5	CONTROLLED SWITCHING DEVICE FOR 420V, 3PH CIRCUIT BREAKER	EA	08	08	08	
6	420KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 1 E/S	EA	42	42	42	
7	420KV, 4400pF CAPACITIVE VOLTAGE TRANSFORMER(1PH)	EA	06	06	06	
8	420KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 2 E/S	EA	02	02	02	
9	420KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 1 E/S	EA	02	02	02	
10	420KV, 3150A, 50KA ISOLATOR (1PH) (DOUBLE BREAK) WITH 1 E/S	EA	10	10	10	
11	420KV, 3150A, 50KA ISOLATOR (1PH) (DOUBLE BREAK) WITHOUT E/S	EA	08	08	08	
12	33kV SURGE ARRESTER (1PH)	EA	28	28	28	

**BILL OF QTY. FOR 220KV MAIN EQUIPMENTS:**

SL.NO.	DESCRIPTION	UNIT	QUANTITY	AS PER LOA	AS PER ACTUAL	REMARKS
1	220KV, 3150A, 50KA CIRCUIT BREAKER(3PH) (WITH SUPPORT STRUCTURE)	EA	04	04	04	
2	220KV, 1600A, 50KA CIRCUIT BREAKER(3PH) (WITH SUPPORT STRUCTURE)	EA	15	15	15	
3	220KV, 1600A, 50KA CIRCUIT BREAKER(3PH) WITH 120% EXTENDED CURRENT RATING	EA	45	45	45	
4	220KV, 2500A, 50KA CIRCUIT BREAKER(3PH) WITH 120% EXTENDED CURRENT RATING	EA	12	12	12	
5	220KV, 4400pF CAPACITIVE VOLTAGE TRANSFORMER(1PH)	EA	36	36	36	
6	220KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 1 E/S	EA	04	04	04	
7	220KV, 3150A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 2 E/S	EA	04	04	04	
8	220KV, 1600A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 1 E/S	EA	15	15	15	
9	220KV, 1600A, 50KA ISOLATOR (3PH) (DOUBLE BREAK) WITH 2 E/S	EA	15	15	15	
10	220KV, 3150A, 50KA TANGENT ISOLATOR (3PH) (DOUBLE BREAK) WITHOUT E/S	EA	28	28	28	
11	220KV, 3150A, 50KA TANGENT ISOLATOR (3PH) (DOUBLE BREAK) WITH 1 E/S	EA	39	39	39	
12	220KV, 1600A, 0.5 MVA LINE TRAP	EA	16	16	16	

**BILL OF QTY. FOR 145KV & 33KV EQUIPMENTS (FOR NCT CONNECTION):**

SL.NO.	DESCRIPTION	UNIT	QUANTITY	AS PER LOA	AS PER ACTUAL	REMARKS
1	145KV, 1250A, 31.5KA CIRCUIT BREAKER (1PH)	EA	02	02	02	
2	145KV SURGE ARRESTER (1 PH)	EA	02	02	02	NOT IN TECHNICAL SCOPE OF SUPPLY
3	145 KV NGR	EA	02	02	02	NOT IN TECHNICAL SCOPE OF SUPPLY
4	CURRENT TRANSFORMER (33KV) FOR TRANSFORMER (33KV) ALONG WITH SUPPORT STRUCTURE & TERMINAL CONNECTOR	SET	03	03	03	
5	CURRENT TRANSFORMER (33KV) FOR REACTOR NEUTRAL ALONG WITH SUPPORT STRUCTURE & TERMINAL CONNECTOR	EA	02	02	02	

**NOTE:**

- FOR DETAIL OF TRANSFORMER, REACTOR AREA PLEASE REFER RESPECTIVE SHEET (2) OF 2.
- 1PHASE ISOLATORS HAVE BEEN USED FOR 765KV REACTORS AND 765KV AUTO TRANSFORMERS TO USE SPARE UNIT THROUGH ISOLATOR SWITCHES.
- 3 PHASE ISOLATORS HAVE NOT IN METEERS SCOPE.
- MARKED EQUIPMENTS ARE INDIVIDUAL POLE OPERATED.

**REVISED AS PER PGCL COMMENTS**

REV	DESCRIPTION	AM	BS	DATE
5	SIXTH SUBMISSION	AM	BS	01.04.25
4	FIFTH SUBMISSION	AM	BS	08.01.25
3	FOURTH SUBMISSION	AM	BS	09.10.24
2	THIRD SUBMISSION	AM	BS	09.08.24
1	SECOND SUBMISSION	AM	BS	03.07.24
0	FIRST SUBMISSION	AM	BS	17.05.24

**CUSTOMER:** BIDAR TRANSMISSION LIMITED

**NOA NO.:** SUPPLY CCT/WA/IS/DOM/A06/23/02743/NOA-123-10473/01 DATE:13.03.24  
ERECTION CCT/WA/IS/DOM/A06/23/02743/NOA-123-10473/01 DATE:13.03.24

**PROJECT:** Substation package (SS-11): Establishment of 3x1500MVA (765/400KV), 5000MVA (400/220KV) station at suitable border location near Bidar with 765KV (1240 MVAR) and 400KV (14120 MVAR) Bus Reactor under Transmission Scheme for Solar Energy Zone in Bidar (2500 MW), Karnataka through tariff based competitive bidding (TBCB) route.

**SUBSTATION:** 765/400/220 KV BIDAR NEW SUBSTATION

**DRG. TITLE:** BIDAR S/S (NEW)-765/400/220KV SWITCHYARD SINGLE LINE DIAGRAM

**DRG. NO.:** TB202364-1002393-SC3530-SY-SLD

**SCALE:** NTS JOB NO: 0804B SHEET 01 OF 02