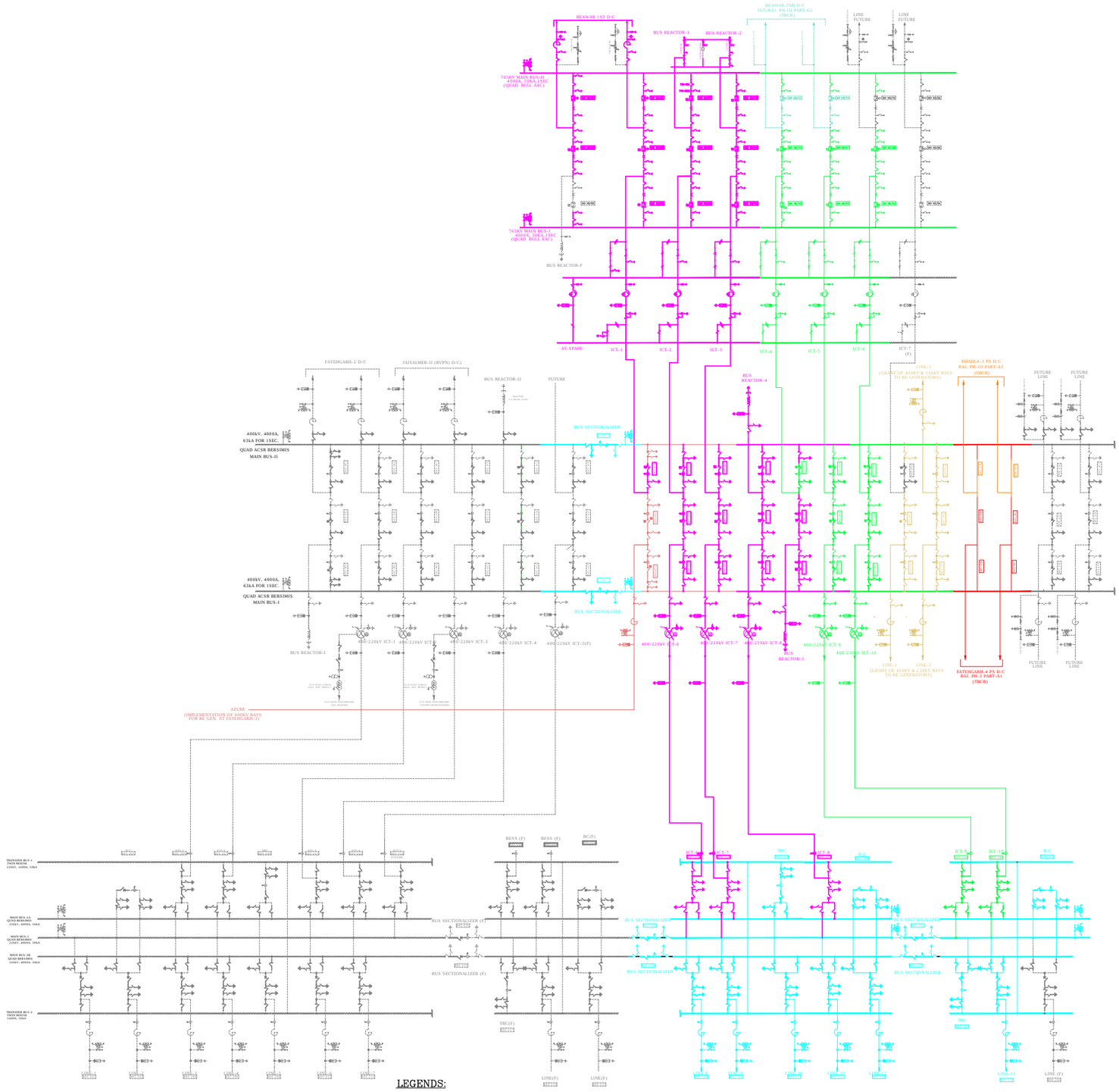

765KV EQUIPMENT

SL. No.	DESCRIPTION	SYMBOL
1	500 MVA, 765/400/220/33kV, 1-PHASE AUTO TRANSFORMER	
2	110 MVAR, 765kV, 1-PHASE SHUNT REACTOR	
3	800kV, 3150A, 50KA CIRCUIT BREAKER WITHOUT PIR (3-PHASE)	
4	800kV, 3150A, 50KA CIRCUIT BREAKER WITH PIR (3-PHASE)	
5	800kV, 3150A, 50KA ISOLATOR WITH ONE EARTH SWITCH (3-PHASE)	
6	800kV, 3150A, 50KA ISOLATOR WITH ONE EARTH SWITCH (1-PHASE)	
7	800kV, 3150A, 50KA ISOLATOR WITHOUT EARTH SWITCH (1-PHASE)	
8	800kV, 3150A, 50KA ISOLATOR WITH TWO EARTH SWITCH (3-PHASE)	
9	800kV, CURRENT TRANSFORMER (1-PHASE) 3000A, 50kA, 1sec WITH 120% EXTENDED CURRENT RATING	
10	800kV, 8800pF CVT (1-PHASE)	
11	624kV SURGE ARRESTER (1-PHASE)	
12	WAVE TRAP, 3150A, 1.0mH, 50kA FOR 1 SEC	
13	CONTROLLED SWITCHING DEVICE FOR CB	

400KV EQUIPMENT

SL. No.	DESCRIPTION	SYMBOL
1	500 MVA, 400/220/33kV, 3-PHASE AUTO TRANSFORMER	
2	125 MVAR, 420kV, 3-PHASE SHUNT REACTOR	
3	420kV, 3150A, 63KA CIRCUIT BREAKER WITHOUT PIR (3-PHASE)	
4	420kV, 3150A, 63KA CIRCUIT BREAKER WITH PIR (3-PHASE)	
5	420kV, 3150A, 63KA ISOLATOR WITH ONE EARTH SWITCH (3-PHASE)	
6	420kV, 3150A, 63KA ISOLATOR WITH ONE EARTH SWITCH (1-PHASE)	
7	420kV, 3150A, 63KA ISOLATOR WITHOUT EARTH SWITCH (1-PHASE)	
8	420kV, 3150A, 63KA ISOLATOR WITH TWO EARTH SWITCH (3-PHASE)	
9	420kV, CURRENT TRANSFORMER (1-PHASE) 3000A, 63kA, 1sec WITH 120% EXTENDED CURRENT RATING	
10	420kV, 4400pF CVT (1-PHASE)	
11	336kV SURGE ARRESTER (1-PHASE)	
12	WAVE TRAP, 3150A, 0.5mH, 63kA FOR 1 SEC	
13	CONTROLLED SWITCHING DEVICE FOR CB	

220KV EQUIPMENT

SL. No.	DESCRIPTION	SYMBOL
1	245kV, 3150A/1600A, 50KA CIRCUIT BREAKER (3-PHASE)	
2	245kV, 3150A/1600A, 50KA ISOLATOR WITH ONE EARTH SWITCH (3-PHASE)	
3	245kV, 3150A/1600A, 50KA ISOLATOR WITH TWO EARTH SWITCH (3-PHASE)	
4	245kV, 1600A, 50KA ISOLATOR WITHOUT EARTH SWITCH-TANDEM (3-PHASE)	
5	245kV, CURRENT TRANSFORMER (1-PHASE) 2500A/1600A, 50kA, 1sec WITH 120% EXTENDED	
6	245kV, 4400pF CVT (1-PHASE)	
7	216kV SURGE ARRESTER (1-PHASE)	
8	WAVE TRAP, 1600A, 0.5mH, 50kA FOR 1 SEC CURRENT RATING	

NOTES:

1. AS PER "CEA MANUAL ON TRANSMISSION PLANNING CRITERIA 2013", BUS SECTIONALIZER IS TO BE CONSIDERED AFTER 8 NOS. OF 220KV FEEDERS. ACCORDINGLY, 2 SETS OF 220KV BUS SECTIONALIZER BAYS HAS BEEN CONSIDERED UNDER "GRANT OF 400 & 220KV BAYS TO RE GENERATORS AT FATEHGARH-III" AGAINST 1 SET MENTIONED IN MOP OM DTD-01.12.2021.

2. THIS DRAWING HAS BEEN PREPARED BASED ON THE FUTURE SCOPE MENTIONED IN RFP DOCUMENT FOR ESTABLISHMENT OF 400/220KV FATEHGARH-III PS (ERSTWHILE RAMGARH-II PS), UNDER RAJASTHAN SEZ PH II PART-A SCHEME THROUGH TBCB ROUTE, TO BE READ IN CONJUNCTION WITH CTUIL EMAILS DTD-18.10.2021, 16.12.2021, 20.12.2021 & 17.01.2022 WHEREIN THE ORIGINALLY SPECIFIED FUTURE SCOPE HAVE BEEN MODIFIED TO ACCOMMODATE BESS AND STATCOM AT FATEHGARH-III PS SUBSTATION.

LEGENDS:

- TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E1 ---- SCOPE OF WORKS UNDER SS86
- TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E2
- GRANT OF 400KV AND 220KV BAYS TO RE GENERATORS (3x400KV LINES)
  } SCOPE OF WORKS UNDER SS87
- GRANT OF 400KV AND 220KV BAYS TO RE GENERATORS (6x220KV LINES + 220KV & 400KV BUS SECTION)
- IMPLEMENTATION OF 400KV BAYS FOR RE GENERATORS AT FATEHGARH-3 (ERSTWHILE RAMGARH-II PS)
  } SCOPE OF WORKS UNDER SS88
- FUTURE/EXISTING

POWER GRID CORPORATION OF INDIA LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT: 1. GRANT OF 400KV AND 220KV BAYS TO RE GENERATORS AT FATEGARH -III (ERSTWHILE RAMGARH-II) PS UNDER ISTS
2. TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E1
3. TRANSMISSION SYSTEM FOR EVACUATION OF POWER FROM REZ UNDER PHASE-III PART E2
4. IMPLEMENTATION OF 400KV BAYS FOR RE GENERATORS AT FATEHGARH-III (ERSWHILE RAMGARH-II) PS

SUBSTATION: 765/400/220kV FATEHGARH-3 PS SUBSTATION

TITLE: SINGLE LINE DIAGRAM

DATE	DRAWN	SCALE	DRG.NO.	REV
JAN 2022		NTS	C/ENGG/SS/FATEHGARH-3/SLD/01	00