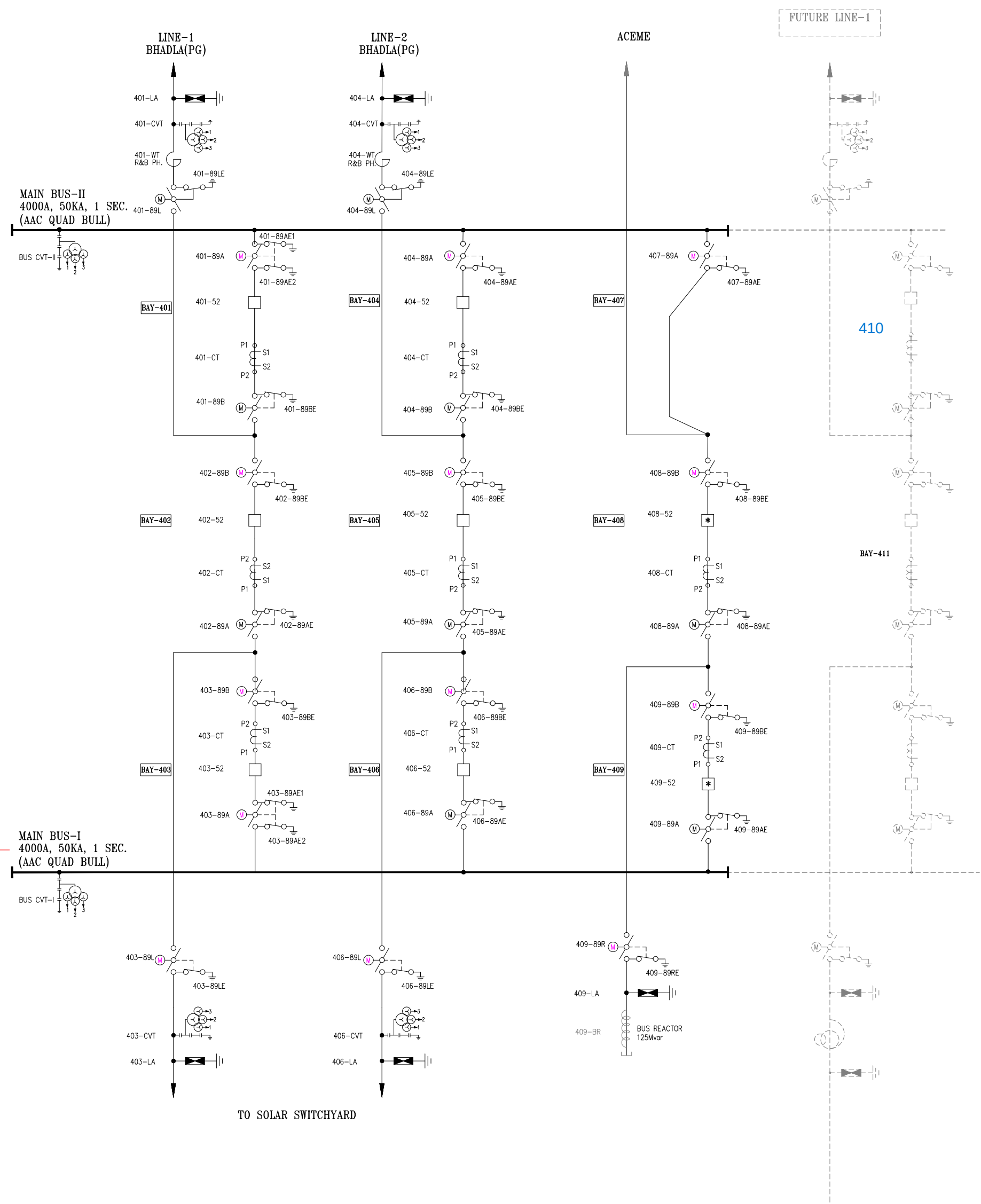


A future 400 kV diameter is available as per this SLD. In this diameter, Bay no. 410 (Main Bay) with associated Tie Bay no. 411 can be used for Interconnection of BESS.

Note:- This is only the feasibility of 400 kV Bay Interconnection, the allotment of the same shall be carried out at the stage of connectivity grant.



BOQ (400kV EQUIPMENTS):-						
SL. NO.	SYMBOLS	DESCRIPTION OF EQUIPMENTS	DESCRIPTION	PACKAGE-B SCOPE QTY.	PACKAGE-C SCOPE QTY.	EQUIPMENTS MAKE
1.		400. 402, 403, 404, 405, 406, 407	400kV, 3150A, 50kA FOR 1sec., 3 PHASE, SF6 CIRCUIT BREAKER WITHOUT CSD, WITHOUT PIR	04 SET.	02 SET.	SIEMENS
2.		408, 409	400kV, 3150A, 50kA FOR 1sec., 3 PHASE, SF6 CIRCUIT BREAKER WITH CSD, WITHOUT PIR	---	02 SET.	SIEMENS
3.		402, 403, 404, 405, 406, 407	400kV, 3000-2000-500/-1-1-1-1-1A, 50kA FOR 1sec., CURRENT TRANSFORMER WITH 120K EXTENDED CURRENT RATING (4k)	12 Nos.	12 SET.	---
4.		402, 403, 404, 405, 406, 407	400kV, 4400pF, 400kV/17.0/11kV/17.0, 3-CORE (14) CAPACITIVE VOLTAGE TRANSFORMER	06 Nos.	12 Nos.	SIEMENS
5.		402, 403, 404, 405, 406, 407	400kV, 3150A, 50kA FOR 1sec., 3 PHASE, MOTORISED AND ELECTRICALLY GANG OPERATED HORIZONTAL DOUBLE BREAK TYPE ISOLATOR WITH ONE EARTH SWITCH	09 SET.	110E1.	SIEMENS
6.		401, 403	400kV, 3150A, 50kA FOR 1sec., 3 PHASE, MOTORISED AND ELECTRICALLY GANG OPERATED HORIZONTAL DOUBLE BREAK TYPE ISOLATOR WITH TWO EARTH SWITCH	01 SET.	01 SET.	SIEMENS
7.		402, 404	400kV, 0.5MVA, 3150A, 50kA FOR 1sec., (14) WAVE TRAP	---	04 Nos.	---
8.		402, 403, 404, 405, 406	400kV, 10kA, CLASS-4, (14) SURGE ARRESTER	06 Nos.	09 Nos.	---
9.		409	400kV, 3-PH, 1x125MVA, BUS REACTOR (NOT IN SIEMENS SCOPE)	---	01 No.	---

SYSTEM PARAMETER DETAILS			
SL. No.	DESCRIPTION OF PARAMETERS	400kV SYSTEM	33kV SYSTEM
1	SYSTEM OPERATING VOLTAGE	400 kV	33 kV
2	MAX. OPERATING VOLTAGE (RMS)	420 kV	36 kV
3	RATED FREQUENCY	50 Hz	50 Hz
4	IMPULSE WITHSTAND VOLTAGE (FOR 1.2/50 microsec) a). FOR TRANSFORMERS AND REACTORS b). FOR OTHER EQUIPMENTS	1300 kVp 1425 kVp	170 kVp -
5	SWITCHING IMPULSE WITHSTAND VOLTAGE (FOR 250/2500 microsec) DRY & WET	1050 kVp	NA
6	ONE MIN. POWER FREQUENCY WITHSTAND VOLTAGE DRY (RMS)	630 kV	75 kV
7	CORONA EXTINCTION VOLTAGE	320 kV	-
8	MAX. CREEPAGE DISTANCE (25mm/kV)	10500 mm	800 mm
9	MAX. FAULT CURRENT WITH DURATION	50 kA FOR 1sec.	25kA FOR 3sec.

BOQ (33kV EQUIPMENTS):-					
SL. NO.	SYMBOLS	DESCRIPTION OF EQUIPMENT	DESCRIPTION	PACKAGE-C SCOPE QTY.	EQUIPMENTS MAKE
1.		---	800kVA, Dyn11, 3kV, AUX. TRANSFORMER (170kV)	01 No.	---
5.		30-39	36KV, 400A, 25kA for 3sec., 3 PHASE, MOTORISED AND ELECTRICALLY GANG OPERATED HORIZONTAL DOUBLE BREAK TYPE ISOLATOR WITHOUT EARTH SWITCH	01 SET.	SIEMENS
6.		30-1A	30kV LA (1 PHASE)	03 Nos.	---
7.		---	36kV HORN GAP FUSE (1 PHASE)	03 Nos.	---

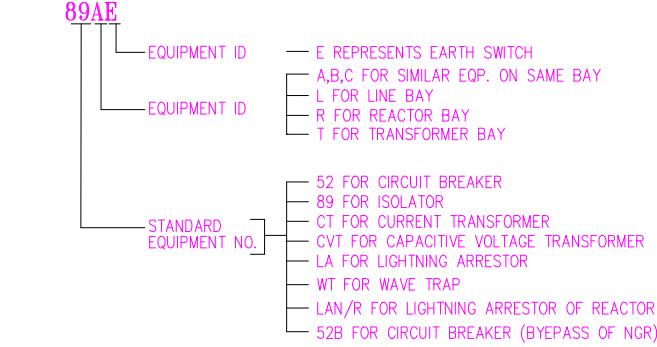
400 & 220kV FUTURE BAYS:-

SL. NO.	PROVISION FOR FUTURE BAYS	NOS.
1.	400KV (FUTURE) LINE WITH REACTOR BAYS	06
2.	400KV (FUTURE) TRANSFORMER BAYS	06
3.	400KV (FUTURE) BUS REACTOR BAYS	02
4.	220KV (FUTURE) LINE BAYS	12
5.	220KV (FUTURE) TRANSFORMER BAYS	06
6.	220KV (FUTURE) BUS COUPLER BAYS	01
7.	220KV (FUTURE) TRANSFER BUS COUPLER BAYS	01

LEGEND:-

- PRESENT SCOPE
- FUTURE / NOT IN SCOPE OF M/S SIEMENS

EQUIPMENT IDENTIFICATION:-



REF. DRAWINGS:-

- 400kV SLD FOR FATEHGARH S/S (TENDER STAGE)
- DRW.NO. SLD/PGC/FATEHGARH

NOTES:-

- WAVE TRAP CONSIDERED AT R & B PHASES ONLY IN BHADLA (PG)
- BHADLA (PG) LINE SIDE CONDUCTOR TO BE CONFIRMED BY M/S FBTL
- BAY NO 402,403,405,406 ARE IN PACKAGE-B

Employer's Approval Stamp

D						
C						
B						
A						
0	2018.10.16	FIRST SUBMISSION		AK	RD	
Rev.	Rev. Date	Modification		Drawn By	Created By	
Siemens Drawing/Document Number				FATEHGARH, JAISALMER		
(1)-G71770-AC 052-S151-001 P-091052_E_C1_8831_FGB_0				LOCATION		
Customer Drawing/Document Number				SUB STATION TYPE		
5682-E-EPS-40H-BE-K-V-1				AIS		
				VOLTAGE LEVEL		
				400kV		
Customer				Released for	PRELIMINARY	
FATEHGARH BHADLA TRANSMISSION LTD (FBTL)					ENGINEERING APPROVAL	
Project					CONSTRUCTION	
400kV FATEHGARH AIS PKG - B&C						
Scale	Paper Size	Sign.	Date	SUPPLY LOA No. : AREPRL/SL/LOA/SUPPLY/SA/03/18 DT. 29.09.18		
NTS	A1			SERVICE LOA No. : AREPRL/SL/LOA/SERVICE/SA/04/18 DT. 29.09.18		
Responsible Dept.	Drawn By		2018.10.16	Document Type		
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