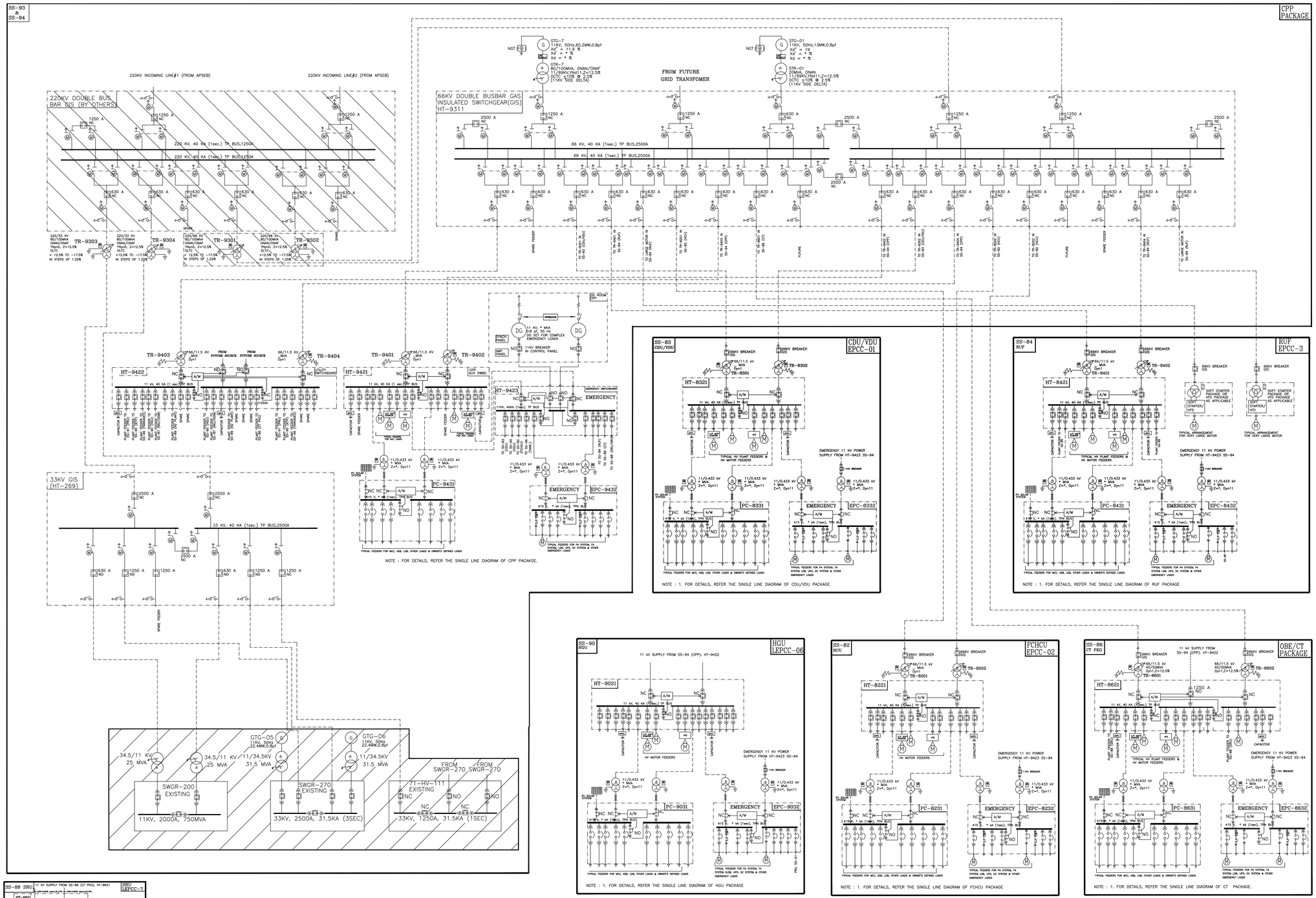

REF. DWG. NO.	REFERENCE DRAWING TITLE

NOTES :-

1. SLD IS INDICATIVE AND IS INTENDED TO HIGHLIGHT THE GENERATION & DISTRIBUTION PHILOSOPHY AND BROADLY DEFINE THE SCOPE OF MAJOR ELECTRICAL EQUIPMENT UNDER VARIOUS LEPC/EPCC/OBE.
2. RATING OF MAJOR EQUIPMENTS WHEREVER INDICATED SHALL BE CONSIDERED AS MINIMUM. EACH LEPC/EPCC/OBE CONTRACTOR SHALL DECIDE EXACT EQUIPMENT RATING DURING DETAILED ENGINEERING.
3. FEEDERS SHOWN ARE TYPICAL. EACH LEPC/EPCC/OBE CONTRACTOR SHALL DEVELOP DETAILED SLD GIVING EXACT RATING, PROTECTION, METERING, NOS. OF FEEDERS ETC. AS PER THE REQUIREMENT OF BID DOCUMENT.
4. SPLIT OF VARIOUS SUB-STATIONS PACKAGE-WISE ARE AS BELOW:

PACKAGE REF.	LEPC/EPCC	SUBSTATION NO.	UNIT
a. CDU/VDU, SR LPG TREATER	EPCC-1	SS-83	CDU/VDU, SR LPG TREATER HWOG TREATER.
b. FCHCU	EPCC-2	SS-82	FCHCU
c. RUF	EPCC-3	SS-84,85	RUF, PITCH GANTRY/PUMP HOUSE
d. NIU/ISOM	EPCC-4	SS-87	NIU/ISOM
e. REVAMP UNITS	EPCC-5	SS-61(EXISTING) SS-71(EXISTING)	REVAMP OF NHT-CCR, PRIME-G REVAMP OF DHT
f. HGU, FGPSA	LEPCC-6	SS-90	HGU, FGPSA
g. SRU/ARU/ PALLETIZING	LEPCC-7	SS-88	SRU,SWS,ARU,PALLETIZING UNIT
h. PACKAGE-1	LSTK PKG/ OBE	SS-86	SEA & BEARING COOLING TOWERS
i. PACKAGE-2	LSTK PACKAGE	SS-89	COMPRESSED AIR & NITROEN PACKAGE
j. PACAKGE-3	LSTK PACAKGE	SS-95	ROOM
k. PACKAGE-	LSTK PACKAGE	SS-97	IETP
l. PACKAGE-4	LSTK PACKAGE	SS-93 SS-94	CAPATIVE POWER PLANT
m.	OBE	SS-96	TANKAGES
n.	OBE	SS-91	PRU (HOLD)

5. EMERGENCY DG SETS AT 11KV SHALL BE LOCATED IN DG SHED IN CPP AREA FOR COMPLETE EMERGENCY POWER REQUIREMENT OF THE COMPLEX INCLUDING CPP.
6. CAPACITOR BANKS SHALL BE PROVIDED IN THE 11KV SWITCHBOARDS FOR POWER FACTOR IMPROVEMENT.
7. ELECTRICAL SYSTEM SHALL BE DESIGNED FOR CONTINUOUS PARALLEL OPERATION OF ALL GENERATORS (GTG, STG) IN CPP PACKAGE AND ALL GRID INCOMERS.
8. EXPORT OF POWER FROM CPP PACKAGE TO GRID IS NOT ENVISAGED.
9. 66 KV, 40 KA GIS ISOLATOR BREAKER PANEL AT THE PRIMARY OF 66/11.5 KV REMOTE POWER TRANSFORMER AND 11 KV, 40 KA BREAKER ISOLATOR PANEL AT THE PRIMARY OF REMOTE 11 /.433 KV TRANSFORMER SHALL BE PROVIDED.
10. CONTROL & INTERFACE BETWEEN UNIT SUBSTATIONS AND CPP S/S (SS-94) FOR FEEDER DIFFERENTIAL PROTECTION & INTERLOCKING PURPOSE SHALL BE PROVIDED. ALL INTERLOCK FROM SAFETY POINT OF VIEW, AS REQUIRED, SHALL BE PROVIDED.
11. THE NUMERICAL DIFFERENTIAL PROTECTION RELAY FOR FEEDER DIFFERENTIAL PROTECTION AT 11KV SW.GR. END SHALL BE PROVIDED BY RESPECTIVE LEPC/EPCC/OBE CONTRACTOR. THE MAKE OF RELAY SHALL BE IDENTICAL TO THE SENDING END RELAY WHICH SHALL BE INFORMED BY OWNER/PMC DURING DETAIL ENGINEERING.
12. EXISTING HV & MV SWITCHGEARS IN SS-61 & SS-71 SHALL BE EXTENDED / MODIFIED TO FEED THE NEW LOADS OF REVAMP OF NHT/CCR, PRIME-G & DHT.

LEGEND

- STEAM/GAS TURBINE GENERATOR
- NGT FOR GENERATOR
- EHV/HV CIRCUIT BREAKER
- POWER TRANSFORMER WITH OLTC
- POWER/DISTRIBUTION TRANSFORMER
- DRAWOUT FEATURE
- AIR CIRCUIT BREAKER
- SWITCH
- FUSE
- CONTACTOR
- MOTOR
- CABLE GLAND
- NO — NORMALLY OPEN
- NC — NORMALLY CLOSED
- DG — DIESEL GENERATOR
- EMERGENCY STOP PB FOR TRAFO.
- NEUTRAL GROUNDING RESISTOR
- A/M — AUTO MANUAL CHANGEOVER
- ISOLATOR MOTOR OPERATED
- LIGHTNING ARRESTOR
- ISOLATOR WITH EARTH SWITCH
- BUS DUCT
- PHOTOVOLTAIC SOLAR POWER SYSTEM
- EXISTING
- BY OTHERS

REV.	DATE	REVISIONS	BY	CHKD	APPD	PEMPC
C	01.09.17	REVISED & ISSUED FOR ENGINEERING	NNB	AS	PG/BRB	
B	06.04.17	REVISED & ISSUED FOR ENGINEERING	NNB	AS	PG/BRB	
A	17.03.17	ISSUED FOR COMMENTS	NNB	AS	PG/BRB	

इंजीनियर्स इंडिया लिमिटेड (भारत सरकार का उपक्रम) ENGINEERS INDIA LIMITED (A Govt. of India Undertaking)

HINDUSTAN PETROLEUM CORP. LTD.
VISAKH REFINERY MODERNISATION PROJECT

OVERALL SINGLE LINE DIAGRAM

SCALE	JOB NO.	UNIT	DEPT	SECT.	DWG. NO.	REV.
N.T.S.	B 0 1 6 0 0 0 1	6 5	0 0	0 0	1 0	C

3-1641-0500 REV.2 A0-1189 x 841

प्रस्तुत आरेख एवं इसमें दिखाए विवरण विशेषतः इंजीनियर्स इंडिया लिमिटेड की लिखित स्वीकृति के बगैर न तो प्रयोग में लाए जाएँगे न ही अन्य किसी प्रकार से अन्यत्र इस्तेमाल किए जाएँगे, न प्रकाशित किए जाएँगे और न ही नकल की जाएगी।

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