

## TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

From:  
Chief Engineer/IPC & Power Systems  
APTRANSCO,  
Vidyut Soudha,  
Hyderabad - 500 082

To  
The Chief Engineer (SP & PA),  
Central Electricity Authority,  
Seva Bhavan, R.K.Puram,  
NEW DELHI - 110 066

Lr. No. CE(IPC&PS)/SE(PS)/DE(SS&LTSS)/ADE-2/F. Rachagunneri/D. No. 181 /2015, Dt. 06 .07.2015.

Sir,

**Sub:** - System Improvement scheme for Up-gradation of existing 220/132 kV Rachagunneri to 400KV SS at Rachagunneri, Chittoor District with one 220KV SS Chervi Chittoor and one 132KV SS at Yerpadu to meet the load demand at proposed M/s Sricity SEZ located at Chervi, Chittoor Dt. - Request to include as agenda item for discussion in the forthcoming Standing Committee meeting - Reg.

\* \* \*

It is to submit that GoAP has announced Vizag Chennai Industrial Corridor (VCIC) for development of State. Accordingly M/s Sricity SEZ has proposed about 500MW load near Chervi in Chittoor District in a phased manner.

In this regard APTRANSCO has proposed the scheme for providing power supply to M/s Sricity SEZ under VCIC scheme and also to meet the up-coming loads in and around Chittoor district.

Accordingly System Studies were carried out by considering the field feasibility and Transmission requirement works for the year 2018-19, Hinduja evacuation scheme, Krishnapatnam evacuation scheme and wind & solar to be come up in the Ananthapur and Kurnool districts. The following dedicated Transmission scheme approved by APTRANSCO for providing power supply to M/s Sricity SEZ under VCIC scheme and also to meet the up-coming loads in and around Chittoor district is as follows:

1. Up-gradation of 220/132KV Rachagunneri SS to 400/220/132KV SS Rachagunneri with 2 x 315 MVA.
2. 400KV QMDC LILO of (45KM) 400KV SS Chittoor - 400KV APGENCO Krishnapatnam.
3. Up-gradation of 132/33KV Chervi SS to 220/132/33KV Chervi SS with 2 x 160 MVA.
4. Erection of 220 KV DC line (50KM) from 400KV SS Rachagunneri to 220KV SS at Chervi in Chittoor district
5. Erection of 220KV DC line (30KM) from 220KV SS Sulluripet to 220KV SS Chervi in Chittoor District.

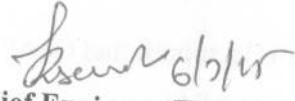
Shri P.J.  
Director  
K. S. S. S.  
13/1

6. Erection of 132/33KV SS at Yerpedu with 2 x 80MVA.
7. Erection of 132KV DC line (5KM) from 400/220/132KV SS at Rachagunneri SS to proposed 132KV Yerpedu SS.

The Load flow results are herewith enclosed. The same is sent through e-mail also. It is requested to include the above proposal as an agenda item for discussion in the forthcoming 39<sup>th</sup> Standing Committee meeting.

It is also informed that regarding erection of 400/220 kV Kalikiri SS and by making LILO of both circuits of 400 kV RTPP – Chittoor DC line was agreed in 36<sup>th</sup> Standing Committee Meeting at para 9.3.1 (IV) under 9.3 Transmission Requirement Scheme of AP for 2013-14.

Yours faithfully,

  
Chief Engineer (IPC & Power Systems)

Encl: - As above

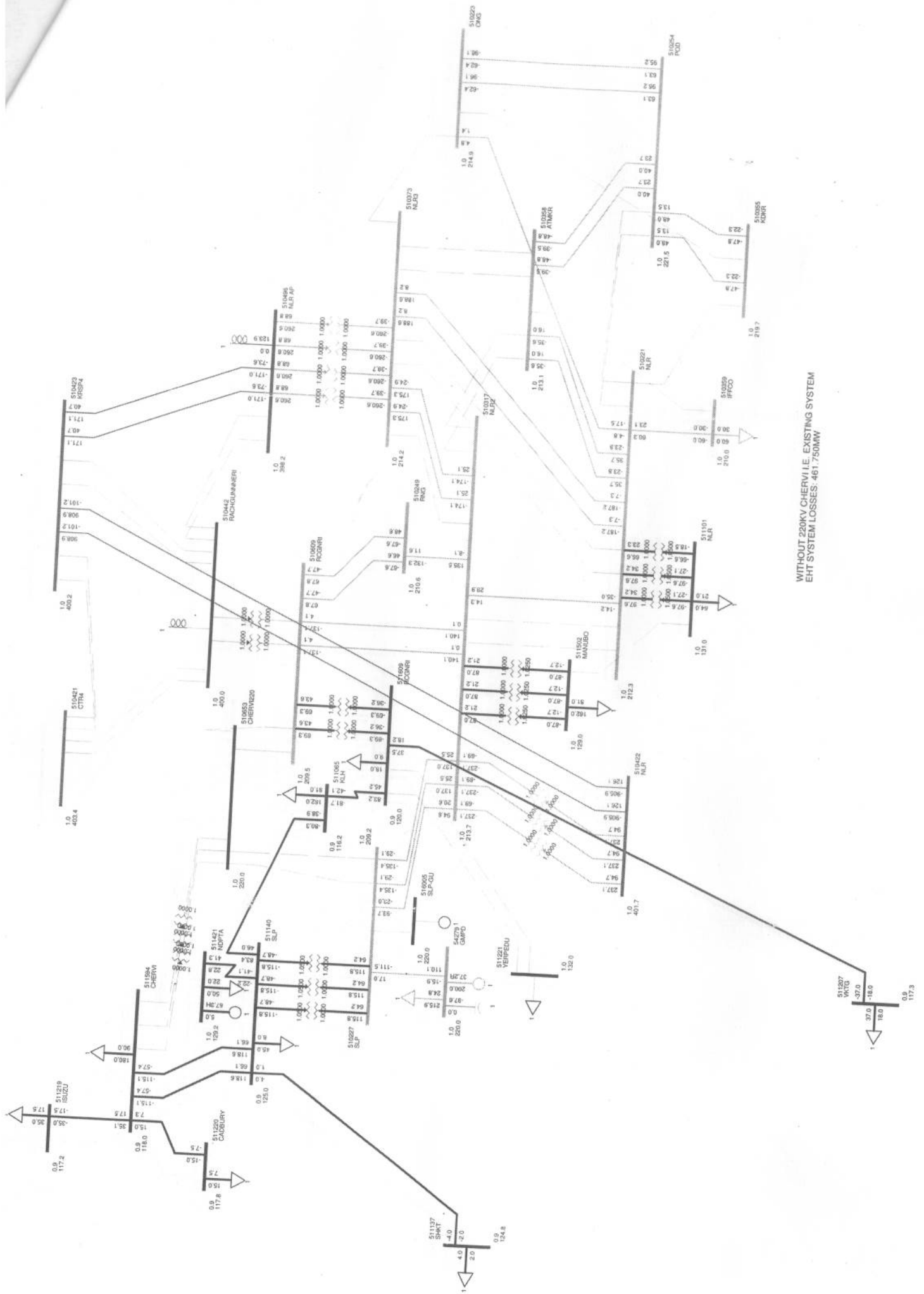
Copy to:

Sri Pardeep Jindal,  
Director (SP&PA)  
Central Electricity Authority,  
Seva Bhavan, R.K.Puram,  
NEW DELHI – 110066

Smt Seema Gupta, DGM(SEF)  
PGCIL,  
'Saudamini' Plot NO.2 Sector-29,  
GURGAON - 122001, Haryana.

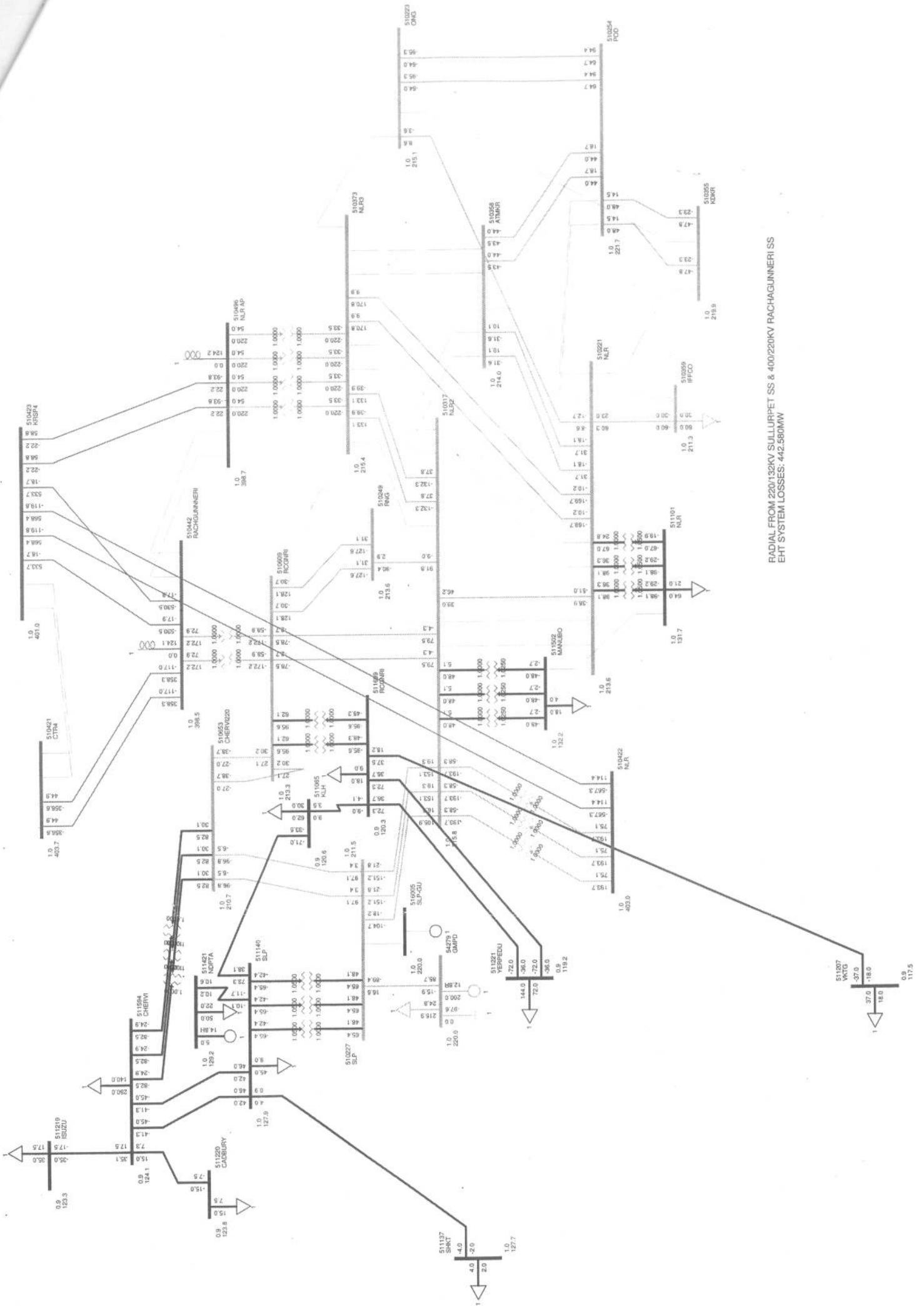
**LINE FLOWS FOR PROVIDING 275 MVA LOAD TO SRI CITY SEZ BY UP-GRADATION OF 132/33KV CHERVI SS TO 220/132/33KV CHERVI SS & UP-GRADATION OF 220/132 KV RACHAGUNNERI SS TO 400/220/132 KV RACHAGUNNERI SS & PORPOSED 132/33 KV YERPEDU SS**

SL. No.	Description	Existing System	220kV DC line from 220kV Sullurpet SS	220kV DC line from 220kV Sullurpet SS & outage of 1 ckt of 220kV Sullurpet-Manubolu	220kV DC line from 220kV Sullurpet SS & 220 kV Rachagunneri SS after up-gradation of 220 kV Rachagunneri SS to 400 kV SS
		MW	MW	MW	MW
1	400/220KV ICT Loadings at Manubolu	3 x 237.1	3 x 197.6	3 x 196.5	3 x 193.7
2	220/132KV PTR Loadings at Manubolu	3 x 87.0	3 x 48.7	3 x 51.4	3 x 48
3	220KV Manubolu - Sullurpet	2 x 137 + 1 x 94.6	2 x 166.9+ 1 x 115.4	1 x 175.4+ 1 x 254.1	2 x 153.1+ 1 x 105.9
4	220KV Manubolu - Nellore	14.3	35.4	37.6	39
5	220KV Manubolu - Rachagunneri	2 x 140.1	2 x 71	2 x 73.2	2 x 79.5
6	220KV Manubolu - Renigunta	135.5	85.6	87.2	91.8
7	220/132KV PTR Loadings at Sullurpet	3 x 115.8	3 x 64.6	3 x 58.4	3 x 65.4
8	220/132KV PTR Loadings at Chervi	-	3 x 79.2	3 x 75.8	3 x 82.5
9	220 Chervi - Sullurpet	-	2 x 47.3	2 x 114.2	2 x -96.8
10	220 Chervi - Rachagunneri	-	-	-	2 x -27
11	220/132KV PTR Loadings at Nellore	2 x 97.6+ 1 x 66.6	2 x 98.1 + 1 x 67	2 x 98.1 + 1 x 67	2 x 98.1 + 1 x 67
12	220KV Nellore - Ongole	-4.8	-9.7	-9.6	-8.6
13	220KV Nellore - Atmakur	2 x 35.7	2 x 30.4	2 x 30.5	2 x 31.7
14	ICT Loadings at Proposed New 400/220KV Nellore SS	4 x 260.6	4 x 222.5	4 x 222.5	4 x 220
15	400/220KV New Nellore - 220KV Nellore	2 x 188.6	2 x 170.8	2 x 169.8	2 x 170.8
16	400/220KV New Nellore - 220KV Manubolu	2 x 175.3	2 x 136.5	2 x 133.4	2 x 133.1
17	ICT Loadings at Proposed New 400/220KV Rachagunneri SS	-	2 x 166.1	2 x 168.2	2 x 172.2
18	400KV Rachagunneri - Krishnapatnam	-	2 x -526.4	2 x -527.6	2 x -530.5
19	400KV Rachagunneri - Chittoor	-	2 x 360.2	2 x 359.4	2 x 358.3
20	132 kV Sullurpet - Chervi	2 x 118.6	2 x 47.3	2 x 52.5	2 x 42
21	132 kV Sullurpet - Srihari Kota	4	4	4	4
22	132 kV Sullurpet - Kalahasthi	83.4	64.8	51.3	73.3
23	132 kV Rachagunneri - Kalahasthi	83.2	-1	12	-9
24	132 kV Rachagunneri - Yerpedu	-	2 x 72.3	2 x 72.3	2 x 72.3
25	132 kV Chervi - Isuzu	35.1	35.1	35.1	35.1
26	132 kV Chervi - Cadbury	15	15	15	15
	<b>EHT System Losses</b>	<b>461.75</b>	<b>443.57</b>	<b>446.710</b>	<b>442.580</b>



WITHOUT 220KV CHERVI I.E. EXISTING SYSTEM  
EHT SYSTEM LOSSES: 461.750MW

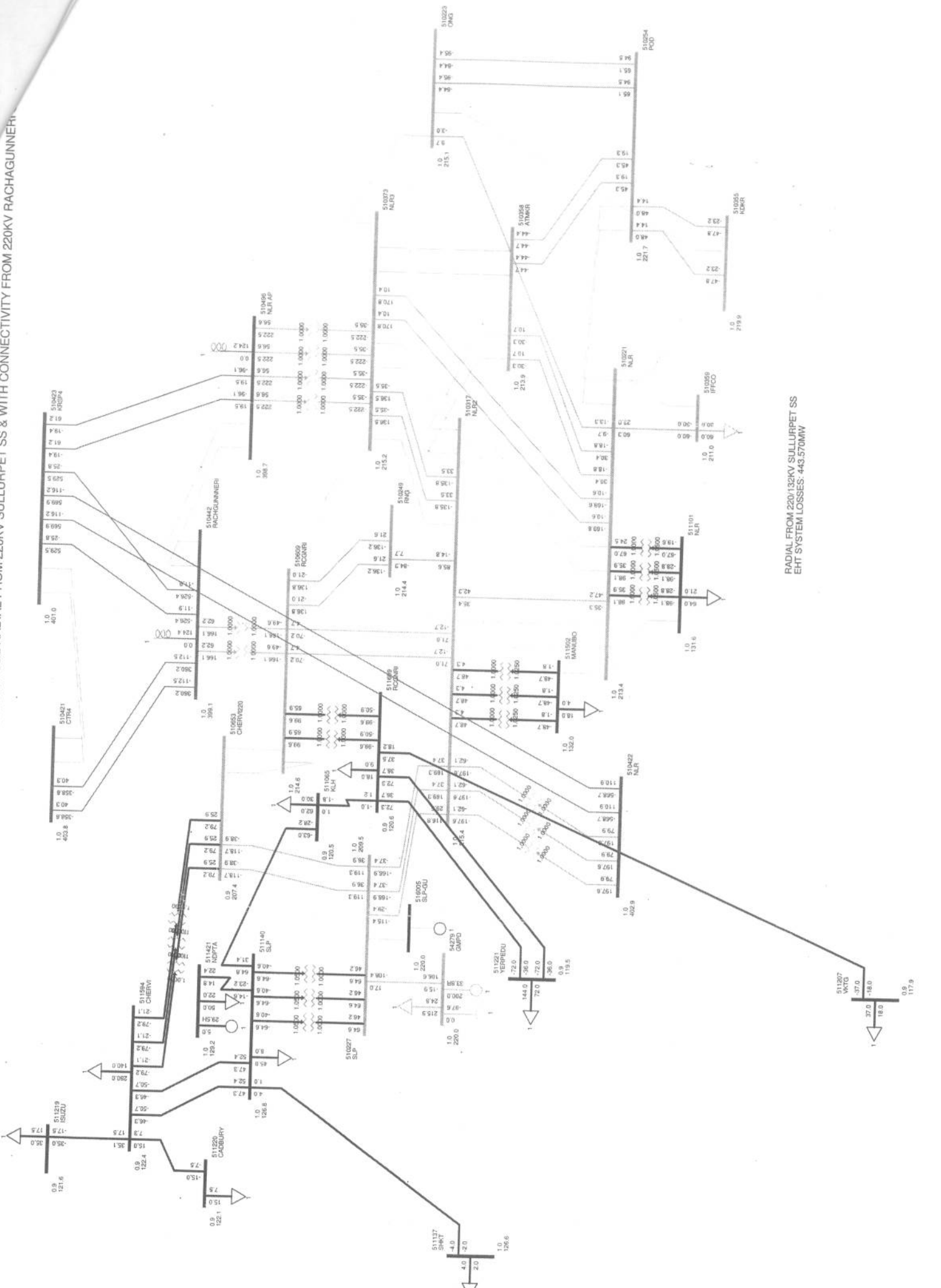
CONNECTIVITY OF 275 MVA POWER TO 220KV SRI CITY SEZ RADIAL FROM 220KV SULLURPET SS & WITH CONNECTIVITY FROM 220KV RACHAGUNNERI



RADIAL FROM 220/132KV SULLURPET SS & 400/220KV RACHAGUNNERI SS  
EHT SYSTEM LOSSES: 442.560MW

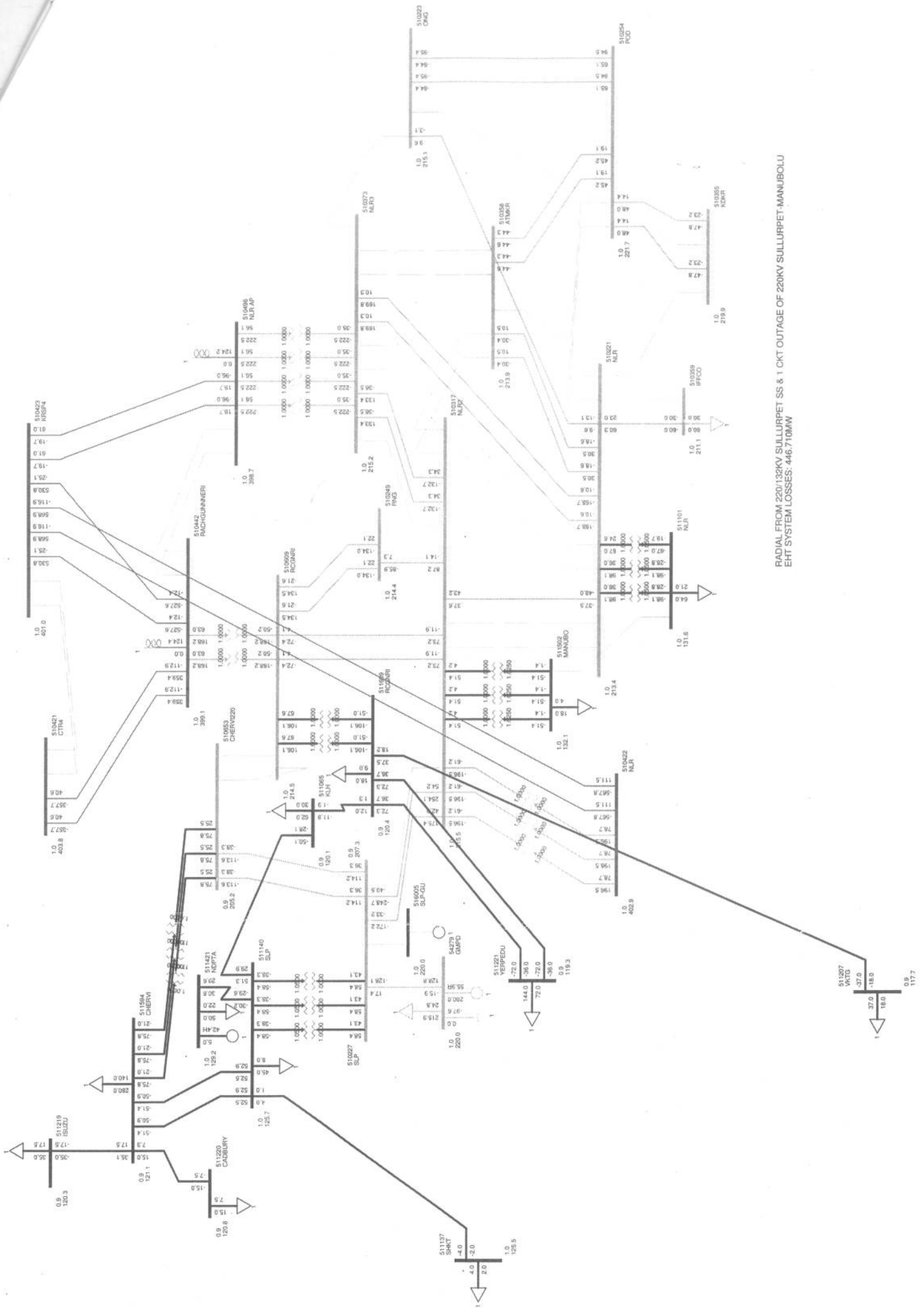
Annex

CONNECTIVITY OF 275 MVA POWER TO 220KV SRI CITY SEZ RADIAL FROM 220KV SULLURPET SS & WITH CONNECTIVITY FROM 220KV RACHAGUNNERI



RADIAL FROM 220/132KV SULLURPET SS  
EHT SYSTEM LOSSES: 443.570MW

CONNECTIVITY OF 275 MVA POWER TO 220KV SRI CITY SEZ RADIAL FROM 220KV SULLURPET SS & WITH CONNECTIVITY FROM 220KV RACHAGUNNER



RADIAL FROM 220/132KV SULLURPET SS & 1 CKT OUTAGE OF 220KV SULLURPET-MANJURULLU EHT SYSTEM LOSSES: 446.710MW

**TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**

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Chief Engineer/IPC & Power Systems  
APTRANSCO,  
Vidyut Soudha,  
Hyderabad – 500 082

To  
The Chief Engineer (SP & PA),  
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**Lr. No. CE(IPC&PS)/SE(PS)/DE(SS&LTSS)/ADE-2/F. Rachagunneri/D. No. 193/2015, Dt. 06.08.2015.**

Sir,

**Sub:** - System Improvement scheme for Up-gradation of existing 132/33 kV Menakuru SS to 220/132/33 kV Menakuru SS by laying 220 kV DC line from proposed 400/220/132 kV Rachagunneri SS – Request to include as agenda item for discussion in the forthcoming Standing Committee meeting - Reg.

**Ref:** - Lr. No. CE(IPC&PS)/SE(PS)/DE(SS&LTSS)/ADE-2/F. Rachagunneri/D. No. 181/2015,  
Dt. 06.07.2015.

\* \* \*

In continuation to the letter cited above APTRANSCO has proposed the following dedicated Transmission Scheme to meet the load demand of 200MW proposed by M/s APIIC at Menakur/Naidupet area under VCIC scheme and also to meet the up-coming loads in and around Chittoor district.

- i. Up-gradation of existing 132/33 kV Menakuru SS to 220/132/33 kV Menakuru SS with 2 x 100 MVA PTRs.
- ii. 220 kV DC line (40 KM) from proposed 400/220/132 kV Rachagunneri SS to proposed 220/132/33 kV Menakuru SS.
- iii. 132 kV LILO (15 KM) of existing 132 kV Naidupet – Gudur line to proposed 220/132/33 kV Menakuru SS.

The Load flow results are herewith enclosed. The same is sent through e-mail also. It is requested to include the above proposal as an agenda item for discussion in the forthcoming 39<sup>th</sup> Standing Committee meeting.

Yours faithfully,

Encl: - As above

*[Signature]*  
Chief Engineer (IPC & Power Systems)

Copy to:

Sri Pardeep Jindal,  
Director (SP&PA), Central Electricity Authority,  
Seva Bhavan, R.K.Puram, NEW DELHI – 110066

Smt Seema Gupta, DGM(SEF)  
PGCIL, 'Saudamini' Plot No. 2 Sector-29,  
GURGAON - 122001, Haryana.

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CEPS/PS/PA/D

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18/8

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3/5  
Copy for Sri P. Jindal, Dir.  
In discuss also.  
J. S. 18/8/15

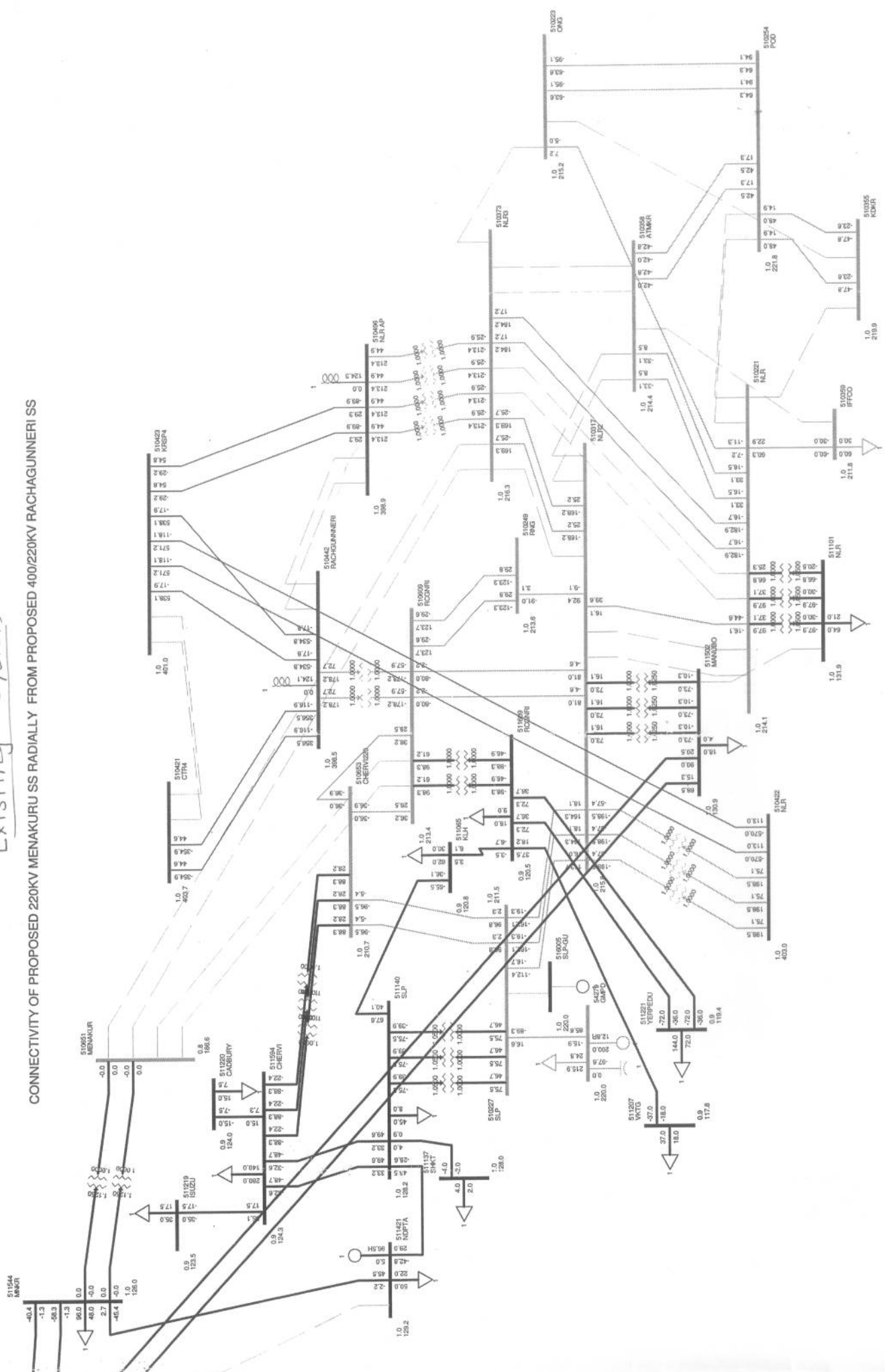


**LINE FLOWS WITH & WITHOUT 220/132 KV MENAKUR SS (UP-GRADATION OF EXISTING 132/33 KV MENAKUR SS) RADIALLY FROM PROPOSED 400/220 KV RACHAGUNNERI SS (UP-GRADATION OF 220/132 KV RACHAGUNNERI SS)**

SL. No.	Description	Existing System	220kV DC line from 400/220 kV Rachagunneri SS to proposed 220/132/33 kV Menakur SS (Up-gradation of 132/33 kV Menakur SS)
		MW	MW
1	400/220KV ICT Loadings at Manubolu	3 x 198.5	3 x 194.9
2	220/132KV PTR Loadings at Manubolu	3 x 73	3 x 59.8
3	220KV Manubolu - Sullurpet	2 x 164.3 + 1 x 113.7	2 x 164.7+ 1 x 113.8
4	220KV Manubolu - Nellore	16.1	19
5	220KV Manubolu - Rachagunneri	2 x 81	2 x 87.8
6	220KV Manubolu - Renigunta	92.4	97.4
7	220/132KV PTR Loadings at Sullurpet	3 x 75.5	3 x 70.1
8	220/132KV PTR Loadings at Chervi	3 x 88.3	3 x 84.3
9	220KV Chervi - Sullurpet	2 x -96.5	2 x -104.9
10	220KV Chervi - Rachagunneri	2 x -36	2 x -21.6
11	220/132KV PTR Loadings at Nellore	2 x 97.9 + 1 x 66.8	2 x 97.9 + 1 x 66.8
12	220KV Nellore - Ongole	-7.2	-6.5
13	220KV Nellore - Atmakur	2 x 33.1	2 x 33.9
14	ICT Loadings at Proposed New 400/220KV Nellore SS	4 x 213.4	4 x 211.6
15	400/220KV New Nellore - 220KV Nellore	2 x 184.2	2x183.9
16	400/220KV New Nellore - 220KV Manubolu	2 x 169.3	2 x 166.1
17	ICT Loadings at Proposed New 400/220KV Rachagunneri SS	2 x 178.2	2 x 182.2
18	400KV Rachagunneri - Krishnapatnam	2 x -534.8	2 x -537.4
19	400KV Rachagunneri - Chittoor	2 x 356.5	2 x 355.1
20	220/132KV PTR Loadings at Menakur	-	2 x 35.8
21	220KV Rachagunneri - Menakur	-	2x-35.8
22	132 kV Sullurpet - Chervi	2 x 33.2	2 x 39.4
23	132 kV Sullurpet - Srihari Kota	4	4
24	132 kV Sullurpet - Kalahasthi	67.6	73.6
	132 kV Sullurpet - Naidupeta	43.5	8.9
25	132 kV Rachagunneri - Kalahasthi	-3.5	-9.1
26	132 kV Rachagunneri - Yerpedu	2 x 72.3	2 x 72.3
27	132 kV Chervi - Isuzu	35.1	35.1
28	132 kV Chervi - Cadbury	15	15
	133 kV Menakur-Gudur	1 x -58.3+1x-40.4	1 x -36.1+1x-25
	132 kV Menakur-Naidupeta	2.7	36.6
	132 kV Gudur-Manubolu	1 x -67.5+1x-88.6	1 x -50.9+1x-66.8
	<b>EHT System Losses</b>	<b>445.98</b>	<b>445.530</b>

Existing System

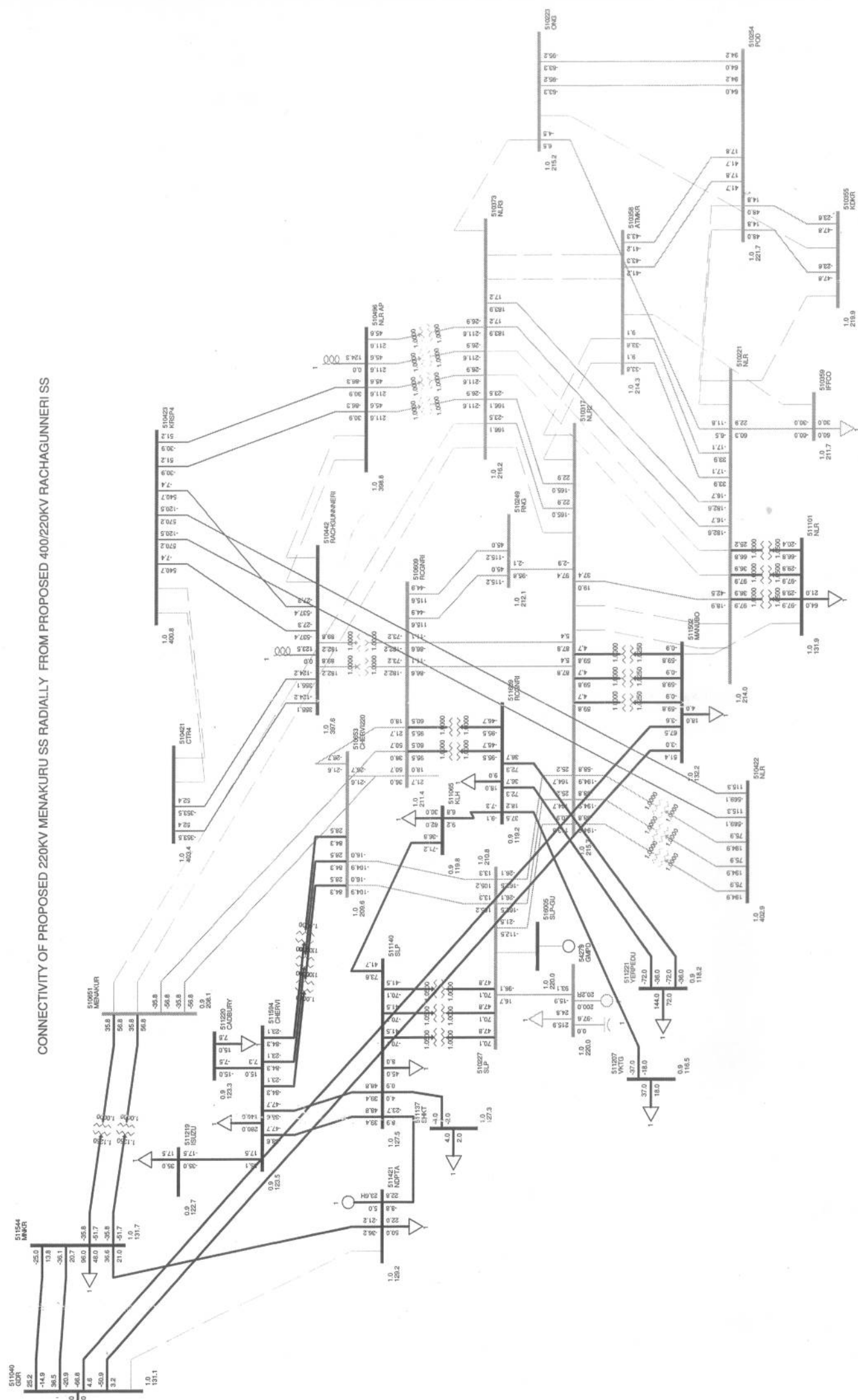
CONNECTIVITY OF PROPOSED 220KV MENAKURU SS RADIALLY FROM PROPOSED 400/220KV RACHAGUNNERI SS



4-4-5.980 MW

EHT SYSTEM LOSSES: 446.639MW

CONNECTIVITY OF PROPOSED 220KV MENAKURU SS RADIALLY FROM PROPOSED 400/220KV RACHAGUNNERI SS



**TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**

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The Load flow results are herewith enclosed. The same is sent through e-mail also. It is requested to include the above proposal as an agenda item for discussion in the forthcoming 39<sup>th</sup> Standing Committee meeting.

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2/5

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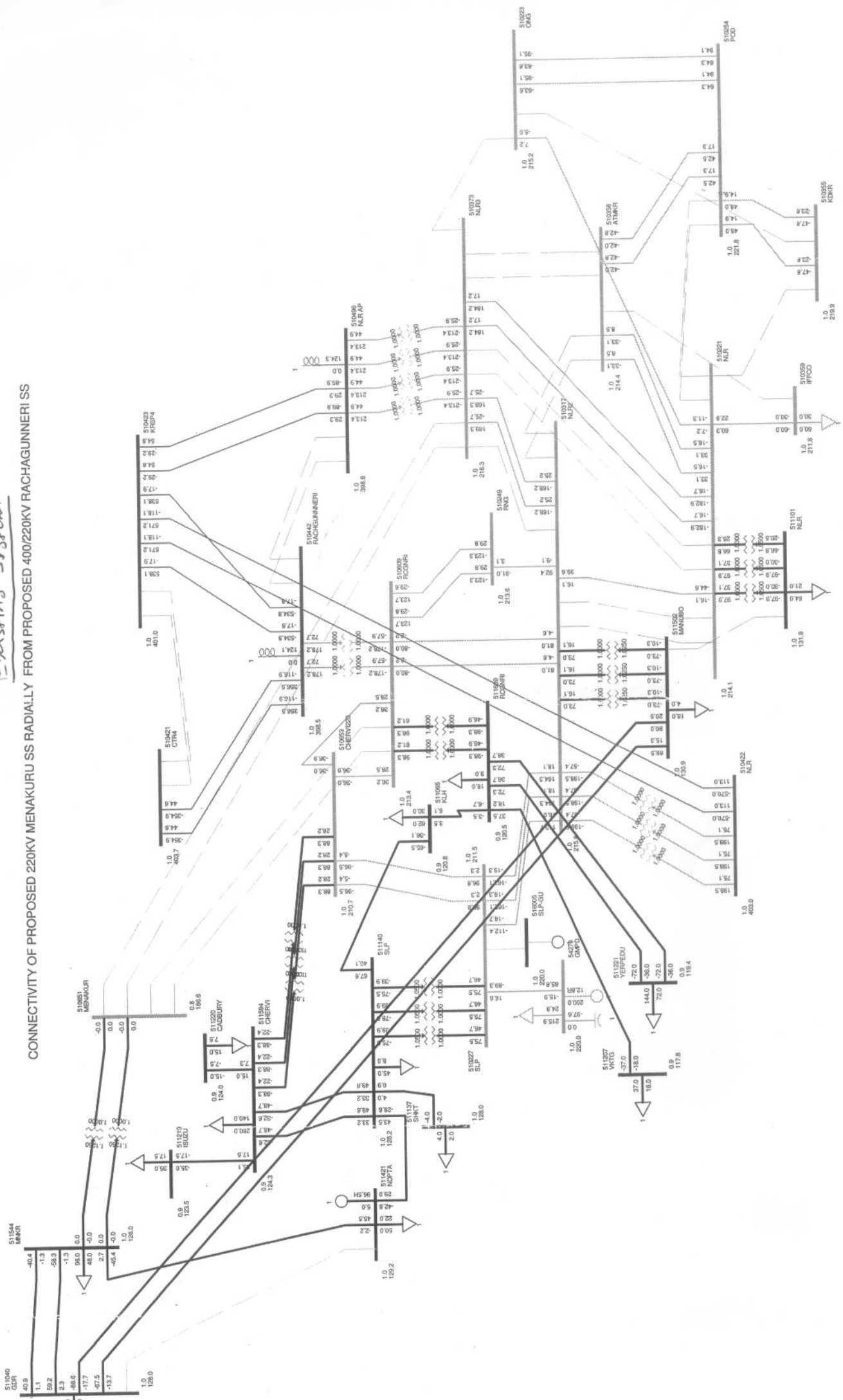
  
Sri Pardeep Jindal, Dir.  
2-19/8/15

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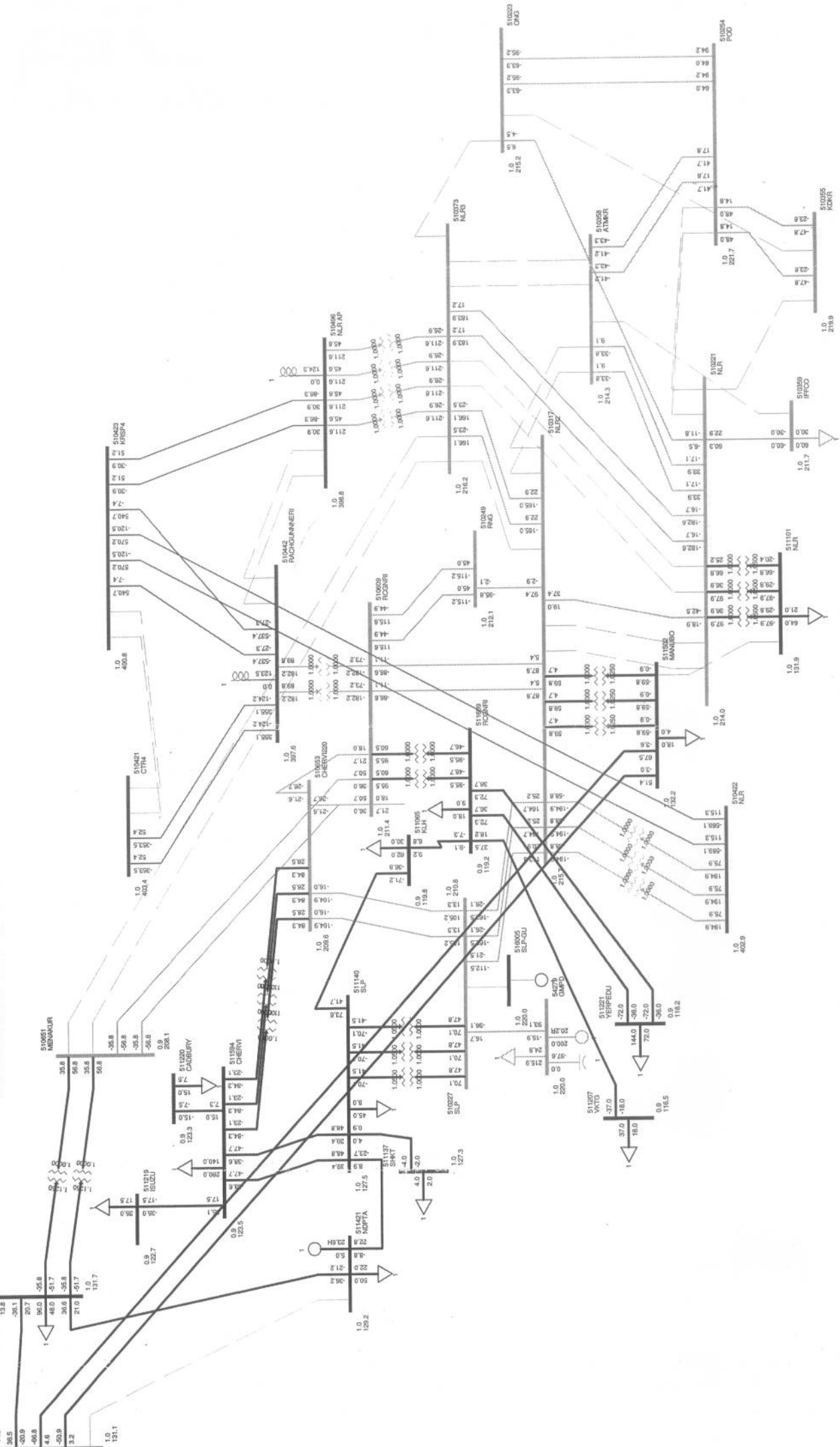
Existing System

CONNECTIVITY OF PROPOSED 220KV MENAKURU SS RADIALLY FROM PROPOSED 400/220KV RACHAGUNNERI SS



511544  
GMR  
22.5

# CONNECTIVITY OF PROPOSED 220KV MENAKURU SS RADIALLY FROM PROPOSED 400/220KV RACHAGUNNERI SS



## पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)  
POWER GRID CORPORATION OF INDIA LIMITED  
(A Government of India Enterprise)



पावरग्रिड

केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुडगाँव-122 001, हरियाणा  
फोन : 2571700 - 719, फैक्स : 2571760, 2571761 तार 'नेटग्रिड',  
Corporate Office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001. Haryana  
Tel. : 2571700 - 719, Fax : 2571760, 2571761 Gram : 'NATGRID'

संदर्भ संख्या/Ref. Number

C\CTU-Plg\S\NP-Kunta

Date: 03<sup>rd</sup> June, 2015

Member (PS)  
Central Electricity Authority  
Sewa Bhawan, RK Puram  
New Delhi - 110 066.

Subject : Evacuation of Power from N. P. Kunta Solar Park (Part-B)

श्री P J  
D. K. A.  
9/6 Fax Copy Seen  
By M(PS)  
CELS/SPA

Sir,

You are kindly aware that the transmission system for N. P. Kunta Mega Solar park has been taken up on priority. Part-A (Phase-I : 250 MW) of the scheme, which includes LILO of Cuddapah – Kolar 400 kV S/c line & establishment of 400/220 kV substation at N P Kunta is targeted for February, 2016 followed by Part B (Phase-II : 750 MW) which is targeted for December, 2016.

In regard to Part-B of the scheme, it is to mention that transmission system, for evacuation of 750 MW, LILO of both the circuits of Cuddapah – Hindupur 400 kV D/c (Quad) line at N.P.Kunta Substation has been envisaged. Here, it may be mentioned that Cuddapah – Hindupur 400 kV D/c (Quad) line, has been entrusted to POWERGRID for implementation under compressed time schedule as part of System Strengthening-XXIV in Southern region. Construction of Cuddapah – Hindupur 400 kV D/c line shall take about 28 months(October,2017), whereas LILO of the same line is to be completed by December 2016.

Keeping above in view, it is proposed that part of Cudappah-Hindupur 400 kV D/c line from Cudappah end to LILO point be planned for completion matching with N.P.Kunta Solar Park(Part-B), by December, 2016 and this line shall be joined with LILO portion planned under NP Kunta scheme to evacuate power from N.P.Kunta Solar Park-part B. The balance

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4.6.15



line portion of Cudappah – Hindupur line shall be completed later in about 28 months of time frame. Associated 2 nos. 400 kV bay at 400 kV GIS S/s at Cudappah is also proposed to be preponed in December, 2016.

Considering the urgency of implementation of NP Kunta transmission system, it is requested that in principle approval for the above may be accorded at the earliest & the same may be informed to the constituents in the next Standing Committee Meeting of Power System Planning Southern Region.

Thanking you,

Yours faithfully,



**(Y K Sehgal)**  
**Executive Director (Commercial & RA) and**  
**COO (CTU-Plg & CE)**



भारत सरकार / Government of India  
विद्युत मंत्रालय / Ministry of Power  
केंद्रीय विद्युत प्राधिकरण / Central Electricity Authority  
प्रणाली योजना एवं परियोजना मूल्यांकन विभाग  
System Planning & Project Appraisal Division  
सेवा भवन आर के पुरम / Sewa Bhawan, R.K. Puram  
नई दिल्ली / New Delhi – 110 066



ISO : 9001 : 2008

No. 51/4(39<sup>th</sup>) / 2015-SP&PA/ 1533

Dated :15-7-2015

To

COO(CTU-Plg),  
Power Grid Corp. of India Ltd.,  
“Saudamini”, Plot No.2, Sector-29,  
Gurgaon -122 001, Haryana.

**Subject: Evacuation of Power from N. P. Kunta Solar Park(Part-B).**

Reference: POWERGRID's letter no. C./CTU-Plg/s/NP-Kunta dated 3-6-2015

Sir,

1. POWERGRID vide their letter under reference has proposed that part of Cuddapah – Hindupur 400kV D/c line from Cuddapah end to LILO point be planned for completion matching with N. P. Kunta Solar Park Part-B by Dec 2016 and this shall be joined with LILO portion of the planned evacuation system of power from N. P. Kunta Solar Park(Part-B). The balance line portion of Cuddapah – Hindupur line shall be completed later in about 28 months of time frame. PGCIL also proposed to prepone the associated 2 nos. of 400kV bays at 400kV GIS S/s at Cuddapah in Dec 2016.

POWERGRID informed that construction of Cuddapah – Hindupur line shall take about 28 months (October 2017), whereas LILO of the same line is to completed by Dec 2016.

Hence, considering the urgency of implementation of N .P. Kunta transmission system, PGCIL has requested the in-principle approval for this scheme may be accorded.

2. In this regard, it may be noted that the implementation of Cuddapah – Hindupur 400kV D/c quad line is inter-alia in the scope of the ‘System Strengthening –XXIV in Southern Region (SSSR-XXIV)’ scheme. MoP vide their office order no 15/9/2013-trans dated 10-12-2014 has approved this scheme for implementation by POWERGRID under the compressed time schedule through regulated tariff mechanism.

LILO of both circuits of Cuddapah – Hindupur 400kV D/c line at N.P.Kunta is inter-alia in the scope of the scheme ‘Transmission system for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh- Part ‘B’ Phase-II (750 MW)’. MoP vide their letter no. 11/64/2014-PG dated 8-1-2015 has also assigned the implementation of the transmission system for evacuation of power from nine solar parks being set up in seven States (including AP) to POWERGRID.

CEA has given the approval u/S 68 of EA-2003 for the two schemes i.e. "SSSR-XXIV and "Transmission system for Ultra Mega Solar Park in Anantpur District, Andhra Pradesh- Part 'A' - Phase-I (250 MW) and Part 'B' Phase-II (750 MW)".

3. The above proposal is regarding taking up some portion of the two schemes on priority and implementing the remaining portion subsequently, as such, it does not result in any change in the final network topology. In view of this, we have no objection for PGCIL to take up the above proposal i.e. implementing a part of Cuddapah - Hindupur line (i.e. from Cuddapah to LILO point for N.P.Kunta) and a part of LILO of both circuits of Cuddapah - Hindupur at N.P.Kunta (i.e. only one D/C out of the 2xD/c lines required for LILO at N. P. Kunta) initially, and the remaining parts of the two schemes as per their compressed time schedules.
4. PGCIL to ensure that the above proposal do not result in any loss of reliability for evacuation of 1000 MW from N.P. Kunta Solar Park which is expected in Phase-I and Phase -II.
5. The above modifications in respect of the two schemes would be informed in the next Standing Committee of Power System Planning of Southern Region.

This issues with the approval of Member (Power System), CEA.

Yours faithfully,

*Pardeep Jindal*  
15/07/2015

(Pardeep Jindal)  
Director (SP&PA)

o/v

Annex - 17.1

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)

POWER GRID CORPORATION OF INDIA LIMITED

(A Government of India Enterprise)



पावरग्रिड

केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुडगाँव-122 001, हरियाणा  
फोन : 2571700 - 719 फैक्स : 2571760, 2571761 तार 'नेटग्रिड'

Corporate office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001 Haryana  
Tel. : 2571700 - 719, Fax : 2571760, 2571761 Gram : 'NATGRID'

संदर्भ संख्या / Ref. Number  
C/CTU/S/PLG

Date: 09/04/2015

Shri K.K.Arya,  
Chief Engineer (SP&PA),  
Central Electricity Authority,  
Sewa Bhawan,  
R K Puram, New Delhi.

**Sub.: Cuddadah 765/ 400kV substation under System Strengthening-XXIV in Southern Region**

Sir,

We write with reference to the discussion held during the 38<sup>th</sup> Standing Committee Meeting and subsequent discussions held on 26/3/2015 at CEA on the above mentioned subject. As already informed presently 56 Acres of land are available at POWERGRID Cuddadah substation which is not adequate for establishment of 765kV & 400kV AIS substation. Further we had analyzed the issue for establishment of 765kV substation as GIS and 400kV substation as AIS and same was deliberated with CEA. It was observed that considering the high fault level at Cuddadah and requirement of series reactor in future, it would not be possible to accommodate 400kV substation as AIS. The land available at Cuddadah substation is suitable & sufficient for establishing new 765kV & 400kV GIS. A Comprehensive proposal for provision of series reactor in Southern Region to Control short circuit level would be put for discussions in the SCPSPSR.

As the project is to be taken up under compressed time schedule and above change is a minor modification to already approved scheme, it is requested that CEA may kindly give in-principle clearance for adoption of GIS at Cuddadah for proposed 400kV expansion. The same can be informed to the constituents during the next standing committee meeting. Further any 400kV spare bay in AIS/GIS due to adoption of GIS shall be considered for utilization as per requirement in future. A brief in this regard is also enclosed.

Thanking you,

Yours faithfully,

Shri. P.J.  
K.K. Arya  
10/4

Mukesh Khanna  
9/4/15  
(Mukesh Khanna)  
Addl. General Manager (CTU-Planning)

पंजीकृत कार्यालय : बी-9, कुतब इंस्टीट्यूशनल एरिया, कटवारिया सराय, नई दिल्ली-110016 दूरभाष : 26560121 फैक्स : 011-26560039 तार 'नेटग्रिड'  
Registered Office : B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016 Tel. : 26560121 Fax : 011-26560039 Gram : 'NATGRID'

स्वहित एवं राष्ट्रहित में ऊर्जा बचाएं

Save Energy for Benefit of Self and Nation

CIN : L40101DL1989GOI038121



Government of India  
Ministry of Power  
Central Electricity Authority  
System Planning & Project Appraisal Division  
Sewa Bhawan, R. K. Puram,  
New Delhi-110066



[ ISO: 9001:2008 ]

51/4/(38<sup>th</sup>)/SP&PA-2015/ (07) 4

Dated: 7-5-2015

To  
COO(CTU - Planning),  
Power Grid Corp. of India Ltd.,  
"Saudamini", Plot No.2, Sector-29,  
Gurgaon -122 001, Haryana.

**Subject: Cuddapah 765/400kV substation under System Strengthening –XXIV in Southern Region.**

Ref: POWERGRID's letter no. C/CTU/S/PLG dated 9-4-2015.

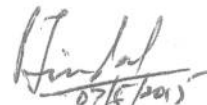
Madam,

1. This has reference to POWERGRID's letter dated 9-4-2015 regarding Cuddapah 765/400kV substation under the scheme "System Strengthening –XXIV in Southern Region". The scheme was agreed in the 37<sup>th</sup> Standing Committee Meeting on Power System Planning of Southern Region held on 31<sup>st</sup> July, 2014 at NRPC, New Delhi except for the GIS type S/S at Cuddapah instead of AIS type as earlier agreed. The issue of GIS at 765/400kV substation at Cuddapah was discussed in the 38<sup>th</sup> meeting of SCPSPSR held on 7 March, 2015 and it was agreed to implement the 765kV part as GIS and the augmentation of 400kV part as AIS for the Cuddapah 765/400kV S/s.
2. POWERGRID vide their letter dated 09-4-2015 has informed that considering the high fault level at Cuddapah and requirement of series reactor in future, it would not possible to accommodate 400kV substation as AIS. The land available at Cuddapah substation is suitable and sufficient for establishing new 765kV and 400kV as GIS. A comprehensive proposal for provision of series reactor in Southern Region to control short circuit level would be put for discussion in SCPSPSR.
3. POWERGRID further stated that the project is to be taken up under compressed time schedule and the proposed change is a minor modification to already approved scheme, therefore, has requested CEA to give in-principle clearance for adoption of GIS at Cuddapah for proposed 400kV expansion. POWERGRID has also submitted that any 400kV spare bay in AIS/GIS due to adoption of GIS shall be considered for utilization as per requirement in future.

4. In view of above, we convey our 'in-principle' approval for adoption of GIS at Cuddapah for proposed 400kV expansion.

This issues with the approval of Member (Power System), CEA.

Yours faithfully,



(Pardeep Jindal)  
Director (SP&PA)

## पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड

(भारत सरकार का उद्यम)  
POWER GRID CORPORATION OF INDIA LIMITED  
(A Government of India Enterprise)



केन्द्रीय कार्यालय : "सौदामिनी" प्लॉट सं. 2, सेक्टर-29, गुडगाँव-122 001, हरियाणा  
फोन : 2571700 - 719, फैक्स : 2571760, 2571761 तार 'नेटग्रिड',  
Corporate Office : "Saudamini" Plot No. 2, Sector-29, Gurgaon-122 001, Haryana  
Tel. : 2571700 - 719, Fax : 2571760, 2571761 Gram : 'NATGRID'

संदर्भ संख्या/Ref. Number

C/CTU/S/PLG

Date: 15<sup>th</sup> May, 2015

**Shri Pradeep Jindal,**  
Director (SP & PA),  
Central Electricity Authority,  
SewaBhawan, R K Puram,  
New Delhi - 1100 066.

**Sub: "Constraints in 400 kV bays extensions at 400 kV Vemagiri S/s"**

Dear Sir,

This is with reference to the discussions held in the 37<sup>th</sup> meeting of Standing Committee of Power System Planning in Southern Region where in following scheme was agreed to:

- i. LILO of both circuits of Gazuwaka/Simhadri-II-Vemagiri-I (AP) 400 kV D/c line at Vemagiri-II (PG).
- ii. Straighten LILO of Vijaywada (Nunna)-Simhadri-II/Gazuwaka 400 kV D/c line (by disconnecting the LILO at Vemagiri-I (AP)), so as to make Vijaywada (Nunna) - Vemagiri-II 400 kV D/c line.
- iii. Utilization of one LILO D/c portion (of Gazuwaka/Simhadri-II Vijaywada (Nunna) at Vemagiri-I (AP)) for KV Kota-Vemagiri-I (AP) 400 kV D/c line. APTRANSCO is implementing KV Kota-Vemagiri-I (AP) 400 kV D/c line.
- iv. Second LILO D/c portion (of Gazuwaka/Simhadri-II - Vijaywada (Nunna) at Vemagiri-I (AP)) to be extended to Vemagiri-II (PG).

While carrying out field survey it was observed that interconnection of Simhadri-Vemagiri-II (PG) could be achieved by LILO in the LILO portion of Vijayawada -Simhadri 400kV D/c line at Vemagiri-I. This would result in reduction in line length of about 1.5km and there is no

change in the network configuration. The approved and proposed arrangement is shown in Exhibit-I. The proposal as received from site for the above modifications is also enclosed for your reference. It is requested that in-principle approval may be given and same may be informed in the next standing committee meeting.

Thanking you,

Yours faithfully,

*Mukesh Khanna*  
15/15/15

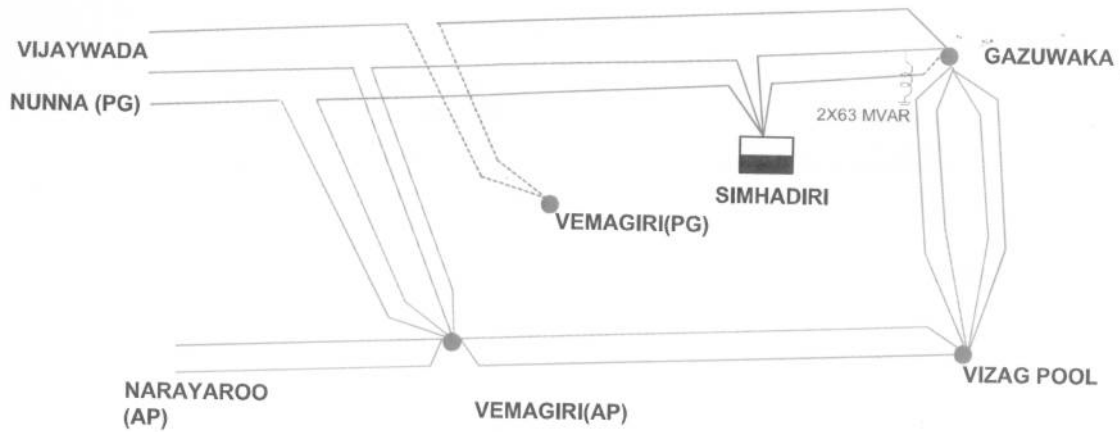
**(Mukesh Khanna)**

**AGM (CTU-Planning)**

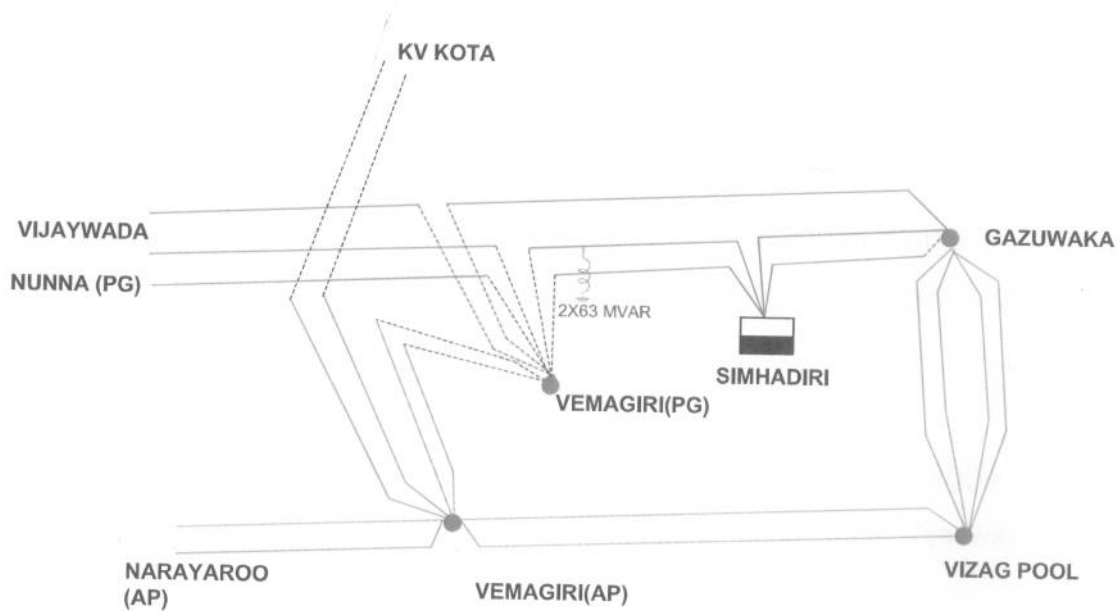


S.No	AS PER SCHEME PROPOSED BY CC (VIDE IOM Dtd.16.01.15)	SCHEME PROPOSED BY SITE	JUSTIFICATION
1	LILO of both circuits of Gazuwaka/Simhadri-II- Vemagiri-I (AP) 400kV D/C line at Vemagiri-II(PG)	No change. However LILO of both the circuits is proposed in existing LILO portion of Vijayawada - Simhadri D/C line at Vemagiri 1 (AP).	From the comparison statement it is observed that there is no change in between scheme proposed by CC and site except the straightening of LILO. Reasons for not proposing the LILO is also explained in adjacent column.
2	Straightening of LILO of Vijayawada(Nunna) - Simhadri-II/Gazuwaka 400kV D/C line ( by disconnecting the LILO at Vemagiri-I(AP)), so as to make Vijayawada (Nunna) - Vemagiri-II 400kV D/C line.	Straightening of existing LILO of Vijayawada - Simhadri line is not proposed as Vijayawada - Vemagiri 2 (PG) and Simhadri - Vemagiri 2(PG) are achieved by LILO in the LILO portion of Vijayawada - Simhadri 400kV D/C line at Vemagiri 1(AP)	Further, from the topo study the following are observed 1. Location chosen by site for LILO at Sr.No.1 is nearer to Vemagiri (PG) by 1.5km approx. vis-a-vis to that of CC proposal.
3	Utilisation of one LILO D/c portion (of Gazuwaka/Simhadri-II - Vijayawada (Nunna) at Vemagiri I(AP) for KV Kota - Vemagiri-I(AP) 400kV D/C line.	No Change	2. Pockets of habitations are more in the scheme proposed by CC.Also, line alignment has to cross NH. 3. Considering the corridor availability due to real estate development in and around vemagiri area M/c provision is kept in the site proposal for the termination of lines Vijayawada & Simhadri D/C line at Vemagiri 2(PG).
4	Second LILO D/C portion (of Gazuwaka/Simhadri-II - Vijayawada (Nunna) at Vemagiri-I(AP)) to be extended to Vemagiri-II(PG)	No change	

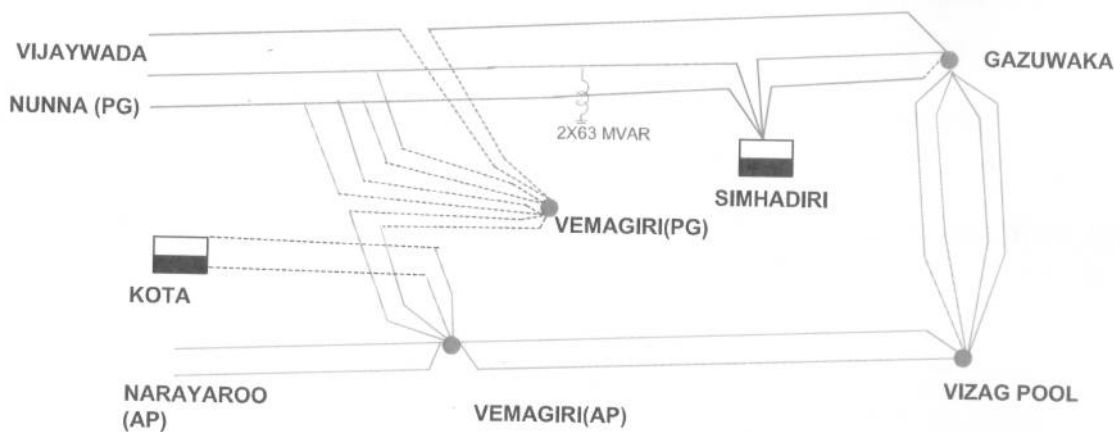
### PRESENT ARRANGEMENT



### PROPOSED ARRANGEMENT

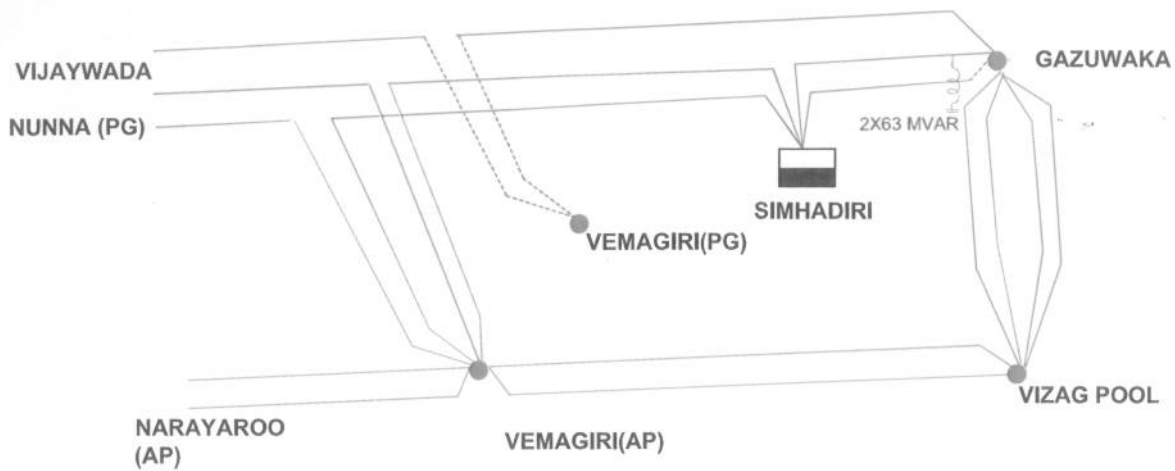


### SITE PROPOSAL

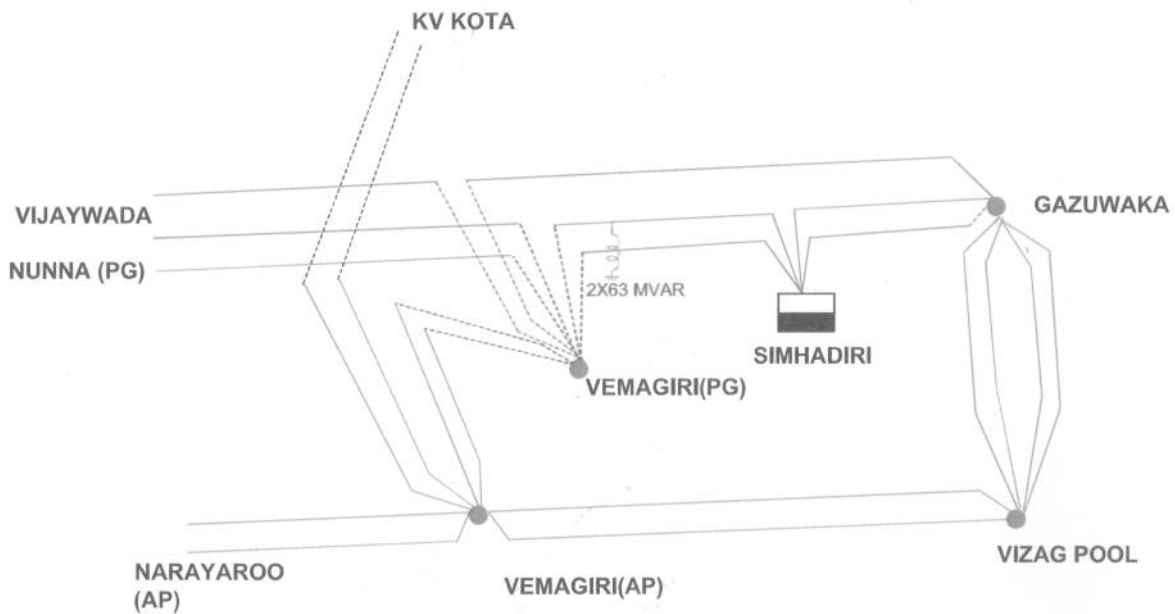


Per 3/2/16  
SK

## PRESENT ARRANGEMENT



## PROPOSED ARRANGEMENT



## SITE PROPOSAL

