

पावर ग्रिड कारपोरेशन ऑफ इंडिया लिमिटेड
(भारत सरकार का उद्यम)
POWER GRID CORPORATION OF INDIA LIMITED
(A Government of India Enterprise)



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संदर्भ संख्या / Ref. No. C/ENG/SEF/S/00/PLG

28 December 2012

Chief Engineer (SP & PA)
Central Electricity Authority
Sewa Bhawan, RK Puram
New Delhi- 110 066.

Sub: Additional Agenda to be included in the forthcoming Standing Committee Meeting.

Dear Sir,

Please find enclosed the Additional Agenda to be included in the forthcoming Standing Committee Meeting.

Thanking you,

Yours faithfully,


(Y. K. Sehgal)

Chief Operating Officer (CTU)

Additional Agenda for 35th Standing Committee Meeting

1.0 Modification to the under implementation System Strengthening in Southern region – XII and XIII Schemes

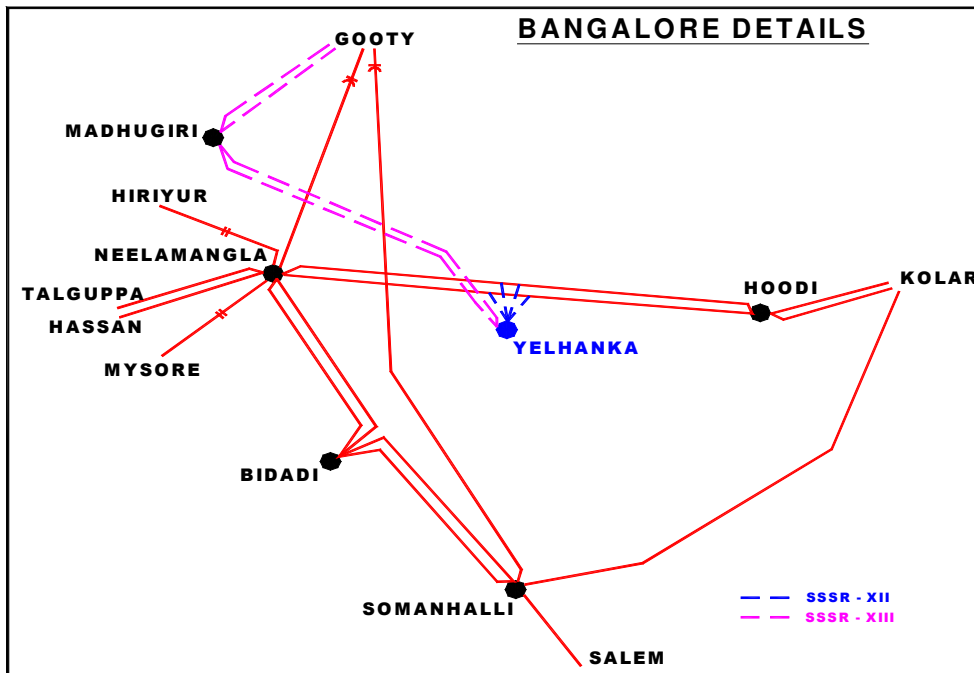
Following two regional strengthening schemes are under implementation by POWERGRID

System Strengthening in Southern region – XII

- LILO of both circuits of Neelamangla – Hoody 400 kV D/c line at Yelahanka
- Establishment of new 400/220 kV GIS substation at Yelahanka

System Strengthening in Southern region – XIII

- Gooty – Madhugiri 400 kV D/c line
- Madhugiri – Yelahanka Quad 400 kV D/c line



In the SSSR-XII, new 400/200 kV Substation at Yelahanka is being introduced in the already established 400 kV ring main around Bengaluru for drawing growing load demand in Bangalore Bengaluru area. The integration of this new substation is planned by LILO of both the circuits of Neelamangla – Hoody 400 kV D/c line. Further, under SSSR-XIII, power is to be injected into the ring main through new substation at Yekahanka is being fed through 400kV Quad D/c line from Madhugiri.

Yelahanka substation being in a Metro city of Bengaluru is having a lot of Right-of-Way (ROW) constraints. As may be seen from the above figure that there shall be three 400kV D/c lines approaching from more or less same side at Yelahanka. Due to lot of urbanised growth in & around Yelahanka our site has reported that it would be practically impossible to secure as many numbers of ROWs. Towards this it is proposed

that only one ROW using the Multi Circuit tower (for about 7-8 km length) supporting one D/c for LILO & one D/c from Madhugiri may be used in view of the severe ROW constraints. Under such an arrangement instead of LILO of both the circuits only one circuit of Neelamangla – Hoody 400 kV D/c line may be made at Yelahanka.

Load flow studies pertaining to modification from LILO of both circuits to one circuit only is placed at Exhibit – I & II, wherein it may be seen that such arrangement may lead to some re-distribution of the flows within the ring main without affecting overall security & reliability of the ring.

Further in the small Multi Circuit portion, instead of Quad conductor for the Mudhugiri – Yelahanka 400kV D/c Quad line, a high ampacity conductor like Gapped conductor may be used, as multi circuit towers with all the 4 circuits with twin conductors is already erected & can be utilised, as the system is required on the urgent basis to alleviate present constraints. The revised arrangement is shown at **Exhibit-III**.

In view of the above following modifications are proposed

System Strengthening Scheme in Southern region – XII

- a) LILO of one circuit on Multi Circuit tower in Bengaluru area of Neelamangla – Hoody 400 kV D/c line at Yelahanka
- b) Establishment of new 400/220 kV GIS substation at Yelahanka

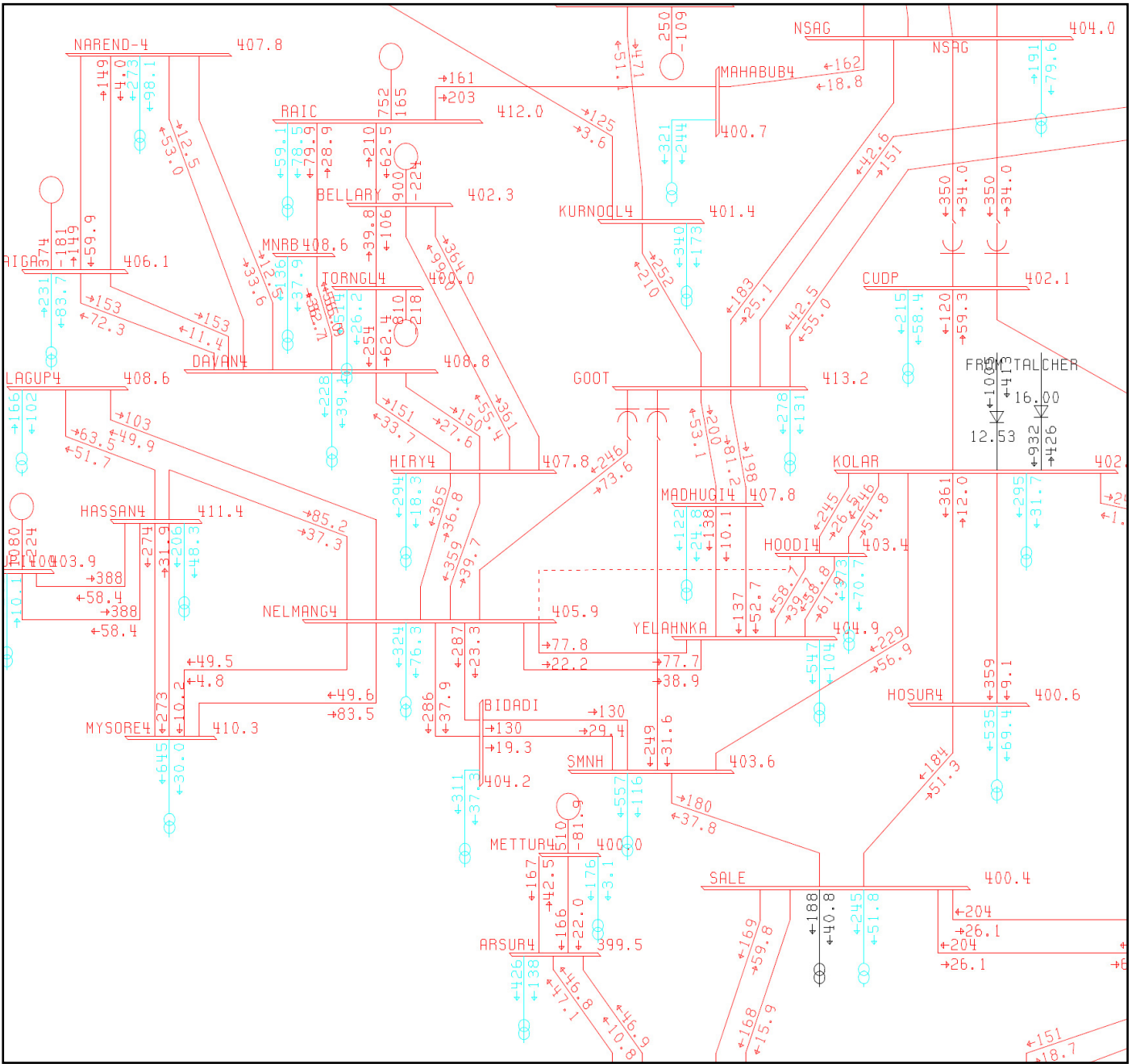
System Strengthening Scheme in Southern region – XIII

- a) Gooty – Madhugiri 400 kV D/c line
- b) Madhugiri – Yelahanka Quad 400 kV D/c line with a small portion to be strung on Multi Circuit tower of SRSR-XIII with high ampacity conductor like Gapped in Bengaluru area

Members may kindly concur the proposal.

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Exhibit-I



Revised arrangement under System Strengthening Schemes in Southern region

