



भारत सरकार
विद्युत मंत्रालय
केंद्रीय विद्युत प्राधिकरण
राष्ट्रीय विद्युत समिति
कटवारिया सराय, नई दिल्ली- 110016
वैबसाइट / Website: www.cea.nic.in

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[ISO 9001:2008]

No. 4/MTGS/NPC/CEA/2015/

Date : 01-12-2015

विषय: एन. पी. सी. की चतुर्थ बैठक के आयोजित करने तथा कार्यसूची के सम्बन्ध में।
महोदय,

उपरोक्त विषय से सम्बन्धित दस्तावेज आपकी जानकारी एवम आवश्यक कार्यवाही हेतु संलग्न है।
संलग्नक : यथोपरि

भवदीय

वि. मल्लिक
(बी.सी.मल्लिक)

मुख्य अभियंता एवं सदस्य सचिव, रा. वि. स.

To,

1. Shri Rakibul Hussain, Chairperson, NERPC & Hon'ble Power Minister of Government of Assam, Assam secretariat, Dispur, Guwahati-781006. **Email:** rockybulhussain@rediffmail.com
2. Shri P.C.Negi, Chairperson, NRPC & Managing Director, Himachal Pradesh State Electricity Board Limited, Vidyut Bhawan, Kumar House, Shimla-171004.
3. Shri M.Sivasankar, Chairperson, SRPC & CMD, KSEBL, Vidyuthi Bhavan, Pattom, Thiruvanthapuram-695 004. **Email:** cmksebl@kseblnet.com
4. Shri Shivraj Singh, IAS(Retd.), Chairman, WRPC & Chairman, Chattisgarh State Power Companies Limited, Vidyut Sewa Bhawan, 2nd Floor, P.O. Sundar Nagar, Raipur-492013. **Email:** shivraj@nic.in
5. Shri N.S.Nigam, Chairperson, ERPC & CMD, WBSEDCL, Vidyut Bhavan, 7th Floor, Bidhannagar, Sector-II, Kolkotta-700091. **Email:** cmdwbasedcl@gmail.com
6. Shri R.L.Baruah, Chairperson, TCC (NERPC) & Managing Director, APDCL, Bijuli Bhawan, Guwahati-781001. **Email:** md-apdcl@apdcl.gov.in
7. Shri R.K.Sharma, Chairman, TCC (NRPC) & Director (Tech), HPSEB, Vidyut Bhawan, Kumar House, Shimla-171004.
8. Smt. P.Vijayakumari, Chairperson, TCC (SRPC) & Director (Tr. & System Opn.), KSEBL, Vidyuthi Bhavan, Pattom, Thiruvanthapuram-695 004. **Email:** mtkseb@kseblnet.com
9. Shri Shashi Bhushan Agrawal, Chairman, TCC (WRPC) & Managing Director, CSPGCL, Vidyut Sewa Bhawan, 2nd Floor, P.O. Sundar Nagar, Raipur-492013. **Email:** mdgenco@cseb.gov.in
10. Chairperson, TCC (ERPC) & Director (Operation), WBSEDCL, Vidyut Bhavan, 7th Floor, Bidhannagar, Sector-II, Kolkotta-700091.
11. Shri P.S.Mhaske, Member Secretary, NRPC, 18-A, S.J.S.S. Marg, Katwaria Sarai, New Delhi-110066. **Email:** msnrpc1@yahoo.com
12. Shri S. D. Taksande, Member Secretary, WRPC, Plot No. F-3, MIDC Area Marol, Andheri (East), Mumbai-400093. **Email:** ms-wrpc@nic.in
13. Shri A.K. Bandyopadhyay, Member Secretary, ERPC, 14, Golf Club Road, ERPC Building, Tolly Gunge, Kolkata-33. **Email:** mserpc-power@nic.in
14. Shri S. R. Bhat, Member Secretary, SRPC, No.29, Race Course Cross Road, Bengaluru-560 009. **Email:** mssrpc@yahoo.com
15. Shri P.K.Mishra, Member Secretary, NERPC, Meghalaya State Housing Finance Co-Operative Society Ltd., Nongrim Hills, Shillong-793003. **Email:** msnerpc@dataone.in

Special Invitees:

16. Chief Engineer, GM, CEA, New Delhi
17. CEO, POSOCO, B-9, Qutab Institutional area, Katwaria Sarai, New Delhi -110016.
18. Director (Operation), PGCIL, Saudamini, Plot No.2, Sector-29, Guragon-122001.

प्रति सूचनार्थ: 1. अध्यक्ष, के. वि. प्रा., रा.वि.स., 2. सदस्य, (ग्रिड प्रचालन एवं वितरण), के.वि.प्रा.



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Subject: Meeting notice and agenda for the fourth meeting of the NPC.

Sir,

The fourth meeting of the NPC is scheduled to be held on 10th December, 2015 at 11:00am at 1st floor conference room, NRPC Building, Katwaria Sarai, New Delhi. Agenda for the meeting is attached herewith for kind information please. The same is also available on CEA website.

Kindly make it convenient to attend the meeting.

भवदीय / Yours faithfully

Encl.: as above

B.C. Mallick
(बी.सी.मल्लिक/ B.C.Mallick)

मुख्य अभियंता एवं सदस्य सचिव, रा. वि. स./ Chief Engineer & Member Secretary, NPC

To,

1. Shri Rakibul Hussain, Chairperson, NERPC & Hon'ble Power Minister of Government of Assam, Assam secretariat, Dispur, Guwahati-781006. **Email:** rockybulhussain@rediffmail.com
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14. Shri S. R. Bhat, Member Secretary, SRPC, No.29, Race Course Cross Road, Bengaluru-560 009. **Email:** mssrpc@yahoo.com
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17. CEO, POSOCO, B-9, Qutab Institutional area, Katwaria Sarai, New Delhi -110016.
18. Director (Operation), PGCIL, Saudamini, Plot No.2, Sector-29, Guragon-122001

Copy for Kind information to:

1. Chairperson, CEA, New Delhi
2. Member (G&OD), CEA, New Delhi

**CENTRAL ELECTRICITY AUTHORITY
NATIONAL POWER COMMITTEE**

AGENDA FOR THE FOURTH MEETING OF NATIONAL POWER COMMITTEE

Time & Date for the meeting: 11:00 Hrs. on 10.12.2015
Venue for the meeting: 1st Floor, Conference Room, NRPC Building, Katwaria Sarai, New Delhi.

A. CONFIRMATION OF SUMMARY RECORD

Summary record of discussions of the 2nd meeting of NPC held on 16th July 2013 and 3rd (special) held on 14th February, 2014 at CEA, New Delhi was circulated vide CEA letter No. 8/X/MMS/GM-13 dated 01-08-2013 and even letter dated 05-03-2014 respectively. Comments of WRPC have been received on the summary record of 2nd meeting (copy enclosed at Annexure for reference) and the same are mentioned below:

- i. As mentioned by WRPC, in the 6th Para of the item B1.2. of the minutes stands modified as "27 reactors were proposed to be installed in the region as per the requirement carried out by the Protection sub-committee and the same was approved by Standing Committee in the 34th and 35th meetings. The priorities of the reactors have been identified".
- ii. Other suggestions of the WRPC do not affect the decisions of the NPC. So the minutes are proposed to be retained without any modification.

Members may, like to discuss/confirm the summary record of discussions.

B. FOLLOW-UP ACTION ON DECISIONS TAKEN EARLIER

B.1: RPCs are requested to intimate the status in the matter of ,

B1.1.: Reactive Power Planning, : All States would carry out reactive power planning not only at transmission level but also at distribution level and prepare schemes to maintain voltage profile as per relevant Regulations / Standards. These schemes would be forwarded by the States to the Power System wing of CEA under intimation to the NPC secretariat at the earliest.

B1.2.: Ensuring proper functioning of Under Frequency Relays (UFRs) and df/dt relays: All SLDCs & RLDCs would upload the details of feeders to be tripped through the UFRs and the expected load relief at different frequency levels in their respective States / Regions on operation of UFRs. It was also decided that RPCs would send inspection report for healthiness of UFR and df/dt regularly on quarterly basis to NPC secretariat.

B.2: RPCs are requested to intimate the status of implementation of Automatic Under Frequency Load Shedding (AUFLS) scheme with 4 stages of frequency viz. 49.2, 49.0, 48.8 & 48.6 Hz in all the regions.

Frequency (Hz)	Load relief in each region (in MW)				
	NR	WR	SR	ER	NER
49.2	2160	2060	2350	820	100
49.0	2170	2070	2360	830	100
48.8	2190	2080	2390	830	100
48.6	2200	2100	2400	840	100
Total	8720	8310	9500	3320	400

B.3.: Membership of POSOCO in NPC: A proposal was mooted in the 2nd meeting to include NLDC as the member of NPC, on which RPCs had assured to revert back in the matter. NPC may discuss and take a decision regarding membership of POSOCO.

C. NEW AGENDA ITEMS

C1. Treatment of collective transaction in case of grid disturbances: CERC in its second amendment to the IEGC dated 17-02-2014 stated that -

“For Bilateral short term and collective transactions, the methodology of settlement of accounts for the period of Grid Disturbance shall be formulated by National Power Committee (NPC) and same shall be put up to the Commission for approval. The methodology shall cover all possible scenarios with illustrative examples to cover the instances where the Grid disturbance is either partial or it affects only one region.”

WRPC has suggested that any transaction during the grid disturbance (GD) period by an entity from healthy region to an entity in the GD region cannot be settled since the entities in GD region are unable to honour the transaction due to the grid constraints. Therefore, it would be appropriate to suspend all the collective schedules from or targeted to entities in the GD region.

Alternatively, the deviation liability of the seller/buyer in a healthy region who would unnecessarily be suffering due to suspension of its schedule shall be shared by all the pool members of the disturbed region who have schedule from/to such seller/buyer in the ratio of their schedules in the block prior to the declaration of grid disturbance, for all the blocks it could not revise its schedule.

Members may discuss the matter.

C2. Power swing blocking (PSB) setting in Distance relays: NRPC had constituted a group to make recommendations on the Power Swing Blocking (PSB) feature in the distance relays. The group recommended that PSB should be applied in all zones of distance relay. For the present Out of Step (OOS) relaying should be employed on all inter-regional lines and at both ends. NRPC has requested that the matter may be deliberated at NPC for uniform implementation of the recommendation by the expert group on the PSB and carry out studies for identifying the installation of out of step relaying.

SRPC has suggested that it would be prudent to await the recommendations of the Consultant being appointed for implementation of the recommendations of the Task Force for Power System Analysis under contingencies.

NPC may deliberate.

C3. Review of Df/dt relays and UFR based automatic load shedding schemes: df/dt relays have been installed in the Northern, Western and Southern region grid that have been set to get activated at 49.9 Hz and shed load automatically in case the rate of fall of frequency happens to be 0.1, 0.2 or 0.3 Hz/Sec. df/dt relays are expected to support in arresting the rapid fall of frequency subsequent to severe grid disturbances. These relays were set according to the power number of regional grid. The setting may not be effective in present circumstances where the installed capacity in the grid is higher and grid is now integrated as national grid.

Protection sub-committee of SRPC has decided to modify the setting of df/dt relays keeping in view the above aspect as under:

a) The PCSC forum reiterated to keep the df/dt settings as recommended by the Working Group meeting of PCSC and the forum recommended to implement the revised df/dt settings as follows:

- Stage-1 : 49.7 Hz & 0.2 Hz/sec
- Stage-2 : 49.5 Hz & 0.3 Hz/sec

b) The df/dt settings would be reviewed after the detailed system study of the SR

SRPC is of the view that settings of the df/dt may be implemented uniformly across the country in view of the development of the National grid.

The power number of the NEWS grid has increased and it is proposed that the present setting of the df/dt relays, wherever installed, need to be revised based on the inputs of the NLDC/RLDC. Similar activity in case of UFR may also proposed to be carried out in view of the fact that most of the time frequency is hovering around the IEGC band. Therefore setting of UFRs may be raised by 0.2 Hz in each steps i.e. new stages may be 49.4Hz, 49.2 Hz, 49.0 Hz and 48.8 Hz.

Members may discuss.

C4. Transfer capability determination by the states: For safe operation of the grid, it is considered essential for the states to carry out power system studies periodically for the purpose of operational planning and power transfer capability (ATC) through their respective transmission links with the rest of the grid. This would give a clear idea to the concerned SLDC about the maximum quantum of power it can draw from the grid without jeopardizing the grid security. It is learnt that states like Punjab and UP are providing information about their ATC after regular system study. Other states are also expected to carry out such studies regularly.

RPCs may initiate dialogue with the states in their respective regions in this regard and get this arrangement implemented in a time-bound manner.

C5. Reasons for demand - supply gap and its variation: the gap in demand and supply of power in various states in different regions of the country are arising on account of various reasons such as power cuts/restrictions, financial constraints, Transmission and distribution constraints etc. CEA, through RPC has requested to states/DISCOMs to furnish the details of reasons leading to gap in demand and supply. The response from various RPC in this regard are still awaited.

Members may like to deliberate.

C6: Coordinated outage planning of transmission elements: NLDC has intimated that outage coordination of inter-regional lines is not cohesive among the RPCs. While some RPCs approve the outage early in the month and other RPCs do so later in the month. This leads to the difficulty in carrying out maintenance and shut down activity of the Inter-regional transmission element. In this regards, NLDC has suggested to adopt philosophies for outage approvals of Inter-regional lines.

Members may like to discuss and finalise the philosophy.

C7: Fund Requirement for NPC: MoP vide its order dated 25th March, 2013 constituted NPC

- i. To resolve issue among RPCs.
- ii. To discuss and resolve issues referred to NPC requiring consultation among one or more RPCs, concerning inter-alia inter-regional implication or any other issue affecting more than one region or all regions.

Functions of the secretariat of NPC has been enhanced with following additional assignments given by CERC and CEA:

- i. Grid study committee- consultants have been appointed by PGCIL for implementation of the recommendations of the Ramakrishna Task Force. NPC secretariat has been associated with review and analysis of the report of the above consultants.
- ii. PSDF related works: NPC Secretariat is assisting in carrying out the techno-economic examination of the schemes received under PSDF funding and the monitoring of implementation of such schemes.
- iii. CEA has established National Reliability Council for Electricity (NRCE) for the purpose of grid security and calculation of TTC and ATC of inter-regional lines. NPC has been entrusted with the work of NRCE.

The growing work of the secretariat is requiring extra expenditure towards the establishment of the NPC. The major areas of expenditure includes the meeting arrangement (including food and snacks), necessity of engaging consultant for secretarial support, travel expenses both local as well as outstation, provisioning of stationery items like Fax, printers, computers along with its consumables etc.

A) per meeting expenditure:

- i) Meeting expenses (food, pen & pad) - Rs. 50000/-
- ii) Travel expense (in case of outstation meetings) - Rs. 100000/- (4X25000/-)

Approximately two meetings in one year

Sub- Total for A) = 2X 1.5 Lacs = 3 Lacs

B) per month expenditure :

- i) consultant for secretarial support - Rs. 20000/- (per month)
- ii) local travel expenses (hiring of one Taxi) - Rs. 25000/- (per month)

Sub-Total B = 12X45000/- = Rs. 5.4 Lacs

C) annual expenditure : provisioning of stationery items like Fax, printers, computers along with its consumables – Rs. 50000/-

Sub- total C = 0.5 Lacs

Grand total A+B+C = 3+5.4+0.5 = 8.9 lacs = say 9.0 Lacs

The Conduct of Business Rules of NPC stipulate that

“Requirement of funds for hosting the meetings of NPC would be met through CEA’s budgetary provisions. However NPC may decide to create a fund for NPC in future for establishment expenses of its Secretariat”.

Funding support from CEA is insufficient to discharge the responsibilities of NPC secretariat. It is, therefore, proposed that amount of Rs. 10 (ten) Lacs (with the contribution of Rs. 2 Lacs from each RPC or may be distributed among RPC according to their peak demand), for establishment expenditure of NPC, may be created and records of expenditure shall be maintained by RPC. Another option would be to have the expenditure met from each RPC by rotation every year.

Members may like to deliberate and suggest the mechanism for meeting the requirement of fund for establishment expenditure of NPC.

C8: Common Commercial Input data formats for all RPCs (Agenda from WRPC):

RPC's are preparing UI pool A/c, Reactive Energy A/c, Regional Energy A/c Regional Transmission A/c and various other reports based on the input data provided by RLDCs/NLDCs. The input data formats is not uniform among the regions. Also the methodology of data processing and preparing these A/cs is not uniform in all the regions.

To bring uniformity in the preparation of these A/cs, WRPC has proposed that the data formats, procedures and methodologies of A/c preparation be standardized, so that software for preparing the above A/cs can be on the same platform and therefore, the software development for preparation of these A/cs would be common for all the RPCs.

SRPC is of the view that the commercial input data format is RPC independent. There is no data handshake between any of the RPCs. The output (Commercial Accounts) is made user friendly in Excel format. Hence, the manner in which the data is to be processed is best left to the concerned RPC. There appears to be no need of any uniform data format etc. in this regard.

Members may like to deliberate the issue.

C9: New Location of Office of NPC Secretariat: Subsequent to Cadre restructuring in CEA, Chief Engineer NPC has been designated as Member Secretary, NPC in place of Chief Engineer (GM). The secretariat of NPC has been shifted to 3rd floor of NRPC Building, Katwaria Sarai New Delhi w.e.f September, 2015.

Members may like to note please.

C10: Any other issue with permission of Chair.

Annexure



भारत सरकार
Government of India
केन्द्रीय विद्युत प्राधिकरण
Central Electricity Authority
पश्चिम क्षेत्रीय विद्युत समिति



आई एस ओ 9001 2008
ISO : 9001-2008

Western Regional Power Committee
एफ -3, एमआयडीसी क्षेत्र, अंधेरी (पूर्व), मुंबई - 400093
F-3, MIDC Area, Andheri (East), Mumbai - 400093
दूरभाष Phone: 022- 28221636; 28200195; 28200194 ; फैक्स Fax : 022 -28370193
Website : www.wrpc.gov.in E-mail : ms-wrpc@nic.in

NO.WRPC/NPC/2013- 1172

Date: 07.08.2013

To,

✓ Member Secretary, NPC & Chief Engineer I/c(GM Division),
Central Electricity Authority,
Sewa Bhavan, R.K.Puram,
New Delhi – 110066.

Subject:- Corrections/additions in the minutes of 2nd NPC meeting.

Sir,

This has reference to the minutes of the 2nd NPC meeting held on 16.07.2013 at New Delhi forwarded vide letter No.8/X/MMS/GM-13/958-976 dated 01.08.2013. Our comments on recording of some of the items are given below which may be considered and the minutes may be modified accordingly.

B.1.2. Reactive Power Planning.

In the 6th Para it is mentioned that 27 reactors were proposed to be installed in the region as per the requirement carried out by the Protection sub-committee and the same was under consideration of Standing Committee of CEA. It may be modified that "27 reactors were proposed to be installed in the region as per the requirement carried out by the Protection sub-committee and the same was approved by Standing Committee in its 34th and 35th meetings. The priorities of commissioning of the reactors have been identified".



B.1.3. Ensuring proper functioning of Under Frequency Relays(UFRs) and df/dt relays.

In the 2nd Para it may be added that "Member Secretary, WRPC in view of the acute manpower shortage suggested that WRPC would carryout some random checks and inspection of the relays. Also monthly self certification from the utilities may also be collected and considered valid to ensure the healthiness of

UFR and df/dt relays as the prime responsibility of providing load relief lies with the utilities”.

B.3 Review of Zone-III Philosophy.

It may be added that “ Member Secretary, WRPC stated that during the 117th Protection Committee meeting Constituents have confirmed that the Zone-III settings adopted by them are generally higher than the loadability limits given in Para 20 of the manual on transmission planning criteria issued by SP & PA division of CEA”.

- C Also Shri Satyanarayan S. ,SE,WRPC,s name may be added in the list of participants.

Thanking you,

Yours faithfully,



(S.D.TAKSANDE)
Member Secretary I/c.