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**EASTERN REGIONAL POWER COMMITTEE
14, GOLF CLUB ROAD, TOLLYGUNGE
KOLKATA-700033**

NO. ERPC/TCC & COMMITTEE/14/2011/ 4479-4530

Date: 13th October 2011

To :

- 1. Members of Eastern Regional Power Committee.**
- 2. Members of TCC.**

Subject: Minutes of 19th ERPC & TCC Meetings.

Sir,

The minutes of 19th ERPC & TCC meetings held on 23rd & 24th September 2011 respectively at Goa are enclosed for kind information.

Yours faithfully,

Sd/-

**(A. K. Bandyopadhyay)
Member Secretary I/C**

Encl: As above

Distribution List : ERPC Members

1. The Chairperson, ERPC & Chairman, Bihar State Electricity Board, Vidyut Bhavan , Bailey Road, Patna-800021.
2. Chairman & Managing Director, West Bengal State Electricity Distribution Company Ltd. Vidyut Bhavan, 7th Floor, Sector-II, Bidhannagar, Kolkata-700091.
3. Managing Director, West Bengal State Electricity Transmission Co. Ltd., Vidyut Bhavan, 7th Floor, Block-DJ, Sector-II, Bidhannagar, Kolkata-700091.
4. Chairman, Jharkhand State Electricity Board, Engineering Building, HEC, Dhurva, Ranchi-834004.
5. Chairman, Damodar Valley Corporation, DVC Towers, VIP Road, Kolkata -700054.
6. Chairman-cum-Managing Director, Orissa Power Transmission Corporation Ltd., Janpath, Bhubaneswar-751022.
7. Principal Chief Engineer-cum- Secretary, Energy & Power Department, Govt. of Sikkim, Kazi Road, Gangtok-737101.
8. Member (GO&D), Central Electricity Authority, Sewa Bhawan , R.K. Puram, New Delhi-110066.
9. Director (Commercial), NTPC Ltd., Core-7, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi -110003.
10. Director (Finance), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad, Haryana-121003.
11. Director (Operations), Power Grid Corporation of India Ltd., Saudamini, Plot No. 2, Sector-29, Gurgaon-122001.
12. Chairman & Managing Director, West Bengal Power Development Corporation Ltd., Bidyut Unnayan Bhavan, 3/C, Block LA , Sector-III, Bidhannagar, Kolkata-700098.
13. Managing Director, Durgapur Projects Ltd., 1593 Rajdanga Main Road, Kolkata-700107.
14. Managing Director, CESC Ltd., CESC House, 1 Chowringhee Square, Kolkata-700001.
15. Managing Director, OHPC Ltd., Orissa State Police Housing & Welfare Corporation Bldg. Vanivihar, Janpath, Bhubaneswar- 751022.
16. Managing Director, OPGC Ltd., Zone-A, 7th Floor, Fortune Towers, Chandrasekharapur, Bhubaneswar-751023.
17. Chief Executive Officer, National Load Despatch Centre, B-9, Qutab Institutional Area, Katwaria Sarai, New Delhi-110016.
18. General Manager, ERLDC, 14 Golf Club Road, Tollygunge, Kolkata – 700033.
19. Managing Director, Tenughat Vidyut Nigam Ltd., Hinoo, Doranda, Ranchi – 834002
20. Managing Director, BSHPC Ltd., Sone Bhawan, Birchand Patel Marg, Patna-800001
21. Director (Finance & Commercial), PTC India Ltd., 2nd floor, NBCC Tower, 15 Bhikaji Cama Place, New Delhi-110066.
22. Chairman-cum-Managing Director, GRIDCO Ltd., Janpath, Bhubaneswar-751022.
23. Executive Director & CEO, Powerlinks Transmission Ltd., DLF Tower-A, District Centre- Jasola, New Delhi-110025.
24. Chief Executive Officer, Maithon Power Ltd., MA-5, Gogna Colony, P.O.-Maithon Dam, Dist.-Dhanbad, Jharkhand-828207.
25. Managing Director, Adhunik Power & Natural Resources Ltd., Crescent Tower, 3rd Floor, 229 AJC Bose Road, Kolkata-700020.
26. Chief Executive Officer, Sterlite Energy Ltd., 1st Floor, City Mart Complex, Baramunda, Bhubaneswar-751012.

Distribution List : TCC Members

1. The Chairperson, TCC & Member (Transmission), Bihar State Electricity Board, Vidyut Bhavan, Bailey Road, Patna-800021.
2. Director (RT & IT), West Bengal State Electricity Distribution Co. Ltd, Vidyut Bhavan, 7th Floor, Sector-II, Bidhannagar, Kolkata-700091.
3. Director (Operation), West Bengal State Electricity Transmission Co. Ltd., Vidyut Bhavan, 7th Floor, Block-DJ, Sector-II, Bidhannagar, Kolkata-700091.
4. Member (T&D), Jharkhand State Electricity Board, Engineering Building, HEC, Dhurwa, Ranchi-834004.
5. Director (Commercial), Damodar Valley Corporation, DVC Tower, VIP Road, Kolkata-700054.
6. Director (Engineering), Orissa Power Transmission Corporation Ltd, Janpath, Bhubaneswar-751022.
7. Chief Engineer (EHV & SE), Energy & Power Department, Govt. of Sikkim, Kazi Road, Gangtok-737101.
8. Chief Engineer (GM), CEA, Sewa Bhawan, R.K. Puram, New Delhi-110066.
9. Regional Executive Director (ER-I), NTPC Ltd., 2nd floor, Loknayak Jaiprakash Bhawan, Dak Bunglow Chowk, Patna-800001.
10. Regional Executive Director (ER-II), NTPC Ltd., 3rd Floor, OLIC Building, Plot No.N-17/2, Nayapalli, Bhubaneswar-751012.
11. Executive Director (O&M), NHPC Ltd., NHPC Office Complex, Sector-33, Faridabad-121003, Haryana.
12. Executive Director (ER-I), Power Grid Corporation of India Ltd, Alankar Place, Boring Road, Patna-800001.
13. Executive Director (ER-II), Power Grid Corporation of India Ltd, J-1-15, Block-EP, Sector-V, Salt Lake City, Kolkata-700091.
14. Director (O&M & FM), WBPDC, Bidyut Unnayan Bhavan, 3C, Block-LA, Sector-III, Bidhannagar, Kolkata-700098.
15. Executive Director (Corporate Services), CESC Ltd, CESC House, 1 Chowringhee Square, Kolkata-700001.
16. General Manager, ERLDC, 14, Golf Club Road, Kolkata –700 033.
17. General Manager, Tenughat TPS, Lalpania, Dist- Bokaro, Jharkhand-829149.
18. Director (Operation), Corporate Office, Orissa Hydro Power Corporation Ltd, Orissa State Police Housing & Welfare Corporation Building, Vanivihar Chowk, Janpath, Bhubaneswar-751022.
19. Director (Operation), Orissa Power Generation Corporation Ltd, Zone-A, 7th floor, Fortune Towers, Chandrasekharpur, Bhubaneswar-751023.
20. Director (Operation), Durgapur Projects Ltd., 1593 Rajdanga Main Road, Kolkata-700107.
21. Director (Commercial), GRIDCO Ltd., Janpath, Bhubaneswar-751022.
22. Senior Vice President (M&TFG), PTC India Ltd., NBCC Tower, 15 Bhikaji Cama Place, New Delhi-110066.
23. General Manager (P&O), Powerlinks Transmission Ltd., C/o Powergrid, Vidyutnagar, Satellite Township, Siliguri-734015, West Bengal.
24. Chief Executive Officer, Maithon Power Ltd., MA-5, Gogna Colony, P.O.-Maithon Dam, Dist.-Dhanbad, Jharkhand-828207
25. Director, Adhunik Power & Natural Resources Ltd., Crescent Tower, 3rd Floor, 229 AJC Bose Road, Kolkata-700020.
26. Senior Vice President, Sterlite Energy Ltd., 1st Floor, City Mart Complex, Baramunda, Bhubaneswar-751012.

EASTERN REGIONAL POWER COMMITTEE

**MINUTES
OF
THE
19th ERPC MEETING**

Date: 24.09.2011

PLACE: GOA

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF THE 19TH ERPC MEETING

Date: 24th September 2011

Place:Goa

In Chair : Dr. Krishna Gupta, Chairman & Managing Director, WBPDC

Host: NTPC Ltd.

List of participants is at Annexure-A1

Shri I.J. Kapoor, Director (Commercial), NTPC welcomed the ERPC members, TCC members, special invitees and other participants on behalf of NTPC. He said “ NTPC is poised to become a company of 1,28,000 MW capacity by the year 2032 from its existing capacity of 34854 MW. Coal would continue to be the main source of fuel for power generation notwithstanding the capacity addition planned in nuclear, hydro and renewable sectors.” He, however, added that coal supply is going to be a major constraint. There is an urgent need to impress Coal India that they should first supply coal to power stations to enable them to declare at least 85% availability and then go for e-auction, which is a costlier option. Coal market abroad is also very volatile and expensive. Import is further costlier. He urged for a coal regulator at national level for rationalisation in coal price and its supply. He thanked all beneficiary constituents in helping NTPC to achieve 100% payment realisation, essential for sustaining sound financial health of the company. In conclusion, he thanked ERPC for giving NTPC an opportunity to host this important meeting. He hoped for pleasant and comfortable stay of the delegates and wished the meeting a grand success.

Shri A.K. Bandyopadhyay, Member Secretary In-Charge, ERPC welcomed Dr. Krishna Gupta, CMD, WBPDC, Shri I.J. Kapoor, Director (Commercial), NTPC, other distinguished ERPC members, TCC members, special invitees and participants to the meeting. He drew attention on the devastation caused by the massive earthquake in Sikkim on 18th September and requested all participants to pray for speedy restoration of normalcy in Sikkim. He said that ERPC member from Sikkim and his colleagues could not attend this meeting due to their pressing work on restoration of power supply across Sikkim. He informed that he had taken over as Member Secretary In-Charge on 6th September 2011 following transfer of Shri A.K. Rampal to CEA HQ at New Delhi and he looked forward to members’ support and valued advice in discharging his responsibilities effectively. He said “Yesterday TCC has discussed number of issues on operational, commercial and policy matters and has referred a few of them to ERPC for deliberation and decision. ERPC may deliberate on the issues with a view to arrive at consensus.” In conclusion, he thanked Shri I.J. Kapoor and the entire NTPC team for excellent arrangements for the meeting.

Dr. Krishna Gupta, Chairman & Managing Director, WBPDC welcomed ERPC members, TCC members, special invitees and other participants to the 19th ERPC meeting. He agreed to the view of Shri I.J. Kapoor, Director (Commercial), NTPC that supply of coal and

its rising cost are major concerns for many generators and WBPDCCL is no exception. He then briefly touched upon the following issues :

- Implementation of Special Protection Schemes (SPSs) for Maithon Right Bank, Mejia 'B' and Sterlite-Jahrsugua power stations at an early date.
- Early resolution on composite transmission system for evacuation of power from upcoming UMPP and IPPs in Odisha which is being discussed for last several ERPC meetings.
- Effective utilisation of fund available in Reactive Energy Charges A/C for capacity building programme.
- Installation and commissioning of 220 kV busbar protection schemes at Biharshariff sub-station of BSEB and Ramchandrapur & Chandil sub-stations of JSEB for grid security as well to prevent damage of costly equipments.

In conclusion, he thanked NTPC for hosting the meeting at this beautiful place and wished the meeting a grand success.

(The speech of Dr. Krishna Gupta is given at Annexure-A3)

ITEM NO.A0: CONFIRMATION OF THE MINUTES OF THE 18TH ERPC MEETING HELD ON 01.07.2011 AT RANCHI

The minutes of the 18th ERPC meeting held on 1st July 2011 were circulated vide letter no.ERPC/ TCC & Committee/14/2011/2784-2843 dated 04.08.2011.

No comments have been received from constituent members on the minutes of the meeting.

Members may confirm the minutes of 18th ERPC meeting.

Deliberation in the ERPC meeting

OPTCL stated that following view of OPTCL be included in the item no.B.13 of the minutes of the last (18th) TCC & ERPC meetings:

“Planning for transmission elements must adhere to the criteria of efficiency and economy”

With this modification members confirmed the minutes.

PART A: ISSUES REFERRED TO ERPC BY TCC IN ITS 19TH MEETING HELD YESTERDAY

ISSUES FOR DISCUSSION

ITEM NO.A1: IDENTIFICATION OF NON-ISTS LINES CARRYING INTER-STATE POWER IN RESPECT OF SHARING OF ISTS CHARGES AND LOSSES AS PER NEW REGULATIONS OF CERC - (TCC Agenda Item No.A2)

In the last CCM (17th), it was decided that constituents would forward their list of lines so that ERLDC may carry out system study to identify the non-ISTS lines for Eastern Region.

List of lines as received from WBSETCL, BSEB, JSEB and OPTCL has been forwarded to ERLDC.

In the last ERPC meeting (18th) Member(GO&D),CEA took an initiative to organize a meeting where representative from CERC, CEA, POSOCO and CTU would try to allay the fears of ER constituents regarding the new methodology of sharing of transmission charges and losses. The meeting was held on 06.08.2011 at ERPC Secretariat.

Also, in the same meeting, “It was decided that ERLDC will consider all the lines and furnish to ERPC Secretariat a list of qualifying non-ISTS lines. That list may be taken as having been approved by ERPC.”

Further, in the meeting of the Member Secretaries of RPCs held at NRPC, New Delhi on 10.08.2011, it was decided that studies to identify the Non-ISTS lines of new grid being used for inter-state transmission could be carried out through IIT, Mumbai. Though, ERPC is not bound by the decision of Member Secretaries, however, it may consider this option also.

In the last CCM (05.09.11),

- ERLDC informed that they are still in the process of carrying out the studies and would make a presentation in the ensuing TCC/ERPC meetings.

ERLDC may give the presentation and members may discuss.

Deliberation in the TCC meeting

ERLDC presented their detailed study on the issue.

At the outset, BSEB informed that they had already filed a petition challenging the CERC regulation on POC charges. Therefore, BSEB suggested that discussion should not be made in ERPC forum as the matter is sub-judice. All beneficiary members of Eastern Region agreed with BSEB’s contention. However, it was clarified by ERPC secretariat that as per existing regulations on POC charges, identification of Non-ISTS lines is a requirement for getting relief for the next FY 2012-13. In case Eastern Region does not identify and furnish it to NLDC with necessary recommendations from ERPC, YTC of these lines will not be included in POC for FY 2012-13. Since identification of non-ISTS lines is a time consuming exercise, the same should be continued. The suggestion of ERPC Secretariat was accepted.

After deliberation, TCC recommended that

- **Before 19th ERPC, ERLDC shall present a list of intra-state lines (lines within one control area) of all ER States, which are carrying more than 50% interstate power.**
- Identification of non-ISTS lines should be completed in such a way that the deadline for submission of the necessary information by 30th November 2011 is adhered to. Therefore, a separate meeting will be convened by the Secretariat at ERPC, Kolkata to sort out diverging interpretations on the identification procedure & finalization of the list as above.

Deliberation in ERPC meeting

Member Secretary I/C ERPC apprised the ERPC members regarding the deliberation that had taken place in the 19th TCC meeting held on 23.09.2011. He informed that there were diverging interpretations on the identification procedure for non-ISTS lines. He informed that ERLDC had already made a study for identification of the non-ISTS lines and requested ERLDC to present the list of intra-state lines (line within one control area) of all ER states which were carrying more than 50 % inter-state power.

Accordingly, ERLDC gave a presentation.

Members observed that there are different interpretations on different terms, methodologies, etc. This needs to be deliberated and clarified first before finalizing the list of lines. Further, there should be a uniformity of approach in the identification process for all the regions, otherwise, if each region makes identification in its own way there would be wide variation. It was also suggested that the same software should be used by all the regions for load flow studies for the purpose of identification of non-ISTS lines.

Members present in the meeting made a detailed deliberation and the following decisions were taken unanimously:

- ERPC Secretariat shall convene a special Commercial Sub-Committee meeting on 10.10.2011 to sort out the diverging interpretation on the identification procedure.
- Thereafter, ERLDC will make the system study to identify the non-ISTS lines of ER.
- The entire exercise shall be completed in such a way that the deadline for submission of necessary information to NLDC/Implementation Agency (IA) by 30.11.2011 is adhered to.
- ERPC Secretariat shall write to NLDC/IA requesting extension of the deadline by two months at least.
- ERPC secretariat will write to NLDC/IA to evolve a common methodology for identification of non-ISTS lines.

ITEM NO.A2: Composite Transmission System for transfer of power from Orissa UMPP and Orissa Ph-II IPP Projects to Beneficiaries (under the Scope of POWERGRID) - (TCC Agenda Item No.A7)

Even after two meetings held between Odisha and CTU after the SCM held on 28.12.2010, the composite transmission system is yet to be finalized.

Powergrid viewed that the requirement of pooling station and drawal of its share is a technical matter. As regards transmission charges are concerned the same would be governed by the prevailing regulations / norms of CERC. In the last ERPC meeting, OPTCL made a brief presentation. After the presentation, it was agreed that CTU & OPTCL may deliberate further in a meeting to be held at Gurgaon.

OPTCL and POWERGRID may inform the latest status.

Deliberation in the TCC meeting (discussed together with item no.A8)

OPTCL informed that on the issue they have already filed a petition before OERC.

However, they will give a presentation before 19th ERPC tomorrow.

ITEM NO.A3: EVACUATION OF POWER FROM UPCOMING IPPs IN ODISHA

–Proposed by Odisha (TCC Agenda Item No.A8)

In the SCM held on 28.12.2010, PGCIL made a presentation on the evacuation of power from the IPPs coming near Dhenkanal i.e. Tata power, CESC, Visa Power, Mahanadi Aban, Bhusan by setting up of a 765kV Pooling station at Dhenkanal. GRIDCO/OPTCL also made a presentation justifying of one 400kV STU S/s at Khuntuni (near Dhenkanal) for evacuation of state share power from the Phase-I & Phase-II IPPs by swapping mechanism. GRIDCO stated that 765kV S/s at Dhenkanal is not required.

Subsequently PGCIL came up with the proposal of connecting one unit each from Tata power, CESC, Visa Power, Mahanadi Aban, Bhusan with OPTCL network & PGCIL 765kV S/s separately through swapping arrangement.

With the above arrangement only 3600MW out of total Odisha share of about 6000MW can be evacuated into STU network. Connection of IPP generator with STU S/s at Khuntuni is a better proposal due to following reasons :

1. Less RoW and forest involvement.
2. In case tie bus is closed, fault MVA will increase.
3. OPTCL need not have to pay PoC charges.

OPTCL made a presentation on it.

Latest Status:

The scheme is yet to be finalised.

Powergrid viewed that the requirement of pooling station and drawal of its share is a technical matter. As regards transmission charges are concerned the same would be governed by the prevailing regulations / norms of CERC. In the last ERPC meeting, OPTCL made a brief presentation. After the presentation it was agreed that CTU & OPTCL may deliberate further in a meeting to be held at Gurgaon.

Meanwhile, OPTCL vide letter dated .16.09.2011 intimated that as per the direction of honourable OERC, OPTCL has filed phase-I evacuation plan and expressed to make a presentation before TCC.

OPTCL may make a presentation.

Deliberation in the TCC meeting (discussed together with item No.A7)

OPTCL informed that on the issue they have already filed a petition before OERC.

However, they will give a presentation before 19th ERPC tomorrow.

Deliberation in the ERPC meeting (Item No.A7 & A8 taken up together for discussion)

OPTCL gave a detailed presentation highlighting the issues involved and the scheme prepared by OPTCL for absorption of Orissa share of 10653 MW, out of 40620 MW of installed capacities of 29 IPPs for which Orissa had signed MoU. CMD, OPTCL & GRIDCO further emphasized that instead of each IPP connecting directly to the CTU network, Orissa has designed optimum numbers of pooling Sub-stations where the power would be pooled and the net power after drawal of Orissa share would be injected into the CTU system. This will also require minimum ROW. Further, the consumers of the Orissa would be immensely benefited if the shares of Orissa from IPPs are drawn directly from the pooling stations instead of from CTU network as the POC charges for CTU network would not be applicable. He requested POWERGRID to consider the evacuation plan prepared by OPTCL.

Director (Projects), POWERGRID informed that POWERGRID have no objection against OPTCL proposal of pooling of IPP powers by OPTCL Sub-stations and then injecting this pooled power to CTU system. For this, IPPs have to agree with the OPTCL proposal. He further emphasized that as per the existing connectivity regulations of CERC, IPPs can directly approach CTU for connectivity. So he suggested that OPTCL should take up with the IPPs for getting the power pooled at proposed 400 kV S/s of OPTCL.

Other members present in the meeting emphasized that State in which an IPP is located should have a final say on how the connectivity to the CTU network would be established. Some suggested that necessary provisions may be built in the regulations of SERCs.

ITEM NO.A4: REACTIVE ENERGY CHARGES – PRESENT STATUS

(TCC Agenda Item No.A10)

As per ERLDC, the updated position of Receipt/Payment of Reactive Energy Charges in the pool as on 17.08.2011 (considering bill up to 07.08.2011) is indicated in **Annexure – II**.

Further, in the 15th ERPC meeting, ERPC approved ERLDC proposal of holding 6 nos. of Workshop on “Black Start & Restoration Procedures” at an estimated cost of Rs.1.5 lakh per Workshop, totalling Rs. 9 lakh. Accordingly, the 1st Workshop was organized on 24.06.2011 jointly by ERLDC and ERPC at ERPC, Kolkata. An amount of Rs.1,74,998/- was advanced out of ERPC FUND for organizing this Workshop. In the 18th ERPC meeting, ERPC approved reimbursement of the above expenditure from Reactive Pool Account to ERPC FUND. Accordingly, ERLDC reimbursed the amount from Reactive Pool Account.

The 2nd Workshop was held on 26.07.2011 at Bhubaneswar. GRIDCO organized the above Workshop. The details of expenditure are yet to be received from GRIDCO.

In the 13th ERPC meeting, ERPC approved an additional expenditure of Rs.20 lakh for conducting Workshop and Seminar on various technical issues to be funded from Reactive Pool Fund. Accordingly, the 1st Workshop was held on 18.07.2011 on “Reliability Co-ordination for ER”. An amount of Rs.89,998/- has been spent from ERPC FUND for organizing the above Workshop. Subsequently, ERLDC reimbursed the above amount from Reactive Pool Account to ERPC FUND. Another Workshop on “Emerging Trend for System

Operation & Market Operation” was held on 25.07.2011 at Bhubaneswar. This Workshop was organized by GRIDCO. The details of expenditure have not been received from GRIDCO.

In the last CCM (05.09.11),

- GRIDCO representative informed that the details of expenditure incurred by them for the two seminars/workshop organized by them, would be provided within one week.

GRIDCO may give the details of expenditure.

Members may recommend

Deliberation in the TCC meeting

GRIDCO representative informed that details of expenditure incurred by them for the Workshops on 25th & 26th July 2011 will be intimated by next week.

ERPC Secretariat clarified that on receipt of GRIDCO’s expenditure details, the amount will be released from Reactive Pool subject to cost ceiling approved by ERPC in its 13th & 15th meeting respectively. Post facto approval would be taken from ERPC in its next meeting.

ERPC may approve.

Deliberation in ERPC meeting

Members agreed with the TCC recommendation regarding reimbursement of GRIDCOs expenditure from ER reactive pool for organizing the Workshop on “Black Start and Restoration Procedure” on 26.07.2011 and Workshop on “Emerging Trend for System Operation and Market Operation” held on 25.07.2011 at Bhubaneswar subject to the cost ceiling earlier decided by ERPC. Post facto approval in the next meeting shall be sought.

ITEM NO.A5: TRAINING ON SCADA / EMS - (TCC Agenda Item No.A15)

As per ERPC approval in their 13th meeting ERLDC had already placed an award on M/s AREVA for Comprehensive Software and Hardware maintenance service for the equipment’s installed in the control Centres under ULDC – ER scheme for 3 years extendable up to 5 years at a total cost of Rs 36.36 Lakh. The above costs are exclusive of tax & it was also decided that the expenditure would be funded from reactive pool account.

But total expenditure of the above training would be Rs 36.36 Lakh plus 10.3 % tax which is coming out to be around Rs 40.11 Lakh. It is proposed that the additional amount of Rs. 3, 74, 508 may please be approved.

In the last CCM (05.09.11),

- Members recommended to TCC for acceptance of additional amount of Rs 3, 74, 508 as amount payable towards 10.3% tax for the training on SCADA/EMS.

Members may please recommend to ERPC for approval.

Deliberation in the TCC meeting

TCC recommended to ERPC for acceptance of additional amount of Rs.3,74,508/- as amount payable towards 10.3% tax for the training on SCADA /EMS.

ERPC Secretariat informed that the amount would be paid from Reactive Pool Account of Eastern Region.

ERLDC highlighted non-participation of the utilities in various SCADA training. TCC acknowledged the concern of ERLDC and advised that the utilities should actively participate in the training.

ERLDC intimated the dates of the following programme

- Training on EMS-14.-25.11.2001
- Dispatcher training-12-14.12.2011

TCC advised utilities to send their nomination before next OCC meeting, tentatively scheduled to be held on 18.10.2011.

Deliberation in the ERPC meeting

ERPC approved additional amount of Rs.3,74,508/- as amount payable towards 10.3% tax for the training on SCADA /EMS.

ISSUES FOR INFORMATION

ITEM NO.A6: NETWORK CONSTRAINTS IN EASTERN REGION DUE TO COMMISSIONING OF NEW IPPS – Agenda submitted by ERLDC (TCC Agenda Item No.A3)

A number of IPPs/ Central generating plants have synchronized with ER grid by LILoing of existing lines. viz. Mejia Ph-II (Unit #7) (declared commercial w.e.f. 02.08.2011), DSTPS, Maithon Right Bank TPS (declared commercial w.e.f. 31.08.2011) & Koderma TPS. More IPPs such as Adhunik Power & Natural Resources, Corporate Power etc. are likely to synchronise their units in the near future. This has increased the criticality of the 400 kV Jamshedpur-Mejia-DSTPS-Maithon-Kahalgaon corridor. Tripping of any transmission element in this corridor is likely to cause widespread disturbance because ATS of the power stations is yet to establish. In such scenario, ERLDC has examined a few simulation study cases in respect of the following:

- i) Tripping of 400kV Maithon –DSTPS line
- ii) Tripping of 400kV Maithon-Kahalgaon one circuit
- iii) Tripping of 400kV Mejia ‘B’-Jamshedpur line
- iv) Tripping of 400kV Sterlite-Raigarh line

This has necessitated the immediate implementation of SPS particularly at Maithon RB, Mejia ‘B’ & DSTPS of DVC and other upcoming projects like Adhunik etc.

ERLDC may please present the study results of the above.

Deliberation in the TCC meeting

ERLDC presented detailed study on the issue.

TCC decided that SPS at Maithon RB, Mejia-B (DVC) and DSTPS (DVC) should be implemented on or before 30th November 2011, otherwise ERLDC may curtail the injection from these stations to operate the grid in a safe way.

ERPC Secretariat shall monitor the implementation of the above mentioned SPS schemes.

ERPC may note.

Deliberation in the ERPC meeting

ERPC noted.

ITEM No.A7: NOMINATION FOR THE COORDINATION COMMITTEE AS PER CLAUSE 10.2 OF REVENUE SHARING AGREEMENT - (TCC Agenda Item No.A5)

As per clause 10.2 of the Revenue Sharing Agreement (RSA) approved by CERC the parties to the RSA shall form a committee (“Coordination Committee”) to coordinate and resolve issues relating to implementation of RSA through amicable discussions.

As per the said clause the **Coordination Committee** shall comprise of two representatives from CTU, one from Implementation Agency, **one from each RPC** and one from each ISTS licensees.

ERPC Secretariat is in receipt of a letter from PGCIL vide No-CC/Comml/RSA dated 30.08.2011 in this regard.

TCC members may discuss and decide the methodology of nomination of member from Eastern Regional Power Committee and recommend the same to ERPC for approval.

Deliberation in the TCC meeting

WBSEDCL observed that TSA has not yet been signed by ER states. Therefore, WBSEDCL suggested that this agenda may be taken in future when TSA is signed by ER states.

All other ER states agreed with the suggestion of WBSEDCL.

ERPC may note.

Deliberation in the ERPC meeting

ERPC noted

ITEM NO.A8: SPECIAL PROTECTION SCHEMES - (TCC Agenda Item No.A6)

ERPC in its 16th meeting approved the following System Protection Schemes (SPSs) proposed by ERLDC:

- i. SPS for Purnea – Muzaffarpur D/C
- ii. 400kV Farakka-Kahalgaon line
- iii. 400kV Farakka-Malda line
- iv. SPS for Purnea – Binaguri D/C
- v. SPS for Tenughat – Biharshariff S/C
- vi. SPS for Sterlite Energy Ltd.
- vii. SPS for Mejia ‘B’ and MPL Power stations

Present status

The schemes (i to v) would be put up for approval of funding from PSDF and CERC is yet to approve the ‘Disbursement Procedure’ of PSDF. Further, 400kV Farakka-Kahalgaon 2nd D/C line is commissioned on 31.08.2011 but yet to be made operational.

In order to finalize the SPS for Sterlite (as above vi), a meeting was held among ABB, SEL, OPTCL, ERPC and ERLDC on 27th July 2011 at ERLDC, Kolkata. It was gathered that 3rd unit of SEL is likely to be synchronized shortly. M/s. Sterlite Energy Ltd.(SEL) informed that various logics for reducing its generation under grid contingencies would be integrated to their CILMS (Composite Islanding and Load Management Scheme). Further, as SPS logic is incorporated through PLC it can be modified at any point of time.

In the last Protection Sub-Committee meeting held on 12.08.2011, Mejia‘B’ and MPL informed that the commissioning SPSs will be implemented in consultation with ERLDC at the earliest.

It was agreed earlier that cost of all the SPSs related to generating stations (IPPs) shall be borne by concerned IPP.

The present status of SPS implementation by Mejia ‘B’, MPL, Sterlite etc. may please be intimated.

Deliberation in the TCC meeting

On this issue, NTPC opined that SPS is not a permanent solution, rather a temporary measure. NTPC stressed that load scenario considered by ERLDC is not in sync with completion target of future lines. Therefore, NTPC stressed for a definite programme of commissioning of various transmission lines.

After deliberation, TCC recommended that

- On the issue, both ERLDC & NTPC would make separate studies.
- ERPC Secretariat would convene a special Protection sub-Committee meeting for deliberation on these studies. The outcome of this special meeting will be placed in the next TCC.

- Sterlite, Mejia B and MPL should implement their SPSs on or before 30.11.2011.

ERPC may note.

Deliberation in the ERPC meeting

ERPC noted.

ITEM NO.A9: LAND REQUIREMENT FOR ESTABLISHMENT OF 400/220 KV S/S AT UTTARA UNDER ERSS-III - (TCC Agenda Item No.A9)

POWERGRID has been given the responsibility for construction of 400/220 kV S/S at Uttara in Odisha. POWERGRID had submitted application for pursuing the Administration for issue of notification under Section-IV. Meeting was held with Chief Secretary and Secretary (Energy), Govt. of Odisha regarding the land identified by POWERGRID for Uttara. Consent for identified land for construction of 400/220 kV Uttara S/S was accorded by concerned State officials.

Accordingly POWERGRID initiated the process of acquisition of land.

Meanwhile District Collector, Khurda has informed that the said land will not be available to POWERGRID due to the identification of said land for International Airport.

POWERGRID now is in the process of identification of the fresh land for the said substation. In the last ERPC meeting Powergrid informed that two number sites as identified by OPTCL need to be examined for its suitability and revert back. In the meantime, OPTCL informed that Powergrid will visit on 21.09.2011 for finalising the site location.

OPTCL & Powergrid may inform the further development.

Deliberation in the TCC meeting

PGCIL informed that alternative sites for construction of 400/220 KV Uttara S/S will be visited by their officials in the last week of September, 2011.

ERPC may note.

Deliberation in the ERPC meeting

ERPC noted.

PART B: FOLLOW UP ACTION ON THE DECISIONS OF PREVIOUS ERPC MEETINGS

ITEM NO.B1 ERPC (CONDUCT OF BUSINESS) RULES, 2011
(Item No.1B of the minutes of 18th ERPC meeting)

B1.1: ERPC in its 18th meeting held on 1st July 2011 has approved Eastern Regional Power Committee (Conduct of Business) Rules, 2011 (CBR). The CBR has been forwarded to the members of ERPC vide letter dated 26th August 2011 and also uploaded on ERPC website.

In pursuance of section-25(d) and section-28 of the CBR, draft regulations on 'ERPC Establishment Fund' and 'ERPC Fund' were prepared and circulated to all members vide letter dated 13th September 2011 seeking comments, if any.

No comments have been received from constituent members on the draft regulations.

The regulations on 'ERPC Establishment Fund' and 'ERPC Fund' are appended in the agenda.

Members may approve the above regulations.

B.1.2: As per section 22.3 of the CBR, each Sub-Committee shall make regulations on the procedure for conducting its meetings and get it approved from ERPC. The Operation Co-ordination Sub-Committee (OCC) and Protection Sub-Committee (PC) have finalised its regulations which require amendment of section 22.2 of the CBR on hosting of at least 50% Sub-Committee meetings by constituent members by rotation.

The Commercial Sub-Committee (CC) in its last meeting held on 5th September 2011 has sought comments from its members, if any, on the draft regulations circulated in the meeting. Comments from members are awaited.

Draft regulations on Technical Co-ordination Sub-Committee (TCC) are under preparation and will be circulated to its member shortly.

Regulations on various Sub-Committees will be put up to ERPC for approval on its finalisation by respective Sub-Committees.

This is for information of members.

Deliberation in the ERPC meeting (item no.B.1.1 & B1.2)

Member Secretary In-Charge, ERPC informed that comments have been received from BSEB on the draft regulations on funds circulated to the members. BSEB wanted that expenditure from the surplus funds shall be made only after the consent of ERPC.

ERPC agreed to the proposal of BSEB and approved the regulations on 'ERPC Establishment Fund' and 'ERPC Fund' with the incorporation of following line at the end "Expenditure from the surplus funds shall be made only after the consent of ERPC." The approved regulations are appended at **Annexure-B1 & B2**.

Member Secretary In-Charge, ERPC informed that regulations on various sub-committees are under finalisation and would be put up to ERPC for approval in its next meeting.

ITEM NO.B2: RENOVATION OF ERPC SECRETARIAT PREMISES

(Item No.3B of the minutes of 18th ERPC Meeting)

ERPC in its 18th meeting held on 1st July 2011 has agreed for renovation and modernisation (R&M) of ERPC Secretariat premises. As decided in the meeting, NBCC was approached for consultancy-cum-execution of the R&M work.

NBCC has carried out preliminary survey work for preparation and submission of estimated cost. Cost estimate from NBCC is awaited.

Based on the advice CEA Internal Audit, ERPC Secretariat, vide letter dated 15.09.2011, has sought clearance/permission from CEA for undertaking the R&M work. Reply from CEA is awaited.

This is for information of members.

Deliberation in the ERPC meeting

NBCC gave a brief presentation on the proposed renovation and modernisation work.

Member Secretary In-Charge, ERPC informed that the matter will be put up again on getting clearance/permission from CEA.

Members noted.

PART C: ERPC SECRETARIAT MATTERS

ITEM NO.C1: ERPC-ESTABLISHMENT FUND FOR THE YEAR 2011-12

ERPC in its 17th meeting held on 17th March 2011 has approved contribution of Rs.14 lakh per member for the year 2011-12.

So far, contributions are pending from the following members: DPL, MPL, OHPC and TVNL.

DPL, MPL, OHPC and TVNL are requested to send their contributions to the Secretariat at an early date.

Deliberation in the ERPC meeting

DPL, MPL, OHPC and TVNL were requested to send their contributions at an early date.

ITEM NO.C2: ERPC FUND FOR THE YEAR 2011-12

ERPC in its 17th meeting held on 17th March 2011 has approved contribution of Rs.1 lakh per member for the year 2011-12.

So far, contributions are pending from the following members: DPL, MPL, OHPC and TVNL.

DPL, MPL, OHPC and TVNL are requested to send their contributions to the Secretariat at an early date.

Deliberation in the ERPC meeting

DPL, MPL, OHPC and TVNL were requested to send their contributions at an early date.

PART D: FINALISATION OF VENUE & DATE FOR THE NEXT MEETING

ITEM NO.D1: FINALISATION OF VENUE AND DATE FOR THE NEXT COMMITTEE MEETING

The roster for hosting of ERPC meetings is given below (as per CBR approved by ERPC) :

Sl. No.	Host Organisation
1.	WEST BENGAL
2.	DVC
3.	NHPC
4.	POWERGRID
5.	SIKKIM
6.	PTC
7.	ORISSA
8.	JHARKHAND
9.	BIHAR
10.	NTPC
11.	CESC
12.	APNRL
13.	MPL
14.	STERLITE ENERGY LTD.

In the last (18th) ERPC meeting the turns of BSEB and NTPC were swapped.

Now, it is the turn of Bihar (BSEB) to host the next meeting, for which Members may decide the venue and date.

Deliberation in the ERPC meeting

BSEB agreed to host the next meeting. The dates are 16th and 17th December 2011 for TCC & ERPC meetings respectively. The venue would be either at Bodhgaya or at Patna, to be confirmed by BSEB.

Thereafter, the meeting ended with vote of thanks by NTPC.

EASTERN REGIONAL POWER COMMITTEE

**MINUTES
OF
THE
19th TCC MEETING**

DATE: 23.09.2011

PLACE: GOA

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF THE 19TH TCC MEETING

Date: 23rd September 2011

Place: Goa

In Chair : Shri T.T. Jha, Member (Transmission), BSEB

Host: NTPC Ltd.

List of participants is at Annexure-A2

Shri U.P. Pani, Regional Executive Director (ER-I), NTPC welcomed Shri T.T. Jha, Chairperson, TCC & Member (Transmission), BSEB, other distinguished TCC members, special invitees and other delegates to the 19th TCC meeting on behalf of NTPC and said it was a matter of pride for NTPC to host the meeting.. He said “NTPC is emerging as a diversified power major with presence in the entire value chain of power generation business. The company has set a target of 1,28,000 MW installed capacity by the year 2032 from existing capacity of 34,854 MW. The capacity will have a diversified fuel mix of coal, gas, hydro, nuclear and renewable energy sources with non fossil based generation contributing nearly 28% of total portfolio.” He informed that NTPC is operating its plant at high efficiency levels. With 17.8% of the total national installed capacity, NTPC contributes about 27.4% of total power generation in the country. He said “The main objective of today’s meeting is to strengthen the business ties among the members, to discuss and resolve various constraints and challenges emerging in the region for development of power sector.” In conclusion, he wished the delegates a very happy and joyful stay at Goa.

Shri A.K. Bandyopadhyay, Member Secretary In-Charge, ERPC welcomed Shri T.T. Jha, Chairperson, TCC & Member (Transmission), BSEB, other distinguished TCC members, special invitees and other participants to the meeting. He thanked Shri U.P. Pani, Regional Executive Director (ER-I), NTPC and his team for excellent arrangements for the meeting. He specially welcomed Shri B.K. Jain, Chief Engineer (GM), CEA, Shri C.D. Kumar, Member (T&D), JSEB and Shri S.K. Agrawal, Executive Director (O&M), NHPC as new members of TCC. He drew the attention of the members on the massive earthquake in Sikkim on 18th September 2011 and said other new member Shri N.T. Bhutia, Chief Engineer of Power Department, Govt of Sikkim and his colleague could not attend this meeting due to pressing restoration work across Sikkim. He informed that he had taken over as Member Secretary In-Charge on 6th September 2011 and looked forward to members’ support and valued advice for effective discharge of his responsibilities. In conclusion, he once again thanked NTPC for hosting the meeting at Goa, a most preferred tourist destination and wished the meeting a grand success.

Shri T.T. Jha, Chairperson, TCC & Member (Transmission), BSEB welcomed all TCC members, special invitees and other participants to the meeting. He briefly stated about the mythological history of Goa. He asked for fruitful deliberations on the issues slated for

discussion and wished that the outcome of the meeting would be beneficial to all. In conclusion, he thanked NTPC for excellent arrangements for the meeting.

ITEM NO.A1: CONFIRMATION OF THE MINUTES OF 18th TCC MEETING HELD ON 30.06.2010 AT RANCHI

The minutes of 18th TCC meeting were circulated vide letter no. ERPC/TCC & Committee/14/2011/2784-2843 dated 04.08.2011.

No comments have been received from constituent members on the minutes of the meeting.

Members may confirm the minutes.

Deliberation in the TCC meeting

OPTCL stated that following view of OPTCL be included in the item no.B.13 of the minutes of the last (18th) TCC & ERPC meetings:

“Planning for transmission elements must adhere to the criteria of efficiency and economy”

With this modification members confirmed the minutes.

ITEM NO.A2: IDENTIFICATION OF NON-ISTS LINES CARRYING INTER-STATE POWER IN RESPECT OF SHARING OF ISTS CHARGES AND LOSSES AS PER NEW REGULATIONS OF CERC.

In the last CCM (17th), it was decided that constituents would forward their list of lines so that ERLDC may carry out system study to identify the non-ISTS lines for Eastern Region.

List of lines as received from WBSETCL, BSEB, JSEB and OPTCL has been forwarded to ERLDC.

In the last ERPC meeting (18th) Member(GO&D),CEA took an initiative to organize a meeting where representative from CERC, CEA, POSOCO and CTU would try to allay the fears of ER constituents regarding the new methodology of sharing of transmission charges and losses. The meeting was held on 06.08.2011 at ERPC Secretariat.

Also, in the same meeting, “it was decided that ERLDC will consider all the lines and furnish to ERPC Secretariat a list of qualifying non-ISTS lines. That list may be taken as having been approved by ERPC.”

Further, in the meeting of the Member Secretaries of RPCs held at NRPC, New Delhi on 10.08.2011, it was decided that studies to identify the Non-ISTS lines of new grid being used for inter-state transmission could be carried out through IIT, Mumbai. Though, ERPC is not bound by the decision of Member Secretaries, however, it may consider this option also.

In the last CCM (05.09.11),

- ERLDC informed that they are still in the process of carrying out the studies and would make a presentation in the ensuing TCC/ERPC meetings.

ERLDC may give the presentation and members may discuss.

Deliberation in the TCC meeting

ERLDC presented their detailed study on the issue.

At the outset, BSEB informed that they had already filed a petition challenging the CERC regulations on POC charges. Therefore, BSEB suggested that discussion should not be made in ERPC forum as the matter is subjudice. All beneficiary members of Eastern Region agreed with BSEB's contention. However, it was clarified by ERPC Secretariat that as per existing regulations on POC charges, identification of Non-ISTS lines is a requirement for getting relief for the next FY 2012-13. In case Eastern Region does not identify and furnish it to NLDC with necessary recommendations from ERPC, YTC of these lines will not be included in POC for FY 2012-13. Since identification of non-ISTS lines is a time consuming exercise, the same should be continued. The suggestion of ERPC Secretariat was accepted.

After deliberation, TCC recommended that

- **Before 19th ERPC, ERLDC shall present a list of intra-state lines (lines within one control area) of all ER States, which are carrying more than 50% interstate power.**
- Identification of non-ISTS lines should be completed in such a way that the deadline for submission of the necessary information by 30th November 2011 is adhered to. Therefore, a separate meeting will be convened by the Secretariat at ERPC, Kolkata to sort out diverging interpretations on the identification procedure & finalization of the list as above.

ITEM NO.A3: NETWORK CONSTRAINTS IN EASTERN REGION DUE TO COMMISSIONING OF NEW IPPS – Agenda submitted by ERLDC

A number of IPPs/ Central generating plants have synchronized with ER grid by LILoing of existing lines. viz. Mejia Ph-II (Unit #7) (declared commercial w.e.f. 02.08.2011), DSTPS, Maithon Right Bank TPS (declared commercial w.e.f. 31.08.2011) & Koderma TPS. More IPPs such as Adhunik Power & Natural Resources, Corporate Power etc. are likely to synchronise their units in the near future. This has increased the criticality of the 400 kV Jamshedpur-Mejia-DSTPS-Maithon-Kahalgaon corridor. Tripping of any transmission element in this corridor is likely to cause widespread disturbance because ATS of the power stations is yet to establish. In such scenario, ERLDC has examined a few simulation study cases in respect of the following:

- v) Tripping of 400kV Maithon –DSTPS line
- vi) Tripping of 400kV Maithon-Kahalgaon one circuit
- vii) Tripping of 400kV Mejia 'B'-Jamshedpur line
- viii) Tripping of 400kV Sterlite-Raigarh line

This has necessitated the immediate implementation of SPS particularly at Maithon RB, Mejia 'B' & DSTPS of DVC and other upcoming projects like Adhunik etc.

ERLDC may please present the study results of the above.

Deliberation in the TCC meeting

ERLDC presented detailed study on the issue.

TCC decided that SPS at Maithon RB, Mejia-B (DVC) and DSTPS (DVC) should be implemented on or before 30th November 2011, otherwise ERLDC may curtail the injection from these stations to operate the grid in a safe way.

ERPC Secretariat shall monitor the implementation of the above mentioned SPS schemes.

ERPC may note.

ITEM NO.A4: PAYMENT OF UI -- PRESENT STATUS

As submitted by ERLDC, the status of UI payment for 2011-12 is enclosed at **Annexure – I**.

In the last Commercial Committee Meeting (CCM) held on 05.09.11 ERLDC informed that

- BSEB and JSEB were both in receivable mode.
- As on 24.08.2011 the receivables of BSEB from UI pool were of the order of Rs 8.07 Crore.
- Sikkim had around Rs 9 Crore as outstanding.
- S.E.(Commercial), ERPC requested Sikkim representative to get the payment settled immediately since Hon'ble CERC is also monitoring these data and may initiate suo motu action as has been done in the case of BSEB.

Sikkim may inform the latest status.

Deliberation in the TCC meeting

ERLDC furnished the updated figures in the meeting. As per the information furnished by ERLDC, outstanding dues of Sikkim had reduced to Rs. 2 crore (approx). BSEB and JSEB were also in the receiving mode.

ERPC Secretariat suggested that in order to avoid UI payment crisis, ERLDC should keep adequate reserve to meet UI obligations of the constituents. Balance amount, if any, may be transferred to PSDF as per CERC regulations.

ITEM No.A5: NOMINATION FOR THE COORDINATION COMMITTEE AS PER CLAUSE 10.2 OF REVENUE SHARING AGREEMENT

As per clause 10.2 of the Revenue Sharing Agreement (RSA) approved by CERC the parties to the RSA shall form a committee ("Coordination Committee") to coordinate and resolve issues relating to implementation of RSA through amicable discussions.

As per the said clause the **Coordination Committee** shall comprise of two representatives from CTU, one from Implementation Agency, **one from each RPC** and one from each ISTS licensees.

ERPC Secretariat is in receipt of a letter from PGCIL vide No-CC/Comml/RSA dated 30.08.2011 in this regard.

TCC members may discuss and decide the methodology of nomination of member from Eastern Regional Power Committee and recommend the same to ERPC for approval.

Deliberation in the TCC meeting

WBSEDCL observed that TSA has not yet been signed by ER states. Therefore, WBSEDCL suggested that this agenda may be taken in future when TSA is signed by ER states.

All other ER states agreed with the suggestion of WBSEDCL.

ERPC may note.

FOLLOW UP ITEMS FOR DISCUSSION

ITEM NO.A6: SPECIAL PROTECTION SCHEMES

(Item No. B.10 of 18th ERPC meeting)

ERPC in its 16th meeting approved the following System Protection Schemes (SPSs) proposed by ERLDC:

- vii. SPS for Purnea – Muzaffarpur D/C
- viii. 400kV Farakka-Kahalgaon line
- ix. 400kV Farakka-Malda line
- x. SPS for Purnea – Binaguri D/C
- xi. SPS for Tenughat – Biharshariff S/C
- xii. SPS for Sterlite Energy Ltd.
- vii. SPS for Mejia ‘B’ and MPL Power stations

Present status

The schemes (i to v) would be put up for approval of funding from PSDF and CERC is yet to approve the ‘Disbursement Procedure’ of PSDF. Further, 400kV Farakka-Kahalgaon 2nd D/C line is commissioned on 31.08.2011 but yet to be made operational.

In order to finalize the SPS for Sterlite (as above vi), a meeting was held among ABB, SEL, OPTCL, ERPC and ERLDC on 27th July 2011 at ERLDC, Kolkata. It was gathered that 3rd unit of SEL is likely to be synchronized shortly. M/s. Sterlite Energy Ltd.(SEL) informed that various logics for reducing its generation under grid contingencies would be integrated to their CILMS (Composite Islanding and Load Management Scheme). Further, as SPS logic is incorporated through PLC it can be modified at any point of time.

In the last Protection Sub-Committee meeting held on 12.08.2011, Mejia ‘B’ and MPL informed that the commissioning SPSs will be implemented in consultation with ERLDC at the earliest.

It was agreed earlier that cost of all the SPSs related to generating stations (IPPs) shall be borne by concerned IPP.

The present status of SPS implementation by Mejia 'B', MPL, Sterlite etc. may please be intimated.

Deliberation in the TCC meeting

On this issue, NTPC opined that SPS is not a permanent solution, rather a temporary measure. NTPC stressed that load scenario considered by ERLDC is not in sync with completion target of future lines. Therefore, NTPC stressed for a definite programme of commissioning of various transmission lines.

After deliberation, TCC recommended that

- On the issue, both ERLDC & NTPC would make separate studies.
- ERPC Secretariat would convene a special Protection sub-Committee meeting for deliberation on these studies. The outcome of this special meeting will be placed in the next TCC.
- Sterlite, Mejia B and MPL should implement their SPSs on or before 30.11.2011.

ERPC may note.

ITEM NO.A7: Composite Transmission System for transfer of power from Orissa UMPP and Orissa Ph-II IPP Projects to Beneficiaries (under the Scope of POWERGRID) - (Item No. B12 of 18th ERPC meeting)

Even after two meetings held between Odisha and CTU after the SCM held on 28.12.2010, the composite transmission system is yet to be finalized.

Powergrid viewed that the requirement of pooling station and drawal of its share is a technical matter. As regards transmission charges are concerned the same would be governed by the prevailing regulations / norms of CERC. In the last ERPC meeting, OPTCL made a brief presentation. After the presentation, it was agreed that CTU & OPTCL may deliberate further in a meeting to be held at Gurgaon.

OPTCL and POWERGRID may inform the latest status.

Deliberation in the TCC meeting

OPTCL informed that on the issue they have already filed a petition before OERC.

However, they will give a presentation before 19th ERPC tomorrow.

ITEM NO.A8: EVACUATION OF POWER FROM UPCOMING IPPs IN ODISHA –Proposed by Odisha -(Item No. B.13 of 18th ERPC meeting)

In the SCM held on 28.12.2010, PGCIL made a presentation on the evacuation of power from the IPPs coming near Dhenkanal i.e. Tata power, CESC, Visa Power, Mahanadi Aban, Bhusan by setting up of a 765kV Pooling station at Dhenkanal. GRIDCO/OPTCL also made a

presentation justifying of one 400kV STU S/s at Khuntuni (near Dhenkanal) for evacuation of state share power from the Phase-I & Phase-II IPPs by swapping mechanism. GRIDCO stated that 765kV S/s at Dhenkanal is not required.

Subsequently PGCIL came up with the proposal of connecting one unit each from Tata power, CESC, Visa Power, Mahanadi Aban, Bhusan with OPTCL network & PGCIL 765kV S/s separately through swapping arrangement.

With the above arrangement only 3600MW out of total Odisha share of about 6000MW can be evacuated into STU network. Connection of IPP generator with STU S/s at Khuntuni is a better proposal due to following reasons :

1. Less RoW and forest involvement.
2. In case tie bus is closed, fault MVA will increase.
3. OPTCL need not have to pay PoC charges.

OPTCL made a presentation on it.

Latest Status:

The scheme is yet to be finalised.

Powergrid viewed that the requirement of pooling station and drawal of its share is a technical matter. As regards transmission charges are concerned the same would be governed by the prevailing regulations / norms of CERC. In the last ERPC meeting, OPTCL made a brief presentation. After the presentation it was agreed that CTU & OPTCL may deliberate further in a meeting to be held at Gurgaon.

Meanwhile, OPTCL vide letter dated .16.09.2011 intimated that as per the direction of honourable OERC, OPTCL has filed phase-I evacuation plan and expressed to make a presentation before TCC.

OPTCL may make a presentation.

Deliberation in the TCC meeting

OPTCL informed that on the issue they have already filed a petition before OERC.

However, they will give a presentation before 19th ERPC tomorrow.

ITEM NO.A9: LAND REQUIREMENT FOR ESTABLISHMENT OF 400/220 KV S/S AT UTTARA UNDER ERSS-III - (Item No.C.5 of 18th ERPC meeting)

POWERGRID has been given the responsibility for construction of 400/220 kV S/S at Uttara in Odisha. POWERGRID had submitted application for pursuing the Administration for issue of notification under Section-IV. Meeting was held with Chief Secretary and Secretary (Energy), Govt. of Odisha regarding the land identified by POWERGRID for Uttara. Consent for identified land for construction of 400/220 kV Uttara S/S was accorded by concerned State officials.

Accordingly POWERGRID initiated the process of acquisition of land.

Meanwhile District Collector, Khurda has informed that the said land will not be available to POWERGRID due to the identification of said land for International Airport.

POWERGRID now is in the process of identification of the fresh land for the said substation. In the last ERPC meeting Powergrid informed that two number sites as identified by OPTCL need to be examined for its suitability and revert back. In the meantime, OPTCL informed that Powergrid will visit on 21.09.2011 for finalising the site location.

OPTCL & Powergrid may inform the further development.

Deliberation in the TCC meeting

PGCIL informed that alternative sites for construction of 400/220 kV Uttara S/S will be visited by their officials in the last week of September, 2011.

ERPC may note.

ITEM NO.A10: REACTIVE ENERGY CHARGES – PRESENT STATUS.

As per ERLDC, the updated position of Receipt/Payment of Reactive Energy Charges in the pool as on 17.08.2011 (considering bill up to 07.08.2011) is indicated in **Annexure – II**.

Further, in the 15th ERPC meeting, ERPC approved ERLDC proposal of holding 6 nos. of Workshop on “Black Start & Restoration Procedures” at an estimated cost of Rs.1.5 lakh per Workshop, totalling Rs. 9 lakh. Accordingly, the 1st Workshop was organized on 24.06.2011 jointly by ERLDC and ERPC at ERPC, Kolkata. An amount of Rs.1,74,998/- was advanced out of ERPC FUND for organizing this Workshop. In the 18th ERPC meeting, ERPC approved reimbursement of the above expenditure from Reactive Pool Account to ERPC FUND. Accordingly, ERLDC reimbursed the amount from Reactive Pool Account.

The 2nd Workshop was held on 26.07.2011 at Bhubaneswar. GRIDCO organized the above Workshop. The details of expenditure are yet to be received from GRIDCO.

In the 13th ERPC meeting, ERPC approved an additional expenditure of Rs.20 lakh for conducting Workshop and Seminar on various technical issues to be funded from Reactive Pool Fund. Accordingly, the 1st Workshop was held on 18.07.2011 on “Reliability Co-ordination for ER”. An amount of Rs.89,998/- has been spent from ERPC FUND for organizing the above Workshop. Subsequently, ERLDC reimbursed the above amount from Reactive Pool Account to ERPC FUND. Another Workshop on “Emerging Trend for System Operation & Market Operation” was held on 25.07.2011 at Bhubaneswar. This Workshop was organized by GRIDCO. The details of expenditure have not been received from GRIDCO.

In the last CCM (05.09.11),

- GRIDCO representative informed that the details of expenditure incurred by them for the two seminars/workshop organized by them, would be provided within one week.

GRIDCO may give the details of expenditure.

Members may recommend.

Deliberation in the TCC meeting

GRIDCO representative informed that details of expenditure incurred by them for the Workshops on 25th & 26th July 2011 will be intimated by next week.

ERPC Secretariat clarified that on receipt of GRIDCO's expenditure details, the amount will be released from Reactive Pool subject to cost ceiling given by ERPC in its 13th & 15th meeting respectively. Post facto approval would be taken from ERPC in its next meeting.

ERPC may approve.

ITEM NO.A11: NON RECEIPT OF SEM DATA FROM JSEB

Since 22.02.10, SEM readings from JSEB substations for JSEB tie lines are not being received at ERLDC. The matter had been discussed in various fora of TCC/ERPC wherein it was intimated by JSEB that they are taking expeditious action in this regard. Nothing has been done so far and entire computation is being done considering the meter readings of other ends.

In the last ERPC meeting JSEB was advised to ensure that data is received at ERLDC on time.

In the last CCM (05.09.11),

- JSEB representative was absent.
- ERLDC informed that requisite data are still not being received by ERLDC.
- This issue was referred to TCC by the members.

JSEB may respond.

Deliberation in the TCC meeting

ERPC Secretariat underlined the need for timely submission of SEM data for UI computation. Due to non-availability of SEM data from JSEB, the other end readings are being taken for UI calculation. As a result, loss is being absorbed by JSEB, resulting financial loss.

JSEB assured that SEM data will be made available at ERLDC on and from 15.10.2011.

ITEM NO.A12: NON-RELEASE OF PAYMENT TOWARDS SERVICE CHARGES FOR MAINTENANCE OF EMS/ SCADA SYSTEM –FIFTH AND SIXTH QUARTERS' BY FOLLOWING CONSTITUENTS:

LTSA(Long term Service Agreement) contract for EMS/SCADA system installed at all control centres (ERLDC ,WBSETCL, OPTCL, DVC, JSEB, BSEB & Sikkim) was awarded to M/s Areva India T & D Ltd. on 15th January 2010 by ERLDC.

Status of payment due is as below :

Sl. No.	Name of Constituent	Period	Bill Amount (Rs.)	Due Date
1.	BSEB	Qr.07 (From 18 th July'11 to 17 th Oct'11)	14,86,541	17.07.11
2.	SIKKIM	Qr.07 (From 18 th July'11 to 17 th Oct'11)	49,432	17.07.11

In the last CCM (05.09.11),

- BSEB representative was absent.
- Sikkim representative informed that they would liquidate the charges within one week.
- It was decided to bring this to the notice of TCC member from BSEB in the ensuing September meetings.

BSEB, Sikkim & ERLDC may respond.

Deliberation in the TCC meeting

BSEB informed that bill for Qtr 7 is already under process. However, their Finance & Accounts Section is demanding a final acknowledgement from ERLDC for the payments already released by BSEB till 6th Qtr. ERLDC clarified that no such provision of issuance of final acknowledgement is there. However, ERLC agreed to issue a certificate on the same to BSEB for facilitating earliest liquidation of payment for Qtr 7.

ITEM NO.A13: ULDC SYSTEM – SIGNING OF MOU FOR AMC OF WIDEBAND COMMUNICATION AND AUXILIARY POWER SUPPLY SYSTEM.

In the last ERPC meeting BSEB & JSEB had assured early signing of MoU.

In the last CCM (05.09.11) ERLDC informed that,

- BSEB has expressed *willingness* to sign the MOU for Wideband Communication and not for Auxiliary Power Supply System.
- JSEB has signed the MOU for Auxiliary Power Supply System and not for Wideband Communication.

PGCIL has requested discussion on this issue vide their letter dated 06.09.2011.

PGCIL may elaborate and members may discuss.

Deliberation in the TCC meeting

BSEB informed that they would sign the MoU for AMC of wideband communication and Auxiliary Power Supply System within a fortnight.

JSEB informed MoU for Wideband communication would be signed within a day or two.

ITEM NO.A14: IMPLEMENTATION OF AUTOMATIC METER READING IN EASTERN REGION

In the last ERPC meeting it was decided that the project would be implemented by PGCIL and the cost (Rs 3.6 Cr approx including AMC for 5 years for 115 meter locations) would be recovered as per procedure of sharing of meter costs.

However, the cost of AMR for the IPPs would be borne by the respective owners.

In the last CCM (05.09.11),

- PGCIL informed that they have tied up with M/s Wipro for a demonstration project at Subhasgram S/S.
- During this process it was discovered that the L&T meters were not modbus protocol enabled.
- However, L&T has informed that they are ready to share the modbus protocol if PGCIL, L&T and the implementing party enter into a legal tripartite agreement to regulate the sharing of the protocol.
- PGCIL informed that there would be no additional cost implications for modbus protocol compliance.
- GM, ERLDC requested that the L1 party for the purchase of current lot of meters may be impressed upon to share modbus protocol.
- Further, in future, any purchase of meters may include this as criteria modbus protocol enabled) in the tendering stage itself.

ERLDC and Powergrid may elaborate further.

Deliberation in the TCC meeting

ERLDC pointed out that instead of modbus protocol, meters will be of IEC-1107 protocol. With this modification the TCC endorsed the views of 18th Commercial Sub-Committee Meeting.

A demonstration will be given by M/s Wipro on 26.09.2011.

ITEM NO.A15: TRAINING ON SCADA / EMS

As per ERPC approval in their 13th meeting ERLDC had already placed an award on M/s AREVA for Comprehensive Software and Hardware maintenance service for the equipment's installed in the control Centres under ULDC – ER scheme for 3 years extendable up to 5 years at a total cost of Rs 36.36 Lakh. The above costs are exclusive of tax & it was also decided that the expenditure would be funded from reactive pool account.

But total expenditure of the above training would be Rs 36.36 Lakh plus 10.3 % tax which is coming out to be around Rs 40.11 Lakh. It is proposed that the additional amount of Rs. 3, 74, 508 may please be approved.

In the last CCM (05.09.11),

- Members recommended to TCC for acceptance of additional amount of Rs 3, 74, 508 as amount payable towards 10.3% tax for the training on SCADA/EMS.

Members may please recommend to ERPC for approval.

Deliberation in the TCC meeting

TCC recommended to ERPC for acceptance of additional amount of Rs.3,74,508/- as amount payable towards 10.3% tax for the training on SCADA /EMS.

ERPC Secretariat informed that the amount would be paid from Reactive Pool Account of Eastern Region.

ERLDC highlighted non-participation of the utilities in various SCADA training. TCC acknowledged the concern of ERLDC and advised that the utilities should actively participate in the training.

ERLDC intimated the dates of the following programme

- Training on EMS-14.-25.11.2001
- Dispatcher training-12-14.12.2011

TCC advised utilities to send their nomination before next OCC meeting, tentatively scheduled to be held on 18.10.2011.

ITEM NO.A16: INSTALLATION OF METER AT PPSP

400 KV PPSP – Durgapur line was made LILO at Bidhannagar in WBSETCL. With this, the new Tie line became as 400 KV Bidhannagar- Durgapur. Special energy meter had already been installed at Durgapur, which is being used for accounting purpose. However at present there is no ABT meter installed at Bidhannagar end. As per CEA metering regulation 2006 and its amendments, one no. of SEM is required to be installed also at Bidhannagar end of Bidhannagar – Durgapur line and the same end data is required to be sent at ERLDC for UI computation purpose.

In the last ERPC meeting WBSEDCL, ERLDC and PGCIL had informed that they would sort out the issue mutually.

In the last CCM (05.09.11),

- WBSEDCL representative informed that ABT meters have been installed at Bidhannagar by WBSETCL. However, they would send a confirmation in this regard to PGCIL and ERLDC after discussing with WBSETCL.
- PGCIL requested that the meters installed at PPSP end be returned.

- ERLDC representative requested that a set of data may be sent to ERLDC to check for compatibility.

Commercial sub-Committee would continue to monitor this and keep TCC posted about the status.

Members may please note.

Deliberation in the TCC meeting

WBSETCL assured that the matter will be resolved within a week.

ITEM NO.A17: OPENING OF LC BY ER CONSTITUENTS FOR UI PAYMENTS

As per the Unscheduled Interchange charges and related matters (Amendment) Regulations, 2010 issued by CERC vide notification No. L-1(1)/2009-CERC dated 28th April, 2010 (effective from 03.05.10)

The LC amount to be opened by BSEB & JSEB is tabulated in **Annexure - III**. ERLDC has already intimated the concerned constituents through individual letters.

In the last TCC/ERPC meeting BSEB and JSEB informed that they would take appropriate action.

In the last CCM (05.09.11),

- JSEB and BSEB representatives were absent.
- ERLDC informed that despite writing several times to BSEB and JSEB authorities in this regard, no action has been taken by them.
- S.E.(Commercial), ERPC, informed that CERC is regularly monitoring such issues and may initiate suo motu action.
- It was decided that ERPC Secretariat would write to JSEB and BSEB in this regard.

ERPC Secretariat has written to BSEB and JSEB on 13.09.2011 in this regard.

BSEB, JSEB and ERLDC may inform the latest status.

Deliberation in the TCC meeting

JSEB assured that they have taken necessary steps and the LC would be opened within fifteen days. BSEB informed that they are examining the issue and will take necessary action.

ERPC Secretariat informed that opening of LC is a regulatory requirement and CERC is continuously monitoring this. In recent CERC hearing on BSEB's outstanding UI dues, CERC asked BSEB to open LC immediately.

**ITEM NO.A18: LESS REGISTRATION AT 132 KV MAITHON-JAMTARA TIE
FLOW FROM 23.09.2007 TO 03.12.2007-Agenda by DVC**

In the last ERPC (18th) meeting, JSEB proposed to host a meeting in Ranchi on 20th July among JSEB, DVC and ERPC Secretariat representatives would decide the principles guiding the resolution and settle the issue conclusively.

In pursuant to the ERPC direction, a meeting was held on 20.07.2011 in Ranchi in which both sides accepted the formula. The payment settlement by adjustment of JSEB UI receivables was also agreed upon.

Accordingly, DVC has started receiving payments from JSEB by adjustment of JSEB UI receivables and shown in the UI Account beginning from the week 1st Aug, 2011.

In the last CCM (05.09.11),

- S.E.(Commercial), ERPC, informed that an amount of Rs 8 Cr (approx) has been already adjusted from the receivables of JSEB and paid to DVC.
- However, this was causing negative pool balance on certain occasions.
- DVC was requested to make UI payments as per the accounts and adjustments would be done as and when pool balance is sufficient.

Members may please note. This shall continue to be monitored in subsequent CCM.

Deliberation in the TCC meeting

Members acknowledged the efforts of JSEB, DVC and ERPC Secretariat to settle this issue.

Members noted.

PART B : ITEMS FOR INFORMATION

ITEM NO.B 1: Interim Arrangement for evacuation of power from Teesta-III HEP (6X200MW) by Teesta Urja Ltd. through LILO of one circuit of 400kV Teesta V-Siliguri D/C line at Teesta-III HEP (Item No. B 11 of 18th ERPC meeting)

Background

After the Standing Committee Meeting (SCM), NHPC conveyed that it may accord consent for interim arrangement for the evacuation of power of Teesta-III through existing Teesta-V system only after the above technical and commercial aspects are specified and agreed to by concerned utilities.

Thereafter, in the Protection Sub-Committee meeting, a basic scheme for reducing generation at Teesta-III HPS, in the event of tripping of (i) Teesta V - Binaguri direct line or (ii) Teesta III – Binaguri line section, was explained by ERLDC. The scheme was forwarded to NHPC HQ for examination both by NHPC and Teesta Urja Ltd. before its finalization. [This scheme

has to be implemented by Teesta Urja Ltd. at their own cost.]. It was further learnt that the expected commissioning schedule of Teesta Urja Unit-1 is April, 2012 and subsequent Units at an interval of one month period.

Subsequently, ERLDC, vide letter No. ERLDC/MO/U-31/2011 dated 1st September, 2011 addressed to Teesta Urja Ltd, expressed the urgency for finalizing the SPS through deliberations in the 66th OCC meeting on 16.09.11. It is decided that a separate meeting with the concerned utilities for finalising the SPS & expediting the establishment of its ATS (i.e. 400kV Teesta-III- Kishenganj D/C line).

NHPC may please appraise the latest position.

Deliberation in the TCC meeting

TCC noted.

NHPC expressed their reservation against the LILO of 400kV Teesta-Binaguri line for evacuation of Teesta-III HEP. It was decided that NHPC's concern would be discussed in the special meeting to be convened by ERPC Secretariat in this regard.

ITEM NO.B2: PROVISION OF BUS-BAR DIFFERENTIAL PROTECTION – Agenda submitted by ERLDC

As per CEA Technical Standards on Connectivity to Grid 2007 , provision of Bus-Bar differential protection is mandatory at all S/Stns and power stations of voltage 220kV and above. Further, as per CEA Regulation on Grid Standards 2010, the maximum allowable fault clearance time at 400kV and 220kV is 100ms and 160ms respectively. This is to ensure faster clearance of faults and safeguard the substation equipment.

Recently a large number of generators have been connected to the ER grid by just doing LILO of existing lines. A few additional lines have also commissioned in recent past. This addition of extra generators and lines has increased fault levels at different substations. At substations with high fault levels, implementation of Bus bar protections (wherever not available) at the earliest would be of utmost importance. The higher fault levels anticipated in future, requires measures like bus splitting, series reactors etc.

The power stations of DVC i.e. Mejia 'B', DSTPS, Koderma & Raghunathpur are required for provision of Bus Bar Differential Protection Scheme implemented during the units are in operation.

This is for information.

Deliberation in the TCC meeting

DVC informed that bus differential had already been put into service in Mejia-B, DSTPS and Koderma Thermal Power Stations. DVC also assured that the scheme would also be placed in Raghunathpur TPS before it comes into operation.

**ITEM NO.B3: COMMISSIONING OF 220KV BUS BAR PROTECTION AT
RAMCHANDRAPUR & CHANDIL SUBSTATIONS (JSEB)**

– (Item No. B.15 of 18th ERPC meeting)

This matter was discussed in various ERPC fora and implementation is pending since long.

The Bus Bar Protection of 220KV Ramchandrapur Substation (JSEB) is yet to be commissioned by JSEB. Due to non-availability of Bus Bar protection, the fault in the bus is cleared by the protection of the ICTs.

JSEB agreed to accord priority to the above tasks.

Present Status

Ramchandrapur and Chandil S/Stns

As advised by the 18th TCC, a sub-group comprising members from ERPC, ERLDC, POWERGRID and JSEB has been constituted to assess the feasibility of its implementation. The committee is expected to visit the above S/Stns during September/October' 11.

This is for information of members.

Deliberation in the TCC meeting

TCC noted.

**ITEM NO.B4: SURVEY OF THE RECOMMENDATIONS OF THE REGIONAL
RELIABILITY COORDINATORS– Agenda submitted by ERLDC**

Experts on system reliability from different utilities, including members from OCC and PCC furnished their views on various issues concerning the reliability of the regional grid, in the workshop on Regional Reliability Coordination held on 18.07.11. Gist of the recommendations is given in **Annexure- IV**.

Since TCC is the highest body to recommend measures that will be technically beneficial for the grid, members may please furnish their valuable guidance for finalizing the vision document on reliability.

This is for information.

Deliberation in the TCC meeting

TCC noted.

**ITEM NO.B5: LOOK-UP TABLE FOR CREDIBLE CONTINGENCIES
– Agenda submitted by ERLDC**

The Control Centres in Eastern Region should prepare look-up table comprising credible contingencies and corrective actions required in response to these contingencies. The corrective actions have to be ranked based on the three criteria as follows:-

- Impact / Sensitivity based, that is quantum of relief expected by the proposed corrective action.
- Risk based assessment, based on the time required to implement corrective action and a number of agencies to be coordinated with
- Combination of the above two.

It is also preferable to rank the contingencies and to make available to the system operators the possible remedial measures that need to be taken in the form of lookup tables. This would help the System operators to respond to the events / contingencies in a faster and effective way.

The importance of look up table was already emphasized in Reliability Coordinator Workshop held on 18th July 2011 at ERPC, Kolkata. ERLDC has prepared a lookup table for the credible contingencies of important regional grid elements.

The 10th Protection Sub-Committee in its meeting held on 12.08.11 endorsed the lookup table. The lookup tables have already been sent to all the SLDCs and RLDCs. ERLDC will suitably modify the tables as the configuration and scenario of the interconnected system evolves in future.

This is for information.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B6: IMPLEMENTATION OF SYNCHROPHASOR TECHNOLOGY IN EASTERN REGION (Item No. B.8 of 18th ERPC meeting)

For enhanced monitoring and visualization of grid, Implementation of synchrophasor technology with 28 Nos. of PMUs was proposed by ERLDC in the 14th ERPC meeting held on 11.06.2010 wherein the scheme along with cost estimate of Rs. 18.65 crore was duly approved by ERPC and thereafter put up to PSDF for 100 % funding of the project. Due to constraints in full funding of the scheme by PSDF, ERPC in its 17th meeting advised ERPC Secretariat & ERLDC to take up with CERC. Since CERC is yet to approve the 'Disbursement Procedure' of PSDF, ERLDC was requested to present there plan before ERPC.

In the 18th ERPC meeting, the expenditure amounting to Rs.8 crore for procurement of few PMUs by preponing ERLDC CAPEX plan for 2012-13 was approved.

In the last CCM dated 05.09.2011 ERLDC informed that specification has been prepared and NIT would be floated in the month of September, 2011. The list of the 7 pilot PMUs to be installed at critical stations as identified by ERLDC is enclosed at **Annexure-V**

Member may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B7: VOLTAGE COLLAPSE PREDICTION RELAYS

(Item No. B.9 of 18th ERPC meeting)

ERPC in its 15th meeting approved ERLDC proposal for procurement of 10 Nos. of Voltage Collapse Prediction Relays of M/s. A.Eberle costing Rs. 3 crore including (cost of training abroad) subject to the condition that it is to be funded from PSDF.

ERLDC in the 17th ERPC meeting informed that it is ready to submit the proposal to PSDF as and when PSDF calls.

CERC is yet to approve the 'Disbursement Procedure' of PSDF.

This is for information.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B8: DECLARATION OF COD OF TRANSMISSION ELEMENTS BY PGCIL

The following elements have been declared commercial by PGCIL:

- A. 400 KV D/C Rourkela-Raigarh Transmission Line and associated 400 KV bays at Rourkela and Raigarh Substations w.e.f. 01.07.2011
- B. 400 KV Baripada-Mendhasal D/C line, associated bays and associated one number switchable line reactor at Baripada (Ckt-II) & 2 nos fixed line reactors at Mendhasal (Ckt-I&II) under ERSS-I project along with switchyard of Mendhasal OPTCL w.e.f. 01.09.2011 [The Ckt-I&II has been charged from Baripada S/S upto Mendhasal at 21:25 Hrs and 19:40 Hrs respectively on 29.08.11. The line could not be synchronized pending clearance from OPTCL]
- C. 400 KV D/C Kahalgaon-Farakka line and associated bays at Kahalgaon end under Farakka-III Transmission system w.e.f. 01.09.2011.

Members may please note.

Deliberation in the TCC meeting

Regarding COD of 400kV Baripada –Mendhasal, OPTCL stated that 400KV Jamshedpur-Baripada- Mendhasal was conceived as a complete section and commissioning of part of the section would not serve any purpose. Therefore, they are not willing to accept the COD of the 400kV Baripada –Mendhasal line.

Regarding 400kV D/C Kahalgaon- Farakka line, NTPC opined that though the line has been commissioned but the line is yet to be made operational. During deliberation, it was understood that some work at Farakka end is to be completed by NTPC for line charging.

ERPC Secretariat expressed that in PoC regime, there is no requirement of formal acceptance of COD of transmission elements of PGCIL in ERPC forum.

ITEM NO.B9: RECONCILIATION OF UI POOL ACCOUNT

The statement of reconciliation of UI Account for the period from April'10 to March'11 stands confirmed.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B10: TRANSFER TO POWER SYSTEM DEVELOPMENT FUND (PSDF)

As submitted by ERLDC, an amount of Rs.16.45 Crore on account of Additional Surcharge for the year 2010 – 11 have been transferred to PSDF on 19.08.11. The status of fund transferred to PSDF so far is enclosed in **Annexure-VI**.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B11: DISTRIBUTION OF INTEREST RECEIVED FROM BSEB AND JSEB FOR 2010-11

As informed by ERLDC, the interest outstanding on UI charges receivable from BSEB & interest receivable from JSEB is given hereunder:

After Full settlement of UI principal amount of 2010 - 11, the total interest amount recovered from BSEB and JSEB are Rs 29.80 Lakh and Rs 16.84 Lakh respectively. The interest amount receivable by various ER constituents is Rs 46.64 Lakh for the year 2010 – 11 on account of delayed payment of UI charges by BSEB and JSEB respectively. Hence the following payments towards interest of UI charges due to delayed payment for the year 2010 - 11 is paid to the constituents as per the ratio of their receivables. Thus delayed payment interest (UI) account for the FY 2010-11 thereby settled.

Constituents	Amount (Rs) for BSEB (2010-11)	Amount (Rs) for JSEB (2010-11)	Total Amount (Rs)	Cheque No
DVC	21, 114	11, 934	33, 048	E-pymt - 288532
GRIDCO	19.59 Lac	11.07 Lac	30.66 Lac	E-pymt - 288533
WBSETCL	7.53 Lac	4.25 Lac	11.78 lac	RTGS - 288534
NTPC	1.73 Lac	97, 581	2.70 Lac	RTGS - 288535
NHPC	74,584	42,156	1.17 Lac	RTGS - 288536
TOTAL	29.80 Lac	16.84 Lac	46.64 Lac	

Members may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B12: METERING ARRANGEMENTS OF VARIOUS IPPS

A. MEJIA – B POWER STATION

In the 16th ERPC meeting it was decided that Mejia – B shall be considered as a separate control area and its scheduling shall be done by ERLDC as per the provisions of IEGC. ERLDC informed that the metering requirement of the power station has already been examined at their end and proposed metering scheme of Mejia - B has also been forwarded to DVC for further necessary action. It was informed to DVC by ERLDC that DVC/MEJIA shall interact with POWERGRID, ERTS-II for installation of additional meters (check and standby).

One no. of SEM (as Check meter) each at Mejia-B end of both the 400 KV outgoing Feeders, 02 nos of SEMs (as Standby) at EHV side of GTs, 02 nos of SEMs (as standby) at EHV side of Station transformer is required to be installed. Thus total 06 nos of SEMs are required to be installed.

In the last ERPC (18th) meeting PGCIL confirmed that they would complete installation of meters by second week of July-11.

In the last CCM (05.09.11),

- PGCIL representative informed that all meters required for metering of Mejia-B power station except for one meter at Jamshedpur feeder (Mejia-B end) had been installed.
- ERLDC requested for the CT/PT ratio from PGCIL. This was provided to ERLDC by PGCIL in the meeting.
- ERLDC requested DVC representative to provide a set of data from the meters to check for compatibility.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

B. SEL (STERLITE ENERGY LIMITED)

The metering requirement at Sterlite has been re-examined in a meeting with ERPC, ERLDC & SEL at Jharsuguda on 23.05.2011. It has been decided in the meeting that Special Energy meter should be installed on HV Side as well as LV Side of each ICT, CPP to Budhipadar

connection at VAL end, which has to be arranged by SEL. Further 02 nos of L&T make ABT meter is required to be installed on the VAL-Budhipadar feeder at Budhipadar end. Sterlite intimated that they are going to synchronise U # 3 by 3rd/4th week of May'2011. Therefore, for UI energy accounting purpose, 02 nos of SEM are required to be installed (One SEM each at EHV side of GT & Station transformer). Thus total 08 nos of SEMs are required to be installed at Sterlite.

The L&T make ABT meters shall be provided and installed by POWERGRID, ER-II. POWERGRID shall also arrange for 02 no DCDs to enable downloading of data from these meters. SEL shall arrange to send all the ABT meter readings on weekly basis (by every Monday) to ERLDC, through email. SEL will provide the switchyard SLD, protection & metering scheme details to SLDC/ERLDC/ERPC within a week.

This issue was discussed in the last ERPC meeting.

In the last CCM (05.09.11),

- SEL representative was absent.
- ERLDC informed that meters have been installed for Units and the 400 KV side but meters have been not yet provided on the 220 KV side.
- GM, ERLDC informed that part data from SEL is being received.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

C. 66 KV RANGIT – RABANGLA LINE

During the last standing committee meeting, approval was accorded for converting 66 KV Rangit –Melli line to (i) 66 KV Rangit – Rabangla line and (ii) 66 KV Melli – Rabangla line. With the changed configuration the tie line now should be considered as 66 KV Rangit – Rabangla line instead of 66 KV Rangit –Melli line. Sikkim/Powergrid may initiate action of shifting of Melli end meter to Rabangla for 66 KV Rangit – Rabangla Line and Sikkim may arrange for sending of Rabangla end data for UI computation purpose.

In the last ERPC meeting, PGCIL requested Sikkim to provide the CT/PT ratio at Ravangla so that they may initiate the process of shifting of meters. Sikkim requested Powergrid to install new meter at Ravangla. The existing meter at Melli should not be relocated.

In the last CCM (05.09.11),

- PGCIL informed that they have not received CT/PT details from Sikkim yet.
- PGCIL also requested Sikkim to nominate a nodal officer for coordination in this regard.
- Sikkim assured that they would provide CT/PT ratio and name of nodal officer to PGCIL in one week.

- It was decided that, if the meters at Melli end were found suitable then PGCIL would shift them to Ravangla, else, they would provide new meters at Ravangla.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B13: FIBRE OPTIC CONNECTIVITY IN EASTERN REGION

In the last ERPC meeting PGCIL informed that FR for management approval is in final stage. NIT was expected to be floated in August-11. Also, PGCIL had agreed to the proposal of identification of priority locations as decided by ERLDC

In the last CCM (05.09.11),

- PGCIL informed that process of management approval is in advanced stage and may be completed in a week's time.
- NIT is expected to be floated in October'11.

The fibre optic links alongwith end equipment to be commissioned under Microwave replacement plan / new fibre installation on priority basis as identified by ERLDC are provided in **Annexure-VII**.

Commercial sub-Committee of ERPC will continue to monitor the status and keep TCC posted about the development in this regard.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B14: Software for Preparation of Monthly Transmission Accounts as per CERC (Sharing of IST Charges & Losses) Regulations, 2010

The last ERPC meeting approved the proposal of procurement of RATS software from M/s CyBuzz SC at a cost of approximately 4 Lakh plus taxes as applicable, by utilizing the ERPC FUND.

However, in the meanwhile ERPC Secretariat had developed the software in house. The Regional Transmission Account for the month of July'11 and the deviation account for the same month was computed successfully by ERPC Secretariat using this software. As such, procurement of new software from Cybuzz may be deferred.

In the last CCM (05.09.11),

- Members appreciated the efforts of ERPC Secretariat in developing the requisite software and decided to continue with the in house software.

Members may please note.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B15: SUBSTATION EQUIPMENT FOR DISASTER MANAGEMENT/ERS SUBSTATION IN EASTERN REGION

In the last ERPC meeting (18th) PGCIL informed that petition have been filed with CERC on 22.03.2011 and queries raised by CERC have been answered on 18.05.2011 and hearing of the matter is awaited.

In the last CCM (05.09.11),

- PGCIL informed that CERC had again raised queries on cost benefit analysis and social impact issues in August-11.
- Replies from PGCIL have been furnished on 02.09.2011.

Members may please note. This will be monitored in the subsequent CCM.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B16: PROCUREMENT OF LAPTOPS/DCDS BY PGCIL FOR MALBASE S/S AND AS SPARE

In the last ERPC (18th) meeting PGCIL informed that NIT for 25 Nos of Laptops/DCDs would be floated on Jul, 2011 and expected delivery would be October, 2011.

In the last CCM (05.09.11),

- PGCIL representative informed that bid evaluation is going on.
- Order is likely to be placed within ten days and delivery is expected to start from 10th Oct-11.
- PGCIL expressed concern regarding frequent malfunctioning of DCDs at Malbase.
- Until now, a total of 4 nos DCDs had been made available to Malbase and all of them have malfunctioned.
- However, PGCIL assured that , after delivery of new DCD/Laptops, Malbase would be provided as per its requirement.
- During discussion of this agenda item ERLDC informed that 15 minutes data from Hydro stations of Bhutan were not being made available to them and requested PTC to take up the matter with respective Hydro Station Authorities.
- PTC informed that they would take up these issues in a meeting scheduled with Bhutan Hydro Station Authorities.

Members may please note. This will be monitored in the subsequent CCM.

Deliberation in the TCC meeting

TCC noted.

ITEM NO.B17: FOLLOW UP ITEMS PERTAINING TO OPERATIONAL MATTERS

Latest status in respect of various decisions taken on operational issues in last ERPC is given below:

Item no.	Discussion/Decision	Latest Status
B.1	Consolidated Approval for spare transformers & reactors to be issued to PGCIL by ERPC Secretariat	A consolidated approval by consolidating all relevant minutes of various ERPC meetings was issued to Powergrid.
B.1	Latest Status on procurement of spare transformers & reactors	<ul style="list-style-type: none"> o Order for 4 number of spare transformers placed on : 19th July 2011 o Order for bay equipment placed on: 17th August 2011 o Order for 2 number of spare reactors placed on: 11th July 2011 o Delivery is expected by 14 months from date of placement of order
B.1	Alternative arrangement for procurement of 50 MVA, 132/33 kV spare transformer	<p>In the 64th OCC, Member Secretary, ERPC suggested that BSEB & JSEB could jointly take up the procurement of the 132/33 kV spare transformer, as it would be mainly used by them.</p> <p>In the 66th OCC, both BSEB & JSEB agreed to drop the procurement of 50 MVA, 132/33 kV spare transformer.</p>
B.2	Increasing evacuation limit through 400 kV Tenughat-Biharshariff line operational at 220 kV	<p>Earlier, it was suggested to change to replace moose conductor at tail end of the line (from Biharshariff side) by zebra conductor.</p> <p>Subsequently, BSEB visited the site along with TVNL engineers and need of replacement of double zebra conductor with moose conductor was not felt and changed the conductor configuration between line to CT from single moose to double moose.</p> <p>With this, there is no constraint in evacuation of power through the line upto 400 MW.</p>
B.2	Restoration of 220 kV Tenughat-Biharshariff line, which is out since	The line was restored on 16.09.11

Item no.	Discussion/Decision	Latest Status
	19.05.11 due to tower collapse	
B.2	Monitoring progress of 400 kV Tenughat S/s by OCC	Work is awarded to PGCIL by TVNL. Powergrid informed that NIT is likely to be floated by end of October 2011.
B.6	Early Commissioning of 160 MVA, 220/132 kV ICT at Siliguri	<p>WBSETCL had offered Powergrid to utilize their CGL 160 MVA ICT at Dalkhola for installing at Siliguri and as when the same is procured by Powergrid, new transformer might be handed over to WBSETCL.</p> <p>In the 64th OCC, Powergrid informed that bay equipment are not available and agreed to mutually discuss all other aspects with WBSETCL at WBSETCL headquarter at separate meeting.</p> <p>However the schedule meeting is yet to take place. Any further development will be intimated in the meeting.</p>
B.15	Commissioning of busbar protection at Biharshariff	<p>As advised in the last ERPC, Powergrid contacted M/s. AREVA. M/s Areva opined that thorough checking of relay, CT circuits and trip circuits were required to be done for commissioning of the scheme. M/s. AREVA agreed to send their service engineer for the said work, in case it is commercially agreed by BSEB.</p> <p>However, M/s Areva as well as ERLDC opined that PBDCB scheme is very old and should be replaced with suitable modern Busbar (low impedance differential bus bar) Protection relay.</p> <p>As decided in 65th OCC, ERPC Secretariat communicated with Member (Transmission), BSEB impressing the urgency for installation of bus bar protection at Biharshariff s/s.</p>
C.15	NTPC was requested to explore splitting of 400 kV Kahalgaon bus	<p>NTPC's engineering team had visited the site during 10th -12th August 2011 and report was under preparation.</p> <p>In the 66th OCC meeting, NTPC assured to place the gist of recommendation of their engineering team before the OCC.</p>

Deliberation in the TCC meeting

TCC noted.

Regarding bus-bar protection at Biharshariff, PGCIL impressed upon BSEB to replace the old PBDCB relay with suitable modern numeric bus bar protection relay. BSEB sought help from PGCIL. PGCIL agreed to extend all help in this regard.

Regarding bus splitting at Kahalgaon, NTPC informed that bus splitting is possible and the cost implication would be approx. Rs. 60-70 crore. It was decided to discuss the details in next OCC meeting.

ITEM NO.B18: HIGHLIGHTS & GRID PERFORMANCE FOR THE PERIOD FROM JUNE TO AUGUST, 2011

Highlights and grid performance for the period from June 2011 to August 2011 are given at **Annexure-VIII.**

This for information.

Deliberation in the TCC meeting

TCC noted.

ANNEXURES

LIST OF PARTICIPANTS IN THE 19TH ERPC MEETING

Date: 24.09.2011

Venue: Vivanta Taj Hotel, Goa

Name of the Constituent / Organisation	Sl. No.	Name S/Shri	Designation	Contact No.	E-mail ID
WEST BENGAL A) WBPDC	1.	Dr. Krishna Gupta	Chairman & Managing Director	9874674474	krishna.gupta@nic.in
	2.	R. Bose	Director (O & M)	9836162233	rbose@wbpdcl.co.in
B) WBSEDCL	3.	Rajesh Pandey	Chairman & Managing Director		
	4.	A. Guha	Director (RT & IT)		
	5.	M.S. PAL	Chief Engineer (PTR)	9830955601	ceptr.wbsecl@gmail.com
C) WBSETCL	6.	S. Nag	Director (Operation)	9051088140	snag1953@rediffmail.com
	7.	D. Chakraborty	Chief Engineer	9831093513	
	8.	P. Saha	Chief Engineer (CPD)	9836043600	
	9.	A. Karmakar	Supdt. Engineer	9433339597	cped@cal3.vsnl.net.in
D) CESC	10.	B.B. Chakraborty	Vice President (SO)	9831095597	
	11.	R. Chakraborty	Senior Manager	9831054619	rahulchakravarty@cesc.co.in
BIHAR BSEB	12.	T.T. Jha	Member (Transmission)	9471000038	mem.trans.bseb@gmail.com
	13.	Rakesh	EEE / Interstate	9693937774	rakesh.bseb@gmail.com
JHARKHAND A) JSEB	14.	S.N. Verma	Chairman	9431120503	amritsuman@rediffmail.com
	15.	C.D. Kumar	Member (T & D)		
	16.	G.N.S. Munda	Engineer in Chief		
	17.	S.C. Misra	Chief Engineer (Comml)		
	18.	B.S. Jha	General Manager (SPS)	9431815670	bsjha@sify.com
	(B) TVNL	19.	Anil Kumar	Managing Director	8757629740
ORISSA A) OPTCL	20.	Hemant Sharma	CMD, OPTCL & GRIDCO		
	21.	J.P. Das	Chief General Manager (Const.)	9437012391	jpgdasoptcl@yahoo.co.in
	22.	K. M. Parida	Chief General Manager (O & M)		
	23.	S.K. Das	General Manager (SLDC)	9437000261	s.santoshdas@rediffmail.com
(B) GRIDCO	24.	P.K. Pradhan	Director (Commercial)	9437125994	prasanta30@gmail.com
	25.	R. Das	Sr. General Manager (PP)		
(C) OHPC	26.	D.K. Sahoo	Sr. General Manager (EI)	9437562226	dks51159@gmail.com
DVC	27.	M.K. Bandyopadhyay	Director (Commercial)	9903985130	maloybanerjee5@gmail.com
	28.	B.K. Chakraborty	Director (System)		
	29.	P.K. Choudhary	Chief Engineer (Comml)	9831954292	pkkolkata@hotmail.com
	30.	A. Nayak	Chief Engineer (CLD)	9434064682	amitava.nayak@dvc.gov.in
CEA	31.	B.K. Jain	Chief Engineer (GM)		
NHPC	32.	S. K. Agrawal	Executive Director (O & M)		
	33.	N. S. Parmeshwaran	Chief Engineer (O & M)		
	34.	V. K. Singh	General Manager (Commercial)		
	35.	P. Kumar	Asst. Manager (E)		

Annexure-A1

Name of the Constituent / Organisation	Sl. No.	Name S/Shri	Designation	Contact No.	E-mail ID
POWERGRID	36.	I.S. Jha	Director (Projects)		
	37.	Bhaskar Sharma	Executive Director (ER-I)	9771496900	bsharma@powergridindia.com
	38.	Kanik Ram	General Manager (O & M) ER-II		
	39.	Amarjit Singh	General Manager (O & M) ER-I		
	40.	K. Sarkar	Addl. General Manager (OS), CC	9711435904	ksarkar@powergridindia.com
	41.	A. M. Pavgi	Addl. General Manager (Engg.),CC	9910378086	apavgi@powergridindia.com
	42.	A.K. Varma	Dy. General Manager (Comml)	9431815669	akverma@powergridindia.com
	43.	S.K. Singh	Chief Manager (OS), ER-II	9434740009	sksinghpg@yahoo.co.in
NTPC	44.	I. J. Kapoor	Director (Commercial)		
	45.	U.P. Pani	Regional Executive Director (ER-I)	9470001650	uppani_2k1@yahoo.co.in
	46.	V.K. Padha	General Manager (Comml.), CC	9868391617	vkpadha@ntpc.co.in
	47.	A.K. Tiwary	Addl. General Manager (OS/FM)	9431600707	aktiwary@ntpc.co.in
	48.	Rakesh Kumar	Dy. General Manager (OS)		
	49.	S.K. Nayak	Dy. General Manager		
	50.	P.K. Ghoshal	Dy. General Manager (Comml.)		
	51.	T.K. Konar	Dy. General Manager (Comml.)		
	52.	A.K. Nayak	Sr. Manager (F & A)		
	53.	A.K. Paswan	Sr. Manager (Comml.)		
	54.	F. Ahamad	Manager (Comml)		
	55.	P. Prasoon	Dy. Manager		
	56.	B.K. Goswami	ES to RED		
	57.	T.K.Bangal	Sr. Engineer (comml)		
ERLDC	58.	P. Pentayya	General Manager	9432669226	ppentayya@gmail.com
	59.	G. Mitra	Dy. General Manager	9433041811	
	60.	G. Chakraborty	Chief Manager		
	61.	S. Banerjee	Chief Manager	9433041823	
	62.	S. Konar	Manager	9433041854	
PTC	63.	Deepak Amitabh	Director (F & C)		
	64.	Harish Saran	Sr. Vice President	9810394429	harishsaran@ptcindia.com
APNRL	65.	R. Sharma	Dy. General Manager (E)		
SEL	66.	C.N. Singh	Sr. Vice President	9777451669	singhcn@gmail.com
	67.	M.K. B.P. Mahapatra	Vice President		
	68.	M. Rastogi	Associate Vice President	9937555543	manoj.rastogi@vedanta.co.in
CIL	69.	H. K. Vaidya	Chief General Manager (S & M)		
NBCC	70.	P.K. Roy	Project Manager		
	71.	S. Bhattacharya	Architect		
MPL	72.	A.P. Wankhede	General Manager (Plant Opn.)		
BHUTAN	73.	K. Dorji	Manager, BPC		
	74.	Tenzing	Engineer, BPC		
ERPC	75.	A.K. Bandyopadhyay	Member Secretary I/C	9433068533	
	76.	J. Bandyopadhyay	Superintending Engineer	9432326351	
	77.	B. Sarkhel	Superintending Engineer	9433065724	
	78.	S.P. Datta	Dy. General Manager	9433067022	spdatta@rediffmail.com
	79.	S.M. Jha	Assistant Secretary	9748216566	erpcjha@yahoo.co.in
	80.	G. Ghosh	Executive Engineer	9051221331	
	81.	S. Paul	Executive Engineer	9874919946	subhro@engineer.com
	82.	S. Kejriwal	Executive Engineer	9831919509	

LIST OF PARTICIPANTS IN THE 19TH TCC MEETING

Date: 23.09.2011

Venue: Vivanta Taj Hotel, Goa

Name of the Constituent / Organisation	Sl. No.	S/Shri Name	Designation	Contact No.	E-mail ID
BIHAR BSEB	1.	T.T. Jha	Chairperson , TCC & Member (Trans), BSEB	947100038	mem.trans.bseb@gmail.com
	2.	Rakesh	EEE /Interstate	9693937774	rakesh.bseb@gmail.com
WEST BENGAL A)WBSEDCL	3.	A. Guha	Director (RT & IT)		
	4.	M. S. Pal	Chief Engineer (PTR)	9830955601	ceptr.wbsedcl@gmail.com
B) WBSETCL	5.	S. Nag	Director (Operation)	9051088140	snag1953@rediffmail.com
	6.	D. Chakraborty	Chief Engineer	9831093513	
	7.	P. Saha	Chief Engineer (CPD)	9836043600	
	8.	A. Karmakar	Supdt. Engineer	9433339597	cped@cal3.vsnl.net.in
C) WBPDCCL	9.	R. Bose	Director (O & M)	9836162233	rbose@wbpdcl.co.in
D) CESC	10.	B. Chakraborty	Vice President (SO)	9831095597	
	11.	R. Chakraborty	Senior Manager	9831054619	raahulchakravarty@cesc.co.in
JHARKHAND (A) JSEB	12.	C.D. Kumar	Member (T & D)		
	13.	G. N. S. Munda	Engineer in Chief		
	14.	S.C. Misra	Chief Engineer (Comm)		
	15.	B.S. Jha	General Manager (SPS)	9431815670	bsjha@sify.com
	(B)TVNL	16.	Anil Kumar	Managing Director	8757629740
17.		S.K.Choudhary	EEE	9430724198	shailesh.ttps@yahoo.co.in
ORISSA (A) OPTCL	18.	J.P. Das	Chief General Manager (Construction)	9437012391	jpgdasoptcl@yahoo.co.in
	19.	K.P. Parida	Chief General Manager (O & M)		
	20.	S.K. Das	General Manager (SLDC)	9437000261	s.santoshdas@rediffmail.com
(B) GRIDCO	21.	P.K. Pradhan	Director (Commercial)	9437125994	prasanta30@gmail.com
	22.	R. Das	Sr. General Manager (PP)		
(C) OHPC	23.	D.K. Sahoo	Sr. General Manager (EI)	9437562226	dks51157@gmail.com
DVC	24.	M.K. Bandyopadhyay	Director (Commercial)	9903985130	maloybanerjee5@gmail.com
	25.	B.K. Chakraborty	Director (System)		
	26.	P.K. Choudhary	Chief Engineer (Comm)	9831954292	pkkolkata@hotmail.com
CEA	27.	A. Nayak	Chief Engineer (CLD)	9434064682	amitava.nayak@dvc.gov.in
	28.	B.K. Jain	Chief Engineer (GM)		
NHPC	29.	S. K. Agrawal	Executive Director (O& M)		
	30.	N. S. Parmeshwaran	Chief Engineer (O & M)		
	31.	V. K. Singh	General Manager (Commercial)		
	32.	P. Kumar	Asst. Manager (E)		
POWERGRID	33.	Bhaskar Sharma	Executive Director (ER-I)	9771496900	bsharma@powergridindia.com
	34.	Amarjit Singh	General Manager (O & M), ER-I		
	35.	Kanik Ram	General Manager (O & M) ER-II		
	36.	K. Sarkar	Addl. General Manager (OS), CC	9711435904	ksarkar@powergridindia.com
	37.	A.M. Pavgi	Addl. General Manager (SEF-Engg)	9910378086	apavgi@powergridindia.com
	38.	A.K. Varma	Dy. General Manager (Comm)	9431815669	akverma@powergridindia.com
	39.	S.K. Singh	Chief Manager (OS)/ ER-II	9434740009	sksinghpg@yahoo.co.in

Name of the Constituent / Organisation	Sl. No.	Name S/Shri	Designation	Contact No.	E-mail ID
NTPC	40.	U.P. Pani	Regional Executive Director (ER-I)	9470001650	uppani_2k1@yahoo.co.in
	41.	V.K. Padha	General Manager (Comml.), CC	9868391617	vkpadha@ntpc.co.in
	42.	A.K. Tiwary	Addl. General Manager (OS/FM)	9431600707	aktiwary@ntpc.co.in
	43.	R. Kumar	Dy. General Manager (OS)		
	44.	P.K. Ghoshal	Dy. General Manager (Comml.)		
	45.	T.K. Konar	Dy. General Manager (Comml.)		
	46.	S.K. Nayak	Dy. General Manager (OS)		
	47.	A.K. Nayak	Sr. Manager (F & A)		
	48.	A.K. Paswan	Sr. Manager (Comml.)		
	49.	F. Ahamad	Manager (Comml.)		
	50.	P. Prasoon	Dy. Manager (PM)		
	51.	B.K. Goswami	ES to RED		
	52.	T.K. Bangal	Sr. Engineer (Comml)		
ERLDC	53.	P. Pentayya	General Manager	9432669226	ppentayya@gmail.com
	54.	G. Mitra	Dy. General Manager	9433041811	
	55.	G. Chakraborty	Chief Manager		
	56.	S. Banerjee	Chief Manager	9433041823	
	57.	S. Konar	Manager		
MPL	58.	A.P. Wankhede	General Manager (Plant Opn.)		
APNRL	59.	R. Sharma	Dy. General Manager (E)		
SEL	60.	C.N. Singh	Sr. Vice President	9777451669	singhcn@gmail.com
	61.	M.K. B.P. Mahapatra	Vice President		
	62.	M. Rastogi	Associate Vice President	9937555543	manoj.rastogi@vedanta.co.in
BHUTAN	63.	K. Dorji	Manager		
	64.	Tenzing	Engineer		
NERPC	65.	A.K. Mishra	Supdt. Engineer		
	66.	Lyngkhoi	Assistant Secretary		
	67.	D.K. Bauri	Executive Engineer		
ERPC	68.	A.K. Bandyopadhyay	Member Secretary I/C	9433068533	
	69.	J. Bandyopadhyay	Superintending Engineer	9432326351	
	70.	B. Sarkhel	Superintending Engineer	9433065724	
	71.	S.P. Datta	Dy. General Manager	9433067022	spdatta@rediffmail.com
	72.	S.M. Jha	Assistant Secretary	9748216566	ercpjha@yahoo.co.in
	73.	G. Ghosh	Executive Engineer	9051221331	
	74.	S. Paul	Executive Engineer	9874919946	subhro@engineer.com
	75.	S. Kejriwal	Executive Engineer	9831919509	

**ADDRESS OF DR. KRISHNA GUPTA, CMD, WBPDC ON THE OCCASION
OF 19TH ERPC MEETING HELD ON 24TH SEPTEMBER 2011 AT GOA**

Good Morning.

Shri I.J. Kapoor, Director(Commercial)-NTPC, Shri Rajesh Pandey, CMD-WBSEDCL, Shri Hemant Sharma, CMD-GRIDCO & OPTCL, Shri S.N. Verma, Chairman-JSEB, Shri I.S. Jha, Director(Projects)-POWERGRID, Shri Deepak Amitabh, Director-PTC, Shri P. Pentayya, General Manager-ERLDC, Shri Anil Kumar, Managing Director-TVNL, Shri A.K. Bandyopadhyay, Member Secretary I/C-ERPC, special invitees, members of TCC and other participants, it is my privilege to welcome you all to the 19th ERPC meeting being held at Goa under the aegis of NTPC. I thank Shri Kapoor and the entire NTPC team for excellent arrangements for the meeting.

The last ERPC meeting was held on 1st July 2011 at Ranchi. We are meeting today to discuss many operational, commercial and policy matters. I look forward to the valued opinions of members on the issues placed before the Committee for deliberations and decisions.

The performance of the grid during the period June'11 to August'11 was satisfactory. The grid frequency remained within the IEGC recommended band of 49.5 Hz to 50.2 Hz for about 92% of time. The regional energy consumption increased marginally by 1.3% and peak demand by 7.5 % on Year-on-Year (YoY) basis. The peak demand recorded 13636 MW in August 2011. During this period the average net export from Eastern Region to other regions was 1173 MU per month, a reduction of about 9% on YoY basis. Among the important events during this period, I would like to inform that 500 MW capacity unit-1 of Kodarma TPS of DVC was synchronized for first time on 27th June 2011, 400 kV Farakka-Kahalgaoon D/C lines were charged on 31st August 2011 and 400 kV Rourkela (ER)-Raigarh(WR) D/C lines were synchronized on 28th & 29th June 2011.

I would like to draw the attention of members on few issues which may come up for discussion today :

- ❖ Due to delay in readiness of associated transmission system (ATS), a number of generating units have been commissioned by LILO of existing 400 kV lines. This may cause serious network constraints. ERPC has already approved Special Protection Schemes (SPS) for those new power plants. ERLDC has called for immediate implementation of SPS for Maithon Right Bank, Mejia 'B' and Sterlite-Jharsuguda to avoid any major grid disturbance.
- ❖ Composite transmission system for evacuation of power from upcoming UMPP and IPPs in Odisha is being discussed for last several ERPC meetings. OPTCL and POWERGRID had agreed to discuss and resolve the issues. It appears from the agenda that no discussion took place and the issues are still unresolved.
- ❖ CERC vide its order dated 27th September 2010 has authorized respective RPC to approve capacity building programme upto a limit of Rs. 2 crore per year or 30% of the outstanding balance as at the beginning of the financial year whichever is less. ERLDC may indicate the balance in Reactive Energy Charges A/C as on 1st April 2011, the amount already utilized and planned to be utilized during this year. This would help in effective utilization of balance amount through new capacity building programme.
- ❖ The issue of commissioning of 220 kV busbar protection schemes at Biharshariff Sub-station of BSEB and Ramchandrapur & Chandil Sub-stations of JSEB is being discussed for long. BSEB and JSEB may install the protection schemes on priority in the interest of grid security and as well to prevent damage of costly equipments.

NTPC has set benchmarks on excellence in power plant operation. By arranging this meeting at Goa in an excellent manner, they have also set benchmark on excellence in arranging ERPC meeting. On earlier occasion, NTPC had hosted the ERPC meeting at Port Blair-Andaman. I thank NTPC for hosting the meeting at this beautiful place and wish the meeting a grand success.

Thank you.

REGULATIONS ON ERPC ESTABLISHMENT FUND

Drawing power from section 25(d) of 'Eastern Regional Power Committee (Conduct of Business) Rules, 2011', ERPC hereby makes the following regulations called "Regulations on ERPC Establishment Fund".

1. **Name:** The name of the fund shall be "**ERPC Establishment Fund**".
2. **Objective:** The fund shall be utilized for meeting reimbursement of the actual expenditure incurred by the office of the ERPC Secretariat in Kolkata for its establishment expenses within the budgeted approval of CEA to the consolidated fund of Govt. of India through Drawing & Disbursing Officer, ERPC (DDO, ERPC).
3. **Contribution:** All members of ERPC except CEA, NLDC and ERLDC shall contribute equal amount on annual basis as per the decision of ERPC. Members of ERPC shall send their contribution by demand draft/ pay order/ cheque drawn in favour of "ERPC Establishment Fund" payable in Kolkata.
4. **Operation:** The fund shall be operated by a group of three officers from member constituents of ERPC posted in Kolkata as nominated by Member Secretary, ERPC. Bank account shall be opened in the name of the fund in a scheduled bank and officers nominated as above shall be given the cheque drawing authority.
5. The cheque for matching reimbursement to the extent of actual establishment expenses of ERPC Secretariat for the relevant period as approved by Member Secretary, ERPC in line with para-2 above shall be drawn in favour of 'Executive Engineer, ERPC, Kolkata'.
6. DDO, ERPC shall deposit the cheque in Government Accounts without delay complying rule-7 of General Financial Rules, rule-6(1) of the Receipt and Payments Rules. .
7. Yearly statement of receipt & expenditure of the fund shall be placed before the ERPC.
8. The accounts of the fund shall be got audited by two officers, one officer nominated by incumbent Chairperson from his own organisation & the other nominated by the Chairperson of previous year from his own organisation.

The officers nominated as above shall be other than the officers nominated as per para-4 above.
9. ERPC, if desires, may constitute a sub-committee which will meet at least once in six months to discuss/ settle/ recommend on various issues related to this fund.
10. Management of surplus fund shall be at the sole discretion of ERPC. Expenditure from the surplus funds shall be made only after the consent of ERPC.

REGULATIONS ON ERPC FUND

Drawing power from section 28 of 'Eastern Regional Power Committee (Conduct of Business) Rules, 2011', ERPC hereby makes the following regulations called "Regulations on ERPC Fund".

1. **Name:** The name of the fund shall be "**ERPC Fund**".
2. **Objective:** The fund shall be utilised for
 - i) Expenses related to meetings, workshops, seminars etc. hosted at ERPC Secretariat.
 - ii) Expenses related to hospitality extended to officials of constituents and other guests on their visit to ERPC Secretariat.
 - iii) Expenses related to printing and binding works for agenda, minutes etc. for TCC & ERPC meetings and similar types of works for meetings, seminars, workshops etc.
 - iv) Expenses related to payment to consultant (s) appointed with the consent of ERPC.
 - v) Expenses related to hiring of vehicles on case to case basis when departmental vehicle is not available / not adequate to meet the requirement.
 - vi) Expenses related to discharge of any other functions deemed fit by ERPC.
3. **Contribution:** All members of ERPC except CEA, NLDC and ERLDC shall contribute equal amount on annual basis as per the decision of ERPC. Members of ERPC shall send their contribution by demand draft/ pay order/ cheque drawn in favour of "ERPC Fund" payable in Kolkata.
4. **Operation:** The fund shall be operated by a group of three officers from member constituents of ERPC posted in Kolkata as nominated by Member Secretary, ERPC. Bank account shall be opened in the name of the fund in a scheduled bank and officers nominated as above shall be given the cheque drawing authority.
5. Cheques can be drawn on this account only against expenses approved by Member Secretary, ERPC.
6. Yearly statement of receipt & expenditure of the fund shall be placed before the ERPC.
7. The accounts of the fund shall be got audited by two officers, one officer nominated by incumbent Chairperson from his own organisation and the other nominated by the Chairperson of previous year from his own organisation.

The officers nominated as above shall be other than the officers nominated as per para-4 above.
8. ERPC, if desires, may constitute a sub-committee which will meet at least once in six months to discuss/ settle/ recommend on various issues related to this fund.
9. Management of surplus fund shall be at the sole discretion of ERPC. Expenditure from the surplus funds shall be made only after the consent of ERPC.

Annexure - I

SUMMARY OF UI RECEIPT AND PAYMENT STATUS

BILL UPTO 07.08.2011 (Week - 19 of 2011 - 12)

Last Payment Disbursement Date - 17.08.11

Figures in Rs. Lakhs

CONSTITUENTS	Receivable	Received	Payable	Paid	Outstanding
WR	597.48433	554.58895	19861.61822	19898.19906	79.47622
SR	2355.83530	2355.83530	1441.85120	798.99387	-642.85733
NER	1340.92627	1340.92625	4227.51625	3474.19504	-753.32119
NR	12108.33034	9268.01450	771.33048	548.26930	2617.25466
BSEB	1292.74246	1292.74246	3404.88765	2965.36365	-439.52400
JSEB	1475.59442	1098.42192	3175.88754	3088.28509	289.57005
DVC	20609.10727	20589.80642	102.29455	0.00000	-82.99370
GRIDCO	177.63047	177.63047	10742.46936	8488.87744	-2253.59192
WBSETCL	5187.23711	4932.76686	9673.60822	9673.60822	254.47025
Sikkim	856.44045	28.47778	2064.39548	2064.39548	827.96267
NTPC	4318.02651	3576.56781	481.26706	481.26706	741.45870
NHPC	0.00000	0.00000	690.23855	640.99223	-49.24632
MPL	213.69201	183.56914	106.38869	58.67607	-17.58975
STERLITE	7650.77391	7391.21441	1018.10929	916.18287	157.63308
Pool Balance	0.00000	0.00000	-412.30827	0.00000	412.30827
Additioal UI charge	478.25528	282.64802	0.00000	0.00000	195.60726
Transfer to IRE	0.00000	0.00000	-62.28734	0.00000	62.28734
TOTAL	58183.82085	52790.56227	57287.26693	53097.30538	

% Realization

90.73 As on 17.08.11

Receivable:

Receivable by ER POOL

Payable

Payable by ER POOL

Received

Received by ER POOL

Paid

Paid by ER POOL

"- ve" Payable by ER pool

"+ ve" Receivable by ER pool

Annexure-II

STATUS OF REACTIVE CHARGES IN ER REACTIVE POOL AS PER PUBLISHED A/C UPTO 31.07.11
AS ON 09.08.11

Figures in Rs

CONSTITUENTS	2003-04		2004-05		2005-06		2006-07		2007-08		2008-09		2009-10		2010-11		2011-12		TOTAL	
	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED	RECEIVABLE	RECEIVED
BSEB	0	0	0	0	0	0	284950	0	0	0	0	0	0	0	0	284950			284950	284950
DVC	6593	6593	86391	86391	264138	264138	0	0	0	0	0	0	0	0	0	0			357122	357122
GRIDCO	0	0	0	0	0	0	0	0	0	223311	223311	0	0	0	0			223311	223311	
WBSEB	1778848	1778848	451090	451090	350045	350045	3519490	3519490	881058	881058	3716019	3716019	3431470	3431470	1273089	1273089	0	0	15401109	15401109
UPPCL	0	0	0	0	0	0	28575	8465	0	0	0	0	0	0	0	0			28575	8465
TOTAL	1785441	1785441	537481	537481	614183	614183	3833015	3527955	881058	881058	3939330	3939330	3431470	3431470	1273089	1558039	0	0	16295067	16274957

Total Received	16274957
Expenditure incurred for 1645.35624 19.08.11 workshop on Black Start Procedure (4 SLDCs)	160000
Expenditure incurred for organising a seminar on Power Exchange on 17.07.08	290000
Expenditure incurred for organising seminar on "Reduction of Agreed technical & commercial Loss-Issues and Challenges " at Bhubaneswar on 05.12.08	184991
Expenditure incurred for organising workshop on Black Start Procedure at ERPC on 19.11.09	123028
Expenditure incurred for organising a seminar on Black Start on 18.04.09 at Hotel Big Boss	49050
Amount Retained in Reactive A/C	15467888
Waival of UPPCL amount on 14 th commercial sub committee meeting on 10.09.10	20110
Amount Credited to reactive account due to TDS (2003-04 to 2007-08) on 25.11.10	402619
Expenditure for SCADA Training at ERLDC ON 23.02.11	226115
Expenditure incurred for organising Blackstart workshop at ERPC on 24.06.11	174996
Expenditure incurred for organising Reliability workshop at ERPC on 18.07.11	89998
Net Retained in Reactive A/C	15359288
Proposed Expenditure for EMS training approved in 13th ERPC meeting	2725584
Proposed Workshop/Seminar on Transmission pricing, Power Exchange & FGMO	2000000
Proposed Workshop/Seminar on Black Start & Reliability	635006
Estimated Available Amount in the POOL	9998698

ANNEXURE-III

2010-11: Letter of Credit (LC) Amount against UI charges*Figures in Lacs of Rupees*

ER Constituents	Total UI charges payable to pool during 2010-11 (A)	Average weekly UI liability (A)/52 weeks (B)	LC Amount 110% of (B)
BSEB	6590.62	126.74	139.42
JSEB	2951.66	56.76	62.44

GIST OF FEEDBACK RECEIVED DURING THE RELIABILITY COORDINATION WORKSHOP HELD ON 18TH JULY 2011 IS GIVEN BELOW - ERLDC POINT

1. General recommendations:
 - a. Lessons learnt from past grid disturbances:
 - More SPS schemes need to be put into operation.
 - Reliable data telemetry & communication facilities are required.
 - Availability of Black-start schemes to be ensured and testing of these need to be done frequently
 - Identification of coordinators is required for proper coordination during disturbances.
 - Paying attention to the alarms of the WAMS.
 - Islanding schemes should be provided for hydra stations where black start facilities are not available.
 - Islanding schemes should be provided to thermal power stations with radial load or house load.
 - Automations should be implemented to prevent total system cascading.
 - Install more number of PMUs.
 - Installation/provision of special protection systems.
 - Data telemetry and voice communication should be at its best.
 - Islanding schemes should operate properly.
 - Load at various buses should be known accurately.
 - Mock drill of Black start facilities of hydro stations need to be carried out periodically so that so that they can operate properly at the time of need.
 - b. Functions of reliability coordinators to prevent wide area blackouts:
 - Carrying out of system studies regularly.
 - System to be isolated into smaller parts i.e. islanding during disturbances.
 - Installation of WAMS (PMUs) and voltage collapse prediction relays.
 - Predictive tools to be looked for to apprehend any disturbance.
 - Update of SCADA & EMS tools.
 - Different defence mechanism needs to be implemented.
 - c. Time frame for ER to use WAMS technology:
 - By the end of 2011. (37.5 % of Participants)
 - Within end of 2012. (25 % of Participants)
 - By the end of 2013. (37.5 % of Participants)
2. Recommendations on Emergency Response:

- a. Ability of the operators to respond in real time:
 - Frequent advanced training for up gradation of knowledge
 - Regular interaction and discussion among higher-ups and counter parts in other organisations.
 - Persons should have good physical and mental health.
 - Better decision support tools and alerting systems to be provided to the operators.
 - Efficient SCADA & EMS system.
 - Efficient communication system.
 - b. Priorities for automation in system security:
 - Installation of PMUs and voltage collapse relays.
 - Installation of automatic under frequency relays.
 - More SPS schemes to be installed for automatic islanding.
 - Back up protection using WAMS.
 - High speed data communication.
 - Automatic generation and load control.
 - c. Efficiency of system operators for taking timely corrective action:
 - Data to be reliable / accurate.
 - Consultation with reliability coordinators during disturbances.
 - Detailed and up to date single line diagrams are to be provided.
 - The grid substations should abide by the instruction of the system operators.
 - There should not be any communication problem.
 - d. How to improve communication among the system operators:
 - Regular visit of RLDC and SLDC shift operator to each other site.
 - To understand each other and address the problems accordingly.
 - The contingency plans should be documented and circulated.
 - e. Response tests to be conducted in ER in the coming six months:
 - Testing of Mock black start, UFRs, SPS and islanding schemes.
 - Time taken by the operator to control the over drawl & generation ramping down.
 - Time taken by the substation and generating station operator to implement the instruction of RLDC & SLDCs.
3. Recommendation on Protection and control:
- a. Protection schemes to arrest the effect of cascading:
 - Installation of numerical relays.
 - Installation of voltage collapse relay and PMUs.
 - Old relays are to be replaced by modern relays (numerical relays) and checking of relay settings.
 - Review of protection relays and their settings time to time.

- Auto reclosing.
 - Relays to prevent tripping of transformers for temporary overloading.
 - b. Improvement needed in system measurements and recordings to help event analysis:
 - Using PMU data of smaller time intervals.
 - Automatic metering system can be done.
 - Proper time synchronisation of instruments using GPS
 - Triggering of disturbance recorder based on pre-set analog and digital parameters.
 - Both end tripping details should be recorded.
 - Voltage collapse prediction relays.
 - c. To identify a complete and robust set of contingencies In order to avoid and minimise cascading outages:
 - Identify and rank the contingencies in terms of impact, severity and repetitions to get a probabilistic list.
 - Avoid overloading for n-1 contingencies.
 - TALCHER - KOLAR HVDC tripping.
 - 400 KV FARAKKA - KAHALGAON D/C tripping.
 - 400 KV ROUKELA - RAIGARH Q/C tripping.
4. Recommendations on OPERATOR tools:
- a. How to improve the data availability and additional data required for system operator to achieve system observability:
 - Better communication systems and decision support tools are required.
 - Metrological data.
 - Install fiber optic communication for data telemetry.
 - Islanding schemes.
 - PMUs to be installed in more number of places.
 - Provision of back up communication systems.
 - b. Improvement of SCADA / EMS functions in control centres:
 - By providing redundant and high speed communication channels with latest software and hardware.
 - Better visualisation and display tools.
 - Reliability of communication path.
 - Running of State Estimator.
 - Contingency Analysis.
 - Installation of PMUs
 - c. Improvement of the performance of SCADA / EMS and its constraints:
 - CT ratio to be increased at places to prevent saturation.

- Better GUI and alerting facility to the operators.
 - Outages of communication facilities, RTU failures are major constraints.
 - The other constraints may be due to limited funding, less competitive market.
 - Replacement of PLCC link with optical fiber link.
 - To provide more monitoring tools in SCADA.
 - WAMS to be installed.
- d. Back up tools, provisions and procedures needed during failure of critical monitoring and controls system:
- Continuous coordination with the SLDC s, substations are required
 - Concurrent effort for the benefit of overall grid system is required.
 - Back up control centre is required.
 - Voice communication should be at its best and to have continuous dialogue with SLDCS.
- e. How to ensure operational actual rating of generators, transformers and transmission lines to cope up with emergencies:
- Updated documents to be prepared with the help of site and control centre people.
 - Lookup tables for LODFs, PTDFs and generator shift factors to be in place.
 - Uploading all documents regularly.
 - Documents need to be available regularly.

ANNEXURE- V

List of identified critical locations for installation of PMUs in ER WAMS Project (Phase-I)

S/N	Location	Station type	Owner
1	Binaguri	400/220KV Substation	POWERGRID
2	Biharshariff	400KV Substation	POWERGRID
3	Farakka	STPS	NTPC
4	Rourkela	400/220KV Substation	POWERGRID
5	Jeypore	400/220KV Substation	POWERGRID
6	Maithon	400 KV Substation	Link provider to be decided
7	Baripada	400 KV Substation	Link provider to be decided

ANNEXURE-VII

List of priority locations identified by ERLDC

- a. SLDC ,Hatia - ERLDC , Kolkata
- b. DVC ,Maithon – ERLDC , Kolkata
- c. SLDC ,Patna - ERLDC , Kolkata .
- d. Koderma - ERLDC , Kolkata
- e. Mejia'B' - ERLDC , Kolkata
- f. Raghunathpur – ERLDC , Kolkata
- g. DSTPS – ERLDC , Kolkata
- h. Muzaffarpur 400 – ERLDC , Kolkata
- i. Sterlite – ERLDC ,Kolkata .
- j. Adhunik Power Ltd. – ERLDC ,Kolkata .
- k. Maithon Right bank - ERLDC ,Kolkata
- l. Durgapur (PG) – Howrah SLDC - ERLDC ,Kolkata.
- m. Dubri - Bhubneswar
- n. Merramundali –Bhubaneswar
- o. Budhipadar –Bhubaneswar

DETAILS OF DISBURSEMENT TO POWER SYSTEM DEVELOPMENT FUND

SI No	Nature of Amount	Amount transferred to PSDF	Date of Disbursement	Cheque No	Remarks
1	UI (Principal)	4976.07019	11.11.10	219865 to 219891	Capping of 2007 - 08
	UI (Principal)	12153.10284	11.11.10	219865 to 219891	Capping of 2008 - 09
	UI (Principal)	3430.79751	11.11.10	219865 to 219891	Capping of 2009 - 10
	UI (Principal)	3836.50702	11.11.10	219865 to 219891	Surcharge of 2009 - 10
	UI (Principal)	975.41106	11.11.10	219865 to 219891	Capping of 2010 - 11
	UI (Principal)	1314.55152	11.11.10	219865 to 219891	Surcharge of 2010 - 11
	Total	26686.44014			
2	UI (Interest)	1284.96601	19.11.10	219919 & 219920	Bank interest of 2009 - 10
3	UI (Principal)	581.47030	22.02.11	219990	Capping & Surcharge
4	UI (Principal)	487.14040	14.03.11	220021	Capping & Surcharge
5	UI (Interest)	200.00000	14.03.11	220021	Bank Interest for UI of 2010-11
6	Reactive (Interest)	6.16992	14.03.11	220021	Bank Interest for Reactive of 2010-11
7	UI (Principal)	202.29434	20.05.11	No Cheque	Capping of 2010 - 11
8	UI (Principal)	204.06337	20.05.11	No Cheque	Surcharge of 2010 - 11
9	UI (Principal)	1645.35624	20.08.11	No Cheque	Surcharge of 2010 - 11
	Total	31297.90072			

HIGHLIGHTS & GRID PERFORMANCE FOR THE PERIOD FROM JUNE TO AUGUST, 2011**□ FREQUENCY :**

Frequency profile for the months of June to August'11 is shown below:

Months	% of time of the month frequency remained			Average Frequency (Hz)
	<49.5 Hz	49.5 to 50.2 Hz (IEGC Band)	> 50.2 Hz	
June'11	4.56	90.93	4.51	49.92
July'11	4.81	93.33	1.86	49.87
August'11	3.87	91.65	4.48	49.88

From the above table it may be observed that:

- Frequency profile in the IEGC band (i.e. 49.5 to 50.2Hz) remained in between 90.93 % to 93.32 % of time during the above months. The average frequency for these three months remained in between 49.87 Hz to 49.92 Hz.

2. PERFORMANCE REVIEW (YoY COMPARISON)

Description	Average (MW) / Month			August'10	August'11	% change
	June'10 to August'10	June'11 to August'11	% change			
Net Generation (MU)/Month	8648	8597	-0.6	8911	9007	1.1
Net Central Sector Thermal Generation (MU)/Month	2391	2080	-13.0	2346	2008	-14.4
Import from CPPs (MU)/Month	480	516	7.5	449	540	20.4
ER Consumption (MU)/Month	7841	7940	1.3	8095	8392	3.7
Net Export to Outside Region (MU)/Month	1288	1173	-8.9	1265	1155	-8.7
Regional Peak Demand Met (MW)	12691	13636	7.4	12691	13636	7.4
Peak Export (MW)	3673	3030	-17.5	3506	3015	-14.0

Generation/ Demand/ Export:

During the period from June'11 to August'11 as compared with the corresponding period of previous year (i.e. June'10 to August'10)

- Net average generation/month decreased marginally
- Net Central Sector Thermal Generation/month has decreased substantially
- Overall Availability/month from CPPs has shown improvement by 7.5 %
- Energy consumption/month in ER has increased marginally by 1.3 %
- Net Export from ER to other regions reduced by 14%
- Regional Peak Demand met increased by 7.4%

3. IMPORTANT EVENTS

1. 400 KV Bus-II of Koderma (DVC) alongwith 50 MVAR Bus reactor first time charged at 17:47 hrs of 08.06.11.
2. Unit-I of Koderma (500 MW) first time synchronized at 20:55 hrs of 27/06/11.
3. 400 KV Rourkela-Raigarh-IV of POWERGRID first time synchronized at 21:08 hrs of 28/06/11.
4. 400 KV Rourkela-Raigarh-III of POWERGRID first time synchronized at 20:29 hrs of 29/06/11.
5. 63 MVAR line reactor in Siliguri-Purnea D/c (Quad)-III at Purnea end was successfully test charged at 22:51 hrs on 30.06.11.
6. 132 kV Budipadar-Rajgangpur ckt was charged on 06.07.11 after erection of damaged tower.
7. 220 kV Budipadar-Katapalli ckt-I & ckt-II were charged on 21.06.11 after erection of collapsed tower.
8. 400 KV Bus of Barh (NTPC) first time charged at 13:36 hrs of 09.07.11.
9. 400 KV Patna-Barh-I of POWERGRID, first time synchronized at 13:56 hrs of 09/07/2011.
10. 80 MVAR Bus Reactor of Barh first time charged at 14:45 hrs of 09/07/11.
11. 400/132 KV, 200 MVA Station Transformer of Barh first time charged at 15:03 hrs of 09/07/11.
12. 400 KV KhSTPP-Barh-I of POWERGRID, first time synchronized at 15:50 hrs of 09/07/11.
13. 132 KV Dalsinghsarai substation(BSEB) first time charged on 29/07/11 at 16:45 hrs by LILoing of 132 KV Samastipur-Begusarai-II at Dalsinghsarai.
14. 400 KV Baripada-Mendhasal-II first time charged on 29.08.11 at 19:40 hrs.
15. 400 KV Baripada-Mendhasal-I first time charged on 29.08.11 at 21:27 hrs
16. 400 KV FSTPP-KhSTPP-III first time charged on 31.08.11 at 15:38 hrs
17. 400 KV FSTPP-KhSTPP-IV first time charged on 31.08.11 at 15:52 hrs