

EASTERN REGIONAL POWER COMMITTEE

MINUTES OF THE 17th ERPC MEETING

Date: 17th March 2011

Place : Jaipur

In Chair : Shri M. K. De, Principal Secretary (Power), Govt. of West Bengal & CMD, WBSEDCL and Chairman, WBSETCL.

Host: PTC India Ltd.

List of participants is at Annexure-A.

Shri Deepak Amitabh, Director (Finance), PTC welcomed Shri M. K. De, Chairperson, ERPC and Principal Secretary (Power), Govt. of West Bengal & CMD, WBSEDCL & Chairman, WBSETCL, other distinguished members of ERPC, Special Invitees, TCC members and other participants at this historical place of Jaipur. He outlined the journey of PTC since its inception upto this year, when the trading volume of PTC is expected to touch 24 BU. For this, PTC along with others, promoted Indian Energy Exchange, the first power exchange in India. In this way, PTC has always endeavoured to be a catalyst for augmenting Indian Power Market. Incidentally, the day of 17th ERPC meeting is coinciding with the historic day of PTC – the day of launching the IPO of its subsidiary, PTC Finance. He appealed that everyone should participate in its growth story.

Shri A. K. Rampal, Member Secretary, ERPC welcomed Shri M. K. De, Chairperson, ERPC and Principal Secretary (Power), Govt. of West Bengal & CMD, WBSEDCL & Chairman, WBSETCL, Shri Deepak Amitabh, Director (Finance)-PTC, Shri P.K. Rai, Chairman-BSEB, Shri Hemant Sharma, Managing Director-GRIDCO & OPTCL, Dr. Krishna Gupta, Managing Director, WBPDC, Shri Anil Kumar, Managing Director, TVNL, Shri A. C. Sarkar, Managing Director, WBSETCL, Shri M. Mazumdar, Managing Director, DPL, Sh. S. M. Dhiman, Ex-Member (GO&D), CEA, Dr. Jaipal Singh, Member (E&C), CEA, Shri U. P. Pani, Regional Executive Director, NTPC, Shri M. K. Raina, Executive Director, NHPC, Shri R. P. Singh, Executive Director, Powergrid, and Shri Pentayaa, General Manager, ERLDC and Sh. Yeshi Tenzin, Superintending Engineer, DGPC, Bhutan, distinguished members of TCC and other participants. He thanked PTC for hosting the meeting. He applauded the efforts of M/s Adhunik Power for getting land allocated in favour of PGCIL in Jamshedpur. He appealed all Eastern Regional utilities to tap new business opportunities emerging from grid connectivity with Bangladesh. Apprising the fact that North Eastern Regional States had approached CERC for deferring the date of implementation of new transmission charge sharing regulation, he advised Eastern Regional states to follow the NER' stand. He informed that revision of Conduct of Business Rules (CBR) of ERPC is under process and a draft in this regard has been placed before ERPC for finalization.

Shri M.K.De , Chairperson, ERPC & Principal Secretary (Power), Govt of West Bengal & CMD, WBSEDCL & Chairman, WBSETCL welcomed ERPC members and other participants. He thanked Shri Deepak Amitabh, Director (Finance), PTC and his team of officers for excellent arrangement of the meeting. He briefly mentioned about the grid

performances during the period from November, 2010 to January ,2011 and highlighted the following in his address:

- Ø Power Stations of NTPC like Kahalgaon STPS and Farakka STPS are having two stages. Tariffs and beneficiaries of Stage-I & II are different. Both the stages require separate metering arrangement for UI accounting. Big power stations like these may also need bus splitting arrangement to contain fault levels. Both the issues were to be discussed by TCC yesterday under two different agenda items. The decisions on both the issues should dovetail to each other.
- Ø Evacuation of power for Odisha from upcoming IPPs and UMPP in Odisha is being discussed for quite some time. It appears that OPTCL & GRIDCO are in disagreement to some of the decisions taken in Standing Committee Meeting. The issues were again slated for discussion in the TCC meeting yesterday. Apart from raising the issues at TCC/ERPC level, OPTCL & GRIDCO should also take up the matter with CEA and POWERGRID to avoid any delay in investment decision and construction of the associated transmission system.
- Ø Adequate supply coal to major power stations in Eastern Region, particularly to Farakka and Kahalgaon STPS of NTPC is required to be properly addressed. Kahalgaon Unit No.7 of 500 MW capacity is under commercial operation; Farakka Unit No.6 of 500 MW capacity has been synchronized recently. But allocation of coal for the above Units is yet to take place. NTPC may apprise about the fuel supply arrangements for Farakka and Kahalgaon to achieve at least 85% plant load factor.
- Ø ERPC has already approved a number proposals of ERLDC on improving grid security like synchrophasor technology, voltage collapse prediction relay, special protection scheme etc. ERLDC was authorized to take up the proposals for funding from Power System Development Fund (PSDF). ERLDC has also proposed for automatic meter reading of special energy meters in Eastern Region installed by POWERGRID. In few cases the equipment/meters proposed by ERLDC are of proprietary nature. Since in each case expenditure involved is substantial, the executing agency should re-ascertain the proprietary nature of the items and adhere to procedures for purchase.
- Ø He is going to complete his tenure of Chairperson, ERPC on 31st March,2011. He thanked all constituent members for their valued opinions, active support and cooperation during his tenure. He also acknowledged the excellent support received from Shri A.K. Rampal, Member Secretary and his officers.

(The speech of Shri M. K. De is given at Annexure-A1)

Agenda items were then taken up.

ITEM NO. “Zero”: WELCOME OF NEW ERPC MEMBERS AND ACKNOWLEDGEMENT OF CONTRIBUTION MADE BY SUPERANNUATING PERSONS

Members congratulated and welcomed Sh. A. C. Sarkar, who has taken over the charge of Managing Director, WBSETCL, as a new ERPC member.

Members wishes Shri S. M. Dhiman and his family a happy, healthy and prosperous superannuated life. Shri Dhiman has been a member of ERPC since November 2007 and has been guiding as Member (GO&D), CEA. During this period, ERPC has taken a number of

initiatives and decisions. ERPC expects that he shall continue to guide ERPC as and when approached.

Member also wishes Shri A. C. Mallick and his family a happy, healthy and prosperous superannuated life. Shri A. C. Mallick has been a TCC member as Director (Commercial), GRIDCO since September 2006. He was actively associated when ERPC adopted its CBR in its first meeting held at Bhubaneswar. Since then he has been associated with decision making process. ERPC expects his continued association in future.

ITEM NO.A1: CONFIRMATION OF THE MINUTES OF THE 16TH ERPC MEETING HELD ON 18.12.2010 AT BHUBANESWAR

The minutes of the 16th ERPC meeting held on 18th December,2011 at Bhubaneswar were circulated vide letter no.ERPC/ TCC & Committee/14/2011/7637-94 dated 11.01.2011.

So far, no comments have been received from constituent members on the minutes of the meeting.

Members may confirm the minutes of 16th ERPC meeting.

Deliberation in the ERPC Meeting

Members confirmed the minutes of 16th ERPC meeting.

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

ITEM NO.B1: ERPC (CONDUCT OF BUSINESS) RULES 2006 - AS AMENDED 2011

In the 15th ERPC meeting held on 28th September,2010 the following decision was taken on amendment of Eastern Regional Power Committee (Conduct of Business) Rules 2006 (CBR) :

“As proposed by Member Secretary, ERPC decided that two officers of constituent member of ERPC located in Kolkata will scrutinize the draft Eastern Regional Power Committee (Conduct of Business) Rules,2006–Amendment and the final draft would be submitted to the Chairperson, ERPC for approval. The approved CBR would be placed in the next ERPC meeting for its ratification.”

The CBR as approved in the 1st meeting of ERPC held on 25th May,2006 has since been amended and forwarded to members vide letter dated 1st March,2011.

ERPC Secretariat will make a presentation on the subject.

Members may ratify the amended CBR.

Deliberation in the ERPC Meeting

ERPC Secretariat made a presentation.

After brief deliberation, it was decided that

- a) Members would send their comments to the Secretariat within a month.
- b) Members will nominate one person from their organisation for finalising the CBR.
- c) A meeting will be conducted within 1½ months.

The CBR so finalised will be adopted. It shall be ratified in the next ERPC meeting.

ITEM NO.B2: ERPC ESTABLISHMENT FUND AND ERPC FUND – Submission of Financial Statement (Item No.B3 of the Minutes of 16th ERPC meeting)

In the last (16th) ERPC meeting Member Secretary had apprised that “ financial statements are under preparation and will be placed in the next meeting.”

Accordingly, the financial statements in respect of ‘ERPC Establishment Fund’ for the year 2009-10 and 2010-11(upto February’11) have been prepared and enclosed at **Annexure-B**.

The financial statement in respect of ‘ERPC Fund’ for the year 2009-10 is enclosed at **Annexure-C**. The statement for the year 2010-11 is under preparation and will be placed in the next meeting.

Members may note.

Deliberation in the ERPC Meeting

Members noted.

ITEM NO.B3: FOLLOW UP ACTION DISCUSSED BY TCC ON THE DECISIONS TAKEN IN PREVIOUS TCC/ERPC MEETINGS

The follow up on the decisions taken in previous TCC/ERPC meetings related to operational, commercial and technical aspects were discussed by TCC yesterday and the gist of the deliberations are placed below:

ITEM NO. B3.1: PROCUREMENT OF SPARE TRANSFORMERS BY PGCIL FOR ITS OWN USE (Item no. 4.4 of minutes of 13th ERPC meeting)

After detailed deliberation, members decided the following:

“To increase the operational reliability of the grid, two numbers of 315 MVA, 400 / 220 KV Autotransformer and one number 50^{@@} MVAR shunt reactor should be procured as O&M spare. One transformer would be kept at Biharshariff, another at Durgapur S/s of Powergrid and one number shunt reactor should be kept at Rourkela.”

{@@ 14th ERPC changed the rating to 80 MVAR}

In the last (59th) OCC meeting, PGCIL informed that purchase order is going to be placed shortly.

Members may note and PGCIL may update the status.

Deliberation in the TCC meeting

PGCIL informed that order for procurement of spare transformers and reactors would be placed within 2-3 months. PGCIL intimated that approval from CERC is not required for this procurement.

Deliberation in the ERPC meeting

Members noted.

ITEM NO. B3.2: PROCUREMENT OF SPARE TRANSFORMERS BY PGCIL FOR USE BY STATES (Item no. B 5.3 of minutes of 16th ERPC meeting)

“ERPC approved the following requirements of spare transformers in Eastern Region:

New Transformers to be procured by Powergrid

1. 400/220kV, 2X 315 MVA
2. 220/132kV, 2x 160/150 MVA(as may be available)
3. 132/66 kV, 1x 50 MVA
4. 132/33kV, 1x 50 MVA

Regarding location, Powergrid will install them at their sub-stations in Eastern Region and decide by itself their location, and inform OCC of ERPC about their location (s).”

In the last (59th) OCC meeting, PGCIL informed that their Board had given investment approval for these transformers and feasibility report is under preparation and order may be placed by another 6-8 months. These transformers would be tentatively kept at Biharshariff, Jamshedpur, Malda and Rengali.

Members may note and PGCIL may update the status.

Deliberation in the TCC meeting

PGCIL Board has given investment approval for all except 132/33 kV, 50 MVA transformer and order would be placed within 2-3 months. PGCIL intimated that approval from CERC is not required for this procurement.

Member Secretary, ERPC would take up the procurement of 132/33 kV, 50 MVA transformer with Director (Operation), PGCIL.

On BSEB’s request, PGCIL was requested to take care of optimum load sharing during parallel operation of 160 MVA transformer with 100 MVA transformer likely to be caused by impedance mismatch.

Deliberation in the ERPC meeting

Members noted.

**ITEM NO. B3.3: ALLOCATION OF 500 MW POWER TO JSEB FROM KODERMA
TPS OF DVC (2X500 MW) (Item no. C30 of minutes of 16th ERPC
meeting)**

From 2x500 MW Koderma TPS of DVC bulk of the power is allocated to Delhi and Haryana. JSEB requested to enhance its allocation from 50 MW to 500 MW. After deliberation, it was decided that

“DVC would examine the issue in the light of DVC Act. The issue would be further deliberated in the OCC meeting.”

In the last (59th)OCC meeting, DVC responded that

- J Allocation of power to the beneficiaries from upcoming projects of DVC was finalized in the corporation meeting held on 26.08.2006 and subsequently on 30.04.2007, wherein Govt of Jharkhand and Govt of West Bengal was present.
- J In the said meeting, a provision of 900 MW out of 4700 MW capacity addition by DVC planned during XIth Plan period was kept for JSEB
- J DVC vide its letter dated 16.10.2006, 23.05.2007 and 16.07.2009 repeatedly requested JSEB to furnish their phase wise load requirement. However DVC did not receive any reply.
- J It is aware that in order to get loan from financial institution, tied up agreement are required. DVC had to execute agreement with other beneficiaries in order to obtain project loan.
- J Subsequently, the matter of additional allocation of 450 MW from Koderma was discussed in the meeting held at DVC tower on 24.06.10 with JSEB, wherein it was explained that additional allocation for JSEB can not be made at this stage since agreements have already been tied up. Accordingly, it was decided that JSEB may take up the matter at MOP level for reallocation.

Members may consider advising ERPC appropriately.

Deliberation in the TCC meeting

This issue would be taken up in the ERPC meeting.

Deliberation in the ERPC meeting

As the issue involves supply of power by DVC to its licensee area, both the parties i.e. JSEB & DVC agreed to resolve this issue bilaterally.

**ITEM NO.B3.4: IMPLEMENTATION OF SYNCHROPHASOR TECHNOLOGY IN
EASTERN REGION (Item No. B.5.2 of 16th ERPC meeting)**

ERPC approved total number of 26 PMUs (original -28 out of which 2 will be funded from NRLDC Pilot Project) at an estimated cost of Rs.18.65 Crores and their location to be identified by ERLDC.

Approval was subject to the condition that the Scheme would be taken up for implementation only if it is 100% funded from PSDF.

ERLDC has informed that the feasibility report is ready and PSDF is yet to call the proposal.

ERLDC may appraise the latest status.

Deliberation in the TCC meeting

ERLDC had discussed the issue of PMU installation with CDAC and IIT Kanpur/Infosys. ERLDC brought out that the project might not get 100% funding from PSDF in PSDF's disbursal procedure. Therefore, there is a need to pursue the change in the procedure or prune the project.

ERPC Secretariat in consultation with ERLDC would send its views to CERC in this regard.

TCC recommends to ERPC to authorise ERPC/ERLDC for taking up this matter with CERC.

Deliberation in the ERPC meeting

ERLDC informed that it is in readiness to submit the proposal to PSDF for its funding. However, as per the recommendation given by PSDF to CERC, schemes upto Rs.5 crores can be 100% funded and this scheme in the present form will not get covered for 100% grant.

After deliberations, it was decided that ERPC Sectt. shall communicate to CERC for increasing the ceiling for RPC approved projects.

It also directed ERLDC to explore the possibility of taking this scheme under separate state-wise project or application wise projects.

ITEM NO.B3.5: VOLTAGE COLLAPSE PREDICTION RELAYS

(Item No. B.5.7 of 16th 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 crores including (cost of training abroad) subject to the condition that it is to be funded from PSDF.

ERLDC may appraise the latest status.

Deliberation in the TCC meeting

ERLDC informed that it is ready to submit the proposal to PSDF as and when PSDF calls.

Deliberation in the ERPC meeting

ERPC noted.

ITEM NO.B3.6: SPECIAL PROTECTION SCHEMES

(Item No. B.5.6 of 16th ERPC meeting)

In order to increase the loadability of various flow gates and to relieve the congestion affecting market operation and to ensure security through automations, 16th ERPC

approved, subject to the condition that scheme is financed by PSDF, the following System Protection Schemes (SPSs) in those corridors as 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

ERLDC is yet to submit the proposal to PSDF.

However, ERPC Secretariat views are :

The SPS mentioned at Sl.No. (i) to (v) may get the nod of PSDF for funding. However, SPS at Sl. No (vi.) & (vii) i.e. SPS for Sterlite Energy Ltd. & SPS for Mejia ‘B’ and MPL Power stations may not get the nod as they pertain to new generation schemes and therefore, their cost should form a part of the generation scheme.

In view of above, IPPs may consider funding these SPSs on their merit.

This part may be deliberated.

IPPs may opine.

Deliberation in the TCC meeting

ERLDC would recommend to Sterlite Energy the changes required in their (ERLDC) scheme and Sterlite Energy would incorporate the same.

DVC has agreed to pay cost for SPS for Mejia “B” and MPL.

Deliberation in the ERPC meeting

NTPC expressed their concern that once new 400 kV Farakka-Kahalgaon 2nd D/C line is put on COD (expected by June, 2011), the congestion may not occur, which is the basis for taking up this SPS. ERLDC responded that the SPS is required because one more unit of 500MW is being added at Farakka STPS.

After deliberations, it was decided to go-ahead with the scheme and review as and when constraints are removed (before as well as after the implementation).

For (vi) ERLDC will review the Sterlite’s scheme incorporating the constraints in 220kV network of Odisha and the islanding scheme envisaged therein. OPTCL and SLDC, Odissa suggested that they should also be consulted during this process, for which ERLDC nodded. The entire cost shall be funded by Sterlite and included in the generation projects scheme.

For (vii), the cost shall be shared by Mejia ‘B’ and MPL power stations i.e. DVC and MPL respectively and included in the generation projects scheme.

It was also agreed that all the SPS scheme related to generating stations (IPPs) shall be borne by concerned IPP.

ITEM NO.B3.7: FOLLOW - UP ACTIONS ON THE DECISIONS OF THE STANDING COMMITTEE MEETING ON POWER SYSTEM PLANNING HELD ON 20.09.2010 AND SUBSEQUENT MEETING ON 28.12.2010

ITEM NO.B3.7.1 Interim Arrangement for evacuation of power from Teesta-III HEP (1200MW) by Teesta Urja Ltd. through LILO of one circuit of 400kV Teesta V-Siliguri D/C line at Teesta-III HEP
(Item No. B.4 under 11.0 of 16th ERPC meeting)

ERPC Decision

ERPC shall ratify the SCM decision provided it is to the satisfaction of the NHPC and ERPC Secretariat shall convey the approval of ERPC in consultation with the Chairman, ERPC.

After the meeting, NHPC vide their letter dated 11.02.2011 informed ERPC Secretariat of the following:

- There would be no requirement of any change / modification or replacement of any element in the GIS to Teesta –V as confirmed by CEA and PGCIL on 28.12.2010.
- PGCIL to send the details of the Special Protection Scheme (SPS) to be installed at Teesta –III for examination by NHPC.
- Upon technical feasibility, a methodology needs to be evolved through an MoU to be signed among CTU, Developer & NHPC for allowing “Right of Way” with respect to O & M expenses, priority of evacuation of power, indemnification in respect any consequences / losses due to above interim arrangement and other technical / commercial aspects.

NHPC may accord its 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.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

NHPC is yet to be satisfied on the Technical / Commercial aspects of the interim arrangement. NHPC stressed that the evacuation of Teesta-V must get priority over Teesta-III as and when situation arises.

ERLDC would frame (design) the SPS for this purpose.

ERPC shall ratify the SCM decision provided it is to the satisfaction of the NHPC and ERPC Secretariat shall convey the approval of ERPC in consultation with the Chairman, ERPC.

ITEM NO.B3.7.2 Establishment of 400 kV Rajarhat-Purnea 400 kV D/c line and 400/220 kV S/S at Rajarhat as system Strengthening in ER.

(Item No. B.4 under 12.0 of 16th ERPC meeting)

ERPC Decision

ERPC shall ratify the SCM decision provided it is to the satisfaction of the WBSETCL and ERPC Secretariat shall convey the approval of ERPC in consultation with the Chairman, ERPC.

After the meeting WBSETCL vide its letter dated 27.01.2011 informed that the scheme as envisaged is to the satisfaction of the WBSETCL subject to minor modification of the recordings of the Standing Committee meeting on 28.12.2010 issued by CEA.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

WBSETCL expressed their concerned regarding availability of ISGS share at Jeerat from Farakka STPS in the event of LILO of Farakka- Jeerat 400 kV S/C line at Berhampur. POWERGRID should take up the construction work of Rajarhat scheme urgently so that West Bengal does not suffer during supply of power to Bangladesh.

ERPC decision

ERPC ratified the SCM decision on 28.12.2010.

POWERGRID should give top most priority for implementation of the project. The construction of 400 kV line bays at Farakka and 400 kV line from Farakka towards Rajarhat must be taken up by POWERGRID urgently so that a portion of the transmission lineup to Berhampur is constructed by the time 400kV Berhampur switching station becomes ready for commissioning in order to make some contingency arrangement to connect Jeerat sub-station directly from Farakka in case supplying power to Bangladesh affects ISGS share to West Bengal

ITEM NO.B3.7.3 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. B.4 under 13.0 of 16th ERPC meeting)

ERPC Decision

ERPC shall ratify the SCM decision provided it is to the satisfaction of the OPTCL and ERPC Secretariat shall convey the approval of ERPC in consultation with the Chairman, ERPC.

After the meeting , OPTCL vide its letter dated 11.02.2011 informed the following:

- OPTCL is planning 400kV sub-stations at Khuntuni, Nisha & Laphanga to evacuate the state share of power from IPPs of Orissa
- OPTCL is in dialogue with all IPPs on the evacuation issues
- In new POC paradigm it will not be wise to have infructuous investment in the system
- This will overburden the consumers of Orissa & other states with additional investment of 765kV sub-stations with associated lines at Dhenkanal.

Hence, the approval for phase –II IPPs evacuation plan may please be withheld.

Approval of these proposals shall be sent to CTU as and when pre-conditions are satisfied. Subsequently, it will be got ratified.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

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

ERPC shall ratify the SCM decision provided it is to the satisfaction of the OPTCL and ERPC Secretariat shall convey the approval of ERPC in consultation with the Chairman, ERPC.

ITEM NO.B 3.7.4 Evacuation of Power from Upcoming IPP's in Odisha –Proposed by Odisha

With reference to the Agenda Item 7.3 Odisha proposed this agenda as:

In the last SCM held on 28.12.2010, PGCIL made a presentation on the evacuation of power from the IPP's 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 IPP's by swapping mechanism. GRIDCO stated that 765kV S/s at Dhenkanal is not required.

Both the proposals of PGCIL and OPTCL are at **Annexure-I&II** respectively.

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. This arrangement is at **Annexure-III**.

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.(**Annexure-III**)
3. OPTCL need not have to pay PoC charges.

OPTCL will make a presentation on it.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

Odisha made a presentation on the evacuation plan from upcoming IPPs in its states. In view of new regulation of POC charges of CERC to be effective from April, 2011, Odisha is expected to finalise the proposed schemes with CTU.

ERPC shall ratify the SCM decision provided it is to the satisfaction of the OPTCL and ERPC Secretariat shall convey the approval of ERPC in consultation with the Chairman, ERPC.

ITEM NO.B3.8: LESS REGISTRATION AT 132 KV MAITHON-JAMTARA TIE FLOW FROM 23.09.2007 TO 03.12.2007 (Item No.B 5.8 of minutes of 16th ERPC meeting)

In the last ERPC meeting JSEB communicated 18.01.2011 as a date to hold the meeting with DVC at ERPC Secretariat, Kolkata.

Accordingly, a meeting was convened at ERPC, Kolkata on 18.01.2011 between JSEB, DVC and ERPC. In the meeting DVC apprised JSEB and ERPC regarding the issue. After thorough deliberation, the model of calculation was decided, which was agreed unanimously by JSEB, DVC and ERPC. DVC and JSEB agreed to place the model of calculation to their respective management and also to obtain the approval from them within 21.02.2011. After obtaining the approval, ERPC will issue necessary statement of UI accounts for JSEB and DVC for the above period.

DVC vide letter no. COM/ERPC-3157 dated 17.02.2011 intimated that the formula proposed in the meeting dated 18.01.2011 has been approved by DVC.

In the last Commercial Sub-Committee meeting, it was informed that ERPC Secretariat had written to JSEB for furnishing the approval from JSEB authorities regarding acceptance of the methodology decided in the meeting among JSEB, DVC and ERPC on 18.01.2011. As no reply was received from JSEB, therefore it was decided that in the meeting that JSEB would be again reminded. Accordingly, JSEB was again requested by ERPC Secretariat (vide Fax Message: 44 dated 25.02.2011) to convey their required acceptance before the forthcoming TCC meeting to enable ERPC to take necessary action.

JSEB may respond.

Deliberation in the TCC meeting

JSEB accepted the formula decided in the meeting on 18.01.2011. Formal acceptance from JSEB management would be communicated within 15 days.

JSEB was requested to respond in the ERPC meeting.

Deliberation in the ERPC meeting

ERPC members appreciated the efforts of JSEB, DVC and ERPC secretariat in arriving at a consensus on the formula devised for this issue. Both DVC and JSEB have agreed to resolve this issue.

ITEM NO.B3.9: SEPARATE METERING ARRANGEMENT FOR KAHALGAON STAGE-I & II (Item No. C.2 of MoM of 16th ERPC Meeting)

In the 16th ERPC & TCC meetings, NTPC proposed to bring a composite proposal for separate metering of Kahalgaon Stage I & II.

A meeting was also held on 25.01.2011 between ERPC, ERLDC & NTPC and the issue of separate metering of Kahalgaon Stage I & II. was discussed. Accordingly, NTPC had submitted a proposal vide their Fax Msg No. REF:041:OSER dated 11.02.2011 which is furnished below :

$$\text{AG Stage I} = (\text{GT 1}+\text{GT 2}+\text{GT 3}+\text{GT 4}) * \text{Sum of all outgoing feeders} / (\text{GT 1}+\text{GT 2}+\dots\dots\dots+\text{GT 7})$$

$$\text{AG Stage II} = (\text{GT 5}+\text{GT 6}+\text{GT 7}) * \text{Sum of all outgoing feeders} / (\text{GT 1}+\text{GT 2}+\dots\dots\dots+\text{GT 7})$$

In the last Commercial Sub-Committee meeting, it was decided to adopt the above proposal as an interim measure. However, NTPC is to develop a scheme for segregation of generation for two Stages of Kahalgaon. NTPC should develop similar scheme for Farakka and Barh also.

Members may approve.

Deliberation in the TCC meeting

TCC approved the interim measure. NTPC agreed to explore alternatives, if any, on long term arrangement.

Deliberation in the ERPC meeting

ERPC approved the interim arrangement.

Regarding splitting of bus, NTPC intimated that the switchyard of KSTPS had not been designed to allow bus splitting arrangement. They intimated their apprehension that sufficient space is not available to allow physical separation of Stage-I and Stage-II bus. Further, NTPC informed that additional capitalisation for Thermal Generating Stations is not available under CERC (Terms and Conditions of Tariff), 2009 regulations.

ERPC members expressed their concern regarding the frequent changes in regulation without paying attention to practical limitations have resulted in this situation. However, NTPC was requested to explore long term solution of this problem, also in view of high fault level as discussed in the Standing Committee Meeting of CEA.

**ITEM NO.B3.10: SUBSTATION EQUIPMENT FOR DISASTER MANAGEMENT /
“ERS SUBSTATION” (Item No.B 5.4 of MoM of 16th ERPC Meeting)**

In the last TCC meeting, members recommended to ERPC for procurement of one number of ERS substation by POWERGRID as a part of disaster management for Eastern Region. ERPC had approved TCC proposal for procurement of one number of ERS substation by POWERGRID as a part of disaster management for Eastern Region. It was decided that its YTC shall be apportioned equally to each of the Powergrid's 400 kV sub-stations in ER.

POWERGRID may intimate the latest status.

Deliberation in the TCC meeting

PGCIL informed that they would approach CERC for getting its approval. Application is likely to be filed within couple of weeks.

Deliberation in the ERPC meeting

Members noted.

**ITEM NO.B3.11: FORMAT FOR INFORMATION ON COAL USED BY NTPC
(Item No C32 of 16th ERPC meeting)**

In the last (16th) ERPC meeting, the issue of steep hike in price of NTPC power was deliberated. In the meeting, constituents requested for furnishing of supporting documents including pricing of coal for the rise in fuel prices. After deliberation, ERPC decided that this matter would be taken up in next OCC, before which, GRIDCO will send a format for the information sought from NTPC. Subsequently, GRIDCO vide its letter dated 21.01.11 submitted the format

This issue was discussed in the 59th OCC meeting held on 22.02.2011, wherein NTPC representative was requested to intimate the Commercial Sub Committee members the format in which data regarding the sources of coal and their costs that is being used for NTPC stations in ER could be furnished.

In the meeting, NTPC was requested to finalize the format before the ensuing TCC meeting. Accordingly NTPC vide letter dt. 08.03.2011 furnished the format which is given in **Annexure-IV**.

Members may please note.

Deliberation in the TCC meeting

NTPC had agreed to Member Secretary's suggestion to split information on domestic coal into linked and e-auction and to furnish the base cost of coal and landed cost of coal. To this extent, NTPC's format would get amended.

Any further change would be taken up in the Commercial Sub-Committee meeting.

Deliberation in the ERPC meeting

ERPC noted.

ITEM NO. B3.12: DISCUSSION WITH SRPC IN RESPECT OF IRE ACCOUNT FOR ER-SR EXCHANGE (Item no.C16 of minutes of 16th ERPC meeting)

In the last the ERPC meeting, members after deliberation,

- Concluded that it is unfair to term this drawl as UI, as it is a scheduled.
- It is an important inter regional exchange due to implications on grid security of both regions
- There is a need for dialogue between the two regions
- ERPC empowered Member Secretary, ERPC & General Manager, ERLDC to initiate dialogue with their counterparts of SR and try to resolve it.
- If they are unable to resolve, Chairman, ERPC will take up with his counterpart.
- Chairperson, ERPC is authorized to take any decision deemed fit by him. Such actions will be ratified in next ERPC meeting.

Member Secretary, ERPC subsequently had taken up the matter with Member Secretary, SR vide e-mail on 28.02.2011. But, Member Secretary, SR opted to send a reminder to CERC for appropriate clarifications/amendments in IEGC.

Inspite of this, a videoconferencing was held among ERPC, SRPC, ERLDC and SRLDC on 08.03.2011 with no concrete outcome. Therein, following issues were deliberated.

- I. Charges for inter regional exchange between SR and ER through HVDC line
- II. Scheduling of Talcher stage –II STPS by ERLDC
- III. Integrated planned maintenance of Talcher Stage-I & Stage-II STPS

Detailed agenda in respect of the above issues are separately placed.

Chairperson ERPC has since been apprised on 09.03.2011 and requested to take this matter with his counterpart of SR.

Members may please note.

Deliberation in the TCC meeting

Members noted.

Deliberation in the ERPC meeting

Member Secretary, ERPC apprised the members regarding the issues and the outcome of the subsequent meeting with Southern Region. He informed that separate agenda have been kept for discussion in the meeting.

Shri M.K. De, Chairperson, ERPC informed that he would take up the issue with his counterpart in SR shortly.

ERPC members noted.

PART C

ITEM NO.C5: SCHEDULING OF TALCHER STAGE –II STPS BY ERLDC

Talcher Stage-II STPS is geographically located in Eastern Region but scheduling of Talcher Stage-II STPS is carried out by SRLDC. Provisions of IEGC in vogue are as below:

- Ø According to section 2.1 (r), “Control Area” means “*an electrical system bounded by interconnections (tie lines), metering and telemetry which controls its generation and/or load to maintain its interchange schedule with other control areas whenever required to do so and contributes to frequency regulation of the synchronously operating system.*”
- Ø According to Section 6.4(1) of IEGC, “*the Load Despatch Centre of a control area therefore is responsible for coordinating the scheduling of a generating station Load despatch centre of that control area*”.
- Ø According to section 6.4(2) of IEGC, “*respective RLDC of that control area shall co-ordinate the scheduling of central generating station*”
- Ø Any change in generation of Talcher Stage-II immediately affects the frequency of ER grid, thus contributes to frequency regulation of ER system; therefore, Talcher Stage-II falls under control area of ER.
- Ø Talcher Stage-II is also connected asynchronously with SR. If synchronous link between ER and SR is withdrawn, then Talcher Stage-II will be vulnerable to electrical jerk. Therefore, Talcher Stage-II gets reliability support from ER.
- Ø During outage of Talcher –Kolar HVDC poles, the generation from Talcher stage-II is wheeled through ER.
- Ø Moreover, Talcher stage-II STPS is a central generating station falling under ER control area; therefore, IEGC demands that scheduling of the station be carried out by ERLDC.

Members may discuss and advise ERPC accordingly.

Deliberation in the TCC meeting

This issue is referred to ERPC for further guidance.

Deliberation in the ERPC meeting

Member Secretary, ERPC cited various provisions of IEGC in this regard. In line with definition of control area given in IEGC, Talcher Stage-II falls under the control area of Eastern Region and therefore scheduling of Talcher Stage-II should be done by ERLDC. Same is the case of Kahalgaon Stage-II, which is stationed in ER but having maximum power allocated outside ER, but is presently being scheduled by ERLDC. In line with the practice followed for Kahalgaon Stage-II, Talcher Stage-II need to be scheduled by ERLDC.

ERPC agreed with the observation of Member Secretary and empowered Member Secretary, ERPC and General Manager, ERLDC to pursue this matter.

ITEM NO.C6: INTEGRATED PLANNED MAINTENANCE OF TALCHER STAGE-I & STAGE-II STPS

Talcher Stage-I STPS and Stage-II STPS of NTPC have 2 x500 MW and 4 x 500 MW respectively. Planned maintenances of these units are carried out by the same contractor and are normally carried out during monsoon season. As a result, there is a rush to accommodate these shutdowns during the short interval resulting into loss of availability for the beneficiaries of both the stations.

In order to tide over the situation, it is proposed that whenever one unit of either stage-I and Stage-II is under planned maintenance, 1/3rd of that unit capacity of ER and 2/3rd of that unit capacity of SR be deemed as under maintenance. This will help NTPC to run their units in an economic and efficient manner and both the regions will be benefited from availability of the units. This will be effected through notional scheduling mechanism. This will also be applicable whenever any unit of either stage-I or stage-II is out due to coal shortage condition.

Members may discuss and give in principle approval for such notional scheduling.

Deliberation in the TCC meeting

The issue is referred to ERPC for further guidance.

Deliberation in the ERPC meeting

Member Secretary, ERPC briefly outlined the philosophy behind such notional sharing of shutdown impact between two regions.

Members took note of the concept and agreed to discuss various operational/commercial implications at their ends. It was decided that this matter would be deliberated in detail in Commercial Sub-Committee meeting.

ITEM NO.C8: ISSUES RELATED TO STANDING COMMITTEE MEETING ON TRANSMISSION PLANNING IN EASTERN REGION HELD ON 28.12.2010

The Standing Committee meeting on Power system planning in Eastern Region and connectivity & Long Term Open Access of IPP generation projects in Eastern Region were held on 28.12.2010 at Gurgaon. The minutes were circulated on 20.01.2011 and 03.01.2011 respectively.

In addition to the above agenda points (**B 7.0**) the following points were also discussed and agreed to:

ITEM NO.C8.1 Termination of the WBSETCL's 400kV Chanditala-Subhashgram D/C line at Rajarhat instead of Subhasgram (PG)

In the Standing Committee meeting held on Bhubaneswar on 08.11.2008 (Item No. 4.4) 400kV Subhasgram –Jagatbalavpur (renamed as “ Chanditala”) D/C was approved. In view of space/RoW constraint at Subhasgram 400kV (PGCIL) sub-station, WBSETCL revised their proposal to terminate 400kV Subhashgram - Chanditala D/C line at Rajarhat 400kV S/S to make it as 400kV Rajarhat - Chanditala D/C line. It was agreed

to during the Standing committee meeting.

- The commercial implication falls upon only WBSETCL.

ERPC may approve.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

ERPC approved.

ITEM NO.C8.2 Transmission System for Phase-I and Phase-II IPPs in Sikkim

- The scheme was approved in the 16th ERPC meeting held at Bhubaneswar.
- Subsequently there are some changes considered and approved in the Standing Committee meeting held on 28.12.2010.
- Amended proposal is placed at **Annexure-V** .

ERPC may please approve.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

ERPC approved.

ITEM NO.C8.3 Diversion of 66kV Rangit-Melli S/C regional line to establish 66kV Rangit –Ravangla and Melli-Rothak S/C lines.

Sikkim proposed to terminate its ongoing 66kV Rangit-Ravangala line at Rangit by diverting the PGCIL's 66kV Rangit-Melli line to Rothak so as to establish 66 kV Ravangala-Rangit and 66 kV Melli-Rathok S/C lines.

To ensure system operation and protection for the 66 kV Ravangala-Rangit and Melli-Rathok S/C lines, Govt. of Sikkim would implement the same in co-ordination with ERPC, ERLDC and PGCIL.

The existing transmission charge recovery practice for the 66kV Rangit-Melli line of PGCIL would continue.

Only for information of TCC / ERPC.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

Powergrid suggested that consequent to the decision of SCM on 28.12.2010 and upon conversion, the system operation and protection for 66kV Rangit-Ravangla and Melli-Rothak S/C lines would be required to be finalised through a meeting between NHPC, PGCIL, ERLDC, ERPC and Govt.of Sikkim at the earliest. ERPC concurred with the suggestion.

ERPC approved the scheme.

ITEM NO.C8.4 Provision of space for 132kV bays at Melli for 132kV interconnection between Melli (Sikkim) and Kalimpong (WB) by WBSETCL.

- WBSETCL desired to construct a new 132kV Melli-Kalimpong line to meet the growing load demand of Kalimpong.
- The space for 132kV bay extension (one or two) at 132kV Melli S/S of Sikkim is required.
- WBSETCL & Sikkim would jointly visit and explore the feasibility for 132kV bay extension at Melli.

Only for information of TCC / ERPC.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

ERPC approved.

ITEM NO.C8.5 Splitting of 400kV Kahalgaon STPS bus by NTPC

- 400kV bus splitting at Maithon, Durgapur, Kahalgaon, Mathon-RB, Biharsharif Sub-stations was discussed in the Standing Committee held on 20.09.2010.
- NTPC would have to take up the work for their Kahalgaon power station to contain fault level.
- Provisions for incurring 60-70 crores for the work, capital addition exists under CERC frame-work for capitalisation of associated expenditure and NTPC would suitably approach the competent authority.

Only for information of TCC / ERPC.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

NTPC expressed reservation on the proposed bus splitting of 400kV Kahalgaon STPS on complex technical consideration at present (as it was not envisaged at the design stages). Further, there is no provision for taking up such capital works under existing CERC

Regulation for thermal generating station.

However, ERPC expressed the concern of fault levels of Kahalgaon STPS and suggested NTPC to explore.

ITEM NO.C8.6 Progress on Muzaffarpur-Dhalkebar 400kV D/C transmission schemes to supply power to Nepal.

It was informed by PGCIL that the Govt. of India permitted PGCIL to implement Muzaffarpur- Dhalkebar 400kV D/C line for power supply to Nepal.

There would be no transmission charges to be paid by ER constituents.

POWERGRID /CTU may please respond to the above points (C8) for appraisal of members.

Deliberation in the TCC meeting

This issue was referred to ERPC for further deliberation.

Deliberation in the ERPC meeting

CTU informed that it would be a joint venture project and 400 kV Muzaffarpur- Dhalkebar D/C line (initially operated at 220 kV level) shall be constructed by PGCIL between India and Nepal.

Members noted with apprehension that the statement “There would be no transmission charges to be paid by ER constituents.” may not hold good in the PoC regime.

ITEM NO.C9: TRANSMISSION OF SR POWER TO WR THROUGH PGCIL POOLING STATION IN ODISHA -- Agenda submitted by ODISHA

- a. If the 765kV line from southern region to western region is anchored at Angul, then Odisha will have to pay PoC charges. Hence it is not acceptable to OPTCL.
- b. OPTCL to get the ISTS Transmission Charges for 220kV Budhipadar-Tarkera line and part of 400kV Rengali-Kolaghat line.

Odisha may explain.

Deliberation in the TCC meeting

Orissa agreed to make a presentation in the ERPC meeting.

Deliberation in the ERPC meeting

After a presentation by OPTCL, ERPC suggested Odisha to discuss the issue in the next Standing Committee meeting.

ITEM NO.C11: FIBRE OPTIC CONNECTIVITY IN EASTERN REGION

– Agenda submitted by POWERGRID

Powergrid made a presentation in the 16th ERPC meeting. It was decided that the SCADA O&M committee will go through this proposal and come out with its recommendation. In the SCADA O & M committee held on 25.01.2011, the scheme was further reviewed and final proposal was put up for consideration. The details placed at **Annexure-VI**.

In the meantime, Powergrid vide its letter dated 15.02.11 informed that the investment approval for Fibre Optic Connectivity in Eastern Region was obtained from GOI with an estimated cost of 57.43 Crores (including IDC of Rs. 3.31 Crores). The project is scheduled to be commissioned with 30 months from the date of investment approval.

Members may please discuss.

Deliberation in the TCC meeting

The scheme will be deliberated before ERPC in detail.

Deliberation in the ERPC meeting

POWERGRID should see that quantity variation clause in their contract to be suitably kept for any variation of OPGW requirement in WBSETCL transmission system, in case WBSETCL take some work of its own before commencement of POWERGRID's work.

POWERGRID agreed.

After deliberations, the scheme was approved.

ITEM NO.C12: PAYMENT OF UI -- PRESENT STATUS

As informed by ERLDC the status of UI payment for 2010 - 11 as on 06.02.11 is enclosed at **Annexure –VII** .

GRIDCO had paid an amount of Rs 62.68 Lacs as delayed payment interest of 2009-10. As the payable amount was already disbursed from addl. surcharge fund, the amount of Rs 62.68 Lacs was replenished as addl. UI charge and has been shown separately. With this payment the UI account for 2009 – 10 is fully settled.

Maithan Power Limited has been considered as an UI pool member and its UI account is being generated w.e.f 06.01.2011.

This is for the information of the members.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

ITEM NO.C13: DISTRIBUTION OF IRE FOR TRANSACTION BETWEEN ER AND SR FROM 29.03.10 TO 02.05.10 (01 TO 05 WEEK) OF 2010- 11

ERLDC has intimated that IRE a/c between ER & SR has already been settled up to week 5 of 2010 - 11. From 1st week to 5th week of 2010 – 11, UI amount payable/receivable as per ERPC and as per SRPC A/C is shown in the enclosed **Annexure -VIII**. The IRE generated for difference in the two accounts is also shown in the **Annexure -VIII**. For the period from 29.03.10 to 02.05.10 (i. e. from 1st week to 5th week of 2010 - 11) IRE amount was kept in ER IRE a/c was Rs 5.82 Crores and IRE amount disbursed to SR IRE a/c from ER IRE a/c was Rs 1.37 Crores. Thus the two accounts have been reconciled between ERLDC & SRLDC. The balance amount of Rs 4.40 Crores after adjustment for DVC (Rs 0.84 Lacs on account of UI charge for 2008 - 09) & BSEB (Rs 2.85 Lacs on account of reactive charge for 2006 - 07) has been transferred to POWERGRID for giving transmission credit to ER constituents. The details of transmission credit given to the constituents are enclosed in **Annexure --VIII**. This settles IRE A/C between ER & SR for the year 2010 - 11.

This is for the information of the members.

Deliberation in the TCC meeting

TCC members noted ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

ITEM NO.C14: REACTIVE ENERGY CHARGES – PRESENT STATUS.

As intimated by ERLDC, the updated position of receipt/payment of Reactive Energy Charges in the pool as on 24.02.2010 considering bill up to 13.02.2011 is indicated in **Annexure –IX**. There is no outstanding due on account of Reactive energy charge as on 24.02.11.

This is for the information of the TCC members.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

ITEM NO.C15: POOL BALANCE DUE TO CAPPING/ADDITIONAL UI CHARGE

As informed by ERLDC the total amount of Rs 75.73 Lacs is available as capped amount as on date and the total amount of Rs 80.27 Lacs is also available as additional UI charge as on date. Moreover an amount of Rs 62.68 Lacs is also available which is paid by GRIDCO as delayed payment surcharge for 2009 -10.

This is for information to the members.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

ITEM NO.C16: RECONCILIATION OF UI POOL ACCOUNT

ERLDC has informed that the statement of reconciliation of UI Account for the period from April'10 to Sept'10 has been sent to all constituents for checking at their end and confirmation. No confirmation has yet been received from BSEB, JSEB and Sikkim. Reminders have also been issued to BSEB, JSEB and Sikkim for confirmation of the same.

In the 16th Commercial sub committee it was decided that if no confirmations are given by the concerned constituents within 23.03.11, it would be presumed that the statement of reconciliation of UI account for the period from April'10 to September'10 sent to the above constituents by ERLDC deemed to be in order.”

This is for information to the members.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

ITEM NO.C17: POWER SYSTEM DEVELOPMENT FUND (PSDF) --- PRESENT STATUS

As per PSDF Regulation, principal amount of Rs 272.68 Crores and an interest of Rs 12.85 Crores has been transferred to PSDF. As provided by ERLDC, as of now total amount of Rs 285.53 Crores has been transferred to PSDF (details enclosed in **Annexure-X**).

This is for information to the members.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

ITEM NO.C18: CHARGES FOR INTERCHANGE BETWEEN SR AND ER THROUGH HVDC LINE (ITEM NO.C 16 OF MINUTES OF 16TH ERPC MEETING)

SR and ER grid are connected via asynchronous HVDC links. Therefore, the frequency of ER and SR grids are different. The UI for inter regional exchanges between ER and SR was calculated using ER frequency. Since ER frequency was almost always higher than SR frequency, the difference of UI between the two regions was receivable by ER, which was passed on to the constituents as transmission credit. This was as per chapter 7 of IEGC (Notification No. L/68(84)/2006-CERC New Delhi, the 14th March, 2006 which came into force from 01.04.06) in vogue during that period.

However, The CERC Indian Grid Code (Amendment) Regulations, 2009 (Notification No- L-1/(2)/2009-CERC dated 30.03.2009) had omitted the chapter 7 on “Inter Regional Exchanges”. The latest version of IEGC (Notification No. L-1/18/2010-CERC New Delhi, 28th April 2010) has no provision on this issue.

Taking cue from this, SR has unilaterally discontinued the earlier practice of calculation of UI and ER constituents have been denied a substantial amount of relief on account of this. ERPC Secretariat had already taken up the matter with SRPC vide their letter No-ERPC/COM 2/UI CORR/2010/2416-18 dated 28.07.2010.

Member Secretary, ERPC subsequently had taken up the matter with Member Secretary, SR vide e-mail on 28.02.2011. Member Secretary, SR has in turn taken up the matter with CERC vide his letter no-SRPC/SE-I/2011/1641-42 dated 03.03.2011 to get the issue examined and arrange for appropriate clarifications/amendments in IEGC.

Members may like to discuss

Deliberation in the TCC meeting

TCC referred this agenda to ERPC.

Deliberation in the ERPC meeting

After detailed deliberation it was decided that Chairperson, ERPC (Shri M.K.De) shall take up the matter with his counterpart in SR to settle the issue.

ITEM NO.C19: NOMINATION TO THE VALIDATION COMMITTEE FROM EASTERN REGION

CERC vide their letter No-I-1/44/2010-CERC dated 28.09.2010 had requested to nominate one officer from Constituent State/Utilities for Validation Committee in addition to Member Secretary of RPC.

It had been decided by Chairperson ERPC & Member Secretary ERPC after mutual consultation that nomination of officer of Constituent States/Utilities from ERPC shall be as under:

- TCC member representing the State Transmission Utility of the State to whom the incumbent Chairperson, ERPC belongs.

This decision would be got ratified in the next ERPC meeting subsequently.

As per this procedure Shri A.C. Sarkar, Director (Transmission), WBSETCL had been nominated to the Validation Committee

In the meanwhile, Shri S. Nag, has taken over the charge of Director (Operations), WBSETCL and consequently has become the member of TCC from the constituent state of West Bengal. Therefore, his name would be nominated to the Validation Committee.

Members may ratify the procedure.

Deliberation in the TCC meeting

TCC recommended to ERPC for ratifying the decision.

Deliberation in the ERPC meeting

ERPC ratified the decision.

ITEM NO.C20: COMMERCIAL DECLARATION (COD) OF PGCIL ELEMENTS

A) Commercial Operation Declaration (COD) of 125 MVAR Bus Reactor-II at New Purnea

125 MVAR Bus Reactor-II at New Purnea S/S under ERSS-II has been declared under Commercial Operation by PGCIL w.e.f 01.02.2011 (PGCIL letter No-E/PT/ED(ER-I)/8019 dated 28.01.2011) as per CERC regulation 2009.

B) COD of LILO connectivity to DVC ANDAL TPS through PGCIL 400 KV D/C Durgapur-Jamshedpur TL associated with ERSS-I

LILO connectivity to DVC ANDAL TPS through PGCIL 400 KV D/C Durgapur-Jamshedpur TL associated with ERSS-I had been declared under commercial operation by PGCIL (PGCIL letter No-ER-II/KOL/Comml/6124 dated-31.01.2011) with effect from 01.02.2011 as per CERC Regulation, 2009-14.

C) COD of 400 KV Ranchi- Rourkela D/C Line

400 KV Ranchi-Rourkela D/C Line along with associated bays has been declared under commercial operation **with effect from 01.12.2010** as per CERC regulation, 2009 by PGCIL (Letter No-E/PT/OS/332/6700 dated 01.12.2010).

POWERGRID was requested to furnish certain information in agreed prescribed format as per decision taken in the 7th Commercial Sub-Committee meeting.

In the last Commercial Sub-Committee meeting, POWERGRID furnished the requisite information which is given in **Annexure –XI** and this was also circulated among the participants in the meeting.

Commercial Sub-Committee recommended to TCC for acceptance of the COD of the above transmission elements.

TCC members may please accord acceptance of the above mentioned elements of POWERGRID.

Deliberation in the TCC meeting (Item A, B & C)

TCC recommended to ERPC to approve COD of PGCIL elements from the respective dates.

Deliberation in the ERPC meeting

ERPC approved the COD of the PGCIL elements.

ITEM NO.C21: AGENDA SUBMITTED BY ERLDC

A: 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 status report in respect of opening of LCs is being furnished to CERC periodically which is shown in **Annexure - XII**. During the last financial year no LC was opened by BSEB and JSEB. However with the completion of 2010 – 11 the new amount of LC to be opened by different constituents which shall be informed in due course.

This is for information of the members.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

B: NON RECEIPT OF SEM DATA

2. Malbase Sub – Station

In the last TCC/ERPC meeting ERLDC had requested PTC to take immediate measures for arranging the Meters, DCDs along with optical cord for downloading of meter data and its transmittal to ERLDC from Malbase s/stn.

Further, ERPC in its last meeting had approved the procurement of 25 nos DCDs/Laptops for Eastern Region at an approximate cost of Rs 12.5 Lacs to be shared equally by the beneficiary constituents of Eastern Region.

- PTC/ERLDC may intimate the latest status of receipt data
- POWERGRID may intimate the status of procurement of DCD/Laptops

Deliberation in the TCC meeting

TCC referred this agenda to ERPC.

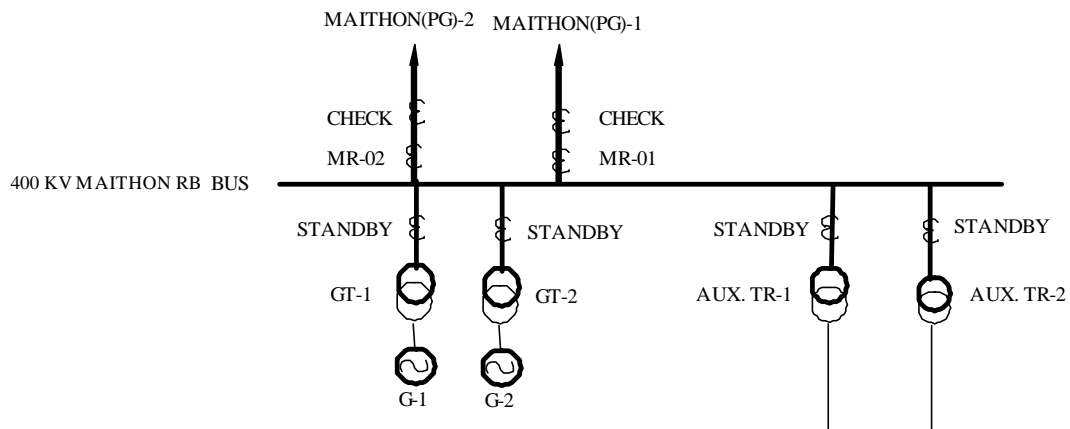
Deliberation in the ERPC meeting

Concerned parties were requested to intimate the information to OCC.

C: METERING ARRANGEMENTS OF VARIOUS IPPS

1. MPL (Maithan Power Limited)

The metering requirement of the MPL (Maithan Power Limited) and SEL (Sterlite Energy Limited) has already been examined as per CEA metering regulation 2006 and its amendments the scheme of which are shown below:



Being a separate Notional Control Area, the UI accounting of Maithon Right Bank is being carried out by ERPC and Maithan Power Limited has become a regional UI pool member. The station has started drawing start-up power and on its commissioning scheduling would be done by ERLDC as per the provisions of IEGC.

Members may please note

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

ERPC members noted.

2. DSTPP (Andal)

400 KV Maithan – Mejia S/C has been made LILO at DSTPP (DVC) to draw start up power at 2X500 MW Durgapur STPP (Andal). The line had already been charged on 26.01.11 and Special Energy Meters (SEM) installed at DSTPP (Andal) end of 400 KV Maithan – DSTPP line and 400 KV Mejia – DSTPP line.

Special Energy Meters (SEM) are to be installed at following

400 KV Maithan – DSTPP line (Two Meters - one main & one check)
400 KV Mejia – DSTPP line (Two Meters - one main & one check)

POWERGRID may please note.

Deliberation in the TCC meeting

TCC members noted. ERPC may kindly note.

Deliberation in the ERPC meeting

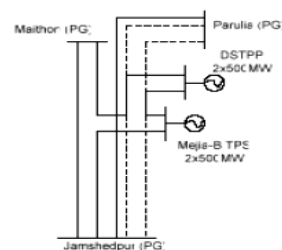
ERPC members noted.

3. SEL (Sterlite Energy Limited)

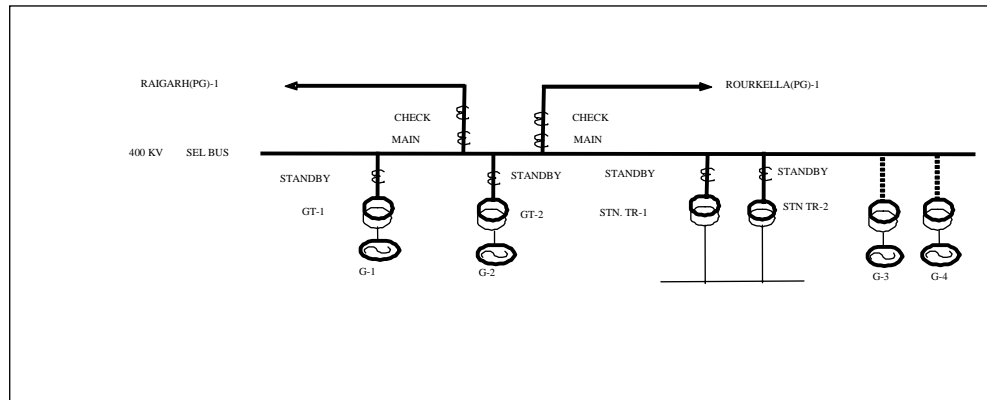
As per the provision of IEGC with synchronization of second unit of Sterlite, the control area jurisdiction of the said plant/unit may fall under the jurisdiction of ERLDC when accounting of Sterlite would be carried out by ERPC and Sterlite would also be a regional UI pool member.

For metering arrangement, 8 nos. of ABT compliant meters have to be installed at Sterlite for computation of any injection / drawal by Sterlite Energy Limited (SEL), two no meters (one Main & One Check) at Sterlite end of 400 KV Raigarh – Sterlite line and two no Meters (one Main & One Check) at Sterlite end of 400 KV Sterlite - Rourkela line. Two Meters are required to be installed at HV side of GT (at present for units 1 & 2) and one meter at HV side for each of the Station Aux Transformer.

Necessary advise has already been communicated to CTU for providing meters to M/s Sterlite.



**METERING ARRANGEMENT AT
STERLITE (4X600 MW)**



Powergrid/Sterlite may inform the status of installation of these meters.

Deliberation in the TCC meeting

Powergrid/Sterlite was requested to inform the latest status to ERPC tomorrow.

Deliberation in the ERPC meeting

Powergrid was requested to inform the latest status in next OCC.

D: CHANGE OF 66 KV RANGIT-MELLI TO 66 KV RANGIT – RABANGLA / ROHTAK 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 16th commercial committee meeting Sikkim informed that they would co-ordinate with POWERGRID for shifting of Melli end meter to Rabangla.

POWERGRID has requested Power Dept., Govt. of Sikkim to provide details of LILO for their records. Consequent to this LILO both the lines shall have to be considered as element for availability certification henceforth.

Members may please note.

Deliberation in the TCC meeting

TCC deliberated following aspects:

- Appropriate metering- action to be taken by PGCIL/ERLDC/ERPC/Sikkim

- Appropriate co-ordination of relays- A separate meeting to be convened between Sikkim, ERLDC and Powergrid. ERPC to co-ordinate
- Commercial Issues-decision to be taken in tomorrow's ERPC meeting

All the constituents were given time to respond in the ERPC meeting.

Deliberation in the ERPC meeting

The Metering and Protection issues were referred to OCC and Protection Committee.

In respect of the Commercial treatment for allocation of cost of the new configuration, it was decided to treat both 66 KV Rangit-Ravangla/Rohtak and 66 KV Ravangla/Rohtak-Melli as regional elements.

E: IMPLEMENTATION OF AUTOMATIC METER READING IN EASTERN REGION

The power system in country is organized in five electrical regions for operation purpose namely North, South, East, West and North-east. Eastern region consists of five states i.e. Bihar, Jharkhand, Orissa, West Bengal and Sikkim. Regional Load Despatch Centers are responsible for scheduling of drawal by the states/other regions and injection by ISGSs/IPPs and their measurement of 15 mts blockwise MWH within and across the regions. Thus each of the states and ISGSs are considered as control areas and measurement of electric energy is being carried out by interface meters called Special Energy Meters (SEMs) installed at the peripheries of states/regions and at ISGSs as per the provision of Metering regulation notified by CEA. POWERGRID being Central Transmission Utility (CTU) is responsible for installation of SEMs throughout the region and ERLDC is responsible for collection and processing of the metered data for the purpose of Regional UI energy accounting

Presently, manual system is being used for reading meter data. For reading meter data, each meter has been provided with optical port. Meter data is being collected from the meter through a hand held device called Data Collecting Device (DCD) provided by the meter manufacturers. The data from DCD is dumped in a local PC through software. From PC, data in the form of encrypted binary files are sent to ERLDC as E-mail attachment for further processing at ERLDC end. These encrypted files collected from all the locations are converted to text files by using manufacturer provided software. After conversion, the data is validated, processed by using in house developed software and sent to ERPC (Eastern Regional Power Committee) for preparing weekly UI and reactive energy accounts.

With system size growing at a faster pace, meter data from a large number station has to be processed and manual downloading of meter data, its collection and onward transmittal would take a longer time. Besides the DCDs are prone to frequent defects/damages and site level repair for these items are not possible for which the data downloading vis-à-vis meter data processing at times becomes quite difficult. ERLDC, therefore, intends to automate the entire process of meter-data reading and collection through AMR (Automatic meter data reading) system. AMR system once deployed will be utilized for collection of meter data from Special Energy Meters deployed by POWERGRID in various locations in Eastern Region. These locations are owned by POWERGRID or State Electricity Boards (SEBs) or Inter State Generating Stations (ISGS). At present about 475 meters are installed at about 115 locations geographically dispersed

across Eastern Region covering the states of Bihar, Jharkhand, Orissa, West Bengal and Sikkim and at ISGSs. As mentioned earlier, 650 Nos of SEM is going to be installed for new elements coming years. As the number of SEM is going to increase manifold it is therefore all the more essential that the data be downloaded and transmitted automatically at ERLDC to optimize cost and time.

The proposed AMR scheme is to automate the task of data collection from each meter/location periodically and storing the same in a database (RDBMS like Oracle, MS SQL Server, My SQL etc). Data from the database will be used by separate software for validation and further processing. The basic block diagram of the indented AMR system is given in **Annexure-XIII**.

NRLDC in association with NR-I had already finalized the technical specification for implementing AMR project in NR and it is in the process of tendering. This project may please be taken up by POWERGRID for implementation.

ERLDC may explain through presentation indicating estimated cost, specification, etc.

In the last Commercial Sub-Committee meeting, representatives from Oracle and WIPRO gave a presentation highlighting the existing process of metered data acquisition system, proposed solution, cost and time involvement. During the inter-active session it emerged that, for installation of automatic meter reading system for 472 meters in the Eastern Region located at 113 places, estimated cost would be Rs8.6 Crores and the project duration would be approximately 6 months from the date of placement of order. It was also informed by them that they had already installed similar system in a number of places.

All constituents noted the distinct advantage the new methodology offers and unanimously underlined the need to adopt the new technology for automatic metered data acquisition system in place of existing manual system. Members also noted that SRPC and NRPC had already been initiated necessary action in this regard.

Commercial Sub-Committee in its last meeting recommended to TCC for acceptance of the proposal for implementation of automatic metered data acquisition system in Eastern Region at an estimated cost of Rs 8.6 Crores preferably by utilizing the fund available under PSDF.

Members may please discuss and decide.

Deliberation in the TCC meeting

ERLDC informed that the cost of the AMR project is expected to come down from Rs. 8.6 Crores to Rs. 3.6 Crores for 115 locations (including AMC for 5 years).

TCC recommends ERPC to concur with ERLDC proposal.

Deliberation in the ERPC meeting

ERPC members concurred with ERLDC proposal. Accordingly, Powergrid shall invite competitive bidding for implementation of the same.

F: PAYMENT FOR MAINTENANCE CONTRACT OF EMS / SCADA

During the 8th SCADA O&M Committee meeting held at ERLDC on 25th January, 2011, the issue of non-payment of AMC charges by BSEB, JSEB and Sikkim was discussed. BSEB assured the house that all pending payments would be cleared by 15th February, 2011. However, payment for only one quarter, out of 3 quarters pending, was made by BSEB. Sikkim has made the payment of 4 quarters out of 5. The status of pending payments from the constituents as on 02.03.11 is as under:

| Constituent | Pending for | Total (Rs.) |
|--------------------|---|--------------------|
| OPTCL | Nil | Nil |
| BSEB | 4 th and 5 th quarter and delay surcharge for all five quarters . | 3416113 |
| WBSETCL | Nil | Nil |
| DVC | Nil | Nil |
| SIKKIM | 5 th quarter and delay surcharge for all five quarters . | 69787 |
| JSEB | Delay surcharge for 3 RD & 4 TH quarters | 58091 |

In view of such a serious issues of non-payment, it would not be possible for ERLDC to continue with the services being rendered by M/s AREVA. In order to maintain smooth AMC services at all the control centres, the constituents are once again requested to immediately clear all the pending payments and ensure timely payment in the balance period of AMC.

In the 16th commercial committee meeting held on 23.02.11 Sikkim and BSEB informed that they would liquidate their outstanding shortly.

Members may like to discuss.

Deliberation in the TCC meeting

ERLDC was requested to furnish the MoM of SCADA meeting to BSEB, which would come out with response.

JSEB, Sikkim assured ERLDC for prompt payment in future (without delay). They requested ERLDC to waive off surcharge for delayed payment.

The issue is to be taken up again in ERPC meeting.

Deliberation in the ERPC meeting

All the three states i.e. Bihar, Jharkand and Sikkim assured regular payment. However, they requested ERLDC to consider one time waiver of surcharge interest for the past period.

G: IMPOSITION OF CONGESTION CHARGES- IMPLICATIONS AND PROCEDURE.

The detailed procedure for relieving congestion in real time operation was ordered by CERC on 11.06.2010. Recently congestion charge was applied in WR-NR link on 26/01/11(between 14:00-15:45 hrs), and on 27/01/11(between 14:00-15:15hrs) due to constraint of transmission network as per procedure laid down by Hon'ble CERC. It is to mention here that the congestion charge as per present order of CERC is Rs 5.45 per unit, which will be applicable to all regions. The congestion charge is applicable on overdrawal/under injection below 50Hz in the up stream of the congested corridor and under-drawal/over injection above 50Hz in Downstream of the congested corridor..

The necessary infrastructures required for applying/withdrawing congestion charge for ER are being kept ready at ERLDC for posting in website as well as through SCADA system as per procedure laid down by Hon'ble CERC.

Members may please note.

Deliberation in the TCC meeting

ERLDC and GRIDCO were requested to make presentations before ERPC next day.

Deliberation in the ERPC meeting

ERLDC gave a presentation.

H: SCHEMES - FUNDED FROM ER REACTIVE ENERGY CHARGE ACCOUNT

A three day programme on Despatcher training was conducted by M/s AREVA at ERLDC from 24.02.2011 to 26.02.2011 which was attended by ER constituents. The expenditure has been booked under Reactive Energy Charge account as already approved by ERPC.

ERLDC proposes to conduct a one-day Workshop on Reliability Coordination at an estimated cost of Rs 1.5 Lac.

This workshop may be approved to be funded from REC account of ERPC.

Deliberation in the TCC meeting

TCC noted the successful completion of training conducted by M/s Areva.

TCC recommended to ERPC for acceptance of ERLDC proposal for conducting workshop on reliability coordination.

Deliberation in the ERPC meeting

ERPC approved ERLDC proposal to conduct a one-day Workshop on Reliability Coordination at an estimated cost of Rs 1.5 Lac.

**ITEM NO.C22: REVENUE SHARING, BILLING, COLLECTION &
DISBURSEMENT PROCEDURES AS PER CERC(INTER-STATE
TR.CHRGES & LOSSES), REGULATIONS, 2010**

-----Agenda submitted by POWERGRID

CERC Regulations on Sharing of Inter-State Transmission Charges and Losses, shall come into effect from 01.04.2011. CTU had submitted Draft of Transmission Service Agreement (TSA), Revenue Sharing Agreement (RSA) and Billing, Collection & Disbursement (BCD) Procedures to CERC. As per the said Regulations, the signatories to the TSA shall be DICs and ISTS Licensees. The DICs mean the user of ISTS and shall include all Generators, State Transmission Utilities (STUs), SEBs etc.

The bill for the use of ISTS, shall be raised by the CTU on the concerned DICs. The SEBs / STUs may recover the transmission Charges for the use of ISTS from the Distribution Companies and pay to CTU.

The payment by all the DICs for the Monthly transmission Charges shall be executed through Real Time Gross Settlement (RTGS).

The STUs may take advance action for putting in place the requisite infrastructure / facility for payment through RTGS and also make back to back arrangement with the Distribution Companies.

The activity of signing of the TSA / RSA shall commence immediately upon approval of the draft of said documents by CERC

Members may please note.

Deliberation in the TCC meeting

The agenda is to be taken up during discussion on “Sharing of Inter State Transmission charges and Losses” to be held tomorrow.

Deliberation in the ERPC meeting

PGCIL made a presentation.

PART D: FUNDING OF ERPC SECRETARIAT FOR THE YEAR 2011-12

ITEM NO.D1 ERPC-ESTABLISHMENT FUND FOR THE YEAR 2011-12

For the year 2010-11 contribution of Rs.14 lakh per member was approved by ERPC. The contribution for the year 2011-12 is proposed to be kept unchanged at Rs.14 lakh per member.

Members may approve the proposal.

Deliberation in the ERPC Meeting

Members approved contribution of Rs.14 lakh per member for the year 2011-12.

ITEM NO.D2 ERPC FUND FOR THE YEAR 2011-12

For the year 2010-11 contribution of Rs.50000 per member was approved by ERPC. The contribution for the year 2011-12 is proposed to be increased to Rs.One Lakh per member. The fund is utilised for holding various meetings, workshops, seminars etc. hosted jointly by the constituents.

Members may approve the proposal.

Deliberation in the ERPC Meeting

Members approved contribution of Rs.One lakh per member for the year 2011-12.

PART E :

ITEM NO.E1: CONSTITUTION OF ERPC FOR THE YEAR 2011-12

1. Sterlite Energy Ltd. (SEL) vide letter dated 15th February,2011 intimated two units each of 600 MW capacity have been commissioned at their Jharsuguda Power Plant in Odisha (4x600 MW) and applied for membership of ERPC as per para 3(iv) of GoI Resolution. They have also sent contribution towards 'ERPC Establishment Fund' and 'ERPC Fund'.

SEL is eligible to become member of ERPC as an IPP having installed capacity more than 1000 MW.

Members may ratify the membership of SEL.

Deliberation in the ERPC Meeting

Members ratified the membership of Sterlite Energy Ltd.

2. The list of members of ERPC for the year 2011-12 as per the Resolution of Ministry of Power, Govt. of India is given at **Annexure-D**.

GRIDCO, PTC, POWERLINKS, APNRL, and MPL shall continue to be Associate Member as per the earlier decision of ERPC.

Members may note.

Deliberation in the ERPC Meeting

Members noted.

3. Tata Power Company Ltd. (TPCL) was eligible to continue as a member as a representative of the generating companies having power plants in the region (not covered in para 3 (ii) to (iv) of the GoI resolution) for the year 2010-11 in absence of any new generating company in this category. But in response to number of communications from the Secretariat, TPCL has neither attended any ERPC meeting nor contributed to 'ERPC Establishment Fund' and 'ERPC Fund'. It appears that TPCL is not interested to continue as member of ERPC.

Therefore, as and when any new generating company becomes eligible for membership in the above category, the mater will be taken up.

Members may note.

Deliberation in the ERPC Meeting

Members noted.

4. As per GoI Resolution one distribution company by alphabetical rotation out of the private distribution companies functioning in the region is eligible to become new member for the year 2011-12. The private distribution companies functioning in the region are DPSCL in West Bengal, NESCO, SOUTHCO & WESCO in Orissa and JUSCO in Jharkhand. The names of the private distribution companies in alphabetical order are DPSCL, JUSCO, NESCO, SOUTHCO & WESCO. For the current year i.e.2010-11 ERPC in its 13th meeting held on 26th March'10 had empowered the Secretariat to approve the Membership of NESCO subject to filing of application for membership together with contribution. But NESCO did not file its application nor sent its contribution. As per above roster, now it will be turn of SOUTHCO to become member for the year 2011-12.

It is proposed to empower the Secretariat to approve the membership of SOUTHCO (Southern Electric Supply Company of Orissa) for the year 2011-12 subject to filing of application for membership together with its contribution. ERPC Secretariat will suggest SOUTHCO to apply.

Deliberation in the ERPC Meeting

Members approved the proposal.

5. As per GoI Resolution one electricity trader is eligible to become member representing electricity traders in the region. As per existing practice, the recommendation is to come from CEA, which is awaited. For the current year i.e.2010-11 JSW Power Trading Company (JSWPTC) was recommended by CEA to be a member of ERPC but they did not file application for membership nor sent its contribution.

CEA may recommend name of a trader to be a member of ERPC for the year 2011-12. The Secretariat will initiate necessary action on receipt of recommendation from CEA.

Deliberation in the ERPC Meeting

Members noted.

ITEM NO.E2: NOMINATION OF CHAIRPERSON -ERPC FOR THE YEAR 2011-12

The incumbent Chairperson, ERPC will complete his term of one year on 31.03.2011.

As per GoI Resolution “ Chairperson of ERPC would represent the States of the region by rotation in alphabetical order. Members of ERPC from the particular State would nominate the Chairperson of ERPC from amongst themselves. Term of Chairperson would be for a period of one year.”

Now it is turn of Bihar State. Bihar State Electricity Board (BSEB) and Bihar State Hydroelectric Power Corporation (BSHPC) are the members from Bihar. But BSHPC has so far not attended any ERPC meeting.

Shri P.K. Rai, Chairman, BSEB will take over as the Chairperson, ERPC for the year 2011-12 w.e.f. 1st April,2011.

Deliberation in the ERPC Meeting

Shri P.K. Rai, Chairman, BSEB was nominated as the Chairperson, ERPC for the year 2011-12 w.e.f. 1st April,2011.

ITEM NO.E3 NOMINATION OF CHAIRPERSON -TCC FOR THE YEAR 2011-12

Shri T.T. Jha, Member (Transmission), BSEB will take over as the Chairperson, TCC for the year 2011-12 w.e.f. 1st April,2011.

Deliberation in the ERPC Meeting

Shri T.T. Jha, Member (Transmission), BSEB was nominated as the Chairperson, TCC for the year 2011-12 w.e.f. 1st April,2011.

ITEM NO.E4: FINALISATION OF VENUE AND TENTATIVE DATE OF THE NEXT COMMITTEE MEETING

The roster approved in the 1st ERPC meeting and updated with the inclusion of IPPs as member/associate member is given below :

| 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 15th ERPC meeting the turns of Orissa and PTC were swapped and Orissa hosted the last (16th) ERPC meeting at Bhubaneswar.

Now, it is the turn of Jharkhand to host the next meeting, for which Members may decide tentative date and venue.

Deliberation in the ERPC Meeting

It was decided that JSEB would host the next TCC and ERPC meetings at Ranchi on 28th and 29th June, 2011 respectively. JSEB would communicate the venue.

Additional Agenda

ITEM NO. F.1: PROVISION OF 6 NOS. 132KV BAYS AT 400 /132KV, 2X100 MVA S/STN. AT BANKA OF PGCIL- agenda submitted by Powergrid

Powergrid informed that CEA vide letter dated 09.02.2011 indicated the construction of the following transmission schemes for BSEB system to be undertaken by Powergrid under phase-II of RSVY :

- a) LILO of both circuits of 132 kV Kahalgaon-Sultanganj-Lakhisarai D/C line at 400/132 kV, 2X200 MVA Banka substation (PGCIL), utilising 4nos. 132 bays at Banka S/s
- b) LILO of both circuits of 132 kV Kahalgaon-Sultanganj-Lakhisarai D/C line at 400/132 kV, 2X200 MVA Lakhisarai substation (PGCIL), utilising 4nos. 132 bays at Lakhisarai S/s
- c) Construction of 132 kV D/C line from 400/132 kV Banka S/S (PGCIL) to 132/33 kV Banka S/S (BSEB)

CEA has observed the above schemes are in order and for item no.(c), an additional 2 nos. of 132 kV line bays at Banka S/S (PGCIL) would be required. BSEB is to take up the issue with Powergrid for provision of necessary space for bay extensions at the Banka S/S(PGCIL). The cost of these two additional 132 kV line bays should be borne by BSEB. This needs to be vetted by ERPC.

Deliberation in the ERPC meeting

CTU informed that on the request of BSEB for provision of additional bays (2 nos.) are required for construction of 132kV D/C line from 400/132kV Banka S/Stn. (PGCIL) to 132 /33kV Banka sub-station (BSEB) as part of system strengthening Scheme-III.

ERPC has already approved in its Special (9th) meeting on 12.01.09, 4 nos. of bays each 400/132kV S/Stns. at Banka & Lakhisarai of BSEB as per the decision SCM.

ERPC is in agreement with the proposal as the cost of the two additional 132kV line bays at Banka S/Stn. shall be borne by BSEB.

ITEM NO. F.2: PRIORITIZATION OF ICT PROCUREMENT FOR CHUKHA TRANSMISSION SYSTEM

At present in Chukha Transmission system, following transformers are available to cater total load of North Bengal and Sikkim

- Ø 1x160 MVA, 220/132 kV Transformer at Siliguri
- Ø 1x100+1x50 MVA, 220/132 kV transformer at Birpara
- Ø 3x50 MVA, 220/132 kV ICT at Malda

In the last (59th) OCC meeting, ERLDC pointed out that the transformation capacity of the above transformers is not sufficient to cater peak load of North Bengal and Sikkim. Besides, the above transformers (except one no 50 MVA, 220/132 kV ICT at Malda) are of 25 years vintage and can not be loaded up to full capacity leading to further constraint in meeting increasing load growth in North Bengal and Sikkim area.

In this regard, ERLDC further submitted that the following augmentation works under the scope of PGCIL (for which transmission charges would be borne by WBSETCL) were already concurred by the Standing Committee Meeting (20-09-10) on Power System Planning for Eastern Region:

- Ø Additional 1X160 MVA, 220/132kV Transformer with associated bays at 220/132kV Siliguri Substation.
- Ø Replacement of 1X50 MVA, 220/132kV Transformer by 1X160MVA, 220/132kV Transformer at 220/132kV Birpara Substation.
- Ø Replacement of 2X50 MVA, 220/132kV Transformer by 2X160MVA, 220/132kV Transformer at 220/132kV Malda Substation.

In view of prevailing constraints in North Bengal and Sikkim, ERLDC had requested PGCIL vide letter dated 2nd February 2011 for procurement and commissioning of above said ICTs in the following order:

1. 160 MVA, 220/132 kV ICT at Siliguri
2. 160 MVA, 220/132 kV ICT at Birpara.
3. 2x 160 MVA 220/132 kV ICT at Malda

OCC felt the urgency of the 160 MVA ICT at Siliguri and requested PGCIL to explore diverting at least one 160 MVA 220/132 kV ICT to Siliguri from its other sites. It was also decided to place this matter before ensuing TCC meeting.

PGCIL may respond.

Deliberation in the TCC meeting

PGCIL informed that

- Order for the above set of transformers would be placed shortly and these would be commissioned during June'12-August'12.
- Diversion of transformer from other sites to Siliguri is being explored but positive response is yet to be received

Existing 100 MVA ICT at Siliguri, which has elapsed 25 years, has been derated to 80 MVA and is a critical link for supplying power to North Bengal and Sikkim. Accordingly, PGCIL was requested to explore early commissioning of Siliguri ICT preferably by March'12.

Contingency plan would be taken up after the placement of order.

This issue was not referred to ERPC.

Deliberation in the ERPC meeting

The issue was again flagged by WBSETCL. WBSETCL impressed upon PGCIL to take up the work for installation of 160 MVA, 220/132 kV ICT priority wise at Siliguri, Birpara and Malda sub-station with special attention for Siliguri by December, 2011.

PGCIL acknowledged the concern of WBSETCL and assured to look into early commissioning of Siliguri ICT.

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

LIST OF PARTICIPANTS IN THE 17TH ERPC MEETING

Date: 17.03.2011

Venue: Hotel, Clarks Ajmer, Jaipur

| Name of the Constituent / Organisation | Sl. No. | Name S/Shri | Designation | |
|--|---------------|------------------|---|----------------------------|
| WEST BENGAL A) WBSSEDCL | 1. | M.K. DE | Chairperson, ERPC & Principal Secretary (Power), Govt. of West Bengal & CMD, WBSSEDCL & Chairman, WBSETCL | |
| | 2. | M.S. PAL | Chief Engineer | |
| | 3. | P. BANERJEE | Divisional Engineer (E) | |
| B) WBSETCL | 4. | A.C. SARKAR | Managing Director | |
| | 5. | S. NAG | Director (Operation) | |
| | 6. | D.CHAKRABORTY | Chief Engineer | |
| | 7. | P. SAHA | Chief Engineer | |
| | 8. | A. KARMAKAR | Supdt. Engineer (E) | |
| C) WBPDC | 9. | Dr. K. GUPTA | Managing Director | |
| | 10. | R. BOSE | Director (O & M) | |
| D) CESC | 11. | B. CHAKRABORTY | Vice President (SO) | |
| | 12. | R. CHAKRABORTY | Senior Manager | |
| E) DPL | 13. | M. MAJUMDAR | Managing Director | |
| | BIHAR BSEB | 14. | P.K. RAI | Chairman |
| 15. | | T.T. JHA | Member (Transmission) | |
| 16. | | RAKESH | EEE /Interstate | |
| JHARKHAND A) JSEB | 17. | C.S. GUPTA | Member (Technical) | |
| | 18. | S.C. MISHRA | Chief Engineer(Commercial) | |
| B) TVNL | 19. | ANIL KUMAR | Managing Director | |
| ORISSA A) OPTCL | 20. | HEMANT SHARMA | Managing Director, OPTCL & GRIDCO | |
| | 21. | K.K. NATH | Director (Engineering) | |
| | 22. | J.P. DAS | Chief General Manager (Construction) | |
| | 23. | K.M.PARIDA | Chief General Manager (O&M) | |
| | 24. | S.K. DAS | General Manager (SLDC) | |
| | 25. | S.C.MISHRA | Dy. Manager (CP) | |
| | B) OPGC | 26. | K.C.SAMANTRY | Manager |
| | | 27. | S. SAHU | |
| | C) GRIDCO | 28. | P.K. PRADHAN | Director (Commercial) |
| | | 29. | S.K. MOHANTY | Manager (El.) |
| GOVT. OF SIKKIM | 30. | S.P. KAJI | Addl. Chief Engineer, Energy & Power Dept. | |
| | 31. | R.P. GURUNG | Supdt. Engineer, Energy & Power Dept. | |
| | DVC | 32. | M.K. BANDYOPADHYAY | Director (Commercial) |
| 33. | | A. NAYAK | Chief Engineer (CLD) | |
| 34. | | M.M. KUMAR | Chief Engineer (Commercial) | |
| 35. | | A.K. MUKHERJEE | Dy.Chief Engineer (SPM) | |
| CEA | | 36. | Dr. J.P.SINGH | Member (E & C) |
| | 37. | K.P. SINGH | Chief Engineer (OM) | |
| | 38. | K.N. GARG | Chief Engineer (GM) | |
| | 39. | M.K. MEHNDIRATTA | D'man, Office of Member (GO&D) | |
| | NHPC | 40. | M.K. RAINA | Executive Director (O & M) |
| 41. | | M.S. BABU | Executive Director (Comml.) | |
| 42. | | R.RAINA | Chief Engineer (Comml.) | |

| | | | |
|------------------------|-----|-----------------------|--|
| POWERGRID | 43. | R.P. SINGH | Executive Director, ER-II |
| | 44. | S. SEN | Executive Director (O&M), ER-II |
| | 45. | K. SARKAR | Addl. General Manager (OS), CC |
| | 46. | A.S KUSHWAHA | Addl. General Manager (LD & C), CC |
| | 47. | A.M. PAVGI | Addl. General Manager (Engg-SEF), CC |
| | 48. | P. SHARMA | Additional General Manager(Comml), CC |
| | 49. | R.V.S.KUSHWAHA | Addl. General Manager (O & M), ER-I |
| | 50. | A.K.VERMA | Dy. General Manager (Comml), ER-I |
| | 51. | R.K. GAJRESEN | Chief Manager, ER-I |
| | 52. | S.K. SINGH | Chief Manager (OS), ER-II |
| NTPC | 53. | U. P. PANI | Regional Executive Director (East-I) |
| | 54. | V.K. PADHA | General Manager (Commercial), CC |
| | 55. | S.K. KAR | Addl. General Manager (Comml), ER-II |
| | 56. | A.K. TIWARY | Addl. General Manager (OS/FM), ER-I |
| | 57. | K.K.SINHA | Addl. General Manager (Comml.), ER-I |
| ERLDC / POSOCO | 58. | P. PENTAYYA | General Manager |
| | 59. | P. MUKHOPADHYAY | Dy. General Manager |
| | 60. | G. MITRA | Dy. General Manager |
| | 61. | G.CHARABORTY | Chief Manager |
| | 62. | S. KONAR | Manager |
| PTC | 63. | DEEPAK AMITABH | Director (Finance) |
| | 64. | SANJEEV MEHRA | Executive Vice President |
| | 65. | S.C. SHUKLA | Vice President |
| | 66. | B.B. KATHPALI | Asstt. Vice President |
| | 67. | HARSHAVARDHAN | Manager |
| | 68. | R.K. ARORA | Jr. Manager |
| ADHUNIK POWER | 69. | S.B. AGARWAL | Chief Executive Officer(Power) |
| | 70. | M.K. RAY | Advisor |
| DGPC, BHUTAN | 71. | YESHI TENZIN | SE |
| BPC, BHUTAN | 72. | NIDUP DORJI | SE |
| SPECIAL INVITEE | 73. | S.M.DHIMAN | Ex. Member (GO&D), CEA |
| | 74. | A.C. MALLICK | Ex. Director (Commercial), GRIDCO |
| ERPC | 75. | A.K. RAMPAL | Member Secretary |
| | 76. | A.K. BANDYOPADHYAY | Superintending Engineer (Operation) |
| | 77. | J. BANDYOPADHYAY | Superintending Engineer (Commercial) |
| | 78. | B. SARKHEL | Superintending Engineer (Power System) |
| | 79. | S.P. DATTA | Dy. General Manager |
| | 80. | G. GHOSH | Executive Engineer |
| | 81. | S.M.JHA | Executive Engineer |
| | 82. | S. PAUL | Assistant Director-I |

ADDRESS OF SHRI M.K. DE, CHAIRPERSON,ERPC & PRINCIPAL SECRETARY (POWER), GOVT. OF WEST BENGAL & CMD,WESEDCL & CHAIRMAN, WBSETCL ON THE OCCASION OF 17TH ERPC MEETING HELD ON 17TH MARCH,2011 AT JAIPUR

Good afternoon. Shri Deepak Amitabh, Director (Finance)-PTC, Shri P.K. Rai, Chairman-BSEB, Shri Hemant Sharma, Managing Director-GRIDCO & OPTCL, Dr. Krishna Gupta, Managing Director-WBPDCL, Dr. Jaipal Singh, Member (E&C)-CEA, Shri U. P. Pani, Regional Executive Director –NTPC, Shri M. K. Raina, Executive Director-NHPC, Shri R. P. Singh, Executive Director-POWERGRID, Shri Anil Kumar, Managing Director-TVNL, Shri A.C. Sarkar, Managing Director-WBSETCL, Shri M. Majumder, Managing Director-DPL, Shri P. Pentayya, General Manager-ERLDC, Shri A.K. Rampal, Member Secretary-ERPC, our guest from Bhutan Mr. Yeshe Tenzin of Druk Green Power Corporation, special invitees, members of TCC and other participants, it is my privilege to welcome you all to the 17th ERPC meeting being held at this historical and beautiful city of Jaipur. To hold ERPC meeting out of the Eastern Region is a welcome change. The initiatives taken by Member Secretary, ERPC and PTC for holding the meeting at this ‘Pink City’ deserve complements. I complement PTC for excellent arrangements for the meeting.

The last ERPC meeting was held on 18th December,2010. We are meeting after three months to discuss many operational, commercial and policy matters. I look forward to valued opinion of members on the issues placed before the Committee for deliberations and decisions.

The performance of the grid during the period November’10 to January’11 was satisfactory. The grid frequency remained within the IEGC recommended band of 49.5 Hz to 50.2 Hz for about 88% of time. Instantaneous maximum and minimum frequency touched 50.71 Hz and 48.89 Hz respectively. The regional energy consumption increased by 9% and peak demand by 13.8% on Year-on-Year (YoY) basis. The peak demand recorded 12846 MW on 4th November,2010. During this period net export from Eastern Region to other regions increased by about 25%, although injection of power from WR to ER continued.

On the issues slated for discussion today, I would like to draw the attention of members on few issues :

1. Power Stations of NTPC like Kahalgaon STPS and Farakka STPS are having two stages. Tariffs and beneficiaries of Stage-I & II are different. Both the stages require separate metering arrangement for UI accounting. Big power stations like these may also need bus splitting arrangement to contain fault levels. Both the issues were to be discussed by TCC yesterday under two different agenda items. The decisions on both the issues should dovetail to each other.

2. Evacuation of power for Odisha from upcoming IPPs and UMPP in Odisha is being discussed for quite some time. It appears that OPTCL & GRIDCO are in disagreement to some of the decisions taken in Standing Committee Meeting. The issues were again slated for discussion in the TCC meeting yesterday. Apart from raising the issues at TCC/ERPC level, OPTCL & GRIDCO should also take up the matter with CEA and POWERGRID to avoid any delay in investment decision and construction of the associated transmission system.

3. Adequate supply coal to major power stations in Eastern Region, particularly to Farakka and Kahalgaon STPS of NTPC is required to be properly addressed. Kahalgaon Unit No.7 of 500 MW capacity is under commercial operation; Farakka Unit No.6 of 500 MW capacity has been synchronized recently. But allocation of coal for the above Units is yet to take place. NTPC may apprise about the fuel supply arrangements for Farakka and Kahalgaon to achieve at least 85% plant load factor.

4. ERPC has already approved a number proposals of ERLDC on improving grid security like synchrophasor technology, voltage collapse prediction relay, special protection scheme etc. ERLDC was authorized to take the up the proposals for funding from Power System Development Fund (PSDF). ERLDC has also proposed for automatic meter reading of special energy meters in Eastern Region installed by POWERGRID. In few cases the equipment/meters proposed by ERLDC are of proprietary nature. Since in each case expenditure involved is substantial, the executing agency should re-ascertain the proprietary nature of the items and adhere to procedures for purchase.

I shall be completing my tenure of one year as Chairperson, ERPC on 31st March,2011. In a complex and fast evolving grid, with the introduction of new

regulations from time to time, differences in opinions of the stakeholders were unavoidable. But, with the active support and cooperation from all constituent members, we could take number of important decisions on operational, commercial and policy matters. I thank all members of ERPC for their valued opinions, support and cooperation. I also acknowledge the excellent support received from Shri A.K. Rampal, Member Secretary and his officers during my tenure.

Before concluding, I once again thank PTC and wish the meeting a grand success.

Thank you.

ERPC ESTABLISHMENT FUND
RECEIPTS AND PAYMENTS FOR THE YEAR 2009-2010

| Receipts | Amount (Rs.) | P. | Payments | Amount (Rs.) | P. |
|--|-------------------------|-----------|--------------------|-------------------------|-----------|
| To Opening Balance | 80,01,889 | 00 | | | |
| ~ Contribution received from the different Constituents for the year 2009-10 | 2,94,00,000 | 00 | | | |
| ~ Contribution from Sikkim for ERPC Fund. | 50,000 | 00 | | | |
| ~ Activation of dormant account | 200 | 00 | | | |
| | | | By Closing Balance | 3,74,52,089 | 00 |
| | 3,74,52,089 | 00 | | 3,74,52,089 | 00 |

Sd/-
(J.Bandyopadhyay)
Superintending Engineer

Sd/-
(B.Sarkhel)
Superintending Engineer

Sd/-
(G.Ghosh)
Executive Engineer

ERPC ESTABLISHMENT FUND
RECEIPTS AND PAYMENTS FOR THE YEAR 2010-2011 (UPTO 28.02.2011)

| Receipts | Amount (Rs.) | P. | Payments | Amount (Rs.) | P. |
|--|-------------------------|-----------|--|-------------------------|-----------|
| To Opening Balance | 3,74,52,089 | 00 | By Reimbursement of expenditure to Govt. account for the period from April 2009 to March 2010. | 2,39,00,850 | 00 |
| ~ Contribution received (2010-11) from the different Constituents. | 3,08,00,000 | 00 | ~ Reimbursement of expenditure to the Govt. account for the period from April 2010 to Sept. 2010 | 1,03,50,173 | 00 |
| | | | ~ Reimbursement of expenditure to the Govt. account for the period from Oct. 2010 to Dec. 2010 | 48,44,432 | 00 |
| | | | ~ Closing Balance | 2,91,56,634 | 00 |
| | 6,82,52,089 | 00 | | 6,82,52,089 | 00 |

Sd/-
(J.Bandyopadhyay)
Superintending Engineer

Sd/-
(B.Sarkhel)
Superintending Engineer

Sd/-
(G.Ghosh)
Executive Engineer

ERPC FUND

**STATEMENT OF RECEIPTS AND PAYMENTS ACCOUNT FOR THE PERIOD FROM
APRIL, 2009 TO MARCH, 2010**

| Receipts | | Rs. | P. | Payments | | Rs. | P. |
|----------|--|------------------|-----------|----------|---|------------------|-----------|
| To | <u>OPENING BALANCE</u> | | | By | Expenditure towards meeting / Workshop | 7,42,921 | 00 |
| | Cash in Hand 48,204.00 | | | | | | |
| | Cash at Bank <u>10,52,636.00</u> | 11,00,840 | 00 | ~ | Publication / Printing works | 36,623 | 00 |
| ~ | Contribution received | 12,00,000 | 00 | ~ | Honorarium for outsourcing of services for Technical & Non-Technical works | 2,46,223 | 00 |
| | - 2008-09 50,000 | | | | | | |
| | - 2009-10 11,50,000 | | | | | | |
| ~ | Amount of EMD recd. from M/s S.N.C. Lavalin Inc., T&D Divn, New Delhi. | 1,00,000 | 00 | ~ | Amount of EMD recd. from M/s S.N.C. Lavalin Inc., T&D Divn, New Delhi transferred to ERPC Training Fund | 1,00,000 | 00 |
| ~ | Refund of Advance | 31,629 | 00 | ~ | Routine Petty Expenses | 79,862 | 00 |
| ~ | Interest received from Bank | 44,553 | 00 | ~ | Advances | 83,132 | 00 |
| ~ | Reimbursement of expenses by ERLDC and BIS | 1,28,028 | 00 | ~ | Purchase of Stationary / Consumable items | 31,869 | 00 |
| | | | | ~ | Bank Charges | 60 | 00 |
| | | | | ~ | <u>CLOSING BALANCE</u> | | |
| | | | | | Cash in Hand 10,102.00 | | |
| | | | | | Cash at Bank * <u>12,74,258.00</u> | 12,84,360 | 00 |
| | | 26,05,050 | 00 | | | 26,05,050 | 00 |

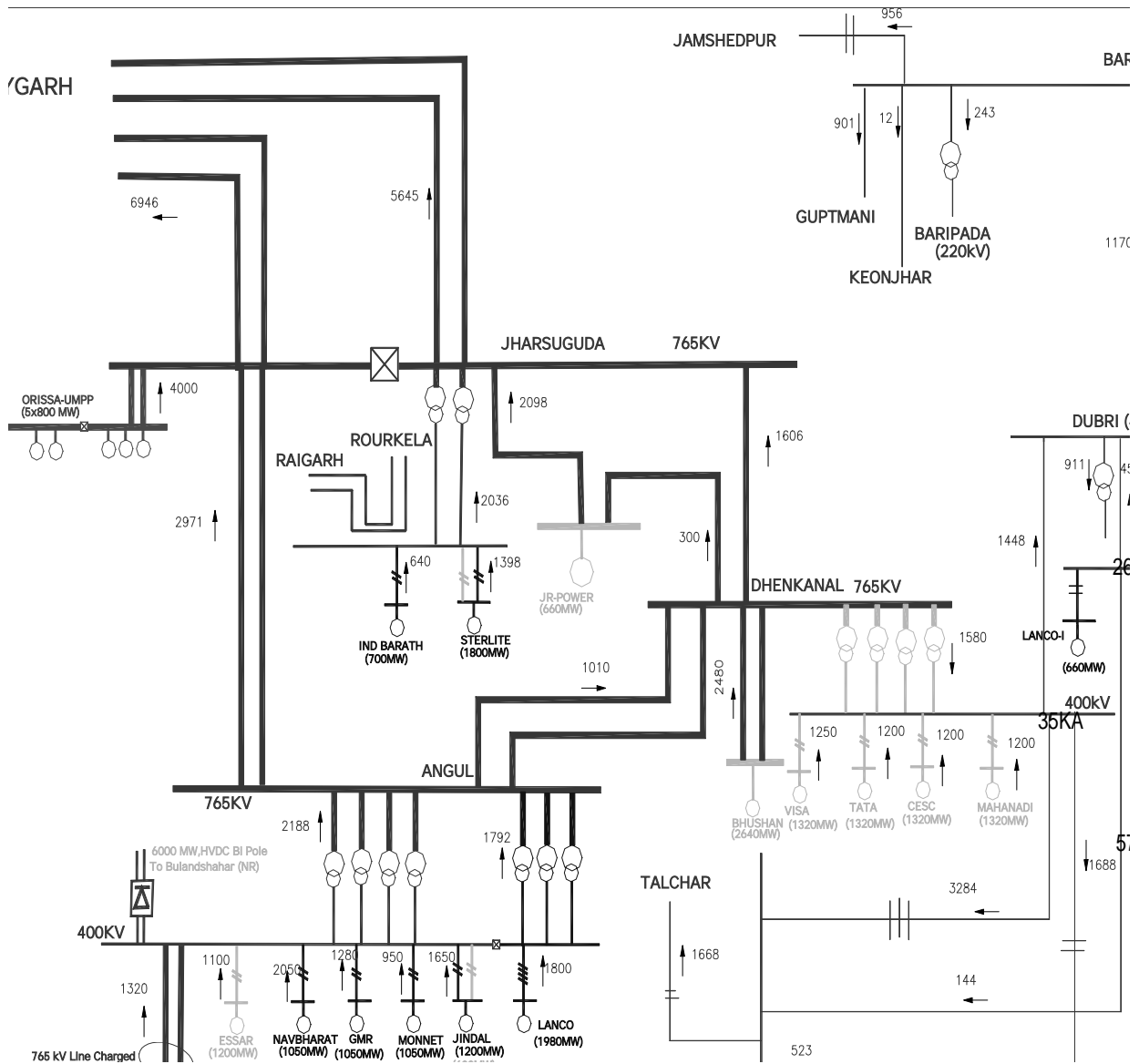
*** Cash at Bank includes Rs.6,91,585.00 on account of Contribution for PSS Tuning work.**

Sd/-
(**G. Ghosh**)
EE, ERPC

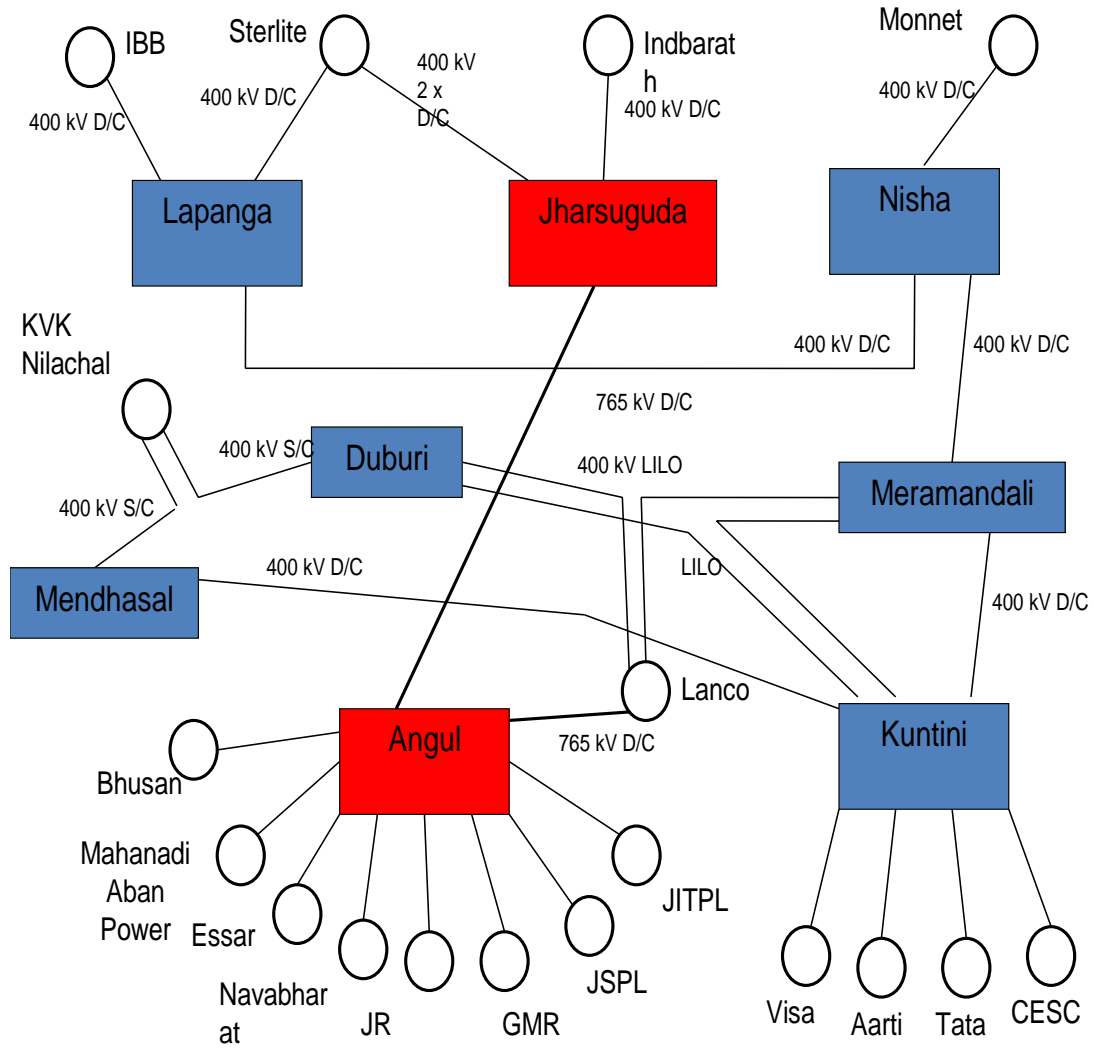
Sd/-
(**S.K. Sengupta**)
ESE (BSEB), ERPC

Sd/-
(**S. P. Datta**)
DGM (NTPC), ERPC

ANNEXURE-I

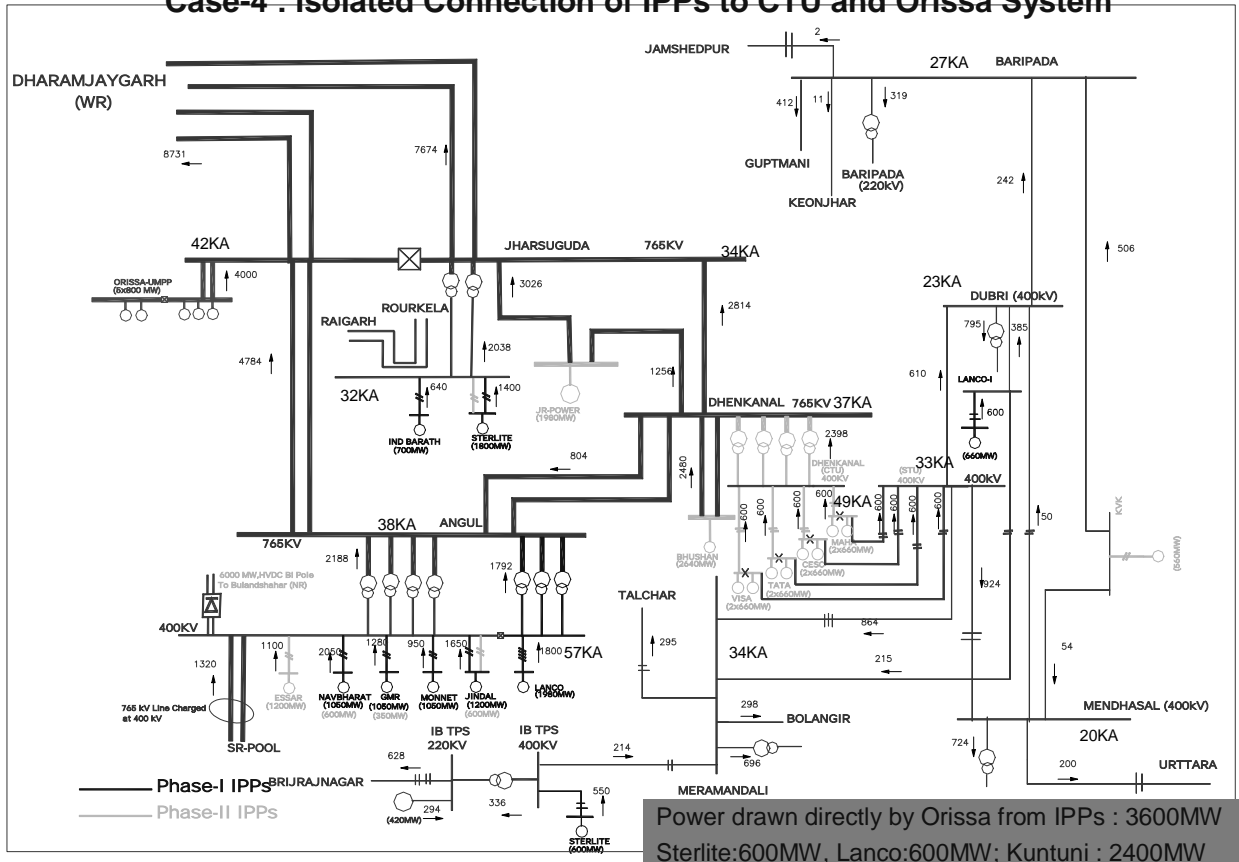


ANNEXURE-II



Case Studies

Case-4 : Isolated Connection of IPPs to CTU and Orissa System



Format for Coal Details

| SI No. | Item Description | UoM | FSTPS | | KHSTPS | | TSTPS | |
|--------|--|---------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| | | | Domestic Coal (a) | Imported Coal (b) | Domestic Coal (a) | Imported Coal (b) | Domestic Coal (a) | Imported Coal (b) |
| 1 | Landed Cost of Coal | Rs/MT | | | | | | |
| 2 | Consumption for the month | MT | | | | | | |
| 3 | GCV of Coal | Kcal/Kg | | | | | | |
| 4 | Wt. Avg. Rate of Coal (On Usage Basis) | Rs/MT | | | | | | |
| 5 | Wt. Avg. GCV of Coal (On Usage Basis) | Kcal/Kg | | | | | | |

2.0 Transmission System for Phase-I and Phase-II IPPs in Sikkim

2.1 Latest scenario of Phase-I IPPs

Phase-1 Gen Projects in Sikkim

| Sl. No | Name of the Generation Plant | Capacity/ Power to be transferred | Tentative Beneficiaries | Expected Commissioning Schedule |
|--------|------------------------------|-----------------------------------|--|---------------------------------|
| 1 | Teesta-III | 200x6=1200 MW | PSEB-340MW, HPGCL-200MW, UPPCL-200MW, Rajasthan Discom-100MW | <i>Dec., 2011</i> |
| 2 | Teesta-VI | 125x4=500 MW | MSEDCL (Maharashtra) | Nov, 2012 |
| 3 | Jorethang | 48x2 = 96 MW | NR/WR | <i>June, 2012</i> |
| 4 | Rangit-IV | 40x3=120 MW | NR/WR | <i>June., 2013</i> |
| 5 | Chuzachen | 49.5x2=99 MW | PSEB, DVB, HSEB, BSEB | <i>March., 2011</i> |
| 6 | Bhasmey | 25.5x2 = 51 MW | NR/WR | June, 2012 |

Power Deptt., Sikkim convened a meeting with CEA & PGCIL on 11.11.2010 to finalise the project specific ATS for the above stated Phase-I IPPs in Sikkim.

2.1.1 Project Specific ATS for Phase-I IPPs:

(under the scope of Generation Project Developers)

a) Upto Pooling Station at New Melli (PG)/ Karandighi (PG)

1. **Teesta-III:** Teesta-III – Karandighi (PG) 400kV D/c line with Quad Moose conductor

(being implemented by TPTL under JV route between TUL and PGCIL)

2. **Teesta-VI:** Teesta-VI – Rangpo 220kV D/c line with Twin Moose conductor

3. **Jorethang:** Jorethang – New Melli Sw. station 220kV D/C line with **Zebra** conductor

4. **Rangit-IV:** Rangit-IV – New Melli Sw. Stn. 220kV D/C line with **Zebra** conductor

b) Upto Pooling Station at Rangpo (PG)

5. **Chuzachen :** Chuzachen – Rangpo 132kV D/C line with Zebra conductor.

6. **Bhasmey :** *LILO of one ckt. of Chuzachen – Rangpo 132kV D/C line at Bhasmey HEP.*

3.1 Latest Status of Phase-II IPPs in Sikkim

3.1.1 The list of Phase-II IPPs in Sikkim applied for connectivity/LTA* is the following:

| Sl No | Project | Ins. Cap (MW) | LTOA (MW) | Time Frame | Applied for | Remarks |
|-------|---|---------------|-----------|------------|--------------------|-------------------------------|
| 1. | BOP(Chungtang) | 99 | 99 | 2015 | LTOA | Closed |
| 2. | Bhimkyong (Teesta Hydro power project) | 99 | 99 | 2015 | LTOA | Closed |
| 3. | Lachung-Tangchi | 99 | 99 | 2015 | LTOA | Closed |
| 4. | Tashiding (Shiga Energy Pvt. Ltd.) | 97 | 97 | Oct., 2012 | LTOA | Granted, BPTA/BG by March' 11 |
| 5. | Tingting (TT Energy Pvt. Ltd.) | 99 | 99 | Oct., 2012 | LTOA | Granted, BPTA/BG by March' 11 |
| 6. | Sada Mangdher (Gati Infrastructure) | 71 | 71 | Sep' 14 | LTOA | Granted, BPTA/BG by March' 11 |
| 7. | Dickchu (Sneha Kinetic Power Projects Ltd.) | 96 | 96 | Dec' 13 | Connectivity & LTA | Granted |
| 8. | Pannan Himagiri Hydro energy Ltd. | 300 | 300 | Jan' 15 | Connectivity | To apply LTA by Jan' 11 |
| 9. | Lethang (KHC Lethang Hydro Project Pvt. Ltd.) | 96 | 106 | Jan' 14 | Connectivity | To apply LTA by April' 11 |
| | | 1056 | 1066 | | | |

*Furnished by PGCIL

The generation specific ATS for Phase-I and Phase-II IPPs in Sikkim and transmission system requirements for power evacuation from pooling point (s) were firmed- up as given below:

I Phase-II Project Specific Transmission System

A. ATS for immediate evacuation from HEPs (Rangit basin) (under the scope of Generation Project Developer)

Tingting HEP

Tingting - Tashiding Sw. Stn 220kV D/c line

Tashiding HEP

Tashiding- Tashiding Sw. Stn 220kV D/c line

Sada Mangdher HEP

Sada Mangdher - Tashiding Sw. Stn 220kV D/c line

Lethang HEP (106 MW)

Lethang HEP - Tashiding Sw. Stn 220kV D/c line

Ralang HEP (100 MW)

Ralang HEP - Tashiding Sw. Stn 220kV D/c

Rangit II HEP (66 MW)

LILO of one circuit of 220kV Tashiding Sw. Stn -New Melli Sw. Stn. at Rangit-II

B. ATS for immediate evacuation from Panan and Dikchu HEPs (Teesta basin)**Panan HEP**

Pannan HEP - Mangan 400kV D/c line (under the scope of POWERGRID).

Dikchu HEP

Dikchu HEP- Gangtok 132kV D/c and Dikchu HEP- Mangan 132kV D/c line with Zebra conductor (as STU's transmission lines)

3.1.3 CTU and/or ISTS System for power evacuation from Phase-II IPPs in Sikkim

Pannan HEP - Mangan 400kV D/c line

Establishment of 4x105MVA, Single Phase, 400/132kV pooling station at Mangan.

*LILO of Teesta-III – Karandighi *400kV D/c line at Mangan*

Mangan – Karandighi 400kV D/c line with quad moose conductor*

New Melli – Rangpo 220kV D/c with twin moose conductor (2nd line)

**Note:- ‘Kishanganj’ changed to ‘Karandighi’.*

3.1.4 STU System for power evacuation from Phase-II IPPs in Sikkim

Establishment of 220kV Gas Insulated Pooling/Switching Station near Tashiding

Pooling station near Tashiding – New Melli 220kV D/c with twin moose conductor

Dikchu HEP- Gangtok 132kV D/c and Dikchu HEP- Mangan (PG) 132kV D/c line with Zebra conductor.

CoD for Dikchu HEP is Dec'13. It was stated by PGCIL that Dikchu generation deemed to be injected at Mangan by 132kV Dikchu-Mangan line (STU) and in case there is a delay in implementation of the 400/132kV Mangan pooling station, evacuation would be made through 132kV Dikchu-Gangtok D/C line (STU). Sikkim was agreeable to build the 132kV Dikchu-Gangtok D/C line matching with the commissioning of Dikchu HEP.

Above proposals were agreed to by ER constituents during the meeting.

Fibre Optic Connectivity in Eastern Region

In the 16th TCC/ERPC meeting held on 17th & 18th December, 2010 at Bhubaneswar, the agenda of POWERGRID for connecting all upcoming and existing substations of Central Sector located in Eastern Region with Fibre Optic of approx. 2956 kms length to meet the future communication requirement was discussed. Out of 2956kms of Fibre Optic requirement, 1055kms length of Fibre Optic was already approved by 15th ERPC/TCC meeting and for balance 1901 kms approval was requested to ensure the overall connectivity of all the central sector substations with Fibre Optic. Proposal also included the requirement for providing connectivity to Bhutan through NER (approximate length 52kms). During the ERPC meeting, it was decided that the proposal need to be discussed in the SCADA-O&M Committee of Eastern Region before seeking approval of ERPC.

Accordingly, the requirement of OPGW based communication in Eastern Region was discussed in the SCADA O&M committee meeting held on 25.01.2011 at ERLDC, Kolkata. POWERGRID made a presentation in 8th SCADA O&M Committee on Comprehensive Master Communication Plan of Eastern Region for connecting all upcoming and existing substations of Central Sector located in Eastern Region and for providing connectivity to Bhutan through NER. In the presentation, POWERGRID highlighted the requirements of higher bandwidth due to implementation of WAMS Technology involving PMUs/Smart Grid, Special Protection Scheme etc. planned in Eastern Region. POWERGRID also highlighted the limitation of PLCC due to Frequency Congestion, Limited Bandwidth, Redundancy in physical paths and poor performance for multiple hops. It is also expressed that all the power plants and all the substations under control area of ERLDC need to be provided with Fibre Optic connectivity. During the discussions, the proposed communication network by POWERGRID was agreed by the Constituents and suggested to include the Fibre Optic connectivity for following substations/power plants under the proposed scheme.

- Adhunik Power Generating Station (IPP)
- Sterlite Power Generating Station (IPP)
- Maithon Power Limited Generating Station (IPP)
- 765/400kV Dhenkanal Substation (PG)
- 400 kV Parulia Pump Storage Plant (WBSEB)
- 220kV Indravati HPP Substation (GRIDCO)
- 400kVTenughat Power Station (BSEB/JSEB)
- 132kV Melli Substation (Sikkim)
- Sikkim Monitoring Center

The SCADA O&M committee members agreed with the proposed Fibre Optic based Communication Network for Eastern Region by POWERGRID and recommended for the approval of the same in the upcoming ERPC/TCC meeting after inclusion of above mentioned suggestions by ERLDC/Constituents.

Based on the above suggestions, POWERGRID prepared the revised communication scheme involving additional requirement of **2588 kms** of OPGW Cable over and above 1055km as already approved in 15th ERPC meeting. The initial estimated cost for this requirement of **2588 kms** is approx. **Rs. 49 Crores**. The detail of the proposed scheme is enclosed at Annexure. The cost of implementation of the scheme shall be recovered as tariff to be determined by

ANNEXURE VI(2/5)

CERC. Further, it is also proposed that this Fibre Optic based communication requirements shall become the part of the commercial agreement signed by POWERGRID with constituents of Eastern Region in ULDC scheme.

Powergrid vide its letter dated 15.02.2011 informed that the investment approval for Fibre Optic Connectivity in Eastern Region was obtained from GOI with an estimated cost of 57.43 Crores (including IDC of Rs. 3.31 Crore) . The project is scheduled to be commissioned with 30 months from the date of investment approval.

Members may please concur the proposal.

FIBRE OPTIC LINK PROPOSED ON NEW/ EXISTING TRANSMISSION LINES (CENTRAL SECTOR/SEBs LINES) FOR PROVIDING DATA CONNECTIVITY OF NEW & EXISTING SUBSTATIONS OF CENTRAL SECTOR LOCATED IN EASTERN REGION TO ERLDC, KOLKATA

| Sl. No. | Name of Substation | STATUS | Voltage Level(in Kv) | Nearest Existing Wideband Node | Fibre Optic Link | | Length of Fibre Optic Link(in kms) | REMARKS |
|---------|---------------------------|----------|----------------------|--------------------------------|---------------------|------------|--|--|
| | | | | | From | To | | |
| 1 | BEHRAMPUR | NEW | 400 | FARAKKA | BEHRAMPUR | FARAKKA | 40 | NEW FIBRE OPTIC LINK FROM LILO POINT OF FARAKKA - JEERAT LINE AT BEHRAMPUR S/s |
| 2 | DALKHOLA | EXISTING | 400 | MALDA | DALKHOLA | PURNEA | 41 | NEW FIBRE OPTIC LINK PROPOSED |
| 3 | BINAGURI | EXISTING | 400 | SILIGURI | BINAGURI | SILIGURI | 0 | Existing PDT fibre link shall be utilized |
| 4 | BIRPADA | EXISTING | 400 | SILIGURI | BIRPARA | SILIGURI | 82 | NEW FIBRE OPTIC LINK PROPOSED |
| 5 | INDRAVATI | EXISTING | 400 | JEYPORE | INDRAVATI | JEYPORE | 72 | NEW FIBRE OPTIC LINK PROPOSED |
| 6 | BOLANGIR | NEW | 400 | JEYPORE | BOLANGIR | JEYPORE | 220kms (In 15th ERPC only 20kms of Fibre Optic link approved) | NEW FIBRE OPTIC LINK FROM BOLANGIR- JEYPORE |
| 7 | BAARH | EXISTING | 400 | KAHALGAON | PATNA | BAARH | 95 | NEW FIBRE OPTIC LINK FROM PATNA-BAARH- KHALGAON LINK |
| 8 | PATNA | | 400 | | BAARH | KHALGAON | 125 | |
| 9 | ADHUNIK Power Plant (IPP) | IPP | 400 | JAMSHEDPUR | ADHUNIK Power Plant | JAMSHEDPUR | 15 | NEW FIBRE OPTIC LINK PROPOSED |

FIBRE OPTIC LINK PROPOSED ON NEW/ EXISTING TRANSMISSION LINES (CENTRAL SECTOR/SEBs LINES) FOR PROVIDING DATA CONNECTIVITY OF NEW & EXISTING SUBSTATIONS OF CENTRAL SECTOR LOCATED IN EASTERN REGION TO ERLDC, KOLKATA

| Sl. No. | Name of Substation | STATUS | Voltage Level(in Kv) | Nearest Existing Wideband Node | Fibre Optic Link | | Length of Fibre Optic Link(in kms) | REMARKS | |
|--|-------------------------------|--------------------|----------------------|--------------------------------|--------------------------|-----------------------------|------------------------------------|--|---|
| | | | | | From | To | | | |
| | | | | | | | | Annexure-VI(4/5) | |
| 10 | RANCHI | NEW | 765 | JAMSHEDPUR | 765kV RANCHI | 400kV RANCHI | 10 | NEW FIBRE OPTIC LINK PROPOSED | |
| 11 | RENGALI | EXISTING | 400 | TSTPS | RENGALI | TSTPS | 24 | NEW FIBRE OPTIC LINK PROPOSED | |
| 12 | MAITHON POWER LIMITED(IPP) | IPP | 400 | MAITHON(PG) | MPL | MAITHON(PG) | 10 | NEW FIBRE OPTIC LINK PROPOSED | |
| 13 | JHARSGUDA | NEW | 765 | ROURKELA | JHARSGUDA | ROURKELA | 120 | NEW FIBRE OPTIC LINK PROPOSED | |
| 14 | ANGUL | NEW | 765 | ROURKELA | ANGUL | JHARSGUDA | 190 | NEW FIBRE OPTIC LINK PROPOSED | |
| 15 | STERLITE POWER PLANT (IPP) | IPP | 400 | ROURKELA | STERLITE POWER PLANT | JHARSGUDA | 40 | NEW FIBRE OPTIC LINK PROPOSED | |
| 16 | PURNEA | EXISTING | 400 | MALDA | PURNEA | MALDA | 167 | NEW FIBRE OPTIC LINK PROPOSED | |
| 17 | GANGTOK | EXISTING | 132 | SILIGURI | GANGTOK | RANGPO | 160 | NEW FIBRE OPTIC LINK PROPOSED | |
| 18 | TEESTA V | EXISTING | 400 | SILIGURI | TEESTA V | RANGPO | 153 | NEW FIBRE OPTIC LINK PROPOSED | |
| 19 | DHENKANAL | NEW (PMU LOCATION) | 765 | ROURKELA | DHENKANAL | JHARSUGUDA | 115 | NEW FIBRE OPTIC LINK PROPOSED | |
| 20 | PARULIA PMP (WBSEB) | NEW (PMU LOCATION) | 400 | VIDHAN NAGAR | PARULIA PMP (WBSEB) | VIDHAN NAGAR | 75 | NEW FIBRE OPTIC LINK PROPOSED | |
| 21 | INDRAWATI HPS(GRIDCO) | NEW (PMU LOCATION) | 220 | INDRAWATI HPS(PG) | INDRAWATI HPS(GRIDCO) | INDRAWATI HPS(PG) | 5 | NEW FIBRE OPTIC LINK PROPOSED | |
| 22 | MELLI(SIKKIM) | EXISTING | 220 | SILIGURI | MELLI(SIKKIM) | NEW MELLI | 20 | NEW FIBRE OPTIC LINK PROPOSED | |
| 23 | TENUGHAT POWER PLANT | EXISTING | 220 | BIHARSHARIF | TENUGHAT POWER PLANT | BIHARSHARIF | 182 | NEW FIBRE OPTIC LINK PROPOSED | |
| 24 | SIKKIM MONITORING CENTER | EXISTING | CONTROL CENTER | SILIGURI | SIKKIM MONITORING CENTER | 132kV SIKKIM S/s(POWERGRID) | 10 | NEW FIBRE OPTIC LINK PROPOSED(Underground Fibre Optic Link) | |
| 25 | MAITHON - JAMSHEDPUR LINK | | | | | | | 153 | NEW FIBRE OPTIC LINK PROPOSED FOR PROVIDING BACKUP TO THE NETWORK |
| 26 | MAITHON - KHALGAON LINK | | | | | | | 172 | NEW FIBRE OPTIC LINK PROPOSED FOR PROVIDING BACKUP TO THE NETWORK |
| 27 | MUZAFFARPUR - PURNEA | | | | | | | 240 | NEW FIBRE OPTIC LINK PROPOSED FOR PROVIDING BACKUP TO THE NETWORK |
| 28 | BONGAIGAON - GELEPHU (BHUTAN) | | | | | | | 52 | NEW FIBRE OPTIC LINK PROPOSED FOR PROVIDING BACKUP PATH TO NLDC BHUTAN DATA |
| TOTAL NEW REQUIREMENT OF OPGW CABLE (in KM) | | | | | | | 2588 | 2588 | |

FIBRE OPTIC LINK PROPOSED ON NEW/ EXISTING TRANSMISSION LINES (CENTRAL SECTOR/SEBs LINES) FOR PROVIDING DATA CONNECTIVITY OF NEW & EXISTING SUBSTATIONS OF CENTRAL SECTOR LOCATED IN EASTERN REGION TO ERLDC, KOLKATA

| Sl. No. | Name of Substation | STATUS | Voltage Level(in Kv) | Nearest Existing Wideband Node | Fibre Optic Link | | Length of Fibre Optic Link(in kms) | REMARKS |
|---------|--------------------|--------|----------------------|--------------------------------|------------------|----|------------------------------------|---------|
| | | | | | From | To | | |

Annexure-VI(5/5)

FIBRE OPTIC CONNECTIVITY SCHEME APPROVED IN 15TH TCC & 15TH ERPC MEETING HELD AT PELLING ON 27TH & 28TH SEPT.2010

| | | | | | | | | |
|--|---------------|----------|---------|------------|---------------------------------------|------------|-------------|---|
| 29 | KEONJHAR | NEW | 400 | JAMSHEDPUR | KEONJHAR | BARIPARA | 200 | NEW FIBRE OPTIC LINK PROPOSED |
| 30 | BARIPARA | EXISTING | 400 | JAMSHEDPUR | BARIPARA | JAMSHEDPUR | 120 | NEW FIBRE OPTIC LINK PROPOSED |
| 31 | CHAIBASA | NEW | 400 | JAMSHEDPUR | CHAIBASA | LILO POINT | 20 | NEW FIBRE OPTIC LINK FROM LILO POINT OF JAMSHEDPUR - ROURKELALINE AT CHAIBASA S/s |
| 32 | CHANDWA/ESSAR | NEW | 400 | JAMSHEDPUR | CHANDWA | RANCHI | 200 | NEW FIBRE OPTIC LINK PROPOSED |
| 33 | SUBHASHGRAM | EXISTING | 400 | JEERAT | SUBHASHGRAM | JEERAT | 60 | NEW FIBRE OPTIC LINK PROPOSED |
| 34 | BANKA | NEW | 400 | KHALGAON | BANKA | LILO POINT | 20 | NEW FIBRE OPTIC LINK FROM LILO POINT OF KHALGAON- BIHARSHARIF LINE AT BANKA S/s |
| 35 | LAKHISARAI | NEW | 400 | KHALGAON | LAKHISARAI | LILO POINT | 20 | NEW FIBRE OPTIC LINK FROM LILO POINT OF KHALGAON- BIHARSHARIF LINE AT BANKA S/s |
| 36 | DALTONGANJ | NEW | 400 | SASARAM | DALTONGANJ | SASARAM | 180 | NEW FIBRE OPTIC LINK PROPOSED |
| 37 | KISHANGANJ | NEW | 765/400 | SILIGURI | KISHANGANJ | SILIGURI | 110 | NEW FIBRE OPTIC LINK PROPOSED |
| 38 | RANGPO | NEW | 400 | SILIGURI | RANGPO | SILIGURI | 85 | NEW FIBRE OPTIC LINK PROPOSED |
| 39 | NEW MELLI | NEW | 400 | SILIGURI | NEW MELLI | RANGPO | 20 | NEW FIBRE OPTIC LINK PROPOSED |
| 40 | SUNDERGARH | NEW | 400 | ROURKELA | LILO Point of Talchar - Rourkela line | SUNDERGARH | 20 | NEW FIBRE OPTIC LINK PROPOSED |
| Total Qty of Fibre Optic Approved in 15th TCC& 15th ERPC Meeting (in kms) | | | | | | | 1055 | |
| Total Qty of Fibre Optic required under Comprehensive Communication Scheme of Eastern Region (in kms) | | | | | | | 3643 | |
| Balance Portion for which approval is required (in kms) | | | | | | | 2588 | |

Annexure - VII

SUMMARY OF UI RECEIPT AND PAYMENT STATUS

**BILL UPTO 06.02.2011 (Week - 46 of 2010 - 11)
Last Payment Disbursement Date - 24.02.11**

Figures in Rs. Lakhs

| CONSTITUENTS | Receivable | Received | Payable | Paid | Outstanding |
|-----------------------------|---------------------|---------------------|---------------------|---------------------|--------------------|
| WR | 2427.61745 | 2427.83708 | 92280.07431 | 84281.02155 | -7999.27239 |
| SR | 9403.74908 | 8580.62559 | 5032.73215 | 5032.73215 | 823.12349 |
| NER | 2872.94824 | 2439.78182 | 14239.64780 | 14235.60687 | 429.12549 |
| NR | 113826.32195 | 106343.63987 | 374.02604 | 380.24493 | 7488.90097 |
| BSEB | 5817.63925 | 5420.80937 | 8843.34094 | 8752.76517 | 306.25411 |
| JSEB | 2394.05454 | 1314.61105 | 19028.49476 | 18828.20985 | 879.15858 |
| DVC | 35906.67665 | 34188.52165 | 482.11664 | 482.11664 | 1718.15500 |
| GRIDCO | 7504.70352 | 8697.94933 | 27017.22163 | 27953.13292 | -257.33452 |
| WBSETCL | 9453.20903 | 9649.84285 | 11826.84715 | 11578.91602 | -444.56495 |
| SIKKIM | 841.06174 | 320.52529 | 1955.59311 | 1955.09436 | 520.03770 |
| NTPC | 168.82963 | 168.82963 | 3406.87940 | 3205.20480 | -201.67460 |
| NHPC | 0.00000 | 0.00000 | 1369.09038 | 1344.55031 | -24.54007 |
| MPL | 20.74774 | 13.61479 | 0.00000 | 0.00000 | 7.13295 |
| Pool Balance | 0.00000 | 0.00000 | 1127.74604 | 1051.14374 | -76.60230 |
| Additional UI charge | 2320.58622 | 1325.51213 | 585.78482 | 0.00000 | 995.07409 |
| Transfer to IRE | 0.00000 | 0.00000 | 516.09236 | 581.52578 | 65.43342 |
| TOTAL | 190637.55882 | 179566.58832 | 188085.68753 | 179662.26509 | |

% Realization

94.19266 As on 24.02.11

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

STATEMENT OF IRE BETWEEN SR AND ER FOR 2009-10

Figures in Rs. Lac

| WEEK NUMBER | DATE | | Payable(-)/Recvl(+) by ER Pool as per ERPC-UI Account | Payable(-)/Recvl(+) by ER Pool as per SRPC UI A/C | IRE AMOUNT TO BE KEPT IN ER IRE A/C | IRE AMOUNT TO BE KEPT IN SR IRE A/C |
|----------------|----------|----------|---|---|---|---|
| | FROM | TO | | | | |
| WEEK- 01 | 29-03-10 | 04-04-10 | 200.85528 | 507.58538 | 0.00000 | 306.73010 |
| WEEK- 02 | 05-04-10 | 11-04-10 | -95.32474 | -61.61926 | 33.70548 | 0.00000 |
| WEEK- 03 | 12-04-10 | 18-04-10 | -645.16482 | -497.86799 | 147.29683 | 0.00000 |
| WEEK- 04 | 19-04-10 | 25-04-10 | -520.66107 | -381.07580 | 139.58527 | 0.00000 |
| WEEK- 05 | 26-04-10 | 02-05-10 | -700.70398 | -439.76578 | 260.93820 | 0.00000 |
| TOTAL | | | -1760.99933 | -872.74345 | 581.52578 | 306.73010 |

IRE AMOUNT PAYABLE TO SR BY ER FOR WEEK 01 TO 05 290.76289

IRE AMOUNT PAYABLE TO ER BY SR FOR WEEK 01 TO 05 153.36505

**NET AMOUNT PAYABLE TO SR BY ER FOR WEEK 01 TO 05
of 2010-11 137.39784**IRE AMOUNT REQUIRED FOR DISTRIBUTION AMONGST ER
CONSTITUENTS FOR WEEK 01 TO 05 444.12794

DETAILS OF % SHARE OF CENTRAL SECTOR FOR THE PERIOD FROM 29.03.2010 TO 02.05.2010

Annexure VIII (2/2)

| BENEFICIARIES | | No. of Days | FSTPP | KHSTPP-I | KHSTPP-II | TSTPP | THEP | TEESTA | CHUKHA | RANGIT | KURICHU | Weighted Average Share for the Period | Share Apportioned to 100% |
|---------------|---------------------------------|-------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------------------------------|---------------------------|
| | | | 1600 | 840 | 1000 | 1000 | 1020 | 510 | 270 | 60 | 60 | | |
| | | | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | % SHARE IN ER | | |
| BSEB | 29.03.2009 to 02.05.2010 | 35 | 0.2607 | 0.3797 | 0.0667 | 0.3726 | 0.2550 | 0.2126 | 0.2963 | 0.3500 | 0.0000 | 0.258631 | 0.362454 |
| | Total no of days for the period | 35 | | | | | | | | | | | |
| JSEB | 29.03.2009 to 02.05.2010 | 35 | 0.0983 | 0.0462 | 0.0167 | 0.0915 | 0.1146 | 0.1234 | 0.1074 | 0.1333 | 0.0000 | 0.081936 | 0.114827 |
| | Total no of days for the period | 35 | | | | | | | | | | | |
| DVC | 29.03.2009 to 02.05.2010 | 35 | 0.0000 | 0.0000 | 0.0000 | 0.0031 | 0.0554 | 0.0864 | 0.1037 | 0.1000 | 0.5000 | 0.026363 | 0.036946 |
| | Total no of days for the period | 35 | | | | | | | | | | | |
| GRIDCO | 29.03.2009 to 02.05.2010 | 35 | 0.1363 | 0.1524 | 0.0060 | 0.3180 | 0.0425 | 0.2059 | 0.1519 | 0.0000 | 0.0000 | 0.135136 | 0.189385 |
| | Total no of days for the period | 35 | | | | | | | | | | | |
| SIKKIM | 29.03.2009 to 02.05.2010 | 35 | 0.0163 | 0.0155 | 0.0033 | 0.0240 | 0.0000 | 0.1319 | 0.0222 | 0.1333 | 0.0000 | 0.023217 | 0.032537 |
| | Total no of days for the period | 35 | | | | | | | | | | | |
| WBSEB | 29.03.2009 to 02.05.2010 | 35 | 0.2881 | 0.0000 | 0.0000 | 0.0910 | 0.3825 | 0.2398 | 0.3185 | 0.2834 | 0.5000 | 0.188272 | 0.263850 |
| | Total no of days for the period | 35 | | | | | | | | | | | |
| | Total | 35 | | | | | | | | | | 0.713555 | 1.000000 |

TOTAL IRE AMOUNT TO BE DISTRIBUTED AMONGST ER CONSTITUENTS = Rs 44412794

| BENEFICIARIES | Weighted Average Share from 29.03.10 to 02.05.10 , | APPORTIONED AMOUNT | AMOUNT DEDUCTED | NET AMOUNT TO BE PAID |
|---------------|--|--------------------|-----------------|-----------------------|
| BSEB | 0.362454 | 16097614 | 284950 | 15812664 |
| JSEB | 0.114827 | 5099795 | 0 | 5099795 |
| DVC | 0.036946 | 1640897 | 83878 | 1557019 |
| GRIDCO | 0.189385 | 8411104 | 0 | 8411104 |
| SIKKIM | 0.032537 | 1445071 | 0 | 1445071 |
| WBSETCL | 0.263850 | 11718313 | 0 | 11718313 |
| TOTAL | 1.000000 | 44412794 | 368828 | 44043966 |

NOTE: 1. UI Principal outstanding of DVC for 2008 - 09 is Rs 83878.00. This amount is adjusted from Transmission benefit generated between ER & SR for 2010-11.

Hence balance amount of Rs 1557019.00 is paid to DVC.

2. BSEB outstanding amount of reactive payment of Rs 284950.00 for 2006-07 has been adjusted from Transmission benefit generated between ER & SR for 2010-11

Hence balance amount of Rs 15812664.00 is paid to BSEB.

**STATUS OF REACTIVE CHARGES IN ER REACTIVE POOL AS PER PUBLISHED A/C UPTO 30.01.11
AS ON 10.02.11**

Figures in Rs

| CONSTITUENTS | 2003-04 | | 2004-05 | | 2005-06 | | 2006-07 | | 2007-08 | | 2008-09 | | 2009-10 | | 2010-11 | | TOTAL | |
|--------------|----------------|----------------|---------------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|
| | 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 | 284950 | 0 | 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 | 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 | 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 | 16295067 | 16274957 |

| | |
|--|-----------------|
| Total Received | 16274957 |
| Expenditure incurred for organising workshop on Black Start Procedure (4 SLDCs) | 160000 |
| Expenditure incurred for organising a seminar on Power Exchange | 290000 |
| Expenditure incurred for organising seminar on "Reduction of Agreed technical & commercial Loss-Issues and Challenges " at Bhubaneswar | 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 | 402629 |
| Net Retained in Reactive A/C | 15850407 |

ANNEXURE - X

All fig in Rs Lakhs

**Total Amount Accumulated as per accounts (As on 10.02.11)
After payment to PSDF**

| Year | Capping | | Surcharge | |
|--------------|-----------------|-----------------|------------------|-----------------|
| | As per accounts | As per actual | As per accounts | As per actual |
| 2010 - 11 | 71.50798 | 54.42819 | 104.08136 | 67.87386 |
| Total | 71.50798 | 54.42819 | 104.08136 | 67.87386 |

NOTE: An amount of Rs 62.68237 Lacs paid by GRIDCO as delayed payment surcharge of UI for 2009-10 is kept as Addl UI

**INFORMATION CIRCULATED BY POWERGRID FOR COD AGAINST
ITEM NO. 11**

125 MVAR Bus Reactor II at New Purnea

| | |
|--|--|
| DOCO | 01/02/2011 |
| Name of Project | ERSS II |
| Approved Cost | Rs.1618.48 lakhs |
| Standing Committee – ER Reference | 22/06/2006 |
| EREB / ERPC Meeting Reference | 2nd ERPC 28/08/2006 |
| Sharing of Transmission Charges | Beneficiaries of Eastern Region |

**LILO connectivity to DVC Andal through 400 KV D/C Durgapur-Jamshedpur line
under ERSS I**

| | |
|--|--|
| DOCO | 01/02/2011 |
| Name of Project | ERSS I |
| Approved Cost | Rs. 2453 lakhs |
| Standing Committee – ER Reference | 20/09/2010 |
| EREB / ERPC Meeting Reference | 15th ERPC 28/09/2010 |
| Sharing of Transmission Charges | Upto COD of 1st unit by DVC then by the beneficiaries of DVC Andal TPS |

400 KV D/C Ranchi-Rourkela Line

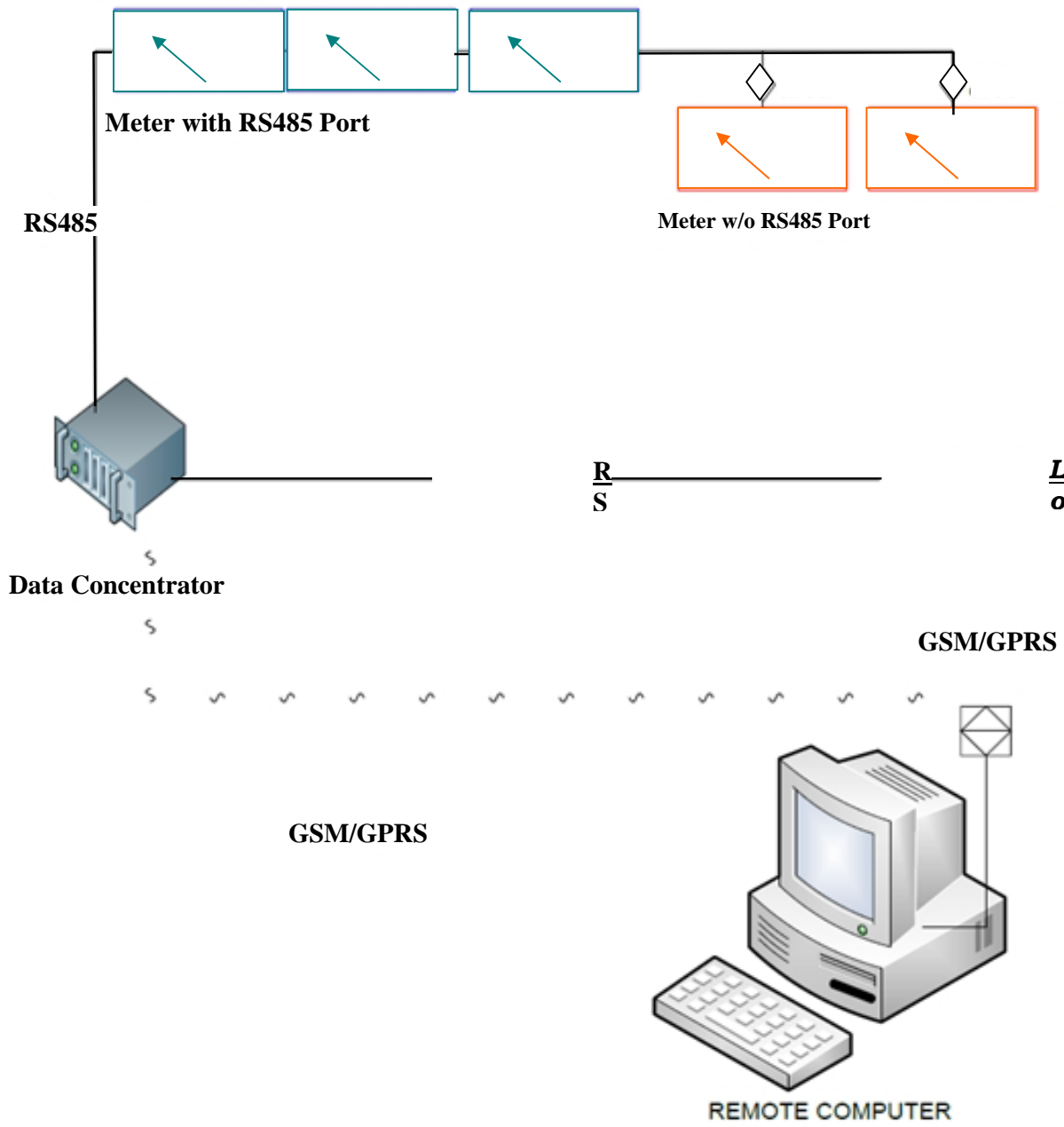
| | |
|--|--|
| DOCO | 01/12/2010 |
| Name of Project | East West Corridor Strengthening |
| Approved Cost | Rs.17097 lakhs |
| Standing Committee – ER Reference | 24/12/2004 at Puri (ER) / 20/01/2004 (WR) |
| EREB / ERPC Meeting Reference | 116th EREB / 124th WREB |
| Sharing of Transmission Charges | To be shared by WR Beneficiaries |

Annexure - XII

REPORT OF OPENING OF LC IN EASTERN REGION (AS ON 31.01.11)

| Sl. No | Name of ER Pool members | Letter issued by ERLDC to Open LC | LC Amount (Lakhs of Rupees) | Status | Response from Pool Members | Remarks |
|---------------|--------------------------------|--|------------------------------------|-----------------|-----------------------------------|---------------------------|
| 1 | BSEB | Yes | 361.54 | LC not opened | Nil | No intimation is received |
| 2 | JSEB | Yes | 142.74 | LC not opened | Nil | No intimation is received |
| 3 | DVC | Yes | 0.00 | LC not required | | |
| 4 | GRIDCO | Yes | 696.71 | LC opened | LC Opened | |
| 5 | WBSETCL | Yes | 49.38 | LC opened | LC Opened | |
| 6 | SIKKIM | Yes | 14.47 | LC opened | LC Opened | |
| 7 | NTPC | Yes | 0.00 | LC not required | | |
| 8 | NHPC | Yes | 0.00 | LC not required | | |

BLOCK DIAGRAM OF AMR SYSTEM



ANNEXURE -D

CONSTITUTION OF ERPC FOR THE YEAR 2011-12

| Organisation / State / Category | | Organisation | Member of ERPC |
|---|-----|---------------------------|---|
| Central Electricity Authority | 1. | CEA | Member (Grid Operations) |
| Central Generating Company | 2. | NTPC | Director (Commercial) Alternate Member : Regional Executive Director |
| | 3. | NHPC | Director (Finance) Alternate Member : Executive Director (Commercial)) |
| | 4. | DVC | Chairman |
| CTU | 5. | POWERGRID | Director (Operations) Alternate Member : Executive Director |
| NLDC | 6. | NLDC | Chief Executive Officer, POSOCO |
| ERLDC | 7. | ERLDC | General Manager |
| Bihar | 8. | BSEB | Chairman |
| | 9. | BSHPC | Managing Director |
| Jharkhand | 10. | JSEB | Chairman |
| | 11. | TVNL | Managing Director |
| Orissa | 12. | OPGC | Managing Director |
| | 13. | OHPC | Director (Operations) |
| | 14. | OPTCL | Managing Director |
| West Bengal | 15. | WBSEDCL | Chairman & Managing Director |
| | 16. | WBSETCL | Managing Director |
| | 17. | WBPDC | Managing Director |
| | 18. | DPL | Managing Director |
| Sikkim | 19. | Energy & Power Department | Secretary-cum-Principal Chief Engineer |
| GENCO having installed capacity more than 1000 MW | 20. | CESC Ltd. | Managing Director |
| | 21. | Sterlite Energy Ltd. | To be nominated by SEL |
| GENCO having installed capacity 1000 MW and less (by alphabetical rotation) | 22. | | |
| One DISCOM out of private DISCOMs in ER (by alphabetical rotation) | 23. | SOUTHCO (Proposed) | SOUTHCO to apply for membership. |
| One member representing electricity traders | 24. | To be recommended by CEA | |
| ERPC Secretariat | 25. | ERPC Secretariat | Member Secretary, ERPC – Convenor |