CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Coram:

1. **Shri Bhanu Bhushan, Member**
2. **Shri R.Krishnamoorthy, Member**

Petition No. 85/2007 (Suo-motu)

In the matter of

Proposed Approach for Sharing of Charges for and Losses in Inter-State Transmission system.

Order

The Central Electricity Regulatory Commission (hereinafter referred to as `the Commission`) has been mandated under section 79 of the Electricity Act, 2003 (36 of 2003) (hereinafter referred to as `the Act`) to determine tariff for inter-State transmission of electricity in such manner as may be specified and shall be guided by the National Electricity policy. The National Electricity Policy issued by the Central of Government vide Resolution dated 12th February 2005 in para 5.3.5 enjoins upon the Commission to implement a national transmission tariff framework to facilitate cost effective transmission of power across the regions. In due discharge of its statutory responsibility, the Central Commission floated a Discussion paper titled " Proposed Approach for Sharing of Charges for and Losses in Inter-State Transmission System" (hereinafter referred to as discussion paper) in February 2007, inviting comments/suggestions from the stakeholders and the interested parties/person . Over 40 sets of written comments have been received by the Commission, from the stakeholders and interested parties and persons as mentioned in Annexure-1.

2. The comments / suggestions received have been collated, and the entire proposal has been reviewed in the light of the same. The revised approach, in the

form of amendments to the "proposed approach" dated February 2007, is enclosed as Annexure-2. In the following paragraphs, we have discussed the comments / suggestions received from the respondents in the succeeding paragraphs.

3. The Commission is grateful to all the respondents for their comments/ suggestions from different perspectives. The responses have enabled the Commission to take a comprehensive and holistic view, and formulate the revised draft approach, which we feel is in the best overall interest.

4. It would be evident from the following discussion that each and every change proposed by the Commission in its discussion paper has been opposed and in some cases vehemently and by a majority of the respondents. The Commission could easily accept the majority view, and defer the proposed rationalization indefinitely. However, we cannot take lightly the responsibility cast on us to be judicious. The 'rationale' should not be allowed to be overshadowed by the pitch at which opinions are expressed.

Section 1- Introduction

5. Relevant parts of the Electricity Act 2003 and GOI policies have been quoted in this section. No comments / suggestions have been received on this section. Only a reference has been made to the extract of National Electricity Policy quoted in para 1.3 by Punjab SEB to press the need for minimizing the transmission charges for inter-State power supply. No amendment is required in Section 1, except that the first sentence of para 1.5 should be replaced by: "The Commission has accordingly taken up the subject exercise, and has arrived at the

approach described herein, after due consideration of the comments received from the stakeholders and other interested parties."

Section 2- Criteria for Transmission Tariff Design

6. Eleven objectives / aspects of transmission pricing scheme have been listed in this section, and immediate problems being faced have been discussed. Comments have been received on this section from Tata Consultancy Services / PowerAnser Labs, Tamil Nadu EB and Tripura SECL. While agreeing with the tariff design objectives listed in para 2.1 of the discussion paper, TCS/PAL have re-emphasised (i) fairness, (ii) transparency, (iii) stability in sunk cost recovery, and (iv) encouragement to system expansion toward seamless network. These are already implied and/or covered in the stated objectives (though not in as many words), and therefore no change in the present text is considered necessary on account of the comments of TCS/PAL.

7. TNEB has discussed the objectives listed in para 2.1 of the discussion paper to make a case for not introducing any distance / location sensitivity in sharing of transmission charges and losses (which is discussed in detail later). However, no change in the listed objective as such has been suggested. Tripura SECL has made certain comments on the objectives (as also on the other sections of the discussion paper) in the context of the special circumstances historically prevailing in NER. The transmission tariff of NER is being examined by the Commission separately, and Tripura's concerns would be addressed therein. No changes in section 2 appear to be necessary on account of these comments.

Section 3- Two Distinct Aspects

8. Specific comments on this section have been received from APTRANSCO, NRPC Secretariat, Punjab SEB and Bihar SEB. The first three respondents, in

their comments, have confirmed their acceptance of para 3.4 of the discussion paper. Bihar SEB has suggested, with reference to para 3.3 that the transmission charges to be paid for a month should be proportional to the weighted average availability of the system during that month. This is reasonable, and the Commission would consider specifying it with effect for 1.4.2009 (when the new tariff period would start), in view of the fact that a change from annual availability to monthly availability is possible only when the relationship between transmission charges and system availability is linear both below and above the normative availability level. It is not so presently.

9. In view of the general consensus on section 3, no change need be made in this section.

Section 4-Sharing of Transmission Charges for Regional Systems by Beneficiaries

10. There are no comments on para 4.1 to 4.4, except one from Punjab SEB which has made out a case, with reference to the question of equity referred to in para 4.3, for not introducing distance sensitivity. Para 4.5, in which continuation of the present system of sharing the transmission charges for the existing regional ISTS was proposed, has been endorsed by Adani EL, APTRANSCO, Gujarat ETCO, NRPC Secretariat and Punjab SERC. There are no adverse comments, indicating a general consensus. MCX has endorsed the entire section 4. Para 4.1 to 4.5 may therefore be retained as they are.

11. In para 4.6, the Commission had proposed segregation of all step-down transformers (excluding 765/400 kV) and downstream systems (where presently included in ISTS), and to assign the liability of payment of their

transmission charges only to the local beneficiaries, both for the existing and future systems. There is a mixed response to the proposal. It has been specifically endorsed by Adani EL, APTRANSCO, Chhattisgarh SEB, ERPC Secretariat, GRIDCO, Gujarat ETCO, MPP Trading Co., MPP Transmission Co., MPERC, TNEB and WBSEB. Some of these respondents, while agreeing in principle, have cautioned about the possibility of disputes being raised by some beneficiaries. The segregation of transmission charges, if decided upon, has therefore to be done judiciously.

12. The above proposal has been opposed by Bihar SEB, Grid Management Division of CEA, Kerala SEB, NRPC Secretariat, Powergrid, Punjab SEB and UPPCL. Their main argument is that the pooling of these system components had been agreed to by all beneficiaries, and the same should continue for the existing system. While the other respondents are agreeable to the proposed segregation for upcoming/ future systems, Punjab SEB appears to be against such segregation even for future systems. NTPC has suggested that this proposal should be implemented only along with introduction of distance and direction based transmission tariff.

13. Only the respondents who have specifically commented on para 4.6 of the discussion paper have been mentioned in para 11 and 12 above. The other respondents, as also the concerned parties who have not responded, are presumed to be either in agreement with or neutral to the proposal. Further, the proposal would have a financial implication only for the State utilities (not for CEA, Powergrid, NTPC, RPC Secretariat, etc). Viewed from this angle, we find a majority, particularly among State utilities, to be in favour of the proposal. All respondents except for Punjab SEB (not counting Maharashtra SEDCL and

Rajasthan RVPNL, who want all rationalization to be indefinitely deferred) appear to agree with the concept of segregation of step-down transformers and down stream systems. In view of this, we propose that the above rationalisation should be implemented, but with a pragmatic time frame to allow sufficient time for the required modalities. We now propose to effect this change from 1.4.2008 (instead of 1.10.2007 proposed earlier), for which Powergrid should carry out the required transmission charge segregation by 31.12.2007 (instead of 30.6.2007 proposed earlier).

14. Powergrid has pointed out that there may be practical difficulties in carrying out the required transmission charge segregation, particularly for the old assets taken over from Central generating companies long ago. Being pragmatic, we would allow approximation where precision is not possible, and audited figures would not be insisted upon for the purpose of transmission charge segregation.

15. In their response on para 4.6 and 4.7 of the discussion paper, APTRANSCO and Punjab SERC has suggested that ICTs experiencing bidirectional power flow may not be treated as serving only the local beneficiary, and should therefore be excluded from the proposed segregation. We feel that a reverse power flow is indicative of wheeling of the beneficiary's own generation over the ISTS, which further justifies segregation of such ICTs, and not their continued pooling or exclusion from segregation. APTRANSCO has also suggested segregation of 400 kV radial lines. However, in our approach, the existing 400 kV system has been taken to be a mesh in which such segregation will become very subjective. The suggestion is therefore not accepted.

16. MP Power Transmission Company, while endorsing the proposed segregation, has suggested that local beneficiary / STU should have a say in O&M of the segregated facilities, and that the STU should even “have the option to construct this system by its own resources as a part of intra-State system, if the STU so desire.” We find these suggestions reasonable and endorse them.

17. No other comments have been received on para 4.7, 4.8 and 4.9 of the discussion paper, except one from ERPC Secretariat, suggesting that some of the 400 kV lines in ER be treated as a part of inter-regional links to NR and SR. This issue has been discussed further in para 30 below. Para 4.7, 4.8 and 4.9 may therefore be retained as they are. Para 4.6 may also be retained except for change in dates as per new dates stipulated in para 13 above.

18. NER has already moved from UCPTT scheme to annual fixed charge concept with effect from 1.4.2007. Para 4.10 is therefore no longer required, and may be deleted. Suggestions of Assam SEB regarding depreciation and O&M have already been accommodated while specifying the provisional transmission charges for NER.

19. Many respondents have opposed para 4.11 of the discussion paper, in which freezing of transmission charge sharing for the existing ISTS had been proposed. It appears that the reasons behind the stipulation therein should have been explained first. The intent was to bring out that transmission investments cannot be diverted from month-to-month from one beneficiary to another corresponding to ever changing allocations out of 15% unallocated capacity of Central generating stations. However, in view of the adverse response, the matter would be kept in abeyance for the present, and para 4.11 would be deleted from the approach paper.

Section 5- Sharing of Transmission charges for Future Additions/ Augmentations

20. HPSEB has commented on Para 5.1 of the discussion paper, and agreed with the matter therein. Nuclear PCIL has disagreed with it, as a part of its general opposition to introduction of distance and direction sensitivity, and overall approach that "the time is not ripe for switching over from existing methodology to the proposed methodology". We do not agree with such views. There are no other comments of para 5.1 and 5.2, and they may be retained as they are.

21. The proposal for stoppage of automatic commercial pooling of all new ISTS elements with the existing regional ISTS in para 5.3 of the discussion paper has attracted many responses. The proposal has been endorsed by Adani EL, APTRANSCO, Bihar SEB, Chhattisgarh SEB, ERPC Secretariat, HPSEB, Kerala SEB, MPP Trading Co, Powergrid, Punjab SEB, WBSEB, Shri K. Ramanathan (TERI), TNEB, GRIDCO, MPERC and NRPC Secretariat. However, some respondents have raised questions on the issue of priority mentioned in para 5.3, which is discussed in para 23 below. GRIDCO has suggested that the criteria given in para 5.3 should be applicable retrospectively from 1.4.2006, whereas MPERC has suggested its application from 1.4.2009 (instead of 1.4.2007 stipulated in para 5.3). The subject proposal has been opposed only by Nuclear PCIL, Rajasthan RVPN and Maharashtra SEDCL, who generally appear to be against any change in transmission tariff philosophy for the present, and by PTC India. NTPC has suggested that all related aspects be clarified before the proposal is put into operation, and it should be applied only where ATS is yet to be finalized and approved. Punjab SEB, Kerala SEB and TNEB are not in favour of distance sensivity (MW-mile concept) mentioned in para 5.7.

22. As explained in para 5.2 of the discussion paper, the concept of automatic pooling of a new ATS into the Regional TSC has worked satisfactorily so far because all regional projects were CPSU owned and all States of a region have had allocations from such stations. The situation has changed with entry of IPPs in which only a few entities may have contracted shares and also with the concept of Ultra Mega Power Project having beneficiaries across regional boundaries. In fact, recently the Commission had the experience of dealing with two such cases, where the ATS of a new generating station has to be kept out of the regional pool, and other similar cases are in the offing.

(i) Sugen CCPP (1100 MW) is an inter-State generating station located in Gujarat. The ATS for Sugen CCPP is partly to be built by Surat Distribution Utility for its own use and partly to be built by M/s TPTL, a Joint Venture of Torrent Power Ltd. and Powergrid. The liability to pay transmission charges for the JV portion would be of the Torrent Power Limited (Generating Company), with the intent of ultimately passing it on to the concerned project beneficiaries.

(ii) Karcham-Wangtoo HEP (1000 MW) is an inter-State hydro project of M/s Jaiprakash Hydro Power Ltd. and is located in Himachal Pradesh. Only some of the Northern Regional States, namely Rajasthan, Punjab Haryana, UP and HP, are its beneficiaries. Jaypee Powergrid Ltd., a JV company of Jaiprakash Hydro-Power Ltd. (JHPL) and Powergrid intends to built 400 kV transmission line from Karcham Wangtoo to Abdullapur (Haryana). The BPTA for this part of the HEP`s ATS would be between the generator and JV company. The transmission charges of the ATS for Karcham Wangtoo HEP are thus not to be pooled with the TSC of Northern Region, but are to be born by the HEP beneficiaries.

23. In view of the support received for the proposal and reasons explained above, we propose to implement it. The threshold date shall now be 1.10.2007 (instead of 1.4.2007). It may be specially noted that the proposal stipulates flexibility, with an option to the beneficiaries to decide whether a new ATS would be commercially pooled with the existing system or treated separately for sharing of transmission charges. The proposal should therefore be readily acceptable to all concerned.

24. The last sentence of para 5.3 of the discussion paper reads as follows : "Transmission of power from the new power plant shall have the first priority on the new ATS, but a lower priority on the existing ISTS , in this case." Many responses have been received questioning this stipulation, and seeking clarifications. This stipulation is a natural corollary when the new ATS is not commercially pooled, and beneficiaries of the new power plant are not going to incrementally share the transmission charges for the existing inter-State transmission system. However, the matter is much more complex. The question of priority would firstly arise only in case of abnormal transmission outages, beyond the standard (n-1) criterion. Since the existing and the new transmission systems would be operating in an integrated mode, and the total system would have been planned to meet the normal redundancy criteria, the usual transmission outages (whether in the existing ISTS or the new ATS), shall not impose any restrictions on generation or load anywhere. On the other hand, in case of abnormal outages, the RLDC(s) shall have to examine as to backing down of which generating station and curtailment of which schedule would best relieve the congestion, irrespectivbe of whether the outages are on existing ISTS or new

ATS. Viewed from this angle, the above stipulation has little relevance. It may therefore be deleted.

25. In case the new ATS, while not pooled commercially, has been optimized in a way as to necessarily use some part of the existing system, it should be possible for the concerned parties to agree on leasing of that part of the existing system (fully or partly) to the beneficiaries of the new generating station. Such an approach was in our mind while stipulating the following in para 5.4 : "There could be pragmatic variants as well, e.g. a hybrid approach, in special cases, to meet the ultimate objective". Further, in case the existing ISTS and the new elements are intermingled in a way that their commercial separation would be inappropriate, there should be no objection to commercial pooling of the new ATS with the existing transmission system. The above clarifications should address the doubts raised in this matter by Adani EL, CLP Power India, Essar PL, MCX, Powergrid, RLDCs, PTC India, Nuclear PCIL, NTPC and Punjab SEB.

26. APTRANSCO, Bihar SEB, HPSEB and Torrent Power have agreed to stipulations in para 5.4. The proposal regarding deferred recovery has however been opposed by CEA, Nuclear PCIL and Powergrid, and doubts have been raised on its implementability by Adani EL and Shri K. Ramanathan. MP Power Trading Co has suggested that beneficiaries of new generating stations should also share the transmission charges allocated for any system strengthening. This can be easily taken care of while bifurcating in a suitable manner the total transmission charge of a new system into two parts, one for recovery from the beneficiaries of new generation (the ATS part) and the other for clubbing with the charges for existing ISTS (the system strengthening part).

27. The Commission feels that there would be a tendency to over-invest in transmission if the provisions of para 5.4 are not there. Besides, in the initial years of front-loaded tariff and partly commissioned generating stations, beneficiaries would have to pay much higher charges (not commensurate with benefits) if they have additionally to pay for surplus transmission capacities built for future. A serious attempt should be made to defer /stagger the investment, unless ROW requirements, etc. dictate otherwise. However, to protect the legitimate interest of transmission owners, it could be specified that deferred recovery would cover the cost of idling investment. This would address the concerns expressed by CEA (SP&PAD), Powergrid, Torrent Power and Reliance.

28. Commenting on para 5.8, MCX "strongly favour that prior agreement with the beneficiaries should not be a pre-condition for network expansion", in view of problems encountered in USA, etc. We feel that the flexibility provided in para 5.3 and 5.4 should enable all concerned parties to reach an upfront consensus. In case a party is found to be taking a totally unreasonable stand and unjustifiably blocking a generally beneficial scheme, the matter could be taken up with the Commission for resolution. We note that NRPC Secretariat has generally agreed with the approach proposed in para 5.3 to 5.9, and particularly to para 5.8.

29. With reference to sections 5.7 and 5.9, M.P. Power Trading Company has commented that in case a new ATS is to be commercially pooled, and in case of system strengthening schemes, the beneficiaries of the new power plant should also share the transmission charges for the new ATS / system strengthening scheme. The Commission's intention is to make this automatic. Whenever any new transmission element is added to the regional pool, the new generating

capacity would also get added in the denominator for sharing of charges. The above clarifications should also address the concerns expressed by Powergrid.

30. In view of the past experience of some beneficiaries opposing the required system strengthening schemes, ERPC Secretariat has suggested, in response to section 5.9, introduction of a voting scheme in the Standing Committee meetings on Power System Planning. This being primarily a system planning issue, we leave it to be taken care of by CEA, whose officials head the Standing Committees. What really matters for us is a consensus by parties who have to pay the transmission charges, at the end of the day.

31. ERPC Secretariat has listed the following transmission assets which are presently facing problems regarding sharing of transmission charges :

(i) 400 kV D/C Purulia – Jamshedpur – Baripada – Mendashal

(ii) 400 kV D/C Talcher – Rourkela (second)

(iii) 400 kV D/C Mendashal – Berhampur – Gazuwaka

(iv) Berhampur and Bolangir substations

(v) ATS of North Karanpura and Maithon RB

(vi) Strengthening scheme – III, comprising 400 kV D/C Durgarpur – Maithon, Jeypore – Bhadrawati, Ranchi – Rourkela – Raipur.

We feel that it is necessary to re – examine as to which of these are really required, in what time frame, and for what primary purpose. Based on these, it should be possible to agree on who all should pay their transmission charges. The decision should not be based on horse-trading.

Section 6- Sharing of Transmission Charges for Inter – Regional Links

32. In the discussion paper, sharing of transmission charges for the existing inter – regional links had been proposed as follows, with effect from 1.4.2007:

(i) Vindhyachal HVDC : NR and WR (50:50)

(ii) Chandrapur HVDC, including Chandrapur – Ramagundam line : WR and SR (50:50)

(iii) Sasaram HVDC, including Sasaram – Allahabad line : NR only.

(iv) Gazuwaka HVDC, including Jeypore – Gazuwaka line: SR only

(v) Talcher – Kolar HVDC : SR only

(vi) Rourkela – Raipur line : WR only

(vii) D/C Budhipadar – Korba line : WR only

(viii) S/C Budhipadar – Korba line : WR only

(ix) New Siliguri – Bongaigaon line : ER and NER (50:50)

(x) Birpara – Salakati line : ER only

(xi) Muzaffarpur – Gorakhpur line : NR only

33. The above proposal has been endorsed by Adani EL, Assam SEB, GRIDCO, TNERC, Shri K. Ramanathan and WBSEB. It is also significant that no comments have been made on this section by CEA, MCX and NTPC, while responding on other parts of the discussion paper. Powergrid too has no objection, but is concerned about timely realization of its dues during the transition. System operation, Powergrid (representing the RLDCs) has however suggested that the present arrangement of 50:50 sharing should continue for the existing inter – regional links.

34. APTRANSCO, TNEB, Karnataka SPPCC and Kerala SEB, while agreeing to rest of the proposal, want the charges for 2 x 500 MW Gazuwaka HVDC to continue to be shared by ER and SR (50:50). Chhattisgarh SEB, Maharashtra SEDCL, MPERC, MP Power Trading Company and MP Power Transmission Company have opposed the proposal for transmission charges of

ER – WR links being borne only by WR beneficiaries. Similarly, HPSEB, NRPC Secretariat, Punjab SEB, Punjab SERC, Rajasthan RVPNL and UPPCL have opposed the proposal for transmission charges of ER – NR links being borne only by NR beneficiaries.

35. Bihar SEB, while acknowledging that the Commission had taken care of its views and agreeing with the rest of the proposal, has proposed that the entire stretch of the original 400 kV D/C Malda – Bongaigaon line (not just the New Siliguri – Bongaigaon part) along with the substations should continue to be treated as an inter – regional link, for which "the entire transmission charges should be borne by the actual users of the said line". Further, since the said line does not benefit BSEB, it should not be required to share the charges for this line at all. A similar view has been expressed by BSEB about the 220 kV D/C Birpara – Salakati line. WBSEB and ERPC Secretariat want the charges for 220 kV D/C Birpara – Salakati line to be borne by NER, while endorsing the rest of the proposal.

36. PTC India has proposed that the charges for all inter – regional links should be shared on 1/3 : 2/3 basis between the two regions as per ECC recommendation, instead of the present 50:50 basis.

37. Our observations on the above are as follows. There is no disagreement on the present arrangement in respect of Vindhyachal HVDC, Chandrapur HVDC and Talcher – Kolar HVDC, and the same may continue in future as well. As for 2 x 500 MW Gazuwaka HVDC, there can be no argument about it providing the required redundancy for 2 x 1000 MW Talcher – Kolar HVDC, for which SR is clearly the beneficiary. We have noted from TNEB's response that "the SR

constituents have already agreed to bear the entire transmission charges of laying a separate 400 kV D/C line from Talcher to Meramundalli and from Bhubaneswar to Jeypore as standby AC system for transfer of power from Talcher to SR in the event of any pole outage." It is obvious that any power coming from Talcher through the above lines (within ER) to Jeypore can flow to SR only through the Gazuwaka HVDC. There is thus no case for ER being required to share the transmission charges for Gazuwaka HVDC.

38. It is our understanding that even when the direction of power flow on Gazuwaka HVDC reverses occasionally, the net power flow (Talcher – Kolar and Gazuwaka algebraically added) is always from ER to SR. The power flows on these HVDC links are directly controllable (unlike A.C. links). Any power flow reversal on Gazuwaka HVDC is only as per SRLDC's directions, and is for optimization of transmission losses and voltage profiles in SR. All this leads us to conclude that SR is clearly the beneficiary of 2 x 500 MW Gazuwaka HVDC, and therefore should bear its entire transmission charges, as proposed in the discussion paper.

39. The links between ER and WR have primarily been constructed for carrying surplus power in ER to the perpetually deficient WR. There is a continuing clamour about the present ER – WR transfer capability being short of requirement, and many more ER – WR links are being constructed and are planned, primarily for bringing more power to WR. In such a scenario, it can not be said that ER constituents are a beneficiary of the ER – WR links. It has often been said that ER is benefiting by exporting surplus power through these links, by virtue of improvement in PLF of its power plants, improvement of frequency, etc. This

argument may have been valid before introduction of Availability Tariff (ABT), but is no more relevant now.

40. It has also been reported that power flow on ER – WR links is not always westward, and occasionally reverses (particularly during evening hours, due to over–drawal by ER beneficiaries). Obviously, the ER – WR links have not been constructed for catering to such requirement of ER beneficiaries. The WR beneficiaries should in fact be asking for enhancement of UI rates, to discourage such over–drawal by ER beneficiaries, rather than asking ER beneficiaries to share the charges for the subject inter – regional links.

41. It is well-established that ER is power-surplus, and WR is power-deficit. All schedules, whether under long-term or short-term contracts, are towards WR. In view of this and the preceeding discussion, the WR constituents are clearly the primary beneficiaries of the ER – WR links, and should therefore bear the total transmission charges of these links, i.e., 400 kV D/C Rourkela – Raipur, 220 kV D/C Budhipadar – Korba and 220 kV S/C Budhipadar – Korba lines.

42. The above discussion on ER – WR links is generally applicable for ER – NR links as well. On a similar logic, we propose that the NR beneficiaries should bear the total transmission charges of the ER – NR links, i.e. 500 MW Sasaram HVDC and 400 kV D/C Muzaffarpur – Gorakhpur line. It may however be noted that the latter is a part of the ATS of Tala HPS in Bhutan, and certain question related to allocations in the Tala HPS itself have been raised by Bihar SEB, ERPC Secretariat, GRIDCO, Punjab SEB, Rajasthan RVPNL, UPPCL and WBSEB. The Commission proposes to take up separately the issue of sharing of charges for

the ATS of Tala HPS, in due course. For the present, the issue is only being flagged.

43. As for the 400 kV D/C New Siliguri – Bongaigaon line, we find that only Bihar SEB has disagreed with our proposal. Since the other ER constituents have already endorsed our proposal, and BSEB's long-standing grievances regarding inter-regional links have been addressed to a large extent, it would be reasonable for BSEB also to reconcile to the proposal. We therefore conclude that the charges for this inter– regional link should be shared by ER and NER in 50:50 ratio, as already explained in para 6.12.

44. The case of 220 kV D/C Birpara – Salakati line has already been deliberated by the Commission in detail in Petition No.59/2005, and decided in orders dated 14.2.2006 and 20.6.2006. No new issues have come up. We therefore confirm the contents of para 6.13 of the discussion paper.

45. In the recent past, a new NR – WR link, the 765 kV S/C Agra – Gwalior line (presently charged at 400 kV) has been commissioned. This is operating in parallel with the Vindhyachal HVDC BtB link. It would only be logical that its transmission charges are shared by NR and WR in 50:50 ratio. The line shall be added in the list of existing inter-regional links in section 6.

46. Another ER – NR link, 400 kV D/C Patna – Ballia line, has been commissioned recently as a part of the ATS for Kahalgaon STPS – Stage II. Its transmission charges shall be borne by the beneficiaries of the STPS, as already agreed by them, and generally in line with the present proposal. This link also

needs being added in section 6. No other change appears necessary in para 6.1 to 6.15.

47. It was proposed in the discussion paper to implement the revised sharing formula for inter – regional links from 1.4.2007. Since that date is already past, and such changes should be made from a prospective date only, we now propose the implementation date as 1.10.2007. Powergrid should quickly segregate the charges for 400 kV D/C New Siliguri-Bongaigaon line from those of 400 kV D/C Malda-Bongaigaon line, and have it approved by CERC before that date.

48. As a corollary to the proposed mid-year transition, it would be necessary to determine the availability of concerned inter – regional links separately for 1.4.2007 – 30.9.2007 and 1.10.2007 – 31.3.2008 periods, for payment of incentive, etc. This may be kept in view by the concerned parties

Section 7- "Open Access" on the Inter – State Transmission System

49. In the discussion paper, the Commission had proposed simplification of the procedure for availing "open access" on ISTS, mainly through elimination of transmission charge for short-term open access (STOA), but with application of incremental losses. Allocation of inter-regional link capacities to the beneficiaries of the importing region had also been proposed.

50. There is an overwhelming response against the proposal for making short-term open access free of transmission charge. APTRANSCO, Assam SEB, Chhattisgarh SEB, GRIDCO, Gujarat ETCO, Karnataka ERC, Karnataka SPPCC, Kerala SEB, M.P. Power Transmission Company, NTPC, POWERGRID, Punjab SEB, Punjab SERC, Shri K. Ramanathan, TNEB, Rajasthan RVPNL, WBSEB,

Reliance Energy and PTC have all opposed the proposal. Only a few respondents like Adani EL, HPSEB, MPERC and NRPC Secretariat have endorsed the proposal, whereas the others are silent on it. The main argument is that there must be a charge for any service availed; otherwise it may lead to misuse.

51. In deference to the above response from the stakeholders, the Commission has decided to continue with the concept of levying a transmission charge for short-term open access. However, we would endeavour to simplify the procedure for "Open Access" in separate proceedings. Para 7.4 would be modified to reflect the above.

52. We have noted that the concept of application of incremental losses for STOA transactions has been supported even by some of the opponents of transmission charge-free STOA, e.g. APTRANSCO, Kerala SEB, Shri K. Ramanathan and WBSEB. The concept of applying incremental losses for STOA has however been opposed by PTC, TNEB, etc. on the ground of complexity and subjectivity involved. We feel that it would be rational to apply incremental losses for STOA, as long as it is practicable. It is therefore proposed to introduce incremental losses from 1.4.2008, by which time the RLDCs should be able to gear up for introducing it in STOA scheduling procedure.

53. In para 7.6 of the discussion paper, the Commission had proposed a concept of allocation of inter – regional link capacities to the downstream beneficiaries. A number of respondents have raised objections / questions on this. Further, the concept was premised on making STOA free of transmission charge, which as discussed earlier is no longer under consideration. In view of

the above, the concept of inter – regional capacity allocation shall be kept in abeyance for the present. The matter would be looked into by the Commission separately, when a review of “open access” regulations is taken up. Meanwhile, para 7.5, 7.6 and 7.7 would stand deleted.

Section 8- Apportioning of Transmission Losses

54. In the discussion paper, the Commission had proposed moving from the present system of transmission loss apportioning / sharing on proportionate (MW) basis irrespective of location / transmission distance, to a system of distance – based and direction sensitive loss allocation for supply of Central generation allocations to the beneficiaries. Thereafter, STOA transactions were to be superimposed one-by-one and incremental losses for them determined through further load flow studies and power tracing techniques.

55. The proposed approach has been endorsed by APTRANSCO, Chhattisgarh SEB, GRIDCO, M.P. Power Trading Company, M.P. Power Transmission Company and WBSEB. Many of the respondents have, however, cautioned that such loss apportioning exercise would be very complex and has to be carried out very judiciously to avoid disputes. Some useful suggestions have also been given.

56. The above proposal has been opposed by Gujarat ETCO, HPSEB, Kerala SEB, Maharashtra SEDCL, MCX, MPERC, NRPC Secretariat, Nuclear PCIL, Punjab SEB, Punjab SERC, Rajasthan RVPNL and TNEB. Powergrid (System Operation) representing the RLDCs has asked for more time for arriving at the methodology which is acceptable to all stakeholders and is practical.

57. The responses are indicative of an appreciation that we should move in the proposed direction, but with caution. One respondent has opposed the proposal on the ground that "cost of power from a CGS should be same to all the beneficiaries irrespective of their geographical location. This was a consensus decision taken by GOI earlier." Many other opponents also represent States far off from Central generating stations, and would be adversely affected by the proposed move. Their opposition is therefore understandable. However, much water has flown since the consensus decision quoted above, if there was one. The present GoI policies quoted in para 1.2 and 1.4 of the discussion paper clearly mandate distance and direction sensitivity, both in transmission tariff and allocation of transmission losses. The Commission proposes to progress in the required direction in pragmatic steps, and para 8.6 outlines one such step which should be taken as soon as we are technically ready.

58. Taking into account all the above factors, the Commission now intends to implement the proposal with effect from 1.4.2008 (instead of 1.10.2007 mentioned in para 8.5), and RLDCs are advised to start the required gearing up process. In para 8.6, "one – by – one" should be deleted.

Section 9- Treatment of Unscheduled Interchange (UI)

59. For a comprehensive coverage of the subject, a comparison of transmission charge and transmission loss implications between long – term contracts, short – term open access (STOA) and Unscheduled Interchange (UI) had been made in this section. A case had also been made, based on this comparison, for not levying any transmission or wheeling charge for STOA.

60. In para 50 above, in deference to the stakeholders' response, we have already decided to continue with the concept of levying a transmission or wheeling charge for STOA. However, as discussed in para 51 above, incremental losses are still to be applied for STOA. This is to ensure that any STOA does not increase the burden of transmission loss sharing for the long – term customers of ISTS. Since the incremental losses are roughly twice of the proportionate losses in percentage terms, and STOA customers would be bearing this high burden, there would be a justification for keeping their transmission charge burden low. In other words, the STOA customers should be asked to pay only a nominal transmission or wheeling charge. Para 9.3, 9.4 and 9.11 of the discussion paper would need to be slightly amended on this account.

61. Now that a justification for making STOA free of transmission charge need not be drawn from a comparison with UI, para 9.5 of the discussion paper can be deleted. Para 9.9 and 9.10 are also no longer relevant, and may be deleted. Para 9.6 too should be modified.

62. The only issue now left concerning UI, relevant to the subject under discussion, is whether the frequency-linked UI rates should have a locational bias. As explained in para 9.6 and 9.7 of the discussion paper, the UI rates should have a locational bias, and this scheme should be introduced as and when distance and direction sensitivity is introduced in allocation of transmission losses. Since the latter is now proposed from 1.4.2008, locational bias in UI rates should also be introduced from the same date (instead of 1.10.2007 mentioned in section 9.8 of the discussion paper).

63. The concept of differential UI rates (locational bias) has been endorsed by GRIDCO, Gujarat ETCO, MPERC, MP Power Trading Company, MP Power Transmission Company and WBSEB. It has been opposed by HPSEB, Kerala SEB, MCX, Meghalaya SEB, NRPC Secretariat, Punjab SERC and Powergrid (System Operation), mainly on account of likely complications in implementation. We feel that the problems can be overcome, and the concept should be implemented along with other rationalization proposed.

64. With the intention of maintaining a parity between STOA and UI, ERPC Secretariat has proposed levy of a transmission charge of three paise/unit on all UI drawal, and one paise/unit on all UI injection. Money thus collected could be used for augmentation / strengthening of the regional ISTS. Reliance Energy has similarly suggested a grid usage component in UI charge. In effect, these would mean a differential in buying and selling rates of UI. However, since we are no longer aiming at a parity between STOA and UI, this complication need not be introduced.

Section 10- Transmission Lines Owned by States and Others

65. This section contained only some general observations, which Adani EL has endorsed. In its response, Powergrid (system operation) has mentioned two State – owned lines (220 kV D/C Auraiya – Malanpur and 220 kV D/C Ujjain – Kota) which can reinforce the NR – WR interconnection. The concerned State utilities may like to offer their operation as inter-regional links, and ask for sharing of transmission charges by the NR and WR beneficiaries.

Section 11- Other Approaches applied in Transmission Pricing

66. Comments have been received on this section from Adani EL, GRIDCO, MCX and WBSEB only. Adani EL want to be assured that the private

transmission companies would not face a problem about transmission charge recovery (on account of evolving transmission charge sharing formula). Adani EL has also requested for a paper on MW – Mile, Point Tariff and Zone – to – Zone concepts and presentations by CERC / CEA experts. GRIDCO and WBSEB have vehemently objected to the CEA proposal for formation of a national pool of transmission assets (mentioned in section 6.17 of the discussion paper). MCX have indicated a preference for Point Tariff (to be derived from power tracing algorithm developed by IIT, Bombay), from Power Exchange angle. We have noted the views expressed. No change is required in this section.

Section 12- Concluding Remarks

67. There are no comments as such on this section. However, based on the foregoing discussion, following change are required in para 12.2 :

(a) "1.10.2007" to be replaced by "1.4.2008" in 12.2(i) and (vii).

(b) 12.2(ii), (v) and (viii) may be deleted.

(c) "1.4.2007" to be replaced by "1.10.2007" in 12.2 (iii) and (iv).

(d) 12.2(vi) may be reworded as : "implement distance and direction sensitive loss allocation for supplies from Central generating stations on proportional basis and apply incremental losses for "short – term open access" w.e.f. 1.4.2008."

68. Some of the responses received by the Commission have not got reflected in the foregoing section – by – section deliberation. Their gist is given below.

(i) All the comments of Enercon (India) Ltd are from the perspective of wind generators, and a case has been made for a preferential treatment for wind power. However, this has little relevance when we are discussing only the sharing of the total transmission charges and losses between the beneficiaries.

(ii) Essar Power Ltd has raised an important aspect related to competitive bidding for procurement of power on long – term basis. If State utilities ask the bidders to quote prices on the utilities' door – step, the bidders shall not only have to include the applicable transmission charges in their bid price, but shall have to arrange the required open access as well. The inherent uncertainty in both issues could be a stumbling block for competitive bidding. The matter merits a separate examination.

(iii) Prof. S.A. Khaparde of IIT, Bombay has pointed out that point – of – connection tariff can be worked out using power flow tracing techniques now available. The Commission proposes to seriously examine the power flow tracing tools developed by IIT, Bombay, and use them pragmatically.

(iv) Ms. Mallika Sharma Bezbaruah, a consumer from Nawgaon (Assam), has suggested that consensus should be evolved on one nation one tariff formula, irrespective of distance. She has also made many adverse comments on PGCIL's performance and on unrelated issues, which we do not propose to go into in this discussion.

(v) TNERC has conveyed its general agreement with the discussion paper. System Planning & Project Appraisal Division of CEA has also endorsed "most of the issues and suggestions brought out in the document" while differing on two issues (4.11 and 5.4), which have already been discussed.

69. Some of the respondents have asked for a hearing wherein the various issues may be discussed in detail. Though we feel that written comments are a more precise way of conveying the views, particularly in an involved subject as the present one, we propose to hold an open – house discussion on this subject, may be along with "open access" issues, in second half of July 2007. A notice for the

same shall be issued separately. This order may be considered as base paper for discussion along with the connected documents.

70. The discussion paper titled “Proposed Approach for Sharing of Charges for and Losses in Inter – State Transmission System” issued by the Commission in February 2007, read along with the proposed amendments listed in Annexure – II herein, shall be taken as an integral part of this order.

71. The reasons for analysing the comments of the stakeholders in a systematic manner and proposing a revised approach through this interim order are (i) to share the suggestions/comments with all the stakeholders and (ii) to facilitate a focused debate during the ensuing public hearing. The Commission would take a final view in the matter after conducting the public hearing

sd-/ sd-/

(R.KRISHNAMOORTHY)
MEMBER

(BHANU BHUSHAN)
MEMBER

New Delhi dated the 2nd July 2007

LIST OF RESPONDENTS

		Communication Date
1.	Adani Enterprises Limited	13.4.07
2.	Andhra Pradesh Transmission Corporation Limited	16.4.07
3.	Assam SEB	5.4.07
4.	Bihar SEB	11.4.07
5.	Central Electricity Authority	12.4.07
6.	Chhattisgarh SEB	9.4.07
7.	CLP Power India	13.4.07
8.	Enercon (India) Limited	14.4.07
9.	Eastern Regional Power Committee Secretariat	4.4.07
10.	Essar Power Limited	16.4.07
11.	Grid Corporation of Orissa Limited	16.4.07
12.	Gujarat Electricity Regulatory Commission	7.4.07
13.	Gujarat Energy Transmission Corporation (GETCO)	.3.07
14.	Government of Karnataka	13.4.07
15.	HP SEB	16.4.07
16.	IIT Bombay	10.4.07
17.	Karnataka Electricity Regulatory Commission	25.4.07
18.	Kerala SEB	14.5.07
19.	Maharastra State Electricity Distribution Company Limited	13.4.07
20.	Mallika Sharma Bezbaruah, Consumer	16.4.07
21.	Multi Commodity Exchange of India Limited (MCX)	13.4.07
22.	Meghalaya SEB	13.4.07
23.	Madhya Pradesh Electricity Regulatory Commission	20.4.07
24.	Madhya Pradesh Power Trading Company Ltd.	21.4.07
25.	Madhya Pradesh Power Transmission Company Ltd.	9.4.07
26.	Northern Regional Power Committee Secretariat	16.4.07
27.	NTPC Ltd.	17.4.07
28.	Nuclear Power Corporation of India Ltd.	13.4.07
29.	Power Grid Corporation of India Ltd. (Commercial)	13.4.07
30.	Power Grid Corporation of India Ltd. (System Operation)	15.4.07
31.	PTC India Ltd.	14.4.07
32.	Punjab SEB	17.4.07

33.	Punjab State Electricity Regulatory Commission	4.5.07
34.	Rajasthan Rajya Vidyut Prasaran Nigam Ltd.	13.4.07
35.	Reliance Energy Limited	31.5.07
36.	Tamil Nadu Electricity Regulatory Commission	17.4.07
37.	Tata Consultancy Services	14.4.07
38.	Shri K. Ramanathan, TERI	10.4.07
39.	Tamil Nadu Electricity Board	12.4.07
40.	Torrent Power Limited	13.4.07
41.	Tripura State Electricity Corporation Ltd.	13.4.07
42.	Uttar Pradesh Power Corporation Ltd.	24.4.07
43.	West Bengal SEB	10.5.07

Annexure-II

PROPOSED AMENDMENTS TO THE APPROACH FOR SHARING OF CHARGES FOR AND LOSSES IN INTER - STATE TRANSMISSION SYSTEM ISSUED IN FEBRUARY 2007

Para 1.5

First sentence of this para – “The Commission ……….an informed discussion”, shall be read as under-

“The Commission has accordingly taken up the subject exercise, and has arrived at the approach described herein, after due consideration of the comments received from the stakeholders and other interested parties. “

Para 2.2

Following sentence shall be inserted before the last sentence – “The Charges ….basis” –

“The above concept has been introduced in NER also with effect from 1.4.2007.”

Para 4.6

Two sentences appearing before last sentence, i.e. – “We propose to effect ………from 1.10.2007. The CTU (PGCI) shall ….latest by 30.9.2007”, shall be read as under:

“We propose to effect this change from 1.4.2008. The CTU (PGCI) shall have to carry out the required transmission charge segregation by 31.12.2007, and obtain the Commission’s approval latest by 31.3.2008. “

Para 4.10 & 4.11

These paragraphs shall be omitted.

Para 5.3

- Dates 1.4.2007 and 31.3. 2007 appearing in first sentence shall be replaced by 1.10.2007 and 30.9.2007 respectively.

- The last sentence of the para namely – “Transmission of ……..in this case.” shall be omitted.

Para 5.4

The last sentence- “We do have………STUs.” shall be amended as under-

“We do have the required framework, of coordinated planning for transmission development under the umbrella of CEA and statutory responsibilities of CTU and STUs, for working out and agreeing on such pragmatic variants.”

Para 6.1

Following lines will be added in the list of inter-regional links-

“(xii) 765 kV S/C Agra-Gwalior line between NR and WR
(xiii) 400 kV D/C Patna-Ballia line between ER and NR”

Para 6.3

The last sentence of this para shall be read as under:

“The NER beneficiaries have been paying (till 31.3.2007) transmission charges for ISTS under a different formula (Uniform Common Pooled Transmission Tariff – UCPTT), and have not been sharing separately the transmission charges for 400 kV D/C Malda - Bongaigaon line.”

Para 6.14

The para shall be read as follows.

“The 400 kV D/C Muzaffarpur - Gorakhpur line has been constructed as a part of ATS of Tala HEP for supplying power to NR States. Its transmission charges should therefore be borne by NR beneficiaries only. Similarly, in case of recently constructed 400 kV D/C Patna-Ballia line, transmission charges would be borne by NR beneficiaries and in case of 765 kV S/C Agra-Gwalior line, transmission charges would be shared in the ratio of 50:50 by NR and WR beneficiaries. “

Para 6.15

Following items would be added in the list:

"(xii) 765 kV S/C Agra-Gwalior line: by NR and WR in 50:50 ratio

(xiii) 400 kV D/C Patna-Ballia line : by NR"

Para 6.16

- The date 1.4.2007 appearing in the first sentence shall be replaced by 1.10.2007.
- The word "specified" in the second sentence shall be replaced by "available".

Para 6.17

- The words "very recently" appearing in the fourth sentence –" The Central Electricity …..sensitivity", shall be omitted.
- Last sentence – The CEA proposal…..information.", shall be omitted.

Para 7.4

The last sentence shall be read as under:

"One of the contemplated measures is levy of a nominal transmission charge for short-term open access, but with application of incremental losses, as explained later on."

Para 7.5, 7.6 and 7.7

The paragraphs shall be omitted.

Para 8.5

In the second sentence date 1.10.2007 shall be replaced by 1.4.2008.

Para 8.6

Words "one-by-one" appearing in last but one sentence shall be omitted.

Para 9.3

Last sentence shall be read as under:

The two being on very different footings, no great inequity would arise if it is stipulated that only nominal transmission charges are to be levied for short-term usage of as-and-when-available surplus capacity of ISTS under “open access”.

Para 9.4

- First sentence shall be read as under:

  “There is one more argument in favour of levying only a nominal transmission charge for “open access” transaction. “
- Last sentence shall be read as under:

  “We can, however, keep things simple by stipulating only a nominal paise/kWh transmission charge levy, and no credit if incremental transmission loss is negative.”

Para 9.5

This paragraph shall be omitted.

Para 9.6

First four sentences shall be replaced by the following:

“Let us now examine the above aspect in respect of deviation from schedule i.e. UI. The UI transactions as of now do not attract any transmission or wheeling charge, and are free of any impact of transmission loss change caused by them. “

Para 9.8

First sentence shall be read as under:

“The Commission proposes to introduce a system of differential UI rates on the lines described above, with effect from 1.4.2008, along with loss allocation as per para 8.6.“

Para 9.9 and 9.10

These paragraphs shall be omitted.

Para 9.11

Last sentence shall be read as under:

"The other would be through use of as-and-when available spare capacity, at a nominal wheeling charge but bearing incremental losses, and low priority."

Para 12.2

This para shall be read as under:

"12.2 To summarise the above discussion, it is proposed to:

(i) segregate step down transformers and downstream system, and charge only the local beneficiary for them w.e.f. 1.4.2008. (para 4.6).

(ii) stop automatic pooling of new ATS with existing ISTS with effect from 1.10.2007 (para 5.3).

(iii) rationalize transmission charge sharing of inter-regional links, w.e.f. 1.10.2007 (para 6.15).

(iv) implement distance and direction sensitive loss allocation for supplies from Central generating stations on proportional basis and apply incremental losses for "short-term open access", w.e.f. 1.4.2008 (para 8.5 and 8.6).

(v) introduce differentials in UI rates of different regions, and for beneficiaries in each region, to compensate for transmission losses, w.e.f. 1.4. 2008 (para 9.8).

(vi) undertake further rationalization in 2008-09 to cater to long-term transmission development (para 6.17)."