

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

Shri A.H. Jung, Member

Petition No 6/2004

In the matter of

Fixation of Wheeling Charges in respect of Transmission System of Grid Corporation of Orissa Ltd. for wheeling of power from NTPC power stations in Eastern Region (ER) through their system to Madhya Pradesh State Electricity Board (MPSEB), Jabalpur with effect from 1.4.2001.

And in the matter of

MP State Electricity Board, Jabalpur

Petitioner

Vs.

1. Grid Corporation of Orissa Limited, Bhubaneswar
2. Eastern Region Electricity Board, Kolkata

Respondents

The following were present

1. Shri D Khandelwal, MPSEB
2. Shri A.K. Garg, MPSEB
3. Shri Rafi-ud-din, ERPC
4. Shri A Roy, ERPC
5. Shri. R. K. Mehta, Advocate, GRIDCO
6. Shri Uma Kanth Sahoo, GRIDCO

**ORDER
(Date of Hearing 2.8.2006)**

This petition has been filed by the petitioner, Madhya Pradesh State Electricity Board, for fixation of wheeling charges for the transmission system belonging to the first respondent, Grid Corporation of Orissa Ltd., (hereinafter referred to as "the respondent") for wheeling of power from the generating stations

belonging to National Thermal Power Corporation Ltd. located in Eastern Region to the petitioner, with effect from 1.4.2001, based on the Commission's notification dated 26.3.2001.

2. In May 1997, CEA made allocation of 150 MW to the beneficiaries in Western Region from NTPC generating stations in Eastern Region, which included allocation of 75 MW to the State of Madhya Pradesh, the allocation was revised from time to time. In October 1999, allocation was increased to 300 MW. Since continuous transmission system of Power Grid Corporation of India Ltd. (POWERGRID) in Eastern Region was not available right up to periphery of the State of Madhya Pradesh, this power was to be wheeled through the system owned by the respondent. Initially, power was transferred in radial mode, wherein part of Madhya Pradesh load around Korba was isolated from Western Grid and was connected to Eastern Grid through 220 kV D/C Budhipadar- Korba transmission line. Thus, electrically, this area of the State of Madhya Pradesh became part of the Eastern Grid. The power flow in radial mode started on 19.5.1997. However, the then Madhya Pradesh Electricity Board, the predecessor to the petitioner vide fax dated 30.5.1997 stated that consumers in this area were protesting against high frequency prevailing in the grid. To obviate this difficulty, the parties agreed to operate the system in islanded mode wherein the respondent isolated its Ib TPS along with some load from Eastern Grid and connected it with Grid through 220 KV D/C Budhipadar - Korba transmission line. Thus, physically the power was drawn by the State of Madhya Pradesh from Ib TPS through Budhipadar- Korba transmission line and was bartered with equivalent amount of energy from NTPC generating stations in Eastern Region. There was a dispute

between the parties about rate of payment of wheeling charges. Since there were no regulations governing wheeling of energy through the system of one State to that of another, the matter was decided by the Commission vide order dated 23.10.2000 in Petition No. 10/2000 filed by the petitioner. The Commission directed computation of wheeling charges @ 10 paise per unit against the respondent's claim of 17.5 paise per unit. The respondent (Madhya Pradesh Electricity Board Vs. Grid Corporation of Orissa Limited) filed an appeal before the High Court of Orissa and the order is presently stayed by the High Court. That matter rests there.

3. Meanwhile, the Commission issued notification dated 26.3.2001 (hereinafter referred to as "the notification") governing terms and conditions of tariff for the period 2001-04, which, *inter alia* covered aspects relating to determination of wheeling charges for use of the State system in the course of inter-State transmission. The present petition has been for determination of wheeling charges in accordance with the provisions of the notification.

4. The notification stipulates that the importing utility and the wheeling utility may in the first instance mutually agree on the wheeling charges and the transmission losses associated with the transmission of electricity, and in the event of their inability to do so, the Contract Path method is to be used for calculation of wheeling charges. Member Secretary of the Regional Electricity Board (now the Regional Power Committee) of the Region wherein the wheeling utility is located is required to calculate the wheeling charges by applying the principles stipulated in

the notification. The notification provides that the incremental transmission losses in the wheeling utility's system are to be adjusted in kind.

5. In view of the disagreement between the petitioner and the respondent on the question of wheeling charges, the Commission by its order dated 21.7.2004, directed Member-Secretary, Eastern Regional Power Committee (hereinafter referred to as "the Member-Secretary), the second respondent, to calculate the wheeling charges in accordance with the principles contained in the notification.

6. The Member-Secretary submitted his report under letter dated 4/5.10.2004. The petitioner as well as the respondent filed their objections on the report. On consideration of the objections raised by the parties, the Commission vide order dated 28.7.2005 directed the Member-Secretary to ascertain the date of commercial operation of Korba-Budhipadar transmission line and recalculate the wheeling charges by Contract Path method by considering the actual date of commercial operation, line length and capital cost, if possible, based on unit costs prevailing at the relevant time. The Member-Secretary was further directed to use appropriate rate of interest on working capital as well as on loan. The Member-Secretary was further directed to re-calculate transmission losses as well. While recalculating the wheeling charges/transmission losses, the Member Secretary was to be guided by the following factors, namely-

- (a) The respondent's claim in respect of verifiable opportunity cost of special arrangement made to facilitate wheeling. In case verifiable opportunity cost exceeded wheeling charges based on Contract Path method, the Member Secretary was to calculate ceiling

value of wheeling charges as applicable to a new transmission line capable of carrying contracted power.

(b) To determine incremental losses (positive or negative) on the respondent's system due to wheeling transactions, the Member-Secretary was to carry out necessary study to determine difference in transmission losses in the respondent's system in consultation with Eastern Regional Load Despatch Centre (ERLDC).

- (i) With wheeling transactions to the petitioner as actually arranged, and
- (ii) Without wheeling transactions to the petitioner.

7. In the light of the above directions, the Member-Secretary submitted the revised report under his letter dated 30.9.2005. The salient features of the revised recommendations made by the Member-Secretary are as under:

- (a) The details of capital cost, date of commercial operation and other parameters for tariff calculation were finalized in a meeting held on 14th & 15th September, 2005 in which representatives of the parties were present.
- (b) The consolidated annual transmission charges for 220 kV D/C Rourkela – Tarkara – Budhipadar – Korba transmission line (Orissa portion) worked out by Contract Path method are as under:

Total annual transmission charge for Contract Path

(Rs. In lakh)

S.No.	Element	2001-02	2002-03	2003-04
1.	220 kV Rourkela-Tarkara D/C transmission line	148.97	145.93	143.00
2.	220 kV Tarkara-Budhipadar D/C transmission line	346.09	344.14	342.53
3.	220 kV Budhipadar-Korba D/C transmission line (Orissa portion)	137.06	139.39	141.86
4.	4 nos. of bays at Budhipadar	164.23	163.42	162.78
	Total	796.35	792.87	790.16

- (c) In accordance with the notification, Western Region beneficiaries are required to pay transmission charges *pro rata* to contracted power vis-à-vis to SIL. In case of 220 kV Budhipadar-Korba transmission line, a third circuit owned by POWERGRID was under operation. Therefore, annual transmission charges payable by the beneficiaries in Western Region work out as under:

(Rs. In lakh)

S.No.	Element	2001-02	2002-03	2003-04
1.	220 KV Rourkela-Tarkara D/C transmission line	148.97	145.93	143.00
2.	220 KV Tarkara-Budhipadar D/C transmission line	346.09	344.14	342.53
3.	220 KV Budhipadar-Korba D/C transmission line (Orissa portion)	114.29	123.29	139.02
4.	4 nos. of bays at Budhipadar	164.23	163.42	162.78
	Total	773.58	776.77	787.32

- (d) The respondent's system has not suffered any adverse incremental transmission losses on account of wheeling of electricity to the petitioner, rather incremental losses were marginally negative,

indicating that the losses in the respondent's system got slightly reduced.

- (e) The respondent submitted a list of opportunity gains to the petitioner and indirect losses suffered by the respondent due to special arrangement made to facilitate wheeling of power. The Member-Secretary has opined that some indirect losses to the respondent and some opportunity benefits by the petitioner cannot be quantified, keeping in view an agreement to that effect in the meeting held on 14/15th September, 2005. Accordingly, the Member-Secretary has concluded that since opportunity cost cannot be explicitly expressed in clear quantified terms, it is not verifiable.
- (f) The Member-Secretary has also calculated annual transmission charges corresponding to a new line along the Contract Path capable of carrying the contracted power. The calculations are based on capital cost of 220 kV D/C Unchahar-Kanpur transmission line, put under commercial operation on 1.1.2000. According to these calculations, total annual transmission charges for the new transmission line work out to Rs.1011.71 lakh, Rs.985.39 lakh, and Rs.959.28 lakh for the years 2001-02, 2002-03, and 2003-04 respectively. The corresponding per unit charges considering SIL level work out to 3.85 paise per unit, 3.75 paise per unit and 3.65 paise per unit.

8. The petitioner as well as the respondent have filed their objections to the conclusions arrived at by the Member-Secretary. In view of the disagreement

between the parties on the recommendations made by the Member-Secretary, the Commission desired that both parties could mutually agree to end the long pending dispute. However, no mutual agreement could be reached between them. The Commission, in the order dated 10.7.2006 observed that the issue involved detailed study of the factual background and the technical aspects. Therefore, the Commission felt it appropriate that the matter be looked into by a one-member Bench and deputed me for this purpose.

9. I heard the parties at length. The objections raised by the parties on the recommendations of the Member-Secretary and my findings thereon are discussed in the succeeding paragraphs.

Objections of the petitioner

10. The petitioner has contended that the Member-Secretary in its earlier report submitted in October 2004 had admitted that actual path of power flow was Ib TPS-Budhipadar-Korba transmission line, whereas for computation of wheeling charges, he has used Rourkela-Tarkera-Budhipadar-Korba transmission line as the Contract Path. Accordingly, the petitioner has submitted that assumption of Contract Path overlooking actual path is against the spirit of the notification read with order dated 8.12.2000 issued by the Commission. It has been further submitted that in the calculations made by the Member-Secretary, cost of 4 nos. 220 kV bays at Budhipadar has been taken as Rs. 800.56 lakh based on estimates since the respondent could not furnish the actual cost data of bays. The petitioner has observed that earlier the respondent had intimated cost per bay as Rs.118.27 lakh and was considered by the Member-Secretary while submitting

recommendations in October, 2004. The petitioner has urged that the cost per bay of Rs.200.14 lakh considered in the latest recommendations is incorrect. According to the petitioner, cost of 220 kV bay in the year 1993-94 was around Rs. 77 lakh. Similarly, the petitioner has submitted that cost of 15.47 km long 220 kV Tarkera – Rourkela D/C transmission line, with 2 bays at Tarkera has been taken as Rs.758.38 lakh which works out to about Rs.34 lakh per km, taking cost of one bay as Rs.118.27 lakh. This line was stated to be commissioned in December, 1993. The petitioner has submitted that the cost per km of Tarkera – Budhipadar D/C transmission line works out to Rs.13.73 lakh per km. This line was commissioned in March, 1994. The petitioner has prayed that cost per km of Tarkera-Budipadar transmission line should also be considered as Rs. 13.73 lakh per km.

Objections of the first respondent

11. The respondent has submitted that it has incurred the following opportunity cost due to the transactions in question, namely—

- (a) Loss of reliability: Opening of 220 kV and 132 kV lines at various places in Budhipadar and Burla command areas and de-synchronization of Ib TPS has reduced reliability of the respondent's system whereas by induction of Ib TPS in the petitioner's system, latter's reliability increased. The respondent has proposed to levy 10% of fixed cost of Ib TPS (10.87 paise/kWh) as opportunity cost for loss of reliability.

- (b) Commercial loss: The respondent has contended that due to special arrangement of islanded mode of operation, the command area of Budhipadar sub-station (approximate load 57 MW) had to be supplied power from Rourkela which is at a distance of 125 kms instead of Ib TPS, about 25 kms away. This resulted in unstable power supply and prolonged low voltage profile in major part of Western Orissa, sometimes leading to public unrest. This also affected industrial consumers, causing commercial losses. According to the respondent, during low hydro conditions, as in the year 2002-03, the situation became even worse leading to peak hour load-shedding of average 50 MW per day. The respondent has submitted that revenue loss to it in the year 2002-03 due to such load shedding was about Rs.43.8 crore which works out to 21.82 paise per/unit.
- (c) Loss due to frequency mis-match: The respondent has contended that it has supplied power from Ib TPS to the petitioner at an average frequency of 48.5 Hz whereas it received the equivalent quantity of power from NTPC stations at an average frequency of 51.5 Hz. According to the respondent, quantity of power at 48.5 Hz is not same as at 51.5 Hz. In this connection the respondent has referred to opinion given by a consultant that 260 MW power given to the petitioner from Ib TPS at 48.5 Hz is equivalent to 260 + 9% of 260 i.e. 283.1 MW of Eastern Region power at 51.5 Hz but in the monthly global account of the region only 260 MW is

shown on account of the petitioner. Thus, according to the respondent it suffered a loss of 9%, equivalent to 21.26 paise per unit for the period of January, 1998 to February, 2003.

12. A summary of opportunity cost claimed by the respondent is as under:

S.No.	Item	Opportunity Cost (paise/kWh)	
		2001-02	2002-03
1.	Reliability loss	10.87	10.87
2.	Commercial loss due to load shedding	0	21.82
3.	Loss due to frequency mismatch	21.60	21.60
	Total	32.47	54.29

13. The petitioner has stated that opportunity cost to the respondent is the cost of foregone alternative due to the transaction. The petitioner has submitted that the respondent has been benefited by improvement in PLF of Ib TPS and reduction in transmission losses. In fact, there is no opportunity cost involved and the respondent has gained because of transfer of surplus power to the petitioner and in support of this, the petitioner has relied upon the observation made in the meeting of Member (GO), CEA, EREB, and MPEB held on 7.8.1999. The petitioner has contested the contention of the respondent that it has suffered any financial and commercial losses but has also gained in the transaction. The petitioner has placed reliance upon the Commission's order dated 23.10.2000 in Petition No. 10/2000. In this regard, the petitioner has furnished the details of PLF of Ib TPS for the period 1996- 97 to 2001-2002 and for NTPC stations in Eastern Region from the period 1997-98 to 2003-04.

Findings

14. I have considered the rival submissions.

15. In the notification, "Contract Path" has been defined to mean "the shortest route formed by a series of transmission lines capable of carrying contacted power between the point of receipt to point of delivery in the wheeling system." It is clear that Contract Path is a hypothetical path and may or may not be different from the actual path of power flow. In actual practice, the power may necessarily reach from point of receipt to point of delivery through several parallel paths and not through the shortest path. Since POWERGRID's transmission system in Eastern Region was only up to Rourkela, and the point of delivery to Western Region was Korba, the Contract Path assumed by the Member-Secretary is in order.

16. I have considered the contention of the petitioner regarding cost of bays at Budhipadar and cost of 220 kV D/C Tarkera – Rourkela transmission line considered by the Member-Secretary in his recommendations of annual transmission charges. I have noted that the matter was discussed and agreed to in the meeting held at Eastern Regional Power Committee, Kolkata on 14th and 15th September 2005. The minutes of the aforesaid meeting have been annexed to the report submitted by the Member-Secretary. I have noted that representative of the petitioner has signed the minutes of the meeting. Therefore, at this stage I do not find any merit in the objection raised by the petitioner.

17. The petitioner has also pointed out that while computing the annual transmission charges, the Member-Secretary has apportioned only transmission charges corresponding to Budhipadar- Korba section in the ratio of contracted

power vis-à-vis SIL of the line, though in accordance with the notification, transmission charges for Rourkela-Tarkera and Tarkera-Budipadar transmission lines should also be apportioned in the ratio of contracted power vis-à-vis SIL of the line.

18. Though it is not clear from the report as to what values were considered by the Member-Secretary for SIL of the line and Contracted Power, it appears that Contracted Power was found to be more than SIL of 220 kV D/C transmission line. Therefore, entire transmission charges corresponding to 220 kV D/C Rourkela-Tarkera and 220 kV D/C Tarkera-Budhipadar sections were considered as payable to the respondent as wheeling charges. On the other hand, in case of Budhipadar-Korba section (upto Orissa border), there are 3 circuits of 220 kV line and hence charges have been apportioned by the Member-Secretary in the two circuits owned by the first respondent (up to Orissa border).

19. To sum up, I am of the opinion that objections raised by the petitioner on the computation of wheeling charges by the Member-Secretary are not sustainable and therefore liable to be rejected.

20. Now I proceed to examine the objections of the respondent to the recommendations made by the Member-Secretary. I have noted that the representative of the respondent was present in the meetings held on 14th and 15th September 2005 wherein the following was decided:

“GRIDCO had claimed Opportunity loss vide its letter nos. Sr.GM(PP)/10/2004/1457 dated 01/09./05 and Sr.GM(PP)/10/2004/1646 dated 13/09/2005. While analysing the same it was found out that the

Opportunity Cost claimed by GRIDCO is not verifiable and in almost all cases subjective. Therefore, EREB proposed to give its comment on each claim made by GRIDCO in its report to CERC.”

21. The minutes of the meeting, have been signed by the representative of the respondent. Its claim towards opportunity cost is liable to be rejected on the ground that the opportunity loss was not quantifiable or verifiable. It is again pointed out that in his report the Member- Secretary has stated that though there was reduction in reliability, it is difficult to either quantify the exact indirect loss or to express it in suitable monetary terms. However, I will go further into merits of each claim of the respondent regarding opportunity cost. Regulation 4.9.2.3 of the notification refers to special arrangement in regard to opportunity cost, namely, backing down of cheaper generation. This indicates that indirect losses such as reduced reliability, low voltage etc cannot be brought within the ambit of opportunity cost calculation. Further, for sake of argument if it is assumed that low voltages and consumer unrest are attributable to the transactions between the petitioner and the respondent, these do not translate into financial losses. As regards load shedding, the respondent has not submitted any details to support its claims. Even if I accept the contention that load shedding to the extent of 50 MW was carried out on certain occasions, the respondent would have saved cost of generation/purchase of equivalent amount of power. The claim of the respondent on account of frequency mismatch is also devoid of any merit. First of all, the respondent has claimed that average frequency in Western Region was 48.5 Hz and that in Eastern Region was 51.5 Hz during 2001-02 and 2002-03 which does not appear to be correct. I have noted that in the affidavit dated 10.5.2005, the petitioner has submitted that average frequency for Western and Eastern Regions

during 2001-02 was 49.43 Hz and 50.28 Hz respectively. The corresponding figures were 49.33 Hz and 50.17 Hz respectively for the year 2002-03. Thus, the difference in frequency of the two regions was 0.85 Hz and 0.84 Hz for 2001-02 and 2002-03 respectively and not 3 Hz as claimed by the respondent. Further, in case of load-generation imbalance, basically it is demand which is affected by frequency and settles at such a value that demand of the regional grid at that frequency matches with generation available. Therefore, it was fair arrangement that whatever was consumed (as recorded in the meters on Korba-Bhudhipadar transmission line) in the Western Grid was given back to the respondent from NTPC stations in Eastern Region. Even if contention of the respondent is accepted about loss due to frequency mismatch, it could be visualized and should have been catered for while agreeing to supply in islanded mode of operation to Western Grid. It appears to me that all these issues are afterthought, as none of these concerns was raised at the time of agreeing to facilitate supply to Western Grid in islanded mode. Also, if problems were so acute, the respondent could have reverted back to radial mode when the problems now projected, surfaced. I have also noted that the respondent has some definite gains from the transactions, namely, the improved frequency regime and improved PLF of its generating stations.

22. The respondent has not raised objections to non-consideration of its other claims by the Member-Secretary, namely, about opportunity cost for reliability maintained in the petitioner's system, opportunity extended by the respondent to avoid unrest in the State of Madhya Pradesh and commercial opportunities/gains availed of the petitioner. These claims have been discussed and rejected by the

Member-Secretary in his report. On this, it has been observed by the Member-Secretary that the power available to the petitioner from Ib TPS synchronized with Western Region was better in quality than the power that would have been available to the petitioner from Eastern Region in radial mode. He has observed that there was definite benefit to the petitioner to receive power from Ib TPS but it is difficult to quantify the benefits in monetary terms. In any case, opportunity gains to the petitioner are of no consequence for deciding the wheeling charges in terms of the notification.

23. In view of the above discussion, I have come to the conclusion that there is no merit in the contention of the respondent that it has suffered opportunity cost on account of the transactions in question. Therefore, for the purpose of calculation opportunity cost has to be taken as zero.

24. Regulation 4.9.2.3 of the notification stipulates that verifiable opportunity cost or charges calculated as per Contract Path method, whichever is higher shall be payable. It further stipulates that in no case wheeling charges shall exceed charges corresponding to a new transmission line of adequate capacity along the Contract Path. As already mentioned, the Member-Secretary has done computation of charges corresponding to a new line based on the capital cost of 220 kV D/C Unchahar-Kanpur transmission line. This transmission line was declared under commercial operation on 1.1.2000. According to these calculations, total annual transmission charges for the new line works out to Rs.1011.71 lakh, Rs.985.39 lakh, and Rs.959.28 lakh for the years 2001-02, 2002-03, and 2003-04 respectively. The corresponding per unit charge considering SIL level works out to

3.85 paise per unit, 3.75 paise per unit and 3.65 paise per unit. Neither the petitioner nor the respondent has pointed out any error in the computation. However, the respondent has contended that had it not made special arrangement (islanded mode of operation), it would not have been possible for the petitioner to draw power in radial mode without HVDC station in the Contract Path. On this premise, the respondent has prayed that new transmission line for the purpose of affecting provisions of Regulation 4.9.2.3 should be construed as AC transmission line with HVDC back-to-back station. I do not find any merit in the contention. I am informed that even presently power is being transferred from Eastern Region to Northern Region in radial mode over 220 kV Pusauli-Sahupuri transmission line. Also, till recently, power exchanges have taken place between Northern and Western Regions over Auraiya-Malanpur transmission line and Ujjain-Kota transmission line. This clearly establishes that inter-regional power transfers in radial mode are technically feasible, without HVDC back-to-back station. I feel that need for considering HVDC back-to-back station can be justified only if it can be established that it was impossible to transfer power without HVDC back-to-back station. Mere some difficulty in power transfer in radial mode does not warrant consideration of HVDC back-to-back station for computation of wheeling charges. I have noted that when the power transfer to Western Region using the respondent's transmission system started in May 1997 in radial mode, difficulties were encountered due to high frequency in Eastern Region and subsequently both parties agreed to islanded mode of operation. However, during the period in question i.e. 2001-04, the frequency regime in both the regions improved considerably although the respondent continued to facilitate power transfer in radial mode, till March 2003 when both regions were synchronized. In view of the

above, I find acceptable the recommendation of the Member-Secretary that charges corresponding to a new transmission line along the Contract Path should be taken as Rs 1011.71 lakh, 985.39 lakh and Rs 959.28 lakh for the years 2001-02, 2002-03 and 2003-04 respectively.

25. In my opinion there is no opportunity cost to the respondent due to the transactions and since transmission charges computed based on the Contract Path are lower than the overall ceiling of charges corresponding to a new line along the Contract Path, in accordance with Regulation 4.9.2.3, wheeling charges payable to the respondent will be equal to transmission charges based on Contract Path i.e. Rs.773.58 lakh, Rs 776.77 lakh and Rs 787.32 lakh for the years 2001-02, 2002-03 and 2003-04 respectively.

Incremental Transmission Losses

26. To determine incremental transmission losses in the respondent's system due to the wheeling transactions, the Commission had given specific instructions to the Member-Secretary as referred to at para 4 above. Such study was carried out by Eastern Regional Power Committee and Eastern Regional Load Despatch Centre jointly and results have been given in the report submitted by the Member-Secretary. It is seen that there was reduction in transmission losses in the respondent's system due to the transactions in question. Therefore, the Member-Secretary has recommended that no payment has to be made to the respondent for transmission losses. However, the Member-Secretary has made the following observation in the report:

"Ib-Power was exported to MP as NTPC power through displacement method. GRIDCO had to pay to OPGC for the ex-bus generation of Ib-TPS but was paid by

MPSEB at Budhipadar bus. Power sent out from Budhipadar was considered as export of NTPC power to MPSEB and was compensated by equivalent quantum of NTPC power at Rourkela. GRIDCO had to bear the entire transmission loss in the 220 KV Ib-Budhipadar line. However, while scrutinizing the difference between the ex-bus generation at Ib-TPS and receipt at Budhipadar, it was found that some loads of GRIDCO were also put along with IB-TPS to MP. Therefore, clear segregation of loss on the Ib-Budhipadar line is not possible. But it is felt that GRIDCO should be compensated for the loss on the IB-Budhipadar section for passing on power to MPSEB. Therefore, it is recommended to apply some normative loss on this line and compensate GRIDCO.”

27. The respondent has requested to consider normative intra-State transmission losses for its system as determined by Orissa Electricity Regulatory Commission in its tariff order and convert these energy losses into monetary terms by applying tariff payable for Ib TPS.

28. Regulation 4.9.2.4 clearly stipulates that the incremental transmission losses are to be adjusted in kind. This means that the incremental transmission losses should have been applied while preparing drawal schedule. The same was not done. However, I find that the incremental losses are negative. It is, therefore, obvious that there is no question for payments to be made to the respondent on this account. Prayer of the respondent to apply average losses in its system approved by Orissa Electricity Regulatory Commission cannot be applied to the transactions of inter-State nature. As regards observation of the Member-Secretary that the respondent should be compensated for losses in Ib TPS-Budhipadar section, I presume that he must have included losses in this section while calculating incremental losses as per directions of the Commission. If this is so, the question of separate treatment for losses in this section should not arise. However, even if losses in this section have not been included in the losses of the respondent's system, the losses in this section (considering average power

supplied to Madhya Pradesh and also considering that part of the Orissa load was also served through this section) would be insignificant and are unlikely to turn incremental losses from negative to positive. I, therefore, recommend that no payment be made to the respondent on account of transmission losses.

29. Based on my above findings, my recommendations are as under:

(a) Wheeling charges payable to the respondent shall be based on Contract Path method as there is no opportunity cost to the respondent and transmission charges corresponding to new line along Contract Path are higher than transmission charges based on existing line along Contract Path. The wheeling charges payable are quantified as under:

(Rs. In lakh)

Year	Wheeling Charges
2001-02	773.58
2002-03	776.77
2003-04	787.32

(b) No payment is due to the respondent on account of transmission losses as incremental losses on account of the transaction in question are negative.

30. The excess amount collected by the respondent from the petitioner on account of wheeling charges should be refunded to the petitioner in the manner to be decided by the Commission.

31. I further recommend that if more than one entity has utilized the transmission system of the respondent for transfer of power, the Member-

Secretary shall allocate the wheeling charges to the petitioner in the ratio of duration and quantum of Contracted Power of the State of Madhya Pradesh only.

Sd/-

Shri A.H. Jung
Member

New Delhi, dated the 29th January 2007