

CENTRAL ELECTRICITY REGULATORY COMMISSION

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1. Shri D.P. Sinha, Member
2. Shri G.S. Rajamani, Member
3. Shri K.N.Sinha, Member

Petition No.46/2000

In the matter of

Approval of Transmission Tariff for Chandrapur HVDC back to back Project
(2X500 MW) between Southern and Western Region.

And in the matter of

Power Grid Corporation of India Ltd.

... Petitioner

VS

1. Madhya Pradesh State Electricity Board, Jabalpur
2. Maharashtra State Electricity Board, Mumbai
3. Gujarat State Electricity Board, Baroda
4. Electricity Deptt., Govt of Goa, Goa
5. Electrical Deptt., Administration of Dadra Nagar Haveli, Silvassa
6. Chhatisgarh State Electricity Board, Chhatisgarh
7. Electrical Deptt., Administration of Daman and Diu, Daman
8. Karnataka Power Transmission Corporation Ltd., Bangalore
9. Transmission Corporation of Andhra Pradesh, Hyderabad
10. Kerala State Electricity Board, Thuvvanathapuram
11. Tamil Nadu Electricity Board, Chennai
12. Electricity Deptt., Govt, of Pondicherry, Pondicherry

.. Respondents

The following were present:

1. Shri S.S. Sharma, AGM, PGCIL
2. Shri U.K. Tyagi, PGCIL
3. Shri C. Kannan, PGCIL
4. Shri K.K.S. Babu, PGCIL
5. Shri Sanjay Mehra, PGCIL
6. Shri S. Gopal, PGCIL
7. Shri A.K. Nagpal, PGCIL
8. Shri S.S. Vindal, PGCIL
9. Shri D. Sen, PGCIL
10. Shri Satish Agnihotri, Advocate, f vIPSEB
11. Shri D.K. Srivastava, EE, MPIEt- u
12. Shri S.P. Degwekar. Coml. Oii.c. .nr.
13. Shri S.N. Chauhan, S.EiCommi/. CSEB
14. Shri B.S. Seshadn, KPI CL
15. Shri S. Somyanarayanaa, TiJEB
16. Shri B. Ravindran, OSD. KSEB

ORDER (**DATE OF**
HEARING : 19.2.2002)

assets : The petitioner has filed this petition for approval of tariff for the following

(a) HVDC back to back station (2X500 MW) between Western and

Southern

region.

(b) 400 KV S/C line between Raiuayundam and Hyderabad and extension
of sub-stations at Ramagundam and Hyderabad.

2. Ministry of Power vide its letter dated 12.11.1993 conveyed the approval of Central Government to the capital investment for setting up Chandrapur HVDC back to back project (2X500 MW) by the petitioner with following break up of cost :

		(Rs. in crores)
(a)	HVDC station	825.21
(b)	Hyderabad-Ramagundam S/C single circuit Transmission Line including associated sub-station extension	75.07
	Total	900.28

3. The project was to be commissioned within 48 months from the date of issue of the sanction, that is, by 11.11.1997. The different assets have been put under commercial operation as indicated hereunder .

		Date of Commercial Operation
(a)	HVDC back to back station at Chandrapur Pole I Pole II	1.10.1997 1.3.1998

(b)	400 kV S/C Ramagundam-Hyderabad line with extension of sub-station at Ramagundam and Hyderabad	1.8.1997
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4. Ministry of Power vide its letter 10.1.2000 conveyed its revised sanction for expenditure of transmission system associated with Chandrapur HVDC back to back project at a cost of Rs. 1028.59 crores, including IDC of Rs.76.94 crores, based on first quarter of 1998 price level. According to the petitioner, the completion cost of assets associated with Chandrapur HVDC back to back project is as under:

	[Rs. in crores)
Pole I of HVDC back to back nation at Chandrapur	477.39
(b) Pole II of HVDC back to back station at Chandrapur	454.12
(c) 400 kV S/C Ramagundam-Hyderabad line with extension of sub stations at Ramagundam and Hyderabad	79.09
Total	1010.60

5. The petitioner has prayed approval of tariff based on completion cost of Rs. 1010.60 crores, as per the terms and conditions of tariff contained in the Ministry of Power notification dated 16.12.1997.

6. The petitioner is presently getting provisional tariff based on the revised cost of Rs. 1028.59 crores approved by Ministry of Power.

7. The replies to the petition have been filed by Madhya Pradesh State Electricity Board (respondent No.1), Transmission Corporation of Andhra Pradesh (respondent No.9), Kerala State Electricity Board (respondent No. 10) and Tamil Nadu Electricity Board (respondent No. 11). The issues raised on behalf of the respondents shall be dealt with in subsequent part of the order.

8. It is contended on behalf of the respondents that approval of tariff at this stage would amount to retrospective revision of tariff which should not be allowed since the respondents are unable to recover tariff from the ultimate consumer. While we appreciate the concern of the respondents, unfortunately in a system of tariff determination/fixation based on commercial date of operation, there is no method by which the tariff can be fixed in advance. The best that can be done is to allow a provisional tariff till the final tariff is determined/fixed and adjustments made later on. This at least ensures that sudden financial burden does not fall on beneficiaries and that the liability on account of difference between final tariff and provisional tariff is contained. We are confident that if these facts are brought to the notice of concerned State Regulatory Commission, the Commission would permit this liability in the Annual Revenue Requirement. The preliminary objection is, therefore, rejected.

CAPITAL COST

9. The petitioner has claimed tariff based on completion cost of Rs. 1010.60 crores, which includes expenditure incurred after the date of commercial operation. It has been submitted on behalf of the respondents that the expenditure of Rs.3.71 crores incurred after the date of commercial operation, which was not within their knowledge, should not be taken into consideration for the purpose of determination of tariff. It has been explained on behalf of the petitioner that the left over minor works, closing of contracts, auditing of accounts, etc, is completed after the date of commercial operation in order to determine the final cost of the project and this did not in any manner affect commercial utilisation of the asset. We have considered the contentions of the parties as the expenditure after the date of commercial operation is within the revised sanctioned cost of the project, the additional expenditure shall be taken into account for the purpose of tariff in the year in which expenditure has been incurred.

10 According to Ministry of Power notification dated 16.12.1997, the actual expenditure incurred on completion of the project shall be the criteria for fixation of tariff and where the actual expenditure exceeds approved project cost, the actual expenditure as approved by CEA shall be deemed to be the actual capital expenditure for the purpose of determining tariff, provided that the excess expenditure is not attributable to the petitioner or its suppliers or contractors. It has been contended on behalf of the respondents that the revised cost estimate of Rs. 1028.59 crores has not been approved by CEA and, therefore, tariff should be paid based on the originally approved cost of Rs.900.28 crores. It has been submitted on behalf of the petitioner that the revised cost has been approved by Cabinet Committee on Economic Affairs (CCEA) on the recommendations of Public Investment Board (PIB) and Central Electricity Authority (CEA) is duly represented on PIB. In view of the explanation given by the petitioner, we are satisfied that the tariff is to be worked out based on the revised cost as approved by CCEA or actual completion cost, whichever is less. In the instant case, the completion cost is less than the revised cost approved by the competent authority. Therefore, tariff is to be worked out based on completion cost of Rs. 1010.60 crores.

11. The respondents have also pointed out that there was delay in execution of the project, therefore, the respondents should not be liable to pay IDC and IEDC during the period of delay. We observe that Pole I of Chandrapur HVDC back to back station was commissioned on 1.10.1997. Ramagundam-Hyderabad line with extension of substations was put under commercial operation on 1.8.1997. Thus, there is no delay so far as commissioning of these assets is concerned, since, these assets were completed before the scheduled date. Pole II of HVDC back to back station was declared under

commercial operation on 1.3.1998. The petitioner has explained that Pole II was ready for initial testing in June 1997 for which clearance from Chief Electrical Inspector, CEA was obtained. However, on account of non-availability of adequate power in both the regions, simultaneous testing of both poles could not become possible but on availability of adequate power for testing. Pole II was declared under commercial operation on 1.3.1998. We are satisfied with the reasons for delay placed on record by the petitioner. We also notice that some of the assets were completed before the scheduled date which had the effect of reducing the liability of the respondents on account of IDC and IEDC. The delay of about three months in completion of Pole II may have the effect of increasing IDC marginally.

12. On going through the records of the petition we found that capital expenditure of Rs.79.09 crores in respect of 400 KV S/C Ramagundam-Hyderabad line included notional cost of GS Earthwire amounting to Rs.32.01 lakhs, which implied that OPGW was being used in this line, though cost of OPGW was not included in the capital cost. We, therefore, directed the petitioner to place on record the present earnings or likely earnings as a result of use of transmission system for other purposes. The issue of sharing of revenues arising on account of communication facilities, if any, to PGCIL shall be dealt with at an appropriate time on receipt of details called for from PGCIL.

INTEREST ON LOAN

13. It is observed that the interest rates considered in different petitions for the same loan are different. During the hearing of various petitions it was explained by the petitioner that these loans are carrying floating rate of interest and the interest prevailing on the date of commercial operation has been considered in the tariff petition. Any resetting of the interest rates during the tariff period shall have to be settled

mutually between the parties. However, in the event of their inability to settle the matter, either party may approach the Commission for a decision.

DEPRECIATION

14. While approving tariff, the weighted average depreciation rate has been worked out on the basis of actual capital expenditure as per CA's certificate annexed to the petition.

RETURN ON EQUITY

15. The petitioner has claimed ROE @ 16% from 1.4.1997 and onwards as provided in the notification dated 16.12.1997. It has been urged on behalf of the respondents that the petitioner should be allowed ROE @ 12% of the subscribed equity. According to the respondents, ROE at enhanced rate is unreasonable since it adds to the liability. The Commission has already decided that for the period up to 31.3.2001, the transmission tariff is to be determined based on the notification dated 16.12.1997 issued by Ministry of Power. The said notification dated 16.12.1997 provides for charging of ROE @ 16%. We, therefore, do not find any justification to support the respondents' contention for charging ROE @ 12%.

16. HVDC back to back station of 1000 MW at Chandrapur has also been funded out of ODA grant, besides loan and equity. It has been clarified by the petitioner that ODA grant pertaining to Chandrapur HVDC is Rs.321.55 crores against the amount of Rs.324.42 crores shown in the balance sheet for the period ending 31.3.1998. This amount has been kept out of consideration for the purpose of calculating return on equity.

O&M EXPENSES

17. O&M expenses are allowed $\leq 1.5\%$; the capital cost as per GOI notification dated 16.12.1997.

INTEREST ON WORKING CAPITAL

18. According to the notification dated 10.12.1997, interest on working capital shall cover:

- (a) Operation and maintenance expenses (cash) for one month,
- (b) Maintenance spares at normative rate of 1% of the capital cost. Cost of maintenance spares for each subsequent year shall be revised at the rate applicable for revision of expenditure on O&M of transmission system, and
- (c) Receivables equivalent to two months' average billing calculated on normative availability level.

19. For the purpose of interest on working capital, the petitioner has, inter alia claimed maintenance spares at a normative rate of 1% of the capital. According to respondents, maintenance spares should be worked out at the rate of 0.5% of the capital cost. The Commission has already directed that for the period up to 31.3.2001, the transmission charges are payable in accordance with the Ministry of Power notification dated 16.12.1997. We are satisfied that the maintenance spares have been claimed based on notification dated 16.12.1997. In view of this, the arguments raised on behalf of the respondent do not survive.

20. The escalation in O&M expenses a : maintenance spares for working capital ;: has been worked out on the basis of WPI a. CPI (industrial workers) for the month of April of the respective year, that is, 6.6C%. :.' :</% ix 6.00% for the years 1998-99, 1999-2000 & 2000-01 respectively,

21. Interest on working capital has been .orked out on the basis of annual average PLR of the State Bank of India. The rate of interest has been considered based on annual average PLR of State Bank of India for the respective years, that is, 14%, 13%, 12% & 11.50% for the years 1997-98, 1998-99, 1999-2000 and 2000-2001 respectively.

22. On consideration of entirety of the circumstances, we approve the transmission charges.

The detailed calculations are contained in Tables I & II appended hereinbelow:

TABLE I Chandrapur HVDC Back to Back

Project

_(Rs. inj-akh_s)_

Components of Transmission Tariff	1997-98		1998-99	1999-2000	2000-2001
	1.10.97 to 28.2.98	From 1.3.98			
Interest on Loan	912.01 j	362.30	4023.47	3556.84	3112.32
Depreciation	997.71	387.10	4659.33	4672.27	4672.27
Operation & Maintenance Expenses	195.38 .. 4	75.8V ^100.97^	930.47	987.53	1046.78
Return on Equity	301.35	"	1241.15	1268.17	1268.17
Interest on Working Capital	78.50	'30.28"	333.12~"	304.67	289.41
Total	2484.95 ! S56.45			10789.48	10388.95

Ramagunam-Hyderabad line

	1997-98 "	(Rs. in Lakhs]		
		1998-99	1999-2000	2000-2001
Components of Transmission Tariff	~ ~ i (w.e.f. 1.8.1997) ;			
Interest on Loan	566.00 !	847.02	831.00	725.94
Depreciation		447.21	446.89	446.89
Operation & Maintenance Expenses	!	124.00	131.18	139.05
Return on Equity			167.27 ^	
Interest on Working Capital	2i;8.09	47.49	44.22	41.13
Total			1620.56	1520.28

23. In addition to the transmission charges, the petitioner shall be entitled to other charges like foreign exchange rate variation, income tax, incentive, surcharge and other cess and taxes in accordance with the notifications issued by Ministry of Power.

SHARING OF TRANSMISSION CHARGES

24. The sharing of transmission charges for the inter-regional systems, between the Western Region and Southern Region shall be based on the applicable GOI tariff notification. The transmission tariff applicable to Western and Southern regions shall be included in the regional transmission tariff of these regions and shall be shared by the regional beneficiaries in accordance with para 7 of notification dated 16.12.1997.

25. The petitioner is presently charging tariff on provisional basis. The provisional tariff being charged by the petitioner is subject to adjustment in the light of final tariff determined by us in this order.


26. We find that the auditors' certificate furnished along with the petition certifies the transmission tariff calculations but does not disclose whether the capital expenditure,

equity, loan, rate of interest, repayment schedule. Qddvl charges, etc. u;v as per the audited accounts of the petitioner company. The petitioner is directed to file **an affidavit within** four weeks of the date of this order thru all the tariff calculations and **auditors'** certificates ere based on audited accounts of the **petitioner company or in** the alternative, the petitioner may file a revised **auditor's certificate, in the** format given below, failing which the transmission **charges approved above** shall not take effect and this order will automatically **lapse without any further** reference to the Commission.


A U D I T O R ' S C E R T I F I C A T E W e h a v e v e r i f i e d t h e

books of accounts, records and other documents of **Power Grid Corporation** of India Ltd and certify that the data used for transmission **tariff calculations for** _____ [name of the transmission system/line (s)] **are in accordance with the** audited books of accounts up to _____ (date) **of the company. We have** obtained all information and explanations which to the **best of our knowledge and** belief were necessary for the purpose of our examination **and necessary approvals** of the competent authority **in** respect of capital cost, **foreign exchange, time and cost over-run, etc. as prescribed under law, have been obtained.**

Auditor's Signature with seal


(G.S.Rajamani)
Member

disposes of


(D.P. Sinha)
Member

and date 27. This order

Petition No.46/2000.

(K.N. Sinha)
Member

New Delhi dated the 20th August, 2002.