

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Coram

1. **Shri Ashok Basu, Chairman,**
2. **Shri K.N.Sinha, Member**
3. **Shri Bhanu Bhushan, Member**

Petition No. 101/2003

In the matter of

Petition for approval of tariff for Special Energy Meters in Northern Region for the period from 1.5.2002 to 31.3.2004.

And in the matter of

Power Grid Corporation of India Ltd.

. Petitioner

Vs

1. Rajasthan Rajya Vidyut Prasaran Nigam Ltd, Jaipur
2. Himachal Pradesh State Electricity Board, Shimla
3. Punjab State Electricity Board, Patiala
4. Haryana Vidyut Prasaran Nigam Ltd, Panchkula
5. Power Development Department, Govt. of J&K, Srinagar
6. Uttar Pradesh Power Corporation Ltd., Lucknow
7. Delhi Transco Corporation Limited, New Delhi
8. Chief Engineer, Chandigarh Administration, Chandigarh
9. Uttranchal Power Corporation Ltd, Dehradun

.....Respondents

The following were present:

1. Shri Umesh Chandra, ED, PGCIL
2. Shri U.C. Misra, Dir (Pers), PGCIL
3. Shri U.K. Tyagi, DGM, PGCIL
4. Shri P.C. Pankaj, AGM, PGCIL
5. Shri C. Kannan, CM, PGCIL
6. Shri D.D. Dhayaseelan, PGCIL
7. Shri K.K. Mittal, XEN (ISP), RVPNL
8. Shri T.P.S. Bawa, PSEB
9. Shri A.K. Tandon, EE, UPPCL
10. Shri S.P. Srivastava, EE, UPPCL
11. Shri R.K. Arora, XEN, HVPN

**ORDER
(DATE OF HEARING : 6.4.2004)**

In this petition, the petitioner, Power Grid Corporation of India Ltd seeks approval for tariff in respect of the Special Energy Meters in Northern Region for the period from 1.5.2002 to 31.3.2004 based on the terms and conditions of tariff notified by the Commission vide notification dated 26.3.2001, hereinafter referred to as “the notification”:

2. The petitioner has installed the Special Energy Meters in the Northern Region as agreed to in the 114th NREB meeting held on 15.1.1998. NREB agreed to the installation of Special Energy Meters at a total estimated cost of Rs. 904.00 lakh. The Special Energy Meters are under commercial operation since 1.5.2002, the total estimated cost of installation of which works out to Rs.690.95 lakh. The petitioner has sought approval of transmission charges as under based on the gross block of Rs.605.24 lakh and Rs.651.83 lakh for the years 2002-03 and 2003-04 respectively:

(Rs. in lakh)

	2002-2003	2003-2004
Interest on Loan	11.90	15.02
Interest on Working Capital	2.71	3.25
Depreciation	19.44	24.14
Advance against Depreciation	0.00	0.00
Return on Equity	65.28	73.80
O & M Expenses	10.80	14.06
Total	110.13	130.27

3. The details in support of interest on working capital claimed by the petitioner are as given hereunder :

(Rs. in lakh)

	2002-2003	2003-2004
Spares	5.89	6.70
O & M expenses	0.98	1.17
Receivables	20.02	21.71
Total	26.90	29.59
Rate of Interest	11.00%	11.00%
Interest	2.96	3.25
Pro rata interest	2.71	3.25

4. In addition, the petitioner has prayed for approval of other charges like Income Tax, Incentive, Development Surcharge, any statutory taxes, levies, duties, cess, filing fee, late payment surcharge, etc.

SCOPE OF WORK

5. The petitioner has submitted the following information about scope of the work:

Total No. Of Special Energy Meters to be installed	:	996
No. of Special Energy Meters already installed	:	883
No. of Special Energy Meters under installation	:	12
Special Energy Meters to be kept as spare	:	70
Special Energy Meters to be installed in future	:	31

CAPITAL COST

6. It is prescribed in the notification that the capital expenditure of the transmission assets shall be financed as per the approved financial package set out in the techno-economic clearance of the Central Electricity Authority, hereinafter referred to as "the Authority" or as approved by an appropriate independent agency, as the case may be.

7. The installation of Special Energy Meters in the Northern Region was agreed to in 114th NREB meeting held on 15.1.1998 at a total cost of Rs. 904.00 lakh. The complete assets are to be commissioned at a total estimated cost of Rs.690.95 lakh, as seen from the following details submitted by the petitioner:

(Rs in lakh)	
Expenditure up to the date of commercial operation (30.04.2002)	572.89
Gross Block on the date of commercial operation	572.89
Expenditure from 1.5.2002 to 31.3.2003	32.35
Gross Block on 31.3.2003	605.24
Expenditure from 1.4.2003 to 31.3.2004	46.59
Gross Block on 31.3.2004	651.83
Expenditure from 1.4.2004 to 30.9.2004 (Based on provisional accounts)	7.23
Balance estimated expenditure	31.89
Total	690.95

8. In line with the Commission's order in petition No 42/2002 (approval of tariff for Special Energy Meters in Southern Region), the cost agreed to at the meeting of NREB has been considered as the benchmark. The estimated completion cost of Rs 690.95 lakh which is less than the cost of Rs 904.00 lakh agreed to at NREB is considered to be in order.

9. The actual expenditure of Rs. 572.89 lakh on the date of commercial operation, as per the auditors' certificate filed by the petitioner is considered to be in order and has been taken as the opening gross block.

Additional Capitalisation

10. The notification dated 26.3.2001 provides that tariff revisions during the tariff period on account of capital expenditure within the approved project cost incurred during the tariff period may be entertained by the Commission only if such expenditure

exceeds 20% of the approved cost. In all cases, where such expenditure is less than 20%, tariff revision shall be considered in the next tariff period. The expenditure of Rs. 79.99 lakh from the date of commercial operation to 31.3.2004 is less than 20% of the approved cost. Therefore, additional capitalisation during the tariff period has not been considered towards gross block.

11. Therefore, for the purpose of tariff in the present petition, the actual expenditure of Rs 572.89 lakh as on the date of commercial operation is considered for computation of tariff. As per auditors' certificate, the mandatory spares included in the gross block have been taken as 'nil'.

SOURCES OF FINANCING. DEBT – EQUITY RATIO

12. As per Para 4.3 of the notification, capital expenditure of the transmission system shall be financed as per approved financial package set out in the techno-economic clearance of CEA or as approved by an appropriate independent agency, as the case may be.

13. It is noted that neither Debt-equity ratio nor means of finances are mentioned in the agreement arrived at 114th meeting of NEREB. The Authority has not approved the financial package for the Special Energy Meters as no techno-economic clearance was needed. As per petition, debt and equity ratio on the date of commercial operation was 25.14:74.86. The petitioner has sought approval of tariff based on actual debt-equity mix. It is also noted that the petitioner has proposed to fund additional capital expenditure during 2003-04 out of debt only. The respondents have raised a

preliminary objection that the cost of these assets should be apportioned between debt and equity notionally in the ratio of 80:20.

14. In view of the fact that the capital cost as on the date of commercial operation is being considered for tariff calculations, debt equity ratio as on the date of commercial operation and corresponding loan and equity as on that date as claimed in the petition have been considered in the calculations. Accordingly, an amount of Rs. 144.00 lakh has been considered as debt and balance amount of Rs. 428.89 lakh as equity.

RETURN ON EQUITY

15. In accordance with the notification, the petitioner is entitled to return on equity at the rate of 16% per annum. The equity of Rs. 428.89 lakh was employed on the date of commercial operation. This has been considered for computing return on equity. Accordingly, the petitioner shall be entitled to return on equity of Rs. 62.90 lakh during 2002-03 and Rs. 68.62 lakh during 2003-04.

INTEREST ON LOAN

16. In accordance with the notification, interest on loan is to be worked out on outstanding loans, duly taking into account the schedule of repayment as per the financial package approved by the Authority or an independent agency. As has been noted above, an amount of Rs. 144.00 lakh has been taken as debt. Therefore, this amount has been considered for allowing interest on loan. The entitlement to interest on loan has been worked out as under:

(Rs. in lakh)

Interest on Loan	2002-03	2003-04
Gross Loan -Opening	144.00	144.00
Cumulative Repayment up to Previous Year	0.00	0.00
Net Loan-Opening	144.00	144.00
Repayment during the year	0.00	0.00
Net Loan-Closing	144.00	144.00
Interest	9.73	12.97

17. In the calculation, the interest on loan has been worked out by considering the gross amount of loan, repayment of installments as per the loan allocation statement up to 2003-04 prepared on the basis of loan allocation details submitted by the petitioner vide affidavit dated 18.5.2005 and rate of interest as on the date of commercial operation as given in the petition.

18. It is noted that PNB-II and Oriental Bank of Commerce loans carry floating rate of interest and the interest rate as submitted by the petitioner stated to be prevailing as on the date of commercial operation has been taken in the calculation. Any change/resetting of the interest rate of the above loans during the tariff period covered in this petition would require settlement mutually between the parties. In case of their inability to do so, any one of them may approach the Commission for appropriate relief.

19. It is further noted from the loan reconciliation details submitted that Bond-XIII Option I has been drawn on 31.7.2002 which is after the date of commercial operation (1.5.2002). Though these have been considered for financing of capital expenditure as on date of commercial operation by the petitioner and charged interest accordingly. However interest on the same has been worked out from the date of drawal.

DEPRECIATION

20. In accordance with the notification, the petitioner is entitled to depreciation, calculated annually as per straight line method at the rates prescribed in the schedule attached thereto. The value base for the purpose of depreciation is the historical cost of the asset.

21. The petitioner had initially classified the asset under the head "sub-station" and had accordingly claimed depreciation @ 3.6%. The petitioner, vide affidavit dated 17.1.2005 has submitted that the asset should have been classified under "meters". The petitioner has submitted a revised auditors' certificate to this effect. The petitioner has also claimed that fair life should be considered as 10 years for calculating tariff. RRVPNL in its affidavit dated 12.2.2005 has pointed out that as per depreciation schedule annexed to the notification, fair life of the meters is 15 years. In petition no. 42/2004 (relating to tariff for Special Energy Meters in Southern Region) also depreciation has been allowed @ 6% based on fair life of 15 years. Accordingly, depreciation has been allowed in the present case also @ 6% based on fair life of 15 years. The detailed calculations in support of weighted average rate of depreciation of 6% as also the amount of depreciation are appended hereinbelow:

Calculation of Depreciation

(Rs in lakh)

Capital Expenditure	Rate as per the notification	Capital cost	Depreciation	
			2002-03	2003-04
Land	0%	0.00	0.00	0.00
Building & other civil works	1.80%	0.00	0.00	0.00
Sub-station Equipments	3.60%	0.00	0.00	0.00
Transmission Line	2.57%	0.00	0.00	0.00
PLCC	6.00%	572.89	31.51	34.37
Weighted Average Rate of Depreciation/Depreciation allowed	6.00%	572.89	31.51	34.37

ADVANCE AGAINST DEPRECIATION

22. In addition to allowable depreciation, the petitioner becomes entitled to Advance Against Depreciation wherever originally scheduled loan repayment exceeds the depreciation allowable as per schedule. The petitioner has not claimed Advance Against Depreciation. Accordingly, Advance Against Depreciation is not being allowed in tariff.

OPERATION & MAINTENANCE EXPENSES

23. In petition No 42/2003 relating to approval of tariff for Special Energy Meters in Southern Region, the petitioner had not claimed any O&M expenses and accordingly there was no component of O&M expenses in the tariff approved by the Commission. However, in the instant case, the petitioner initially claimed O&M expenses @ 2% of the capital cost. The norms for O&M charges specified by the Commission are on the basis of per Ckt-Km of line length and per bay and Special Energy Meters do not fall in either of these categories. The respondents have contended that claim of O&M expenses by petitioner is on higher side. The Commission had directed the petitioner to place on record relevant provisions in the award for maintenance of the Special Energy Meters and the activities and cost associated with O&M of Special Energy Meters. The petitioner, in the affidavit dated 20.4.2004 increased the claim for O&M expenses and prayed that O&M expenses may be allowed @ 9.11% of capital cost, the details given by the petitioner in support of its revised claim of O&M expenses as indicated below:

- (i) Annual Maintenance contract @ 2% of capital cost :Rs 9.20 Lakh
- (ii) Other expenses for repair and replacement :Rs 1.19 Lakh

(Estimated considering 5% quantities / year)

(Includes freight and insurance of Special Energy Meters sent for repair, cost of installation in place of faulty meter, travelling and other related cost testing and inspection of repaired Special Energy Meters)

(iii) AMC for PCs and laptops : Rs 6.44 Lakh

(iv) Collection and transferring weekly meter readings :Rs 22.97 lakh
(@Rs 470/- per location per week for 94 locations)

(v) -Annual site testing of the meters (250 man-days @ Rs 2000/-)

: Rs 5.0 Lakh

- TA/DA for testing Engineers (250 x 1000) : Rs 2.50 Lakh

- Testing of 4 MTEs every year : Rs 0.60 Lakh

(vi) Testing at independent Test Laboratory once in 5 years

:Rs 19.00 Lakh

Total : Rs 66.90 lakh

(9.11% of capital cost)

24. RVPNL has pointed out that when the option of tariff payment vis-a-vis one-time payment for Special Energy Meters was discussed as per directions of the Commission at NREB meeting held on 21.10.2003, responding to objection of 2% O&M charges, the petitioner had explained that the calculations were approximate and meant to reflect payment implication under two options. RVPNL has contended that in spite of this assurance, no justification in support of claim of O&M expense @ 2% has been furnished in the petition. According to RVPNL, O&M expenses for Special Energy Meters should not be more than 0.5% of the capital cost. The petitioner, in its rejoinder dated 16.2.2004 to RVPNL's response, has stated that O&M expenses @ 2% were claimed as Special Energy Meters are not covered in the norms for O&M expenses notified by the Commission.

25. On consideration of the above facts, the Commission vide order dated 26.4.2005, directed the petitioner to furnish certain additional information. The petitioner has filed two affidavits, one dated 27.6.2005 and the other dated 27.7.2005. On the question of year-wise audited annual expenditure on account of O&M expenses for Special Energy Meters for all the regions called for by the Commission, the petitioner has submitted that in case of Western, Eastern and North-eastern Regions, the beneficiaries have agreed for one-time payment of the cost of the Special Energy Meters. Therefore, the petitioner has submitted information only in respect of Northern and Southern Regions. The petitioner has mentioned that expenditure incurred towards obtaining the Annual Maintenance Contract (AMC), Repair & maintenance (R&M), insurance under self insurance scheme, corporate allocation and RHQ allocation are booked separately and the audited figures booked in the books of account are available. In addition to this, the expenditure is being incurred towards data downloading, Special Energy Meters data testing, and meter replacement. Meters are also required to be tested in independent laboratory. The petitioner had initially submitted certain information under affidavit dated 27.6.2005, which was not supported by auditors' certificate.

26. However, subsequently, in the affidavit dated 27.7.2005, the petitioner has submitted auditors' certificate in respect of actual O&M expenditure on Special Energy Meters as per details given below:

<u>Northern Region:</u>	2002-03:	Rs. 59762/-
	2003-04:	Rs. 1015912/-

	2004-05:	Rs. 1270185/-
<u>Southern Region:</u>	2002-03:	Rs. 459235/-
	2003-04:	Rs. 781475/-

27. The petitioner was also directed to explain the reasons for not claiming O & M expenses for Special Energy Meters in Southern Region. The petitioner has submitted that the normative O&M expenses for transmission system in Southern Region for the period 2001-04 were arrived at based on total O&M expenses booked for the period 1995-96 to 1999-2000, which also included expenditure incurred on O&M of Special Energy Meters during the relevant period. Therefore, O&M expenses on Special Energy Meters were not claimed separately in case of Southern Region.

28. The petitioner was further asked whether the constituents in the region were extending necessary assistance in timely collection of metered data as provided in IEGC. The petitioner has submitted that most of the beneficiaries have taken over responsibility of data transfer except for a few locations of UPPCL and PTCUL.

29. We have considered the submissions made on behalf of the petitioner in response to the order dated 26.4.2005. It is seen that the petitioner had initially furnished details of O&M expenses of Rs 55.33 lakh and 63.22 lakh for Northern Region for the years 2002-03 and 2003-04 respectively under the affidavit dated 27.6.2005. However, in the subsequent affidavit dated 27.7.2005, the petitioner has submitted auditors' certificate only for the amount of Rs 59762/- and Rs. 1015912/- in respect of O&M expenses on Special Energy Meters for Northern Region for the years 2002-03 and 2003-04 respectively. In the affidavit submitted on 27.6.2005, the petitioner has mentioned that in addition to audited figures booked in the books of

accounts, expenditure is being incurred towards data downloading (being done by POWERGRID) / outsourcing for some of the locations, SEM data testing and meter replacement. The details of the expenditure claimed by the petitioner and as admitted by us are as under:

(Amount in Rs.)

Item	Expenditure claimed by the Petitioner		Expenditure admitted by the Commission		Remarks
	2002-03	2003-04	2002-03	2003-04	
1. Expenditure on SEM data downloading					
i) Salary	1629850	1407976	Nil	Nil	Norms of O&M expenses for the period 2001-04 cover salary of all the employees.
ii) On vehicle, TA/DA	1280908	1075353	1280908	1075353	Norms of O&M expenses do not cover these expenses.
2. Expenditure on outsourcing of data	197999	656472	Nil	Nil	No supportive evidence has been submitted such as agencies engaged and their contract amount, etc.
3. Meter replacement cost (Salary and TA/DA)	188500	215221	Nil	Nil	As per the petitioner, meter replacement cost includes salary as well as TA/DA. Salary is already covered in norms of O&M expenses for transmission. Further, since expenditure on TA/DA has not been provided separately, it is not possible to admit the expenditure.
4. Exp. Of SEM data testing					
i) On Salary	198331	30967	Nil	Nil	Norms of O&M expenses for the period 2001-04 cover Salary of all the employees
ii) Vehicle TA/DA	78000	20000	78000	2000	Norms of O&M expenses do not cover these expenses.
5. O&M expenses booked under the head of SEM account	59762	1015912	59762	1015912	Actual expenditure certified by Auditors
6. Per year expenditure on five yearly testing in independent lab (estimated)	1900000	1900000	Nil	Nil	This is only estimated expenditures, which is yet to be incurred
Total	5533350	6321901	1418670	2111265	

30. Therefore, total O&M expenses of Rs 14.18 lakh and Rs 21.11 lakh have been allowed in the year 2002-03 and 2003-04 respectively.

31. Sizeable number of locations at which Special Energy Meters have been installed belong to agencies other than the petitioner. The most cost effective and efficient way of downloading and transfer of data from these locations is that the responsibility should be taken over by the agency concerned. This will avoid unnecessary expenses. From the affidavit of the petitioner, it is clear that barring a few locations, it is getting necessary co-operation. We direct that in future, bills may be raised directly on the agency concerned for the amount spent on downloading and transfer of data from its locations, if this agency is not extending cooperation in downloading and transfer of data from Special Energy Meters. Before raising the first bill, the petitioner may bring this direction to the notice of the agencies concerned. The matter may be brought before the Commission only in case of dispute

INTEREST ON WORKING CAPITAL

32. As provided in the notification, the interest on working capital shall cover:

- (a) Operation and maintenance expenses (cash) for one month;
- (b) Maintenance spares at a normative rate of 1% of the capital cost, less 1/5th of the initial capitalised spares. Cost of maintenance spares for each subsequent year shall be revised at the rate applicable for revision of expenditure on O & M of the transmission system; and
- (c) Receivables equivalent to two months' average billing calculated on normative availability level, which is 98%.

33. The normative value of maintenance spares at the rate of 1% of the capital cost during 2002-03 works out to Rs. 5.73 lakh, and after applying 6% rate of escalation, the value for 2003-04 is Rs. 6.04 lakh. The value of the initial capitalised spares is zero. Therefore, cost of maintenance spares for 2002-03 and 2003-04 is taken as Rs.5.73 lakh and 6.04 lakh respectively.

34. The interest rate for the purpose of interest on working capital is to be the cash-credit rates prevailing on the date of commercial operation in respect of the assets commissioned after 1.4.2001. The petitioner has claimed interest on working capital @ 11%, which corresponds to annual average SBI PLR on 1.5.2002, the date of commercial operation. Therefore, we allow the interest @ 11.00% on the working capital. In keeping with the above methodology, working capital and interest thereon work out as under:

(Rs in lakh)		
Working Capital	2002-2003	2003-2004
Maintenance Spares	5.73	
Less: Capitalised Initial spares	0.00	
	5.73	6.04
O & M expenses	1.29	1.76
Receivables	22.05	23.42
Total	29.07	31.22
Rate of Interest	11.00%	11.00%
Interest	(11 months) 2.93	3.43

35. In the light of above discussion, we approve the tariff for Special Energy Meters as per the table given hereunder:

TABLE		
(Rs in lakh)		
	2002-03	2003-04
Interest on Loan	9.73	12.97
Interest on Working Capital	2.93	3.43
Depreciation	31.51	34.37
Advance against Depreciation	0.00	0.00
Return on Equity	62.90	68.62

O & M Expenses	14.18	21.11
Total	121.25	140.50

36. In addition to the transmission charges, the petitioner shall be entitled to other charges like income tax, incentive, surcharge and other cess and taxes in accordance with the notification, subject to orders of the superior courts, if any, on the appeals filed the petitioner and the state utilities.

37. The petitioner is billing provisional tariff in respect of the Special Energy Meters. The tariff being billed on provisional basis shall be subject to adjustment in the light of final tariff now approved by us.

38. The transmission tariff approved by us shall be included in the regional transmission tariff for Northern Region and shall be shared by the regional beneficiaries in accordance with para 4.6 of the notification.

39. This order disposes of Petition No.101/2003.

Sd/-
(BHANU BHUSHAN)
MEMBER

Sd/-
(K.N. SINHA)
MEMBER

Sd/-
(ASHOK BASU)
CHAIRMAN

New Delhi dated the 9th November 2005