

**CENTRAL ELECTRICITY REGULATORY COMMISSION**

**NEW DELHI**

**Coram:**

- 1. Shri Bhanu Bhushan, Member**
- 2. Shri R. Krishnamoorthy, Member**
- 3. Shri S. Jayaraman, Member**

**IA No. 53/2006**

**in**

**Petition No.155/2004**

**In the matter of**

Approval of tariff in respect of Dadri Gas Power Station for the period 1.4.2004 to 31.3.2009.

**And in the matter of**

National Thermal Power Corporation Ltd.

**... Petitioner**

**Vs**

1. Uttar Pradesh Power Corporation Limited, Lucknow
2. Jaipur Vidyut Vitran Nigam Limited, Jaipur
3. Ajmer Vidyut Vitran Nigam Limited, Ajmer
4. Jodhpur Vidyut Vitran Nigam Limited, Jodhpur
5. Delhi Transco Limited, New Delhi
6. Haryana Vidyut Prasaran Nigam Limited, Panchkula (Haryana)
7. Punjab State Electricity Board, Patiala
8. Himachal Pradesh State Electricity Board, Shimla
9. Power Development Department Government of J & K, Jammu
10. Power Department, Union Territory of Chandigarh, Chandigarh
11. Uttaranchal Power Corporation Limited, Dehradun **...Respondents**

**The following were present**

1. Shri M G Ramachandran, Advocate, NTPC
2. Shri Shankar Saran, NTPC
3. Shri A S Pandey, NTPC
4. Shri Atul Pasrija, HPPC, Panchkula
5. Shri Pradeep Misra, Advocate, UPPCL & CSEB

## ORDER

(Date of Hearing: 25.11.2008)

The petitioner, filed this petition for approval of tariff in respect of Dadri Gas Power Station (829.78 MW) (hereinafter referred to as “the generating station”) for the period from 1.4.2004 to 31.3.2009 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 (hereinafter referred to as “the 2004 regulations”).

2. The tariff for the generating station was approved by the Commission vide order dated 9.5.2006, and the petition was “disposed of”:

(Rs in lakh)

<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-</b>	<b>2007-</b>	<b>2008-</b>
Depreciation	4328	4328	4328	4328	1494
Interest on Loan	1380	984	592	199	0
Return on Equity	6158	6158	6158	6158	6158
Advance against Depreciation	0	0	0	0	0
Interest on Working Capital	3272	3278	3284	3299	3254
O & M Expenses	4315	4489	4663	4854	5045
<b>TOTAL</b>	<b>19453</b>	<b>19238</b>	<b>19026</b>	<b>18839</b>	<b>15951</b>

3. O&M expenses as claimed by the petitioner are as detailed below:

( Rs in lakh)

Year	2004-05	2005-06	2006-07	2007-08	2008-09
O&M Expenses	5934	6171	6418	6675	6942

4. The Commission in the 2004 regulations specified the normative O&M expenses for gas-based generating stations as under:

Year	(Rs. in lakh/MW)		
	Gas-based and liquid fuel-based power generating stations other than small gas turbine power generating stations	Small gas turbine power generating stations	
	With Warranty Spares of 10 years	Without any Warranty Spares	Without any Warranty Spares
2004-05	5.20	7.80	9.46
2005-06	5.41	8.11	9.84
2006-07	5.62	8.44	10.24
2007-08	5.85	8.77	10.65
2008-09	6.08	9.12	11.07

5. The petitioner had stated that the normative O&M expenses of Rs. 5.20 lakh/MW specified under the 2004 regulations for the gas-based generating stations were not adequate to meet the actual expenses which were likely to be incurred for the reasons summarized hereunder and accordingly, had sought to claim O&M expenses for the generating station based on actual O&M expenditure of preceding 5 years i.e. 1999-2000 to 2003-04:

- (i) The warranty period had already expired April 2002, before 1.4.2004.
- (ii) The consumption of spares at the gas-based generating stations had increased with the passage of time because of aging as the generating station had completed 13-15 years of operation and requirement of repair & maintenance for old stations was more in case of gas-based generating stations as compared to coal-based

ones for the reason that the components of gas-based generating stations are exposed to much higher temperatures and stresses.

- (iii) The value of spares consumed up to 3-4 years after the end of warranty period cannot be representative of the cost of spares to be met in future because most of these spares consumed in this period purchased along with the main equipment in 1987-1990 had very low historical value.
- (iv) As the spares were procured along with main equipment which was exempted from payment of duties which now would be payable at the time of procurement of new spares, thereby leading to higher operation and maintenance costs.
- (v) The value of Indian Rupee as compared to foreign currencies had depreciated resulting in higher procurement cost in rupee term.
- (vi) The spares were required to be procured from the OEM on proprietary basis, the cost quoted by them is very high.

6. For the above reason, the petitioner sought relaxation of norms in case of the gas-based generating stations with warranty spares.

7. The Commission vide its order dated 16.2.2006 directed the petitioner

to place on record the following information for taking a comprehensive view on the revision of O&M expenses for the gas-based generating stations, namely –

- (a) Details of actual O&M expenses from the date of commercial operation of 1<sup>st</sup> GT of the generating stations to 2004-05,
- (b) O&M expenses recovered in tariff from the date of commercial operation of 1<sup>st</sup> GT to 2004-05;
- (c) Whether or not the capital spares issued at zero cost were included in the capital cost for the purpose of tariff; and
- (d) Basis of estimation of embedded cost of spares in respect of the generating station.

8. On the petitioner's prayer for relaxation of O&M norms, the Commission in the order dated 16.2.2006 *ibid* observed as follows:

*“ The issue of revision of O&M expenses as claimed by the petitioner shall be considered on merit after filing of the above information by the petitioner and after a comprehensive examination of the issue for all the five gas based generating stations of the petitioner. ”*

9. In the order dated 9.5.2006, while approving tariff for the generating station, O&M expenses were allowed on the basis of the norms specified under the 2004 regulations, applicable to gas-based generating stations with warranty spares, with a specific observation that these were being allowed “(t)ill such time a comprehensive view is taken on the issue”. Thus even though the tariff petition

was disposed of, the question of revision of O&M expenses was left open, which subjected to review based on the comprehensive view to be taken at a later stage.

10. The petitioner furnished the information called for vide order dated 16.2.2006 under its affidavit dated 7.7.2006, which has been registered as IA No. 53/2006, reiterating its prayer for approval of O&M expenses based on actual expenses for the last five years. These details were supplemented through the affidavit dated 26.9.2008. The petitioner also submitted information regarding O&M expenses in respect of the generating stations, namely, Faridabad GPS and Kayamkulam CCPP, not supplied with free warranty spares under its affidavit dated 23.5.2007 and 27.4.2007 respectively as subsequently directed by Commission in the order dated 26.2.2007.

11. The first respondent has filed its reply, raising certain preliminary objections regarding maintainability of the IA filed by the petitioner. These are being referred to in the subsequent paragraphs.

12. It has been submitted that the petition has already been disposed of vide order dated 9.5.2006. After disposal of the main petition, the Commission has become *functus officio* and has got no power to revise its own order. In the reply, the Commission's earlier order dated 20.2.2008 in IA No. 49/2008 in Petition No. 157/2004 has been relied upon in support of the contention that the Commission

has become *functus officio* after the final order has been passed in the petition. It has been stated that Rule 3, Order XX of CPC provides that after the judgment has been signed, it cannot afterwards be altered or added to save as provided in Section 152 of the Code. It is an established point of law that power under Section 152 is available only in case of correction of accidental or unintended error in judgment or order. As the petitioner has not pointed out any mistake or error in the judgment dated 9.5.2006, the IA is not maintainable. Further, according to the first respondent, the petitioner in Appeal No. 94/2005 had challenged the Commission's order dated 13.4.2004 in Petition No.94/2002 relating to Gandhar Gas Power Station to allow it actual O&M charges of Rs.26.54 crore on the ground that it should be on normative basis as provided in the tariff regulations applicable during 2001-04. The Appellate Tribunal allowed the O&M charges of Rs.56.27 crore in accordance with the provisions of the 2001 tariff regulations. On the analogy of the judgment of the Appellate Tribunal, once normative O&M charges have been allowed in the present case, there is no question of looking at the actuals for revision of O&M expenses. Lastly it has been submitted that in order to ascertain the reasonability of the claim, it would be necessary to invoke Section 62(5) of the Electricity Act, 2003 and call for the Annual Revenue Requirement of the generating station for the period 2004-09 so as to compare it with the revenue generated from tariff. If the petitioner is able to establish that it has not been able to earn the prescribed return of 14% on the equity employed, the Commission may examine the prudence of the claim. Otherwise, it has been submitted, it would result in additional burden on the

consumers. The first respondent has furnished certain data to show that the petitioner earned return of 412 crore, during 2007-08.

13. We heard the learned counsel for the petitioner. Learned counsel submitted that since the warranty period had expired much before the 2004 regulations came into force, the norms specified by the Commission for the gas-based generating stations without warranty spares, should apply. Learned counsel for the respondents present at the hearing reiterated the preliminary objections raised on behalf of the parties

14. We, in the first instance, consider the preliminary objection relating to maintainability of the IA. There is no denying the fact that IA is normally not maintainable after the final disposal of the main petition, except for rectification of clerical errors. This is intended to obviate the possibility of reopening the judgment or order on merits for which the remedy of appeal is available. The position is different in the present case. In the case on hand, the Commission had taken note of the submissions of the petitioner that O&M expenses calculated on normative basis were inadequate to meet the actual expenses in respect of the gas based generating stations and directed the petitioner to file the required information for taking a view in the matter and till that time, O&M expenses were determined on basis of the norms. In other words, even though the main petition has been disposed of, the prayer of the petitioner with regard to O&M expenses has not been finally disposed by the Commission and has been



kept open for consideration. The information has been filed in compliance with the directions of the Commission in the said order. Moreover, the information has been called for by the Commission to take a view in the matter. Therefore, filing of the IAs for submission of the required information in compliance with the directions of the Commission cannot be treated as synonymous with any other application made for the modification of the order. The legal point regarding the maintainability of the IA after disposal of the main petition decided by the Commission in its order dated 20.2.2008 in IA No. 49/2008 in Petition No.154/2007 is not applicable in this case. Similarly, Rule 3 Order XX of CPC does not stand as a bar to the maintainability of the IA in the instant case. The question of O&M expenses recoverable by the petitioner was not finally settled in the order dated 9.5.2006 and was left open to be considered by the Commission after submission of the details called for.

15. The judgment dated 14.7.2006 in Appeal No.94/2005 of the Appellate Tribunal is extracted below:

*“14. Thus, it is apparent that the appellant was not able to secure the actual O&M expenses, in respect of thirteen generating stations. On overall basis, the actual O&M expenses are much more than the expenses which have been worked out on the basis of Escalation Factor. It seems to us that it would be unfair and unjust to work out the O&M expenses, on the basis of actual expenses incurred in respect of Gandhar Power station, especially when the O&M expenses have been worked out in respect of the other stations, on the basis of the Escalation Factor. In case, the O&M expenses in respect of the other power stations are worked out on the basis of actual expenses, the appellant would have been entitled to several hundred crores by way of tariff. The Central Electricity Regulatory Commission ought to have applied one yardstick or principle for determining O&M expenses for all the generating stations of the appellant.”*

16. We feel that the ratio of the judgment in above case is not applicable to the facts of the case before us for the reason that the petitioner is not seeking O&M expenses on actual basis but has contended that it should be allowed the normative O&M expenses specified by the Commission for the gas-based generating stations without warranty spares.

17. As regards the requirement of filing of ARR by the petitioner under sub-section (5) of Section 62 of the Act, it is pointed out that the Commission is yet to frame regulations under that sub-section and without the regulations being in place, the petitioner cannot be directed to file its ARR as suggested by the respondents.

18. In the light of the above discussion, we conclude that the IA is maintainable as the question of O&M expenses had not been finally settled by the Commission in its order dated 9.5.2006.

19. Now we consider the petitioner's request for revision of O&M expenses.

20. While laying down norms for determination of tariff applicable from 1.4.2004, the Commission felt that there was embedded cost in the project cost of the gas-based generating stations on account of free supply of spares during warranty period. However, quantification of the reasonable cost of warranty spares included in the project cost was found difficult after both the petitioner as well as the beneficiaries expressed their inability to place on record any reliable

data in this regard. However, the petitioner at the time of deliberations of terms and conditions of tariff had worked out the impact of free warranty spares for 10 years on the project cost based on the notional cost indicated in the supply contract of the OEM. The amount of warranty spares included in the project cost for Anta, Auraiya, Dadri and Kawas was indicated by the petitioner as follows:

(Rs. in lakh)

Anta	Auraiya	Dadri	Kawas
1723	2062	2575	1966

21. The petitioner had contended that based on the above data of embedded cost, average impact on project cost should be of the order of Rs. 3.3 lakh/MW. The above cost of spares embedded was not accepted by the Commission while formulating the terms and conditions of tariff for the generating stations falling under the category of those warranty spares. The Commission in the statement of reasons dated 29.3.2004 in suo moto Petition No.67/2003 concerning laying down of terms and conditions of tariff for the period 2004-09, after noting that the actual consumption of warranty spares, for the years 1995-96 to 2000-01 based on their notional value furnished by the petitioner in tariff petitions for the period 2001-04 was at variance with the above data, observed as follows:

*“129. The above values of spares are based on notional values of spares quoted by the OEM in the supply contract. The consumption of spares in case of Gandhar GPS is only Rs. 3.87 crore which is about 0.16% of the total capital base ( on 1.4.2001). This is very low considering the consumption of spares in other gas power generating stations of*

*NTPC. There is no uniformity of value of consumption of spares in Gandhar, Anta, Auraiya, Kawas and Dadri GPS. The capital cost of Gandhar GPS is quite high as compared to other gas-based projects of NTPC. It is, therefore, difficult to hold that the project cost quoted by the bidders would not be including a substantial cost of warranty spares to be supplied free of cost over 10 years period. On this the generator would not only be getting ROE but also getting cost of such spares reimbursed by way of depreciation. In our view the beneficiaries should not be double - charged. In view of this, actual operation and maintenance expenses of these five stations after the warranty period is of no assistance to the Commission in arriving at fair operation and maintenance expenses. In the end, there appears to be no sufficient ground to revise the operation and maintenance expenses norms specified for the stations with supply of warranty spares free of cost for 10 years.”*

22. In the above context the petitioner has now explained that as per contractual provisions, the equipment supplier was supposed to supply some identified critical spares free of cost during the operational warranty period. The petitioner has explained that it earlier submitted the market value of the spares on the basis of budgetary offer from OEM and was based on the exchange rate, customs duty , etc applicable during the year of consumption of spares. This, as explained, was indicated by the petitioner from the point of view of the benefit already availed of by the respondents through concession of additional customs duty and additional payment on spares consumed on account of FERV. Since the OEM quoted the price in foreign currency the prices of free spares would have been included by them in foreign currency and the same could be the part of the project cost as on the date of commercial operation calculated as per the then prevailing exchange rate. The spares cost estimated to be embedded in the capital cost of respective generating station has been recalculated by the petitioner based on spares consumption since the date of commercial operation

of the generating stations as follows:

Station	Total (Rs. in lakh.)
Anta	2602
Auraiya	2125
Dadri	2633
Kawas	7800

23. There is no denying the fact that O&M recovery of the petitioner is falling short of the actual O&M expenses incurred by it. The position of actual O&M expenses and those recovered in tariff since the dates of commercial operation of gas-based generating stations with warranty spares is as follows:

Name of the station/capacity	Year of operation since the date of commercial operation of 1 <sup>st</sup> GT	Actual O&M up to 2004-05 (Rs in lakh)	O&M recovered in tariff up to 2004-05 (Rs in lakh)	Shortfall in O&M recovery (Rs in lakh)
Anta GPS (419.33 MW)	16	36117	24470	11647
Auraiya GPS (663.36 MW)	14.5	47031	33499	13532
Kawas GPS (656.20 MW)	13.75	52218	44505	7713
Dadri GPS (829.84 MW)	12.75	42985	33500	9485

24. The petitioner has claimed all along in the tariff petitions for the tariff period 2004-09 that higher repair and maintenance (R&M) expenses due to aging along with high cost of spares consumed at actuals after the warranty period has led to higher O&M cost. The petitioner has stated that the OEM is charging very high

prices for spares after the expiry of warranty period. As such, the petitioner has been insisting to work out the difference in repair and maintenance expenses during warranty period and after the expiry of warranty period to support its claim for higher O&M expenses.

25. We have sought to examine the matter from that point of view. The capital spares issued at zero cost and consumed in different gas-based generating stations after expiry of warranty period which were not allowed by the Commission as a part of the capital cost for the purpose of tariff have been considered in the R&M expenses for working out the normalized R&M expense for the year 2004-05 after the expiry of warranty period. The difference in R&M expenses on the basis of actual R&M cost before and after expiry of warranty period as in the year 2004-05 is worked out as under:

(Rs. in lakh)

Name of the station	Capacity of the generating station	Base R&M 2004-05		Difference (R2-R1)
		During warranty period (R1)	After warranty period (R2)	
Anta	419.33	838.33	2077.51	1239.18
Auraiya	663.36	1585.22	2571.97	986.75
Dadri	829.84	1288.45	2430.83	1142.38
Kawas	656.20	1103.20	3468.83	2365.63
Total	2568.73	4815.2	10549.14	5733.94
Weighted Average				2.23 lakh/MW

26. The average of actual R&M expenses for the years before and after the expiry of warranty have been considered as R&M expenses for the mid-year of

the respective period. R&M expenses of mid-year as found out have been escalated at the rate of 10% per annum up to 1999-2000 and then escalated at the rate of 6% per annum up to 2003-04 and further escalated at the rate of 4% to arrive at R&M expenses for the base year 2004-05. It is found from the above calculations that the weighted average difference in R&M expenses on the basis of actual R&M before the expiry and after the expiry of warranty period worked out to Rs. 2.23 lakh /MW. O&M norms allowed in the tariff calculations for the period 2004-05 are Rs. 5.20 lakh /MW which include different heads of O&M expenses such as consumption of stores and spares, repair and maintenance expenses, employee cost, administration expenses etc.

27. The petitioner has also furnished the actual O&M data for Faridabad GPS and Kayamkulam CCPP from the date of commercial operation to 2004-05, we have also examined whether norms applied for the period 2004-09 is adequate to compensate the O&M expenses for these stations. The base R&M costs in the year 2004-05 is worked out adopting the methodology similar to that discussed above and has been worked out as under:

(Rs. in lakh)

Name of the station	Capacity of the station ( MW)	Year of Operation since the COD of 1 <sup>st</sup> GT	Base R&M 2004-05	Actual R&M expense for 2004-05
Faridabad GPS	431.586	6	539.07	547
Kayamkulam CCPP	359.577	7	784.16	688.87
Total =	791.16	13	1323.23	1235.87
Weighted Average				-0.11 lakh/MW

28. From the above table, it has been seen that actual R&M expenses for the year 2004-05 are almost equal to the normalized R&M expenses for 2004-05 in case of Faridabad GPS whereas actual R&M is less than the normalized R&M in case of Kayamkulam CCPP. There is a marginal difference in weighted average R&M expenses on the basis of actual R&M and normalized R&M expense for 2004-05 of the order of Rs.(-) 0.11 lakh /MW

29. On analysis of the above it appears to us that there is merit in the petitioner's contention and there is a case for having a second look at O&M norms to be allowed to the petitioner since it has been worked out that there is an increase of Rs. 2.23 lakh/MW under the sub-head of R&M expenses after the expiry of warranty period. We have analyzed the data furnished by the petitioner in tariff petitions for the period 2001-04 and have found that cost of spares indicated by the petitioner and relied upon by the Commission in its orders were the notional values arrived at in the respective year of consumption after accounting for escalation and custom duty at 60%, freight and handling charges etc. The customs duty, freight and handling charges are generally paid in addition to the contract prices. As such, notional cost of these spares as worked out by the petitioner based on foreign exchange rate as on dates of commercial operation of the respective unit or generating station appears to be reasonable. Thus, there is no denying that existing O&M norms applied to the generating stations with initial warranty spares in the tariff order are much lower than the



actuals for the period 1995-96 to 1999-2000 when warranty period was applicable and as such those expenses do not reflect the actual consumption pattern of spares and R&M expenditure.

30. We would not like to be dragged into the debate on the question of cost of spares embedded in the project cost yet again. Any estimation of embedded cost would always be debatable. Even if for sake of argument it is accepted that there is embedded cost on account of warranty spares in the capital cost of the generating station, in our view, such a provision was kept by the petitioner in its bidding condition in over all interest of the beneficiaries and in good faith and the beneficiaries were benefited during the warranty period with less O&M cost.

31. The warranty period for supply of free spare has already expired as noted above. We feel that with the expiry of warranty period, the generating station should be governed by the norms applicable to the generating stations without warranty spares.. Accordingly, we direct that the O&M norms as applicable to the gas-based generating stations without warranty spares as given hereunder shall apply:

(Rs. in lakh/MW)

2004-05	2005-06	2006-07	2007-08	2008-09
7.8	8.11	8.44	8.77	9.12

32. Based on the above, the petitioner shall be entitled to the following O&M expenses

(Rs. in lakh)

Year	2004-05	2005-06	2006-07	2007-08	2008-09
<b>O&amp;M expenses</b>	<b>6472</b>	<b>6730</b>	<b>7003</b>	<b>7277</b>	<b>7568</b>

33. It is noticed that O & M expenses being allowed exceed the petitioner's claim in the case of this generating station. However, we have applied the norm, now specified uniformly to all similarly placed gas-based generating stations, even where revised O & M expenses being allowed are less than those claimed.

34. Revision of O&M expenses has necessitated revision of interest on working capital since O&M expenses for part of the working capital. The revised calculation of interest on working capital by retaining the principles considered in the order dated 9.5.2006 are as under:

#### **Revised Calculation of Interest on Working Capital**

( Rs. in lakh)

	2004-05	2005-06	2006-07	2007-08	2008-09
Fuel Cost (One month)	8219	8219	8219	8241	8219
Naptha stock	2376	2376	2376	2383	2376
O & M expenses	539	561	584	606	631
Spares	1292	1369	1451	1539	1631
Recievables	20048	20027	20008	20036	19527
Total Working Capital	32474	32552	32638	32805	32384
Rate of Interest	10.25%	10.25%	10.25%	10.25%	10.25%
<b>Interest on Working Capital</b>	<b>3329</b>	<b>3337</b>	<b>3345</b>	<b>3363</b>	<b>3319</b>

## ANNUAL FIXED CHARGES

35. The revised annual fixed charges for the period 1.4.2004 to 31.3.2009 allowed in this order are summed up below:

(Rs in lakh)

<b>Particulars</b>	<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>2008-09</b>
Interest on Loan	1380	984	592	199	0
Interest on Working Capital	3329	3337	3345	3363	3319
Depreciation	4328	4328	4328	4328	1494
Advance against	0	0	0	0	0
Return on Equity	6158	6158	6158	6158	6158
O & M Expenses	6472	6730	7003	7277	7568
<b>TOTAL</b>	<b>21667</b>	<b>21537</b>	<b>21427</b>	<b>21325</b>	<b>18540</b>

36. In all other respects, the order dated 9.5.2006 shall be applicable. The petitioner shall claim the additional annual fixed charges within a period up to 31.3.2009.

37. With the above, IA No. 53/2006 stands disposed of.

**Sd/-**  
**(S. Jayaraman)**  
**Member**

**Sd/-**  
**(R. Krishnamoorthy)**  
**Member**

**Sd/-**  
**(Bhanu Bhushan)**  
**Member**

New Delhi, dated the 3<sup>rd</sup> February 2009