

**In the Appellate Tribunal for Electricity at New Delhi  
(Appellate Jurisdiction)**

**Appeal Nos. 122, 136 and 146 of 2013**

**Dated:7<sup>th</sup> Dec, 2015**

**Present: Hon'ble Mrs Justice Ranjana P Desai, Chairperson  
Hon'ble Mr.T Munikrishnaiah, Technical Member**

**In the matter of:**

**Appeal No. 122 of 2013**

NTPC Limited,  
NTPC Bhawan, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi - 110003,

.....Appellant

Versus

1. Central Electricity Regulatory Commission,  
3<sup>rd</sup>& 4<sup>th</sup> Floor, Chanderlok Building,  
36, Janpath, New Delhi- 110001.
2. Uttar Pradesh Power Corp. Ltd (UPPCL),  
Shakti Bhawan, 14, Ashok Marg,  
Lucknow - 226001.  
(U.P.)
3. Jaipur Vidyut Vitaran Nigam Ltd. (JVVN),  
Vidyut Bhawan, Janpath,  
Jaipur-302005.  
(Rajasthan).
4. Ajmer Vidyut Vitaran Nigam Ltd. (AVVN),  
Old Power House, Hathi Bhata,  
Jaipur Road, Ajmer-305001.  
(Rajasthan)
5. Jodhpur Vidyut Vitaran Nigam Ltd (JVVN),  
New Power House, Industrial Area,  
Jodhpur-342003.  
(Rajasthan)
6. Tata Power Delhi Distribution Ltd.(TPDDL),  
Grid Sub Station, Hudson Road  
Kingsway Camp, Delhi-110009.
7. BSES Rajdhani Power Ltd. (BRPL),  
BSES Bhawan, Nehru Place,  
New Delhi 110019.

8. BSES Yamuna Power Ltd., (BYPL).  
Shakti Kiran Building,  
Karkardooma, Delhi -110092.
9. Haryana Power Purchase Center (HPPC),  
Shakti Bhawan, Sector-VI,  
Panchkula, Haryana-134109.
10. Punjab State Power Corporation Ltd (PSPCL),  
The Mall, Patiala-147001.
11. Himachal Pradesh State Electricity Board Ltd.(HPSEB),  
Kumar Housing Complex Building-II,  
Vidyut Bhavan, Shimla-171004.
12. Power Development Department,  
Govt. of Jammu & Kashmir,  
Secretariat, Jammu-180 001
13. Power Department (Chandigarh),  
Union Territory of Chandigarh,  
Addl. Office Building,  
Sector-9D, Chandigarh-16009.
14. Uttarakhand Power Corporation Ltd. (UPCL),  
Urja Bhawan, Kanawali Road,  
Dehradun-248001.

.....Respondent(s)

Counsel for the Appellant(s) : Mr. M.G. Ramachandran  
Ms. Poorva Saigal,  
Mr. Avinash Menon  
Ms. Swagatika Sahoo  
Ms. Ranjitha Ramachandran

Counsel for the Respondent(s) : Mr. R.B. Sharma for R-7  
Mr. Bipin Gupta  
Mr. S.K. Bansal for R.3 to 5  
Mr. Pradeep Misra  
Mr. Manoj Kr. Sharma  
Mr. Daleep Kr. Dhayani  
Mr. Shashank Pandit for R.2  
Mr. Alok Shankar for TPDDL  
Mr. M.S. Ramalingam for R.1  
Mr. Vaibhav Choudhry for R-6

**Appeal No. 136 of 2013**

NTPC Limited,  
NTPC Bhawan, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi - 110003,

....Appellant

Versus

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  11. Himachal Pradesh State Electricity Board Ltd.(HPSEB),  
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Secretariat, Jammu-180 001
  13. Power Department (Chandigarh),  
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Mr. S.K. Bansal for R.3 to 5  
Mr. Pradeep Misra  
Mr. Manoj Kr. Sharma  
Mr. Daleep Kr. Dhayani  
Mr. Shashank Pandit for R.2  
Mr. Alok Shankar for TPDDL  
Mr. M.S. Ramalingam for R.1  
Mr. Ashish Gupta &  
Mr. Aditya Mukherjee for R-8  
Mr. Vaibhav Choudhry for R-6

**Appeal No. 146 of 2013**

NTPC Limited,  
NTPC Bhawan, SCOPE Complex,  
7, Institutional Area, Lodhi Road,  
New Delhi - 110003,

.....Appellant

Versus

1. Central Electricity Regulatory Commission,  
3<sup>rd</sup>& 4<sup>th</sup> Floor, Chanderlok Building,  
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Mr. Daleep Kr. Dhayani  
Mr. Shashank Pandit for R.2  
Mr. Alok Shankar for TPDDL  
Mr. M.S. Ramalingam for R.1  
Mr. Vaibhav Choudhry for R-6

**JUDGMENT**

**Per Hon'ble T Munikrishnaiah, Technical Member**

**Appeal No. 122 of 2013**

1. Appeal No. 129 of 2012 under Section 111 of the Electricity Act, 2003 has been filed by the appellant (NTPC Limited herein) against the order dated 02-04-2013 passed by the Central Electricity Regulatory Commission (hereinafter referred to as the 'Central Commission') in Review Petition No. 12 of 2012 in Petition No.239 of 2009 to the determination of generation tariff for ANTAGAS Power Station (419-33 MW) and Supply of Electricity to Respondents 2 to 14 for the period from 01.04.2009 to 31.3.2014.
2. By this Impugned Order, the Central Commission disallowed the claims of the Appellant NTPC regarding additional capital expenditure on the following works:
  - (a) Disallowance of Capital Expenditure on Online Compressor Cleaning amounting to Rs.231 Lakh
  - (b) Disallowance of Capital Expenditure on addition CT Pump amounting to Rs.240.83 Lakh for the period from 1.4.2009 to 31.3.2014

**Appeal No. 136 of 2013**

3. Appeal No. 136 of 2013 under Section 111 of the Electricity Act, 2003 has been filed by the appellant (NTPC Limited herein) against the order dated 01.05.2013 passed by the Central Electricity Regulatory Commission (herein after called the 'Central Commission') in Review Petition No.21 of 2012 filed in Petition No.224 of 2009 relating to the determination of Generation tariff for Dadri Gas Power station (829.78 MW) and supply of electricity by the Appellant to the Respondent Nos 2 to 14 for the period

from 1.4.2009 to 31.3.2014. The aspect to be considered in this Appeal is with respect to period of Life Extension of Gas Turbines of Dadri Gas Power Station whether it should be 10 years on the total useful life of the Gas Power Station or 15 years as determined by the Central Commission over and above the entire life period of 15 years decided by the Commission in the earlier orders.

**Appeal No. 146 of 2013**

4. The Appeal No. 146 of 2013 under Section 111 of the Electricity Act, 2003 has been filed by the appellant (NTPC Limited herein) against the order dated 29.4.2013 passed by the Central Electricity Regulatory Commission ( herein after called the 'Central Commission') in Review Petition No.15 of 2012 filed in Petition No.270 of 2009 wherein the Central Commission has determined the Tariff applicable for generation and supply of electricity for Auraiya Gas Power Station (663.36 MW) and supply of electricity to the Respondent No.2 to 14 for the period from 1.4.2009 to 31.3.2014.
5. By the Impugned Order dated 29.4.2013, the Central Commission disallowed additional capital expenditure incurred in respect of the following capital expenditure:
  - (a) Disallowance of capital expenditure towards renovation of GT Cooling towers amounting to Rs.24.00 Lakh during the year 2009-10;
  - (b) Disallowance of Capital Expenditure on installation of evaporative type of inlet air cooling system amounting to Rs.576.00 lakh during FY 2012-13;
  - (c) Disallowance of capital expenditure towards laying of rails in transformer yards amounting to Rs.60.00 lakh during FY 2011-12.



- (d) Disallowance of capital expenditure towards procurement of additional Excitation Transformer amounting to Rs.29.00 lakh during 2011-12;
  - (e) Disallowance of capital expenditure on procurement of one generator rotor each for Gas Turbine and Steam Turbine amounting to Rs.3241.00 lakh during 2013-14;
  - (f) Disallowance of capital expenditure on installation of on line wet washing system and on line compressor efficiency monitoring system for Rs.186 lakh in 09-10 & 10-11;
  - (g) Extension of the useful life of gas turbines of the Auraiya Station by 15 years after R&M instead of 10 years as provided under the Tariff Regulations, 2009.
6. Let us discuss the main grievance of the Appellant (NTPC) on the issues specified in Appeal No.122 of 2013, 136 of 2013 and Appeal No.146 of 2013 pertaining to Gas Power stations and the Commission's view in disallowing the additional capital expenditure spent in the respective Review Petitions of the three Generating Stations namely Anta Gas Power Station, Dadri Gas Power Station and Auraiya Gas Power Station and our consideration and conclusion on these issues.
7. We have heard the arguments of learned Counsel for the Appellant Mr. M G Ramachandran and learned Counsels Mr. R B Sharma for Respondent No.7 and Mr. Pradeep Mishra for Respondent No.2 and have gone through the submissions of the learned Counsels for both the parties and Impugned Orders passed by the Central Commission.
8. Since all the three Appeals are pertaining to the Gas Turbine Stations of the Appellant NTPC, they are being taken up together and the issues are as follows:

## Judgment in Appeal Nos.122, 136 and 146 of 2013

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- (i) Whether the Central Commission erred in disallowing the additional capital expenditure on Online Compressor Cleaning Equipment amounting to Rs.231 lakhs ? **(Appeal No.122 of 2013)**
- (ii) Whether the Central Commission erred in disallowing the additional capital expenditure of Rs.240.83 Lakhs towards expenditure on CT Pump (Cooling Tower Pump) ? **(Appeal No.122 of 2013).**
- (iii) Whether the Central Commission has erred in considering the life extension of Gas based Power Station after renovation and modernization programme by 15 years instead of 10 years in contravention of the Tariff Regulations? **(Appeal No.136 of 2013).**
- (iv) Whether the Central Commission has erred in disallowing Rs.24 Lakhs incurred during FY 2009-10 towards renovation of Gas Turbines Cooling Towers? **(Appeal No.146 of 2013).**
- (v) Whether the Central Commission has erred in disallowing the additional capital expenditure of Rs.576.00 Lakhs towards expenditure spent on installation of Evaporative Type of Inlet air cooling system during the FY 2012-13? **(Appeal No.146 of 2013).**
- (vi) Whether the Central Commission has erred in disallowing the additional capital expenditure of Rs.60 Lakhs during the FY 2011-12 towards laying of rails in transformer yards? **(Appeal No.146 of 2013).**
- (vii) Whether the Central Commission has erred in disallowing the capital expenditure towards procurement of additional Excitation Transformer amount to Rs.29 Lakh during FY 2011-12? **(Appeal No.146 of 2013)**
- (viii) Whether the Central Commission erred in disallowance of capital expenditure towards procurement of one generator Rotor each for Gas Turbine and Steam Turbine amount to Rs.3241 Lakh during FY 2013-14? **(Appeal No.146 of 2013)**
- (ix) Whether the Central Commission has erred in disallowing capital expenditure on installation of on line wet washing system and on line

compressor efficiency monitoring system for Rs.186 lakhs in FY 2009-10 and FY 2010-11 ? (Appeal No.146 of 2013)

(x) Whether the Central Commission has erred in considering the life extension of Gas based Power Station after renovation and modernization programme by 15 years instead of 10 years in contravention of the Tariff Regulations? (Appeal No.146 of 2013).

9. Before discussing the above issues, let us briefly discuss the Central Commission's Tariff Regulations, 2009 pertaining to additional capitalization and utilization of spares etc., which reads as under:

(a) Regulation 3(8) defines the capital cost as defined in Regulation 7. Regulation 7(1) provides that the capital cost shall consist of three elements, namely; (i) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project as admitted by the Commission, (ii) capitalized initial spares subject to the ceiling rates as specified in Regulation 8 and (iii) additional capital expenditure as determined under Regulation 9.

(b) Regulation 7(2) provides that the capital cost admitted by the Commission after prudence check shall form the basis for determination of tariff. The last proviso to Regulation 7 of the 2009 Regulations as amended on 21.6.2011, provides that in case of the existing projects, the capital cost admitted by the Commission prior to 1.4.2009 duly trued-up by excluding un-discharged liability, if any, as on 1.4.2009 and the additional capital expenditure projected to be incurred for the respective years of the tariff period 2009-14, as may be admitted by the Commission, shall form the basis for determination of tariff.

(c) The last proviso to Regulation 7(2) does not make any exception to the word "Project" to mean new project or existing project. It follows there from, that additional capital expenditure

would be determined under Regulation 9 for both the new projects as well as the existing projects.

(d) Regulation 9 is an independent substantive provision as regards treatment of additional capital expenditure which does not make any distinction between the existing projects or the new projects. Therefore, the additional capital expenditure irrespective of the fact whether it is for existing project or new project, has to be determined under Regulation 9.

(e) The words "as may be admitted by the Commission" referred to in the last proviso to Regulation 7(2) must be read harmoniously with Regulation 7(1) (c) and Regulation 9. Therefore, in case of existing projects also, additional capital expenditure projected to be incurred for the respective year of the tariff period 2009-2014 may be admitted by the Central Commission having regard to Regulation 9.

(f) The additional capital expenditure for existing generating stations under the last proviso to Regulation 7(2) needs to be considered only in terms of Regulation 9(1) and 9(2) of the 2009 Regulations.

(g) In so far as the additional works and services that are necessary for efficient and successful operation of the generating station are concerned, the same has been taken care of by Regulation 19(e) which provides for compensation allowance.

(h) In response to the Central Commission's Notification for amendment of Regulation 9 of 2009 for additional capitalization on Renovation & Modernization (R&M) of gas Turbines, NTPC had urged for extension of the similar provision for coal based stations stating that the compensation allowance in case of coal based station was not sufficient. However, the Central Commission while

amending the provisions of Regulation 9 vide Notification dated 21.6.2011 rejected the prayer of the NTPC.

(i) The last proviso to Regulation 7(2) carves out an exception in case of existing projects, but it cannot be construed as an exception to other provisions namely Regulation 8 and Regulation 9 of 2009 Tariff Regulations. The words "as may be admitted by the Commission" in the last proviso to Regulation 7(2) must be read harmoniously with Regulation 7 (1) (c) and Regulation 9.

10. Let us take-up the issues one by one for our consideration.
11. Issue No.1: Disallowance of additional capital expenditure on Online Compressor Cleaning Equipment amounting to Rs.231 lakhs.
12. The contention of the Appellant on Disallowance of additional capital expenditure on Online Compressor Cleaning Equipment amounting to Rs.231 lakhs is as under:
  - 12.1 that the Central Commission erred in not allowing the capital expenditure towards the installation of Online Compressor Cleaning system only on the ground that there is no commitment on the part of NTPC to pass on the benefit of the efficiency improvement by such installation of online compressor cleaning system, to the beneficiaries.
  - 12.2 that the Central Commission has totally misdirected itself in regard to the nature of expenditure incurred. The online compressor Cleaning System is not of a nature or type which makes any value addition to the plant capacity over and above the specification with which the plant was initially installed. In the natural and normal course, there is deposition of dust on the Compressor Blades and Vanes which reduces the performance level and is to be cleaned from time to time. The Online Compressor Cleaning System provides such on-going cleaning measure and, therefore, is of the nature to maintain the performance level of the machine.

- 12.3 The Central Commission has failed to appreciate that the issue of higher performance giving benefit to the NTPC would arise only in the event of equipment or system being installed which increases the production of electricity beyond what was envisaged in the plan or reduces the cost substantially in the use of material. The Online Compressor Cleaning System does not improve the performance of Gas Turbine beyond the capacity of the Gas Turbine. It enables maintenance of the Gas Turbine free of dust to maintain performance at the required level. Accordingly, there is no question of any additional performance of the plant giving benefit to NTPC which was not envisaged at the time of installation of the plant. Consequently, there is no benefit available additionally for NTPC to pass on the same to the beneficiaries.
13. Per Contra, the learned Counsel for the Respondent No.7 submits that the claim of the Appellant was disallowed by the Commission as he was not prepared to share the gains of the efficiency with the beneficiaries. The relevant part of the Impugned Order is quoted as below:

*“42. The Petitioner has claimed an expenditure of Rs.231.00 lakh during 2010-11 towards the installation of Online Compressor Cleaning System. Apart from increase in the availability on line compressor cleaning would also improve the performance of GTs. However, the benefit of such improvement in performance would be retained by the Generator and hence it may not be appropriate to allow such expenditure, especially in the absence of any commitment on the part of the Petitioner to pass on the benefit of efficiency improvement to the beneficiaries. Hence, the said claim is not allowed”.*

- 13.1 Learned Counsel for the Respondent-2 submits that the Petitioner has claimed an expenditure of Rs.131 lakhs during the FY 2010-11 towards installation of Online Compressor Cleaning System. Apart from increase in the availability of Online Compressor Cleaning system, it would also improve the performance of the Gas Turbine. However, the benefit of such improvement in performance would be retained by the Generator and hence it may not be appropriate to allow such expenditure especially in the absence of any commitment on the part of the Petitioner to pass the benefit

of efficiency improvement to the beneficiaries. Hence the said claim may not be allowed.

**14. Our Discussion and Consideration on Issue No.1:**

14.1 It is a fact that online Compressor Cleaning system will improve the performance of the Turbine by cleaning the dust etc., on the vanes of the Turbines blades by using online water washing system which would help to clear the dust and thereby achieve partial recovery of performance level of the turbines.

14.2 The cleaning of dust on the blades of the turbines is a periodical maintenance work and the purchase of online cleaning system is to the benefit to the Appellant and also the performance of the turbine will partially improve due to removal of dust on the blades and this benefit is not passed on to the consumers.

14.3 Further, any expenditure made for the improvement of the Generating system has to be shared to the consumers also. The Appellant has to work out the cost benefit analysis before implementing any capital work and finally the benefit has to be passed on to the consumers.

14.4 Thus, we feel that the Central Commission has rightly disallowed the expenditure as the benefit due to implementation of the system has not been passed on to the consumers.

14.5 The issue relating to the sharing of the gains of the efficiency with the beneficiaries also came before this Tribunal in the judgment dated 10.9.2015 in Appeal No.250 of 2013. The relevant para is quoted below:

*"10.8 On deep analysis of the material on record and, after due consideration of the rival contentions, we find that the Central Commission has rightly and legally disallowed the claim of the additional capitalization on Energy Management System claimed by the Appellant on the ground that the benefit of reduction in Auxiliary Power Consumption due to the implementation of Energy Management System is not being passed on the beneficiaries by the Appellant."*

14.6 We agree with the conclusion of the Central Commission and thus, we affirm the decision of the Central Commission specified in the Impugned order.

14.7 Accordingly, this issue is decided against the Appellant.

15. Issue No.2: Disallowance of Additional Capital Expenditure on CT Pump (Cooling Tower Pump) to Rs.231 Lakhs (Appeal No.122 of 2013).

16. The contention of the Appellant on the installation of additional CT Pump at the cost of Rs.240.83 Lakhs, NTPC had given justification as under:

*“There are 2x50% capacity Cooling Tower Pumps installed in circulating Cooling Water System. The Cooling Water Pumps are required to run continuously during operation of the Plant. Failure of one cooling tower pump affects approximately 50% of generation of the steam turbine. Therefore, for sustained availability, another cooling tower pump as part of overall system requirement is required to be installed to cater to emergency requirement.”*

16.1 That the Central Commission erred in not allowing the capital expenditure incurred on installation of additional CT Pump. The Central Commission has disallowed such expenditure on the ground that this expenditure is in respect of asset which is in the nature of spares.

16.2 That the Central Commission has failed to appreciate that the additional CT Pump is a necessary equipment to be installed and is to be put into operation immediately on failure of the running equipment which are bound to occur from time to time in the operation of cooling towers. It is not of the nature of spare which need to be replaced occasionally and that the plant can function without installation for a continued period of time.

16.3 That the Central Commission has failed to appreciate that an additional/standby CT Pump is necessary to enable the maintenance of generation at combined cycle mode in case of outage of one pump.

16.4 That the Central Commission has failed to appreciate that the performance of Anta Gas Power Station is required to be maintained at a PLF level of 85% as against previously allowed performance level of 80% and there are



increasing requirement of running C T Pumps due to reduced supply of cooling water. The failure of the Pump affects 50% of the generation of the Steam Turbine. The availability of the additional CT Pump to continue the performance is necessary.

17. **Per Contra**, learned Counsel for the Respondent No.7 stated that the CT Pump is a spare item and the spares are allowed to be capitalized only up to cut-off date in accordance with Regulation 9(1) (iv) of the Tariff Regulations, 2009. Within the overall ceiling norms under Regulation 8, the Commission has rightly rejected the claim as the claim does not fall within the cut-off date. The Appellant has not even identified any Regulation under which the claim has been made.

17.1 That the contention of the Appellant on this issue is without any merit and the Commission has rejected its alleged claim.

17.2 That the capitalization of spares after cut-off date is not permissible as stated in this Tribunal's judgment dated 11.4.2014 in Appeal No.188 of 2013.

17.3 Learned Counsel for Respondent-2 submitted that the Petitioner has claimed expenditure of Rs.240.83 Lakhs during FY 2010-11 for installation of additional CT Pump. The above expenditure cannot be claimed under provisions of Regulation 9 of the Regulation, 2009 and hence the same cannot be capitalized.

18. **Our Discussion and Consideration on Issue No.2.**

18.1 The Appellant has incurred expenditure on purchase of cooling Tower Pump. The Appellant's existing system is having 2x50% capacity of Cooling Tower Pumps installed in the Cooling Water System and the failure of one Pump affects approximately 50% of the generation of the Steam Turbine. For sustained availability, another Pump is required for emergency purposes. This is a Spare Pump provided by the Appellant to meet the emergencies in case of failure of any of the two Pumps existing in the system.

18.2 As per Section 7(1) (b), capitalized initial spares subject to the ceiling rates specified in Regulation 8. Regulation 8 of the Tariff Regulations, 2009 specifies that the expenditure on spares has to be procured at the initial period of the commissioning of the Generating Station and for the Gas Turbine/Combine Cycle Thermal Generating Stations, 4% of the original purchase cost is allowed for procurement of spares initially.

18.3 As seen from the Impugned Order, the Commission has rightly disallowed the expenditure on this expenditure incurred on CT Pump. The relevant part of the Impugned Order is as under:

*“The Petitioner has claimed an expenditure of Rs.240.83 lakh during 2010-11 for installation of additional CT Pump. The justification furnished by the petitioner for such expenditure is that there are 2x50% capacity Cooling Tower Pumps installed in the Cooling Water System and the failure of one pump affects approximately 50% of generation of the Steam Turbine. For sustained availability, another pump is required for emergency purpose. Since the expenditure in respect of the asset which is in the nature of spares, the capitalization of the same is not allowed”.*

18.4 This Tribunal in its earlier judgment in Appeal No.173 dated 8.9.2014 disallowed the purchase of Spare Generator Transformer. The relevant part is quoted below:

*“48. We find that Regulation 18 provides that the working capital shall cover inter alia, maintenance spares @ 20% of O&M expenses specified in regulation 19 and operation & maintenance expenses for one month. Sub-clause (a) of Regulation 19 specifies the normative O&M expenses for coal based generating stations given in terms of Rs. lakh/MW. The norms for O&M expenses are not based on a percentage of the capital cost. Sub-clause (b) of Regulation 19 provides for O&M expenses allowed for certain old thermal power projects of NTPC and DVC. The compensation allowance provided in Regulation 19(e) is to meet the expenses on new assets of capital nature. Therefore, we find no merit in the contention of NTPC for inclusion of compensation allowance in normative O&M expenses for computing the working capital requirement. Thus, we do not find any infirmity in the impugned*

*order of the Central Commission in not including the compensation allowance in the O&M expenses while computing the working capital requirement.”*

- 18.5 Thus, we find that the decision of the Central Commission in disallowing the expenditure on spare CT Pump is correct and the decision of the Central Commission in the Impugned Order is affirmed.
- 18.6 Thus, this issue is decided against the Appellant.
19. **Issue No.3 and Issue No.10:** Consideration of Life Extension of Gas Based Power Station after renovation and modernization by 15 years instead of 10 years in contravention to the Tariff Regulations.
20. Since Issue No.3 in Appeal No.136 of 2013 and Issue No.10 in Appeal No.146 of 2013 are similar and identical in nature, these issues are being taken up together.
21. Learned Counsel for the Appellant has made the following submission on this issue.
- 21.1 That the Central Commission erred in deviating from the provisions of the Tariff Regulations, 2009 which recognize the useful life of a gas power station as 25 years as compared to 15 years in the earlier Tariff Regulations, 2004 i.e. extension of life of Gas Turbines of a Gas Power Station by 10 years only by deciding on the extension by 15 years in the Impugned Order.
- 21.2 That the Central Commission failed to appreciate that NTPC has filed its tariff petition as per the provisions of the Tariff Regulations, 2009 and after factoring in the additional capitalization for the Renovation and Modernization (R&M) works to be carried on for extension of life of the Dadri Station by 10 years. The Central Commission on the one hand has erred in allowing the R&M expenditure prayed for by NTPC for extending the useful life by 10 years and on the other hand by extending the life by 15 years.

- 21.3 That the Central Commission has failed to appreciate that if the useful life is to be extended deviating from the Tariff Regulations, 2009, then the Central Commission ought to have put NTPC on the notice and the expenditure on equipments and further R&M to be carried out for such extension by 15 years should have been examined and claimed by NTPC.
- 21.4 That the NTPC craves leave to add to the grounds mentioned above and states that the above grounds are in the alternative and have been raised without prejudice to one another.
22. Per Contra, the following are the submissions made by the learned Counsel for the Respondent No.7 Mr. R B Sharma.
- 22.1 That the Appellant has alleged that the useful life after the renovation of the Gas Turbine after their operation for 15 years from their Commercial Operation Date (CoD). The renovation of these Gas Turbines was put off by the Appellant who approached the Central Commission through a true-up Petition being the Petition No.28/GT/2013. Revising the Tariff of Generating Station and the Capital Expenditure projected to be incurred. Now, the generation of gas turbines and the time frame is required to be visited during the tariff period 2014-15. The Appellant has claimed that this issue has been decided by this Tribunal in their favour vide Order dated 25.10.2013 in Appeal No.70 and 71 of 2012.
- 22.2 That It is our submission that the issue involved is distinguishable and thus, the Order dated 25.10.2013 in Appeal No.70 and 71 of 2012 would not be applicable in the present Appeal.
- 22.3 That one of the reasons and one important tactical reason in Appeal No.70 and 71 for remanding matter back to the Central Commission by the Tribunal was that no reason has been given for enhancing the useful life of Gas Turbine by 15 years by the Central Commission.
- 22.4 The perusal of the Impugned Order would show that the Commission has clearly provided with basis for calculation, enhancement of life by one lakh

Equivalent Operating Hours (EOH) which translates into 15 years considering no PLF of the Generating Station. Another argument on this issue is that the Gas Turbines have logged more than one lakh EoH which was initially designed life of these Gas Turbines. The life of the Gas Turbine is sought to be increased by another one lakhs EoH by undertaking the R&M activities after the initial one lakhs EoH translates to 15 years useful life then, however the subsequent increase in life by the same but one lakh EoH would translate to only 10 years.

22.5 That the contention of the Appellant is misleading, misconceived and without any substance on this issue.

22.6 Learned Counsel for R-2 submits that the aspect to be considered are with respect to period of extension of Gas Turbine of the Dadri Station namely whether it should be 10 years as the total useful life of Gas Turbine Station itself has been determined by the Central Commission as 25 years or whether it should be 15 years determined by the Central Commission.

22.7 That it is submitted that the above issue is covered in favour of the Appellant by the decision dated 25.10.2013 by this Tribunal in Appeal No.70 and 71 of 2012.

22.8 Thus, this issue is liable to be allowed.

23. Our Submissions and Consideration on this Issue:

23.1 We find that the useful life extension in the Regulations for Thermal Generation Station is 25 years from the Commercial Operation Date (CoD). In the 2004 Tariff Regulations, the life of Gas Based Station was specified as 15 years but the same was enhanced to 25 years in the 2009 Tariff Regulations based on the performance of the existing Gas Turbine Stations, the life extension of Gas Turbine Stations was extended for a period of 10 yers in 2009 Tariff Regulations. The aspect of useful life extension of the Gas Turbine Station is discussed at length by this Tribunal in the judgments

in Appeal No.70 and 71 of 2012 dated 25.10.2013. The relevant judgment is quoted as below:

*“18. On the basis of above, the amendment to the Tariff Regulations, 2009 was notified on 21.6.2011. The amendment provides as under:*

*“5. Amendment of Regulation 9 of the Principal Regulations- Three sub-clauses namely, (vi), (vii) and (viii) shall be added after sub-clause (v) of clause (2) of Regulation 9 of the Principal Regulations as under:*

*“(vi) In case of gas/liquid fuel based open/combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 year of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.*

*Provided that any expenditure included in the R&M on consumables and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed”.*

*19. Regulation 9 provides for additional capitalization from Date of Commercial Operation upto the Cut-Off date and after the Cut-Off date. The sub-section (2) of Section 9 specify the counts on which the additional capitalization could be allowed after the cut-off date. Prior to the amendment dated 21.6.2011, the sub-section (2) of Section 9 did not provide for additional capitalization of the expenditure on renovation & modernization of the gas based power station. With the amendment date 21.6.2011, the gas based generating station could claim expenditure on renovation of gas turbine after 15 years of operation from COD and expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the station as additional capitalization after the cut-off date.*

*20. The intent of the Regulation is that the life of gas turbine and its auxiliaries which are subjected to very high temperatures can be extended from 15 years to 25 years only after renovation of gas turbine which may become necessary after 15 years of operation from its COD. While the Central Commission in its 2009 Tariff Regulations enhanced the life of the gas based power stations from 15 years to 25 years it did not provide for compensating the gas power station for expenditure which may be required for renovation of gas turbine after 15 years of operation of the plant from its COD*

*during the useful life of the gas station of 25 years. Therefore, the Central Commission amended its 2009 Tariff Regulations to provide for additional capitalization for renovation of gas turbine after 15 years of operation and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the gas station.*

23.2 We have observed that the Central Commission has considered that after completion of R&M, the life extension to Gas Turbine Station shall be extended by 15 years from the date of completion of major R&M i.e. for 1.4.2012. However, the useful life of the Steam Turbine Station has been considered as 25 years from its CoD (Commercial Operation Date)

23.3 Further, this Tribunal in Para-24 and 25 of the above judgment stated as under:

*“24. It is clear from the table given in the impugned order in paragraph 61 that, the useful life of Gas Turbine I, II & III at Gandhar after extension of life by 15 years has been considered as 32.08, 31.75 and 32.08 years respectively while the life of steam turbine has been taken as 25 years. Accordingly, the weighted average useful life of the gas based power station after extension of useful life of Gas Turbine has been computed as 29.59 years in the impugned order. Similarly in case of Kawas the useful life of the gas turbines IA, IB, 2A and 2B on life extension after R&M has been considered as 35.83, 35.67, 35.58 and 35.42 year respectively and for steam turbine as 25 years.*

*Accordingly, for Kawas the weighted average life of the gas station has been computed as 29.59 years in the impugned order. This is against the intent of the Regulations for enhancing the useful life of the gas turbine to 25 years on Renovation after completing 15 years of useful life. No reason has been given by the Central Commission for enhancing the useful life of the gas turbines by 15 years after R&M over the elapsed life as on 1.4.2012 instead of 10 years as intended in its Tariff Regulations, 2009. We feel that the useful life of the Gas Turbines should have been extended by 10 years after completion of the Renovation of the Gas Turbines as per the Regulations. Accordingly, decided.*

*25. Therefore, we decide to remand this matter back to the Central Commission with direction to re- determine the useful life of the plants after extension of life by 10 years for GTs after completion of Renovation and Modernization, instead of 15 years.*



23.4 The views of the Central Commission in the Impugned Order is as under:

*“43. The details of the date of commercial operation of the different units of the generating station, the period of operation up to 1.4.2009 and 1.4.2014 (completion of major R&M works) and the extended life after R&M of GTs and their weighted average period of operation on above dates and weighted average life are as under:*

*(Rs. in Lakh)*

Units	Capacity (MW)	COD	Elapsed life up to 31.3.2009	Elapsed life up to 31.3.2014	Useful life after extension of life by 15 years for GTs	Balance life as on	
						1.4.2009	1.4.2014
GT-I	130.19	1.5.1992	16.92	21.92	36.92		
GT-II	130.19	1.6.1992	16.83	21.83	36.83		
GT-III	130.19	1.8.1992	16.67	21.67	36.67		
GT-IV	130.19	1.12.1992	16.33	21.33	36.33		
ST-I	154.51	1.8.1996	12.67	17.67	25.00		
ST-II	154.51	1.4.1997	12.00	17.00	25.00		
<b>Total</b>	<b>829.78</b>		<b>15.07</b>	<b>20.07</b>	<b>32.33</b>	<b>17.27</b>	<b>12.27</b>

23.5 As seen from the above submissions made by the Counsel for the Appellant and Respondents and also according to this Tribunal judgment dated 25.10.2013, we conclude that the extension of useful life after Repair & Maintenance (R&M) works were taken up has to be considered extended life of 10 years i.e. useful life of Gas Turbine and also to be taken as 25 years i.e. 15 years + 10 years extension after R&M.

23.6 It is pertinent to mention here that useful life of steam turbine was also considered as 25 years from its CoD.

23.7 In view of the above, we feel that total life span of the Gas Turbine also to be equivalent to the life span of steam turbine i.e. 25 years.

23.8 Accordingly, as per the findings given in this Tribunal judgment in Appeal No.70 and 71 of 2012, this issue is decided in favour of the Appellant and the Impugned Order of the Central Commission is set aside to this extent. We decide to remand this matter back to the Central Commission with the direction to re-determine the useful life of the gas turbine plants as 25



years after extension of life by 10 years after completion of renovation and modernization works.

23.9 Thus, these two issues in Appeal No.136 of 2013 and Appeal No.146 of 2013 is decided in favour of the Appellant.

24 **Issue No.4:** Whether the Central Commission has erred in disallowing Rs.24 Lakhs incurred during FY 2009-10 towards renovation of Gas Turbines Cooling Towers? (Appeal No.146 of 2013).

24.2 Learned Counsel for the Appellant has made the following submissions on this issue:

24.3 that the Central Commission has erred in disallowing the expenditure towards renovation of GT Cooling Towers amounting to Rs.24.00 lakh during 2009-10 on the ground that since the expenditure associated with cooling towers is generally in the nature of O&M expenses. The renovation of GT Cooling Tower has been approved by the CEA as a part of the Renovation and Modernization Scheme and cannot therefore be possibly treated as a part of O&M expenditure.

24.4 that the Central Commission has failed to appreciate that the Renovation of Cooling Tower was approved by none other than the Central Electricity Authority after appropriate due diligence and therefore the same cannot be treated either as expenditure of O&M nature or the nature of work undertaken was not required.

24.5 that the Central Commission ought to have called for further details if on scrutiny of the expenditure, the nature of the expenditure was not clear. The work undertaken in respect of which the expenditure was claimed was that the structure of all the Gas Turbine Cooling Towers and fills are wooden and over the period of operation, performance and strength of cooling towers had been reduced.

25 Per Contra, the following are the submissions made by Shri R B Sharma, the learned Counsel for the Respondent No.7:

25.2 that the Appellant has claimed that the Commission has disallowed the additional capitalization towards renovation of cooling towers amounting to Rs.24 lakh during 2009-10. The works of this nature are undertaken in the O&M expenses. The relevant para of the Impugned Order dated 23.05.2012 in Petition No.270 of 2009 rejecting the claim is quoted below:

*Renovation of GT Cooling Tower*

*35. The Petitioner has claimed expenditure for Rs.24.00 lakh during 2009-10 for the said asset and has submitted that as all the GTs have operated for more than 100000 EOH and the cooling tower performance has also deteriorated with reduced cooking effect. From the submissions of the Petitioner, it could not be ascertained as to the nature of work undertaken for renovation of Cooling Tower for GTs. Also, the Petitioner's submission linking the cooling tower performance to 100000 EOH of GTs cannot be appreciated. Since, expenditure associated with cooling towers is generally in the nature of O&M expenses, the capitalization of the said expenditure is not allowed."*

As may be seen from the above para, the Appellant in his submission could not justify as to the nature of work undertaken for renovation of Cooling Tower for GTs. The Appellant has been provided a huge sum on account of O&M expenses which is as under:

Rs. 9818 lakh for 2009-10  
Rs.10382 lakh for 2010-11  
Rs.10972 lakh for 2011-12  
Rs.11602 lakh for 2012-13  
Rs.12266 lakh for 2013-14

The above figures would show that the Appellant is in receipt of huge amount under O&M expenses and accordingly, the claim of the Appellant on this issue is not justified.

26 Mr. Pradeep Mishra, Learned Counsel for the Respondent No.2 (UP Power Corporation) has made the following submissions:

26.1 that the Central Commission on this issue has held as followings.

*35. The Petitioner has claimed expenditure for Rs.24.00 lakh during 2009-10 for the said asset and has submitted that as all the GTs have operated for more than 100000 EOH and the cooling tower performance has also deteriorated with reduced cooling effect. From the submissions of the Petitioner, it could not be ascertained as to the nature of work undertaken for renovation of Cooling Tower for GTs. Also, the Petitioner's submission linking the cooling tower performance to 100000 EOH of GTs cannot be appreciated. Since, expenditure associated with cooling towers is generally in the nature of O&M expenses, the capitalization of the said expenditure is not allowed."*

26.2 that this claim is not maintainable as there is no provision in the Regulation for grant of such claim. That the date of commercial operation of this gas power station is 01.12.1990 and the useful life of 15 years of this station has not expired, hence this expenditure cannot be claimed and has been rightly rejected by the Commission.

26.3 that as held by this Tribunal vide judgment dated 8.5.2015 in Appeal No.129 of 2012 such an expenditure cannot be allowed.

**27. Our Submissions and Consideration on this Issue:**

27.1 The Appellant has undertaken the renovation of GT Cooling Towers as part of the Renovation and Modernization Scheme and cannot possibly be treated as a part of O&M expenditure.

27.2 The expenditure was claimed on the ground that the structure of all Gas Turbine Cooling Towers and fills were wooden and over the period of operation, performance and strength of cooling towers had been reduced. Thus, renovation of cooling tower has sustained the performance of lube oil system and turbine cooling air system and in turn performance of the Gas Turbine.

27.3 According to the submissions, the units of Auraiya Gas Turbine Stations were commissioned during the period October, 1990 to December, 1990. As per the contention of the Appellant, the Central Electricity Authority approved

this work under R&M Scheme. The R&M work will be taken up after completion of the useful life of the Generating Station. The useful life of the Generating Station expires by the year 2015 as per the earlier decision of the Central Commission that the life span of the GT Stations is 15 years.

27.4 The expenditure was incurred in the year 2009-10 ie. The expenditure was incurred before the life span of the Gas Turbine stations and hence the renovation work comes under O&M and hence the expenditure cannot be claimed under R&M.

27.5 The relevant Clause of the Tariff Regulations, 2009 of Central Commission is as under:

*“(vi) In case of gas/liquid fuel based open/combined cycle thermal generating stations, any expenditure which has become necessary on renovation of gas turbines after 15 years of operation from its COD and the expenditure necessary due to obsolescence or non-availability of spares for successful and efficient operation of the stations.*

*Provided that any expenditure included in the R&M on consumable and cost of components and spares which is generally covered in the O&M expenses during the major overhaul of gas turbine shall be suitably deducted after due prudence from the R&M expenditure to be allowed.”*

27.6 Thus, the Central Commission rightly disallowed the expenditure on GT Stations.

27.7 The Petitioner has claimed expenditure for Rs.24.00 lakh during 2009-10 for the said asset and has submitted that as all the GTs have operated for more than 100000 EOH and the cooling tower performance has also deteriorated with reduced cooling effect. From the submissions of the Petitioner, it could not be ascertained as to the nature of work undertaken for renovation of Cooling Tower for GTs. Also, the Petitioner's submission linking the cooling tower performance to 100000 EOH of GTs cannot be appreciated. Since, expenditure associated with cooling towers is

generally in the nature of O&M expenses the capitalization of the said expenditure is not allowed.

27.8 Thus, the Central Commission has correctly ruled that the said expenditure is essential for successful and efficient operation of Generating Stations and the same cannot be covered by Regulation 9 (2) of the Tariff Regulations, 2009 and the nature of work has to be considered under O&M nature.

27.9 This Tribunal also in the earlier judgments has disallowed the expenditure of this nature in the judgment dated 8.5.2015 in Appeal No. 129 of 2012.

27.10 Thus, we affirm the decision of the Central Commission given in the Impugned Order.

28. **Issue No.5**: Disallowance of additional capital expenditure on installation of Evaporative Type of Inlet Air Cooling System amounting to Rs.576.00 lakh during 2012-13 (Appeal No.146 of 2013).

28.1 Learned Counsel for the Appellant has made the following submissions on this issue:

28.2 That the Central Commission erred in disallowing the expenditure towards installation of Evaporative type of Inlet air Cooling System amounting to Rs.576.00 lakh during 2012-13 on the ground that the benefit of improvement in efficiency of the generating station is to be retained by the Generator and the benefit of improvement in efficiency is not passed on to the beneficiaries. The Central Commission has failed to appreciate that the expenditure claimed is covered by Regulation 9(2) (vi) of the Tariff Regulations, 2009.

28.3 That the Central Commission has totally misdirected itself in regard to the nature of expenditure incurred. The installation of Evaporative Type of Inlet Air Cooling System is not a nature or type which makes any value addition to the plant capacity over and above the specification of the plant

already considered. The Central Commission has increased the target availability to 85%. The Station Output reduces during peak summer when ambient temperature touches 43 to 45 degree centigrade. Installation of Evaporating type of inlet air cooling system is envisaged to sustain the availability and achieving the target set by the Central Commission. Thus, the expenditure is to maintain the performance level of the machine and not to derive any unintended benefit to NTPC.

28.4 That the Central Commission has failed to appreciate that the issue of higher performance giving benefit to the NTPC would arise only in the event of equipment or system being installed which increases the generation of electricity beyond those envisaged in the plant or reduces the cost substantially in the use of material. The installation of above asset is only to sustain the performance at the norms set by the Central Commission. There is, therefore, no question of any additional performance of the plant giving benefit to NTPC which was not envisaged at the time of installation of the plant. Consequently, there is no extra benefit available additionally for NTPC to pass on the same to the beneficiaries.

29. Per Contra, the following are the submissions made by Shri R B Sharma, the learned Counsel for the Respondent No.7:

29.1 That the additional capitalization of Rs.576 lakhs towards installation of Evaporative type of inlet air cooling system during the FY 2012-13 that the claim of the Appellant was disallowed by the Commission, the Appellant was not prepared to share the gains of efficiency with the beneficiaries.

29.2 The relevant part of the Impugned Order is quoted below:

*"36. The Petitioner has claimed expenditure of Rs.178.00 lakh during 2009-10 and Rs.8.00 lakh during 2010-11 towards installation of Online Compressor Cleaning System and Rs.576.00 lakh during 2012-13 for Evaporative type of inlet air cooling system. The Petitioner has submitted that these assets are required for improvement of the availability of the generating station in order to*

*achieve the Normative Annual Plant Availability norms specified by the Commission for the period 2009-14 under the 2009 Tariff Regulations. Apart from the increase in the availability by installation of Online Compressor cleaning system and Evaporative system, the performance of GTs would also improve. However, the benefit of such improvement in efficiency of the generating station is to be retained by the Generator. Hence, we are of the view that It would not be prudent to allow such expenditure, in the absence of any commitment by the Petitioner to pass on the benefits of improvement in efficiency to the beneficiaries. The expenditures claimed are disallowed on this count.*

29.3 The Appellant by raising the claim on this account, is seeking double benefit as may be noted from the above para of the Impugned Order. The Appellant intends to pass on the additional capital expenditure to the beneficiaries and also enjoys the fruits of the improvement in the availability of the Generating Stations which is norm basis. Thus, the Commission has dealt the issue in an equitable manner.

30. Mr. Pradeep Mishra, learned Counsel for the Respondent No.2 (UP Power Corporation) has made the following submissions:

30.1 That there is no provision in the Regulations for capitalization of such assets. Besides this, there is no change in law under which it was claimed. The beneficiaries will not get any benefit out of this asset hence the same cannot be capitalized for the purpose of tariff.

31. **Our Submissions and Consideration on this Issue:**

31.1 The contention of the Appellant is that the installation of Evaporative Type of inlet air cooling system is envisaged to sustain the availability and achieve the target set by the Central Commission. Further, the Appellant stated that the Central Commission has increased the target availability to 85% and stated that the station output reduces during peak summer when ambient temperature touches 43 to 45 degree centigrade. Thus, the expenditure in installation of the system is to maintain the performance level of the machine.

31.2 The findings of the central Commission with respect to Evaporative Type of Inlet Air Cooling System in the Impugned Order are as under:

*“36. The Petitioner has claimed expenditure of Rs.178.00 lakh during 2009-10 and Rs.8.00 lakh during 2010-11 towards installation of Online Compressor Cleaning System and Rs.576.00 lakh during 2012-13 for Evaporative type of inlet air cooling system. The Petitioner has submitted that these assets are required for improvement of the availability of the generating station in order to achieve the Normative Annual Plant Availability norms specified by the Commission for the period 2009-14 under the 2009 Tariff Regulations. Apart from the increase in the availability by installation of Online Compressor cleaning system and Evaporative system, the performance of GTs would also improve. However, the benefit of such improvement in efficiency of the generating station is to be retained by the Generator. Hence, we are of the view that It would not be prudent to allow such expenditure, in the absence of any commitment by the Petitioner to pass on the benefits of improvement in efficiency to the beneficiaries. The expenditures claimed are disallowed on this count.*

31.3 Thus, the Central Commission has disallowed the expenditure on account of installation of online compressor cleaning system and evaporative type of inlet air cooling system as there is no commitment on part of the Appellant to pass on the benefit of the improvement in efficiency to the beneficiaries.

31.4 This Tribunal has discussed a similar issue in Appeal Nos. 70 and 71 of 2012 dated 25.10.2013 and disallowed the expenditure on installation of inlet air cooling system.

31.5 Therefore, we affirm the decision of the Central Commission taken in the Impugned Order in disallowing the expenditure of Rs.576 lakhs.

31.6 Thus, this issue is decided against the Appellant.

32. **Issue No.6: Disallowance of Capital Expenditure towards laying of Rails in Transformer Yard amounting to Rs.60 lakh during FY 2011-12 (Appeal No.146 of 2013).**



- 32.1 Learned Counsel for the Appellant has made the following submissions on this issue:
- 32.2 That the Central Commission erred in disallowing the capital expenditure of Rs.60.00 lakh during 2011-12 towards laying of rails in transformer yard for the purpose of maintenance by holding that the asset is required for ease of maintenance and reduce the down time for maintenance therefore, the expenditure should be borne by the Petitioner from the O&M expenses allowed to the generating station. The Generator transformers are critical for unit availability. The outage/non availability directly results into unit shutdown and eventually leads to loss in generation. In case of failure/breakdown of any transformer, replacement/maintenance of transformer is urgently required to reduce the downtime of unit. Without availability of rails in transformer yard, shifting/transportation of transformers in transformer yard is difficult and maintenance/replacement activities take longer time. Keeping in view the above and critical application of transformer for unit availability and to meet exigency, rails in transformer yard are required. The above expenditure has been approved by the CEA as a part of the Renovation and Modernization Scheme and cannot therefore, be possibly treated as a part of O&M expenditure.
- 32.3 That the Central Commission has failed to appreciate that the expenditure towards laying of rails in transformer yard for the purpose of maintenance was approved by none other than the Central Electricity Authority after appropriate due diligence and therefore, the same cannot be treated either as expenditure of O&M nature or the nature of work undertaken unnecessarily when it was not required.
- 32.4 That the Central Commission has failed to appreciate that the expenditure towards laying of rails in transformer yard for the purpose of maintenance is of enduring nature and cannot therefore be treated as revenue expenditure covering day to day and maintenance expenses.

33. Per Contra, the following are the submission made by Shri R B Sharma, the learned Counsel for the Respondent 7:

33.1 that the Commission has disallowed the additional capitalization towards laying of rails in the Transformer Yard amounting to Rs.60 lakhs during 2011-12. The works of this nature are undertaken in the O&M expenses. The relevant para of the Impugned Order dated 23.5.2012 in Petition No.270 of 2009 rejecting the claim is quoted as below:

*“Laying of rails in Transformer Yard*

37. The Petitioner has claimed expenditure of Rs.60.00 lakh during 2011-12 towards the laying of rails in transformer yard for the purpose of maintenance. The Petitioner has submitted that the said item/work would further reduce the downtime for maintenance of transformers which in turn would improve the availability of the Generating Station. As the asset is required for ease of maintenance and reduce the downtime for maintenance of transformers, we are of the view that the expenditure should be borne by the Petitioner from the O&M expenses allowed to the Generating Station. Hence, the claim of the Petitioner on this count is not allowed for capitalization.”

34. Mr. Pradeep Mishra, learned Counsel for the Respondent No.2 (UP Power Corporation) has made the following submissions:

34.1 That there is no provision in the Regulations for capitalization of such assets. Besides this, there is no change in law under which it was claimed. The above work comes under O&M expenses allowed to the Generating Stations and hence it should be borne by the Appellant/Petitioner. Further, the beneficiaries will not get any benefit out of this asset and hence, the same cannot be capitalized for the purpose of tariff.

35. Our Submissions and Consideration on this issue:

35.1 that the Appellant has submitted that the Central Commission erred in disallowing the expenditure towards laying of rails in Transformer Yard for the purpose of maintenance by holding that the asset is required for ease of maintenance and reduce the down time for maintenance of transformers

and transformers are critical for the unit availability. The outage/non availability directly results into unit shut down and eventually leads to loss in generation.

35.2 In case of failure/brake down in transformer, replacement/maintenance of transformer is urgently required to reduce the downtime.

35.3 Though the Appellant claimed the expenditure under addition capitalization, laying of rails in the Transformer Yard is for ease of maintenance during failure of the power transformer in the Generating Stations. The replacement of failed transformer etc., comes under Operation and Maintenance Works. For easing, replacement of the failed transformer laying of rails in transformer yards is part of the O&M work and the expenditure cannot be treated additional capitalization and cannot be loaded in the tariff order of the Generating Stations.

35.4 The relevant part of the order of the Central Commission is as under:

“37. The Petitioner has claimed expenditure of Rs.60.00 lakh during 2011-12 towards the laying of rails in transformer yard for the purpose of maintenance. The Petitioner has submitted that the said item/work would further reduce the downtime for maintenance of transformers which in turn would improve the availability of the generating station. As the asset is required for ease of maintenance and reduce the downtime for maintenance of transformers, we are of the view that the expenditure should be borne by the Petitioner form the O&M expenses allowed to the generating station. Hence, the claims of the Petitioner on this count is not allowed for capitalization.”

35.5 Thus, we affirm the order of the Central Commission in the impugned order and reject the plea of the Appellant on this issue.

35.6 Thus, the issue is decided against the Appellant considering the laying of rails under O&M expenses allowed to the Generating stations.

**36. Issue No.7 and Issue No.8: Disallowance of the Capital Expenditure towards procurement of additional Excitation Transformer amounting to Rs.29 lakh during FY 2011-12 and disallowance of Capital Expenditure**

towards procurement of One Generator Rotor each for Gas Turbine and Steam Turbine amount to Rs.3241 lakh during FY 2013-14 (Appeal No. 146 of 2013).

36.1 Since Issue No. 7 and Issue No. 8 in Appeal No. 146 of 2013 are similar and identical in nature, these issues are being taken up together.

36.2 Learned Counsel for the Appellant has made the following submissions on this issue:

36.3 that the Central Commission has erred in disallowing the expenditure towards procurement of additional Excitation Transformer amount to Rs. 29 lakh during 2011-12 on the ground that asset is in the nature of spare, without considering the necessity of the asset to meet the emergency situation for the uninterrupted generation of the electricity.

36.4 That the Central Commission has failed to appreciate that the expenditure claimed is covered by Regulation 9(2) (vi) of the Tariff Regulations, 2009. The Central Commission has failed to appreciate that in view of the increase in the life of the Gas Station from 15 years to 25 years, the additional excitation transformer is essential for sustained operation of the station. The excitation transformer is critical for unit availability. The outage/non availability will directly result into unit shutdown and lead to loss in generation. One number of spare Excitation Transformer is required to sustain availability and reduce downtime. Therefore, the procurement of a spare excitation transformer is vital for the sustained operation generation station.

36.5 That the Central Commission has failed to appreciate that the Excitation Transformer had been in operation in Auriaya Station for more than 20 years and found to be affected due to ageing and fatigue, which may lead to failure of Transformer. Due to sudden outage of the Transformer, repair and restoration time will be too high. Accordingly, in order to avoid the loss of generation over a period of time, it was necessary to procure one spare Transformer and keep the same in stock. There is, therefore, full

justification for procurement of one spare Excitation Transformer as claimed by NTPC.

36.6 That the Central Commission has erred in disallowing the expenditure towards procurement of Generator Rotor for Gas Turbine and Steam Turbine on the ground that asset is in the nature of spare, without considering the necessity of the asset to meet the emergency situation for the uninterrupted generation of the electricity.

36.7 That the Central Commission has failed to appreciate that the expenditure claimed is covered by Regulation 9(2) (vi) of the Tariff Regulations, 2009. The Central Commission has failed to appreciate that in view of the increase in the life of the Gas Station from 15 years to 25 years, the additional Generator Rotor for Gas Turbine & Steam Turbine were essential for sustained operation of the Station. The Generator Rotor is critical for unit availability. The outage/non availability directly results into unit shutdown and lead to loss in generation. One number of spare gas turbine Generator Rotor and one number of Steam Turbine Generator Rotor are required to sustain availability and reduce downtime. Therefore, the procurement of above equipment is vital for sustained generation. Keeping in view the above and the long lead time in delivery of new generator rotor and critical application and to meet any exigency, one number of spare gas turbine Generator Rotor and one number of steam Turbine Generator rotor are to be necessarily procured.

37. Per Contra, the following are the submissions made by Shri R B Sharma, the learned Counsel for the Respondent 7:

37.1 That the Appellant has alleged that the Commission did not allow the additional expenditure of Rs. 29 lakhs during 2011-12 towards procurement of additional Excitation Transformer. The claim of the Appellant was disallowed by the Commission as the assets are in the nature of spares and the same are not to be allowed.

- 37.2 That the Spares are allowed to be capitalized only up to cut-off date when the Regulations 9 (1 (iv) of the Tariff Regulations, 2009 within the overall ceiling norms prescribed under Regulations-8. The Commission had rightly rejected the claim as the claim does not fall within the cut off date.
- 37.3 That the Appellant has not even identified any Regulation under which the claim has been made.
- 37.4 Thus, the contention of the Appellant on this issue is without any merit and the Commission has rightly rejected its alleged claim.

**38. Mr. Pradeep Mishra, Learned Counsel for the Respondent No. 2 (UP Power Corporation) has made the following submissions:**

38.1 That there is a provision in the Regulations for capitalization of such assets. Besides this, there is no change in law under which it was claimed. The beneficiaries will not get any benefit out of these assets. Hence, the same cannot be capitalized for the purpose of tariff.

**39. Our Submissions and Considerations on this issue.**

- 39.1 According to Regulations 7(1) (b) of Tariff Regulations of the Central Commission, 2009, the capitalization of initial spares is subject to ceiling rates as specified in Regulation 8.
- 39.2 According to Regulation 8 initial spares shall be capitalized as a percentage of the original project cost subject to following ceiling norms. As per Regulation 8 (ii) Gas Turbine/Combine Cycle Thermal Generating Stations 4% of the original project cost of initial spares are allowed. Thus, the expenditure on spares within the cut off date can be admitted whereas this expenditure was incurred during FY 2011-12 i.e. after the cut off date. Similarly, with respect to expenditure pertaining to procurement of one Generator Rotor each for GT and ST during the FY 2013-14 as a spare cannot be allowed after the cut off date.
- 39.3 Further, this Tribunal, in its judgment dated 8.5.2014 in Appeal No.173 of 2014 affirmed the decision of the Central Commission regarding disallowance

of capital expenditure towards purchase of spare generator transformer.  
The relevant portion of the judgment is quoted below:

*“22. This Appellate Tribunal while interpreting the Regulation 9 of the Tariff Regulations, 2009 in its judgment dated 11<sup>th</sup> April, 2014 in Appeal No.188 of 2013 titled NTPC Limited Vs Central Electricity Regulatory Commission & Ors has held as under:*

*“The Appellant cannot legally question or challenge the interpretation of Regulation 7 & 9 of the Tariff Regulations, 2009 which has already been settled or answered by this Appellate Tribunal vide judgment dated 27.01.2014 in Appeal No.44 of 2013. This Tribunal in its judgment dated 27.01.2014 has clearly observed that additional capitalization has to be allowed only according to Regulation 9 of Tariff Regulations, 2009 which will apply to both existing and new power projects. We also affirm the same view of this Tribunal as recorded in our judgment dated 27.01.2014 in Appeal No.44 of 2012”.*

39.4 Thus, this Tribunal in various judgments disallowed the plea of the Appellant NTPC pertaining to capitalization of spares and similar order was issued by this Tribunal in the judgment dated 11.4.2014 in Appeal No.188 of 2013 wherein the plea of the Appellant has been rejected towards capitalization of spares.

39.5 The Central Commission has rightly disallowed the expenditure incurred on these items and relevant part of the impugned order is given as under:

*“38. The Petitioner has claimed expenditure of Rs.2900 lakh during 2011-12 towards procurement of additional Excitation Transformer and Rs.3241.00 lakh during 2013-14 for procurement of one Generator Rotor each for GT and ST. The Petition in its justification has submitted that there is no standby Excitation Transformer and Rotors in order to meet any emergency situation for sustenance of availability. As the assets claimed are in the nature of spares, the same is not allowed to be capitalized.”*

39.6 This Tribunal in the judgment dated 11.4.2014 in Appeal No.188 of 2013 rejected the plea of the Appellant NTPC pertaining to capitalization of spares.

39.7 Thus, we find that the decision of the Central Commission in disallowing the spare Excitation Transformer and One Generator Rotor each for GT and ST is justified and the impugned order of the Commission is affirmed.

39.8 Hence, these two issues are **decided against the Appellant**.

40. **Issue No.9:** Disallowance of additional capital expenditure on installation of Online Wet Washing System and Online Compressor Efficiency Monitoring System for Rs.186 lakhs in FY 2009-10 and FY 2010-11 (Appeal No. 146 of 2013).

41. Learned Counsel for the Appellant has made the following submissions on this issue:

41.1 That the Central Commission has erred in disallowing the capital expenditure towards installation of online wet washing system and online compressor efficiency monitoring system. The Central Commission failed to consider that the compressor efficiency is reduced substantially due to deposition of dust on compressor blades and vanes and are to be cleaned from time to time. Installation of online wet washing system and online compressor efficiency monitoring system for compressor is required to improve the availability of power from the generating station.

41.2 That the Central Commission has failed to appreciate that the expenditure claimed is covered by Regulation 9(2) (vi) of the Tariff Regulations, 2009. The Central Commission has failed to appreciate that in view of the increase in the life of the Gas Station from 15 years to 25 years, the installation of online wet washing system was essential for sustained operation of the Station. Compressor efficiency reduces substantially due to compressor fouling because of deposition of dust/ambient pollutant on compressor blades and diaphragms. For cleaning of deposition, originally offline washing was the only method at station, which required outage of turbine for 2 to 3 days. Installation of compressor online washing system has enabled the station to decrease the frequency of offline washing of



compressors. From online washing, station is able to maintain the compressor performance within the required limits. By online washing, site has minimized the loss of output due to compressor fouling and able to maintain the target of DC and 85% set by the Commission.

42. **Per Contra**, the submissions made by Shri R.B. Sharma, the **Learned Counsel for the Respondent Nos. 7** are similar to the contentions specified in Appeal No. 122 of 2013 with regard to online Compressor Cleaning System.

43. **Similarly**, Mr. Pradeep Mishra, Learned Counsel for the **Respondent No. 2 (UP Power Corporation)** has expressed similar views as mentioned in Appeal No. 122 of 2013 under issue No.1 above.

43.1 Thus, the Counsels for the Respondents have submitted that the claim of the Appellant on the above issue is not justified.

44. **Our Submissions and Consideration on this issue:**

44.1 We have explained the views on the Cleaning System to improve the availability of Power from the Generating Stations in respect of online Compressor Cleaning System **discussed in Issue No.1 at Para -12 above.**

44.2 Accordingly, we reject the claim on Online Compressor Efficiency Monitoring System.

44.3 Accordingly, we affirm the order of the Central Commission on this issue and the claim of the Appellant is disallowed.

44.4 Accordingly, **this issue is decided against the Appellant.**

**ORDER**

45. In view of the above, we do not find any illegality or perversity in the findings recorded in the Impugned Order of the Central Commission on the issues (i), (ii), (iv) (v), (vi), (vii) (viii) and (ix) pertaining to Appeal No.122 of 2013 and Appeal No.146 of 2013 and approve the same. Consequently, these issues are decided against the Appellant.
46. The issues pertaining to issue No.(iii) in Appeal Nos. 136 of 2013 and Issue No.(x) in Appeal No.146 of 2013 are decided in favour of the Appellant and hence these issues are remanded back to Central Commission for re-consideration.
47. No order as to costs.
48. Pronounced in the Open Court on this 7<sup>th</sup> day of Dec, 2015.

(T Munikrishnaiah)  
Technical Member

(Mrs Justice Ranjana P Desai)  
Chairperson

/ REPORTABLE/NON-REPORTABLE