

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 32/RP/2017

in

Petition No.325/GT/2014

Coram:

Shri P.K.Pujari, Chairperson

Dr.M.K. Iyer, Member

Date of Order:19thFebruary, 2019

In the matter of

Review of Commission's order dated 10.4.2017 in Petition No. 325/GT/2014 regarding determination of tariff of Jhanor Gandhar GPS (657.39 MW) for the period from 1.4.2014 to 31.3.2019.

And

In the matter of

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

...Review Petitioner

Vs

1. Madhya Pradesh Power Management Company Limited
Shakti Bhawan, Vidhyut Nagar,
Jabalpur- 482008
2. Maharashtra State Electricity Distribution Company Limited,
Prakashgad, Bandra (East),
Mumbai - 400051
3. Gujarat Urja Vikas Nigam Limited,
Vidyut Bhawan, Race Course,
Vadodara - 390007
4. Chhattisgarh State Power Distribution Company Limited,
P.O. Sundar Nagar, Danganiya,
Raipur - 492013
5. Electricity Department,
Vidyut Bhawan,
Panaji, Goa



6. Electricity Department,
Administration of Daman and Diu
Daman - 396210

7. Electricity Department,
Administration of Dadra and Nagar Haveli,
Silvasa...**Respondents**

Parties present:

Shri Shyam Kumar, NTPC
Shri Manish Jain, NTPC

ORDER

The Petitioner, NTPC has filed this Review Petition seeking review of the Commission's order dated 10.4.2017 in Petition No. 325/GT/2014, whereby the Commission had determined the tariff of JhanorGandhar Gas Power Station (657.39 MW) (hereinafter referred to as "the generating station") for the period from 1.4.2014 to 31.3.2019 in terms of the CERC (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter "the 2014 Regulations"). The annual fixed charges determined by order dated 10.4.2017 is as under:

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3429.42	3944.26	4347.88	4600.57	4600.57
Interest on Loan	1424.87	2064.86	2395.71	2009.78	1531.19
Return on Equity	24471.34	25224.88	25772.07	25871.99	25871.99
Interest on Working Capital	5335.90	5436.48	5504.27	5555.43	5599.84
O&M Expenses	10180.19	10784.99	11429.23	12112.92	12842.62
Total	44841.72	47455.46	49449.16	50150.69	50446.22

2. Aggrieved by the said order dated 10.4.2017, the Petitioner has sought review on the ground of error apparent on the face of the order on the following issues:

- (a) *Calculation of weighted average balance useful life of the station;*
- (b) *Un serviced Capital expenditure against partial R&M of GT-1 in 2012-13 and 2013-14;*
- (c) *Deduction of amount against Capital Spares from the admitted additional capitalization against R&M of GT-1 and GT-2 in 2014-19; and*
- (d) *Adjustment of Cumulative depreciation on account of De-Capitalization*



3. By interim order dated 15.1.2018, the Commission admitted the Review Petition on the above issues and notice was issued to the Respondents with directions to complete pleadings in the matter. Replies to the petition have been filed by the Respondents, MPPMCL (affidavit dated 1.2.2018) and MSEDCL (affidavit dated 22.2.2018) and the Petitioner vide affidavits dated 7.2.2018 and 13.3.2018 has filed its rejoinders to the replies of MPPMCL and MSEDCL respectively.

4. Thereafter, the matter was heard on 16.10.2018 and the Commission, after hearing the Petitioner reserved its order in the Petition. None appeared on behalf of the Respondents. Based on the submissions of the parties and the documents available on record, we proceed to examine the reliefs prayed for by the Petitioner as stated in the subsequent paragraphs.

Calculation of weighted average balance useful life of the station

5. The Commission in order dated 10.4.2017 has computed the weighted average balance life of the generating station as on 1.4.2015 as under:

Description	Capacity MW	COD	Balance life as on 1.4.2014	Life after extension of 10 years of GT 3	Life after extension of 10 years of GT 2	Life after extension of 10 years of GT 1
GT-1	144.30	1.3.1995	5.90	5.90	4.90	13.90
GT-2	144.30	1.7.1995	6.24	6.24	15.24	14.24
GT-3	144.30	1.3.1995	5.90	15.90	14.90	13.90
ST	224.49	1.11.1995	6.58	6.58	6.58	6.58
Total	656.20	Weighted Average life	6.21	8.40	9.94	11.47

6. The Petitioner in this petition has submitted that there is typographical error in the calculation of weighted average balance useful life of the generating station since the life of ST has been left unchanged as on 1.4.2014, 1.4.2015 & 1.4.2016. The Petitioner has further stated that all necessary adjustments have been made for



all GTs based on the date of capitalization and R&M works. Accordingly, the Petitioner has prayed that the error in the order may be corrected.

7. The Respondent, MSEDCL has submitted that the Commission may rectify the balance life of ST in terms of the Regulations after prudence check. In response, the Petitioner has submitted that there was a typographical error as regards the calculation of weighted average balance useful life of the generating station as life of ST during the tariff period has been left unchanged. Accordingly, the Petitioner has submitted that the error may be corrected and review be allowed.

Analysis and decision

8. The matter has been considered. It is observed that there is an inadvertent typographical error in the calculation of weighted average balance useful life of the generating station on account of non-reduction of balance useful life of ST in the succeeding years of 2014-15 and 2015-16, after calculating the balance life as on 1.4.2014. This, according to us is an error apparent on the face of order and the same is rectified through this order. Accordingly, table under para 52 of order dated 10.4.2017 stands modified as under:

Description	Capacity MW	COD	Elapsed life as on 31.3.2014	Balance life as on 1.4.2014	Balance life after extension of 10 years as on 1.4.2014	Balance life after extension of 10 years as on 1.4.2015	Balance life after extension of 10 years as on 1.4.2016
GT-1	144.3	1.3.1995	19.1	5.9	5.9	14.9	13.9
GT-2	144.3	1.7.1995	18.76	6.24	6.24	5.24	14.24
GT-3	144.3	1.3.1995	19.1	5.9	15.9	14.9	13.9
ST	224.49	1.11.1995	18.43	6.58	6.58	5.58	4.58
Total	657.39	Weighted Average life	18.8	6.21	8.4	9.6	10.79

9. Consequent upon the above, para 53 of order dated 10.4.2017 is revised as under:



“53. The balance life of the generating station is 8.40 years as on 1.4.2014, 9.60 years as on 1.4.2015 and 10.79 years as on 1.4.2016. Accordingly, balance useful life of the generating station with effect from 1.4.2014 is as under:

(in years)

2014-15	2015-16	2016-17	2017-18	2018-19
8.40	9.60	10.79	9.79	8.79

Un-serviced Capital expenditure against partial R&M of GT-1 in 2012-13 and 2013-14

10. The Petitioner in this Petition has submitted that the Commission in its order dated 10.4.2017 had not considered the expenditure of ₹5554.87 lakh (₹5440.00lakh in 2012-13 and ₹114.00 lakh in 2013-14) incurred towards partial R&M of GT-1 on the ground that the R&M works were not completed during the period 2009-14 and had accordingly deferred the expenditure already incurred in GT-1 with the execution of remaining R&M work of GT-1 & GT-2 (along with the pending R&M works of rotor refurbishment of GT-3) for consideration during the period 2014-19, after the same are put to use. The Petitioner has further submitted that the deferred expenditure against partial R&M of GT-1 incurred during the period 2009-14 has also not been allowed during the period 2014-19. The Petitioner has pointed out that the Commission has not considered the fact that the amount of ₹4939 lakh (as indicated in the tables under para 12 & 35 of order dated 10.4.2017) was claimed by the Petitioner for reconditioning of GT-3 in the year 2016-17. Accordingly, the Petitioner has submitted that there is error apparent on the face of record and the same may be corrected.

11. The Respondent, MPPMCL vide affidavit dated 22.2.2018 has submitted that the additional capital expenditure approved during the period 2009-14 and capitalized upto 31.3.2014 may not be allowed. It has also submitted that in respect of additional capital expenditure approved during the period 2009-14 but not



capitalized upto 31.3.2014, the Commission may consider the same, after prudence check.

12. In response, the Petitioner has submitted that the deferred expenditure amounting to ₹5554.87 lakh (₹5440.00 lakh in 2012-13 and ₹114.00 lakh in 2013-14) towards partial R&M of GT-1 incurred during the period 2009-14 has not been included in the period 2014-19. Accordingly, the Petitioner has prayed that the said capital expenditure incurred during 2014-15 may be allowed as R&M was completed during this year.

Analysis & decision

13. The matter has been examined. The Commission in para 27 of order dated 30.3.2017 in Petition No. 326/GT/2014 (truing up of tariff for 2009-14) had observed that R&M expenses of GT-1 & GT-2 actually incurred by the Petitioner during the period 2009-14 can only be considered during the next tariff period (2014-19), as the remaining work of GT-1 and GT-2 along with rotor refurbishment of GT-3 is to be completed during 2014-19. It is observed that the said directions of the Commission was in line with the Appellate Tribunal's judgment dated 5.10.2015 in Appeal No. 319 of 2013, wherein the Tribunal had upheld the findings of the Commission for consideration of R&M during the period 2014-19 as the R&M works were not completed during the period 2009-14. The relevant extract of order dated 30.3.2017 in Petition No. 326/GT/2014 is extracted as under:

"27. From the revised phasing of expenditure projected by the petitioner, it is observed that the expenditure towards R&M of GT-3 along with ST is to be considered from the year 2013-14 onwards only, as the R&M of GT-3 has been completed in 2013-14. Accordingly in line with the judgment of the Tribunal (as quoted above) we are of the view that the expenditure on R&M package towards GT-3 along with ST should be considered during the 2013-14. Accordingly, the R&M expenses of GT-3 and ST as claimed by the petitioner in 2013-14 is allowed. However considering the remaining work of GT-1 and GT-2 along with rotor refurbishment of GT-3 will be completed during the period 2014-19 and the same shall be considered at the time of determination of tariff for the period 2014-19 in terms of the 2014 Tariff Regulations."



14. It is noticed that in the original petition , the petitioner had claimed ₹4939 lakh in 2016-17 for reconditioning of GT-3. However, the said amount had been inadvertently considered against GT-1. This is an error apparent in the order and deserves to be allowed in Review.

15. The break-up of the expenses related to R&M of GT-1 amounting to ₹5554.87 lakh which was not considered during the period 2009-14 is as under:

(₹ in lakh)

Work claimed by the Petitioner	2012-13	2013-14	Total
R&M of Gas Turbine (HGC Components) for GT-1	1660.37	0	1660.37
GT Rotor Refurbishment for GT-1	3780.17	0	3780.17
Renovation of battery bank for main plant and PLCC for GT-1	0	114.33	114.33
Total			5554.87

16. Accordingly, the expenditure of ₹5554.87 lakh towards R&M for GT-1 is required to be allowed since the said work was completed during the year 2014-15.

17. The Petitioner has also submitted that the deferred expenditure against partial R&M of GT-1 incurred during the period 2009-14 was also not allowed during 2014-19. It is noted that the Commission had already allowed ₹4939 lakh in 2016-17 in the order dated 10.4.2017 towards the reconditioning of Rotor for GT-1. On perusal of the submissions made by the Petitioner in Form-9A of the original tariff petition, we notice that as against the expenditure of ₹4939 lakh, the Petitioner has only indicated "Reconditioning of Rotor" without any reference to GT1 or GT2 or GT3. Accordingly, the Commission had considered the expenditure of ₹4939 lakh in 2016-17 against GT-1 since similar expenditure was claimed by the Petitioner for GT-1 in 2012-13 in Petition No. 326/GT/2014 and the same was deferred for consideration during the period 2014-19 due to non-completion of R&M of GT-1 & GT-2 during 2009-14. The Petitioner has however clarified that the expenditure of ₹4939 lakh corresponds to GT-3 and not to GT-1. In view of the above, the



expenditure of ₹4939 lakh is allowed towards reconditioning of rotor for GT-1 for the period 2016-17.

18. Based on the above, the projected additional capital expenditure allowed for the period 2014-19 as mentioned at Para 35 of order dated 10.4.2017 stands revised as under:

(₹ in lakh)

Name of work/ equipment	2014-15	2015-16	2016-17	2017-18
R&M Scheme (Capitalisation)				
R&M- Gas Turbine (HGP Components) GT1	13065.70	-	-	-
R&M of Gas Turbine (HGC Components) for GT-1	1660.37	-	-	-
Renovation of battery bank for main plant and PLCC for GT-1	181.33	-	-	-
Upgrading of Generation Relay Panel with numerical control relays GT 1	39.60	-	-	-
Generator Excitation System GT1	32.80	-	-	-
Replacement of EA Bus l/o & Control Module in GT 1	60.60	-	-	-
Replacement of vibration monitoring, speed measuring & turbine supervisory instt. System for GT's & ST	319.00	-	-	-
Rotor Refurbishment for GT-1	3780.17	-	-	-
Total (R&M) GT 1	19139.57	0.00	0.00	0.00
R&M -Gas Turbine (HGP Components) GT 2	-	20898.60	-	-
Reconditioning of Rotor (GT 2)	-	4409.90	-	-
Upgrading of Generation Relay Panel with numerical control relays GT 2	-	39.60	-	-
Generator Excitation System GT2	-	32.80	-	-
Replacement of EA Bus l/o & Control Module in GT 2	-	60.60	-	-
Total (R&M) GT 2	0.00	25441.50	0.00	0.00
Reconditioning of Rotor (GT 3)	-	-	4939.00	-
Total (R&M) GT 3	0.00	0.00	4939.00	0.00
R&M -Gas Turbine (HGP Components) GT 1	(-)3024.44	-	-	-
Renovation of battery Bank for main plant and PLCC	(-)23.07	-	-	-



Name of work/ equipment	2014-15	2015-16	2016-17	2017-18
Upgrading of Generation Relay Panel with numerical control relays GT 1	(-)60.17	-	-	-
Generator Excitation System GT1	(-)27.14	-	-	-
Replacement of EA Bus l/o & Control Module in GT 1	(-)59.93	-	-	-
Replacement of vibration monitoring, speed measuring & turbine supervisory instt. System for GT's & ST	(-)271.07	-	-	-
Reconditioning of Rotor GT 1	-	-	(-)1024.03	-
De-capitalization adjustment as per order dated 30.3.2017 in Petition No. 326/GT/2014	(-)1808.96	-	(-)534.48	-
Total De-capitalization (GT 1)	(-)5274.78	0.00	1558.51	0.00
R&M -Gas Turbine (HGP Components) GT 2	-	(-)4315.27	-	-
Reconditioning of Rotor (GT 2)	-	(-)1024.03	-	-
Upgrading of Generation Relay Panel with numerical control relays.	-	(-)60.17	-	-
Generator Excitation System GT2	-	(-)27.14	-	-
Replacement of EA Bus l/o & Control Module in GT (GT 2)	-	(-)59.93	-	-
De-capitalization adjustment as per order dated 30.3.2017 in Petition No. 326/GT/2014	-	(-)2863.65	-	-
Total De-capitalization(GT 2)	0.00	(-)8350.19	0.00	0.00
Deductions on account of capital spares	(-)1959.00	(-)1959.00	-	-
Inert Gas fire extinguishing system	0.00	0.00	0.00	0.00
Installation of Energy efficient LED street light main plant (PAT scheme)	0.00	0.00	0.00	0.00
Total Additional Capitalization	11905.79	15132.31	3380.49	-

Deduction of amount against Capital Spares from the admitted additional capitalization against R&M of GT-1 and GT-2 in 2014-19

19. As regards Capital spares, the Commission in order dated 10.4.2017 had decided as under:

“20. Since R&M on GTs are in the nature of major overhaul, suitable adjustment of capital spares which are included in the normative operation and maintenance (O&M)



*expenses is required. The quantum of capital spares included in O&M corresponding to major overhaul is to the tune of ₹5877.00 lakh (expenditure towards hot gas path components) and the same has been deducted from the additional capital expenditure for CEA approved R & M scheme. The Commission in order dated 30.3.2017 in Petition No. 326/GT/2014 has deducted capital spares of ₹1959 lakh corresponding to GT-3 on pro-rata basis. The Commission has further deducted capital spares of ₹1959 lakh (5877*1/3), corresponding to GT-1 and GT-2 in 2014-15 and 2015-16 respectively”*

20. The Petitioner in this petition has submitted that the deduction of ₹3912 lakh on account of cost of Capital spares from the total expenditure allowed for R&M of the GT-1 & GT-2 is incorrect. In justification of the same, the Petitioner has submitted that the cost of capital spares of GT-3 was deducted in order dated 30.3.2017 in Petition No. 326/GT/2014, wherein the capital spares form part of the normative O&M granted to the generating station. However, in terms of the 2014 Tariff Regulations, the cost of capital spares were to be computed separately and does not form part of normative O&M expenses. Accordingly, the Petitioner has submitted that while deduction had been allowed under normative O&M expenses under the 2009 Tariff Regulations, the provisions of the 2014 Tariff Regulations do not provide for inclusion of the cost of capital spares in the normative O&M expenses. Based on this, the Petitioner has submitted that there is error apparent on the face of the order dated 10.4.2017 and the same may be reviewed.

21. The Respondents, MPPMCL and MSEDCL have submitted that the Commission has rightly deducted the amount of ₹3912 lakh towards cost of capital spares, as the major portion of R&M of GT-1 & GT-2 was completed during the period 2009-14 in which the cost of capital spares was included in the normative O&M expenses. Accordingly, the Respondents have prayed that the prayer of the Petitioner may be rejected. In response, the Petitioner has clarified that the R&M works of GT-1 & GT-2 were completed during the years 2014-15 & 2015-16 respectively and in terms of the judgment of the Appellate Tribunal dated 25.2.2016 in Appeal No. 24/2015, the



Commission had approved expenses for R&M of GT-1 & GT-2 in 2014-19 after the same were put to use. Accordingly, the Petitioner has submitted that the contention of the Respondents may be rejected and order dated 10.4.2017 on this ground may be reviewed.

Analysis and decision

22. We have examined the submissions of the parties and perused the documents on record. It is observed that the Commission in order dated 30.12.2011 in Petition No. 226/2009 (approval of tariff of the generating station for 2009-14) had, based on a conscious decision, deducted ₹5877 lakh pertaining to capital spares which was included in the normative O&M expenses granted to the generating station. The relevant portion of the said order is extracted hereunder:

“40. The proposed expenditure on R&M of Gas Turbines involves the replacement of Hot Gas Path (HGP) components of Gas Turbines. The estimated expenditure during the different years is based on the revised R&M budget on 13.2.2007. It is observed that the petitioner intends to purchase one set each of HGP for all the turbines rows rotors blades, on the turbine vane rows, vane carriers, hot gas casings, exhaust casing, heat shield rows for rotor and stator etc. It is also noticed that the petitioner is procuring turbine rotor blades for rows 1, 2, 4 and 5 for GT-1 once again during 2011-12. Thus, it is evident that that the purchase of HGP components as proposed by petitioner, also includes certain capital spares which are to be used in future. Since the R&M on GTs would be in the nature of major overhaul, suitable adjustment of capital spares included in the normative Operation & Maintenance expense is required. The expenditure on capital spares included in O&M corresponding to major overhaul is to the tune of `5877.00 lakh. This capital expenditure, other than the expenditure on refurbishing of Gas Turbine rotors is covered under O&M expenses, which includes at least one major overhaul, for each Gas Turbine during the period 2009-14. In view of this, the expenditure for `5877.00 lakh is deducted from the additional capital expenditure allowed during 2009-14.

23. Further, in the Statement of Reasons for the 2009 Tariff Regulations, the Commission had stated the following:

“20.3 The Operation & Maintenance cost for the purpose of tariff covers expenditure incurred on the employees including gratuity, CPF medical, education allowances etc, repair and maintenance expenses including stores and consumables, consumption of capital spares not part of capital cost, security expenses, administrative expenses etc. of the generating stations, corporate expenses apportioned to each generating stations etc. but exclude the expenditure on fuel i.e. primary fuel as well as secondary and alternate fuels.”



24. Thus the deduction of said expense amounting to ₹3912 lakh was based on the provisions of the 2009 Tariff Regulations. However, under the 2014 Tariff Regulations, the expenditure on capital spares is allowed separately in terms of Regulation 29(2) based on the details furnished by the Petitioner.

25. Since, the Capital spares are no more part of normative O&M expenses during the period 2014-19 and the Petitioner has the opportunity to approach the Commission through the final truing up petition, we are of the view that the Petitioner may claim the expenditure on Capital spares, along with documentary evidence and justification at the time of final truing up.

Adjustment of Cumulative depreciation on account of De-Capitalization

26. The Petitioner in this Petition has submitted that the Commission in order dated 10.4.2017 had allowed depreciation adjustment of ₹4152.10 lakh, ₹6301.92 lakh and ₹1125.77 lakh for the years 2014-15, 2015-16 and 2016-17 respectively. Thus, the corresponding adjustment of decapitalization on cumulative depreciation should have been ₹4747.30 lakh, ₹7515.17 lakh and ₹1402.66 lakh for the said years. The Petitioner has therefore submitted that the Commission has erred in calculating depreciation for the said years and had adjusted only amounts of ₹4152.10 lakh, ₹6301.92 lakh and ₹1125.77 lakh during the respective years. Accordingly, the Petitioner has prayed that the error in calculation of depreciation may be rectified and review be allowed.

27. The Respondents, MPPMCL vide affidavit dated 1.2.2018 and MSEDCL vide affidavit dated 22.2.2018 have submitted that there is no provision for projected decapitalization under the 2014 Tariff Regulations and therefore the submission of the Petitioner deserves no merit for consideration. In response, the Petitioner has



submitted that in the original Petition, it had projected the expenditure on account of decapitalization against R&M of GT-1 & GT-2 on the basis of calculation and experience gained after the R&M of GT-3. The Petitioner has also pointed out that the Commission had adopted the philosophy of decapitalization against notional basis in terms of order dated 30.12.2011 in Petition No. 226/2009, considering the guidelines of Gas Turbine World handbook, 2009. The Petitioner has submitted that the former methodology is more appropriate in representing the expenditure for decapitalization. Accordingly, the Petitioner has prayed for consideration of the decapitalization amount claimed against R&M in place of notional decapitalization and for calculation of the adjustment of cumulative depreciation on account of the same.

Analysis and decision

28. The matter has been considered. The Commission in order dated 10.4.2017 had considered the adjustment of depreciation on account of decapitalization as under:

“23. Further, since the petitioner has not furnished any reconciliation of the each of de-capitalized assets as certified by the Auditor, and since no justification has been submitted for claiming the de-capitalization, we are inclined to consider the decapitalization value in line with the decision of the Commission in order dated 30.3.2017 in Petition No. 326/GT/2014.

*“24. Accordingly, the corresponding value of de-capitalization of R&M of GT plus GT refurbishment, as ₹24855.80 lakh (27775*55380.37/61884.54), on proportionate basis has been considered for the purpose of tariff. Hence, the de-capitalization amount has been considered for ₹5274.78 lakh for 2014-15, ₹8350.19 lakh for 2015-16 and ₹1558.51 lakh for 2016-17.”*

29. We have considered the submissions of the Petitioner. It is observed that while computing depreciation, certain linkage error has crept in the calculation and the same has an impact on cumulative depreciation adjustment and the depreciation amount allowed for the period 2014-19. This calculation error needs to be corrected. Accordingly, review on this count is allowed.



30. Based on the above discussions, the tariff of the generating station determined by order dated 10.4.2017 stands revised as stated in the subsequent paragraphs.

Capital Cost

31. The capital cost allowed in para 36 of the order dated 10.4.2017 is modified as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Opening Capital Cost	253004.95	264910.74	280043.05	283423.54	283423.54
Add: ACE	11905.79	15132.31	3380.49	0.00	0.00
Closing Capital Cost	264910.74	280043.05	283423.54	283423.54	283423.54
Average Capital Cost	258957.85	272476.90	281733.30	283423.54	283423.54

Return on Equity

32. Return on Equity allowed in para 43 of order dated 10.04.2017 is revised as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Notional Equity- Opening	123837.46	127409.20	131948.89	132963.04	132963.04
Addition of Equity due to ACE	3571.74	4539.69	1014.15	0.00	0.00
Normative Equity - Closing	127409.20	131948.89	132963.04	132963.04	132963.04
Average Normative Equity	125623.33	129679.04	132455.96	132963.04	132963.04
Return on Equity (Base Rate)	15.500%	15.500%	15.500%	15.500%	15.500%
Tax Rate for respective years	20.961%	21.342%	21.342%	21.342%	21.342%
Rate of Return on Equity (Pre Tax)	19.6100%	19.7050%	19.7050%	19.7050%	19.7050%
Return on Equity (Pre Tax)- Annualised	24634.73	25553.26	26100.45	26200.37	26200.37

Interest on loan

33. Interest on loan worked out and allowed in para 46 of order dated 10.4.2017 is revised as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Gross opening loan	129167.49	137501.54	148094.16	150460.50	150460.50
Cumulative repayment of loan upto previous year / period	114013.80	114048.40	112800.25	116795.34	122173.68



Net Loan Opening	15153.69	23453.15	35293.91	33665.16	28286.83
Addition due to ACE	8334.05	10592.62	2366.34	0.00	0.00
Repayment of loan during the year	3726.94	4596.98	5086.05	5378.33	5378.33
Less: Repayment adjustment on account of de-caps	3692.35	5845.13	1090.96	0.00	0.00
Add: Repayment adjustment on discharges corresponding to un-discharged liabilities deducted as on 1.4.2009	0.00	0.00	0.00	0.00	0.00
Net Repayment	34.60	-1248.15	3995.09	5378.33	5378.33
Net Loan Closing	23453.15	35293.91	33665.16	28286.83	22908.49
Average Loan	19303.42	29373.53	34479.54	30975.99	25597.66
Weighted Average Rate of Interest on Loan	8.1384%	7.9086%	7.5076%	6.8911%	6.2334%
Interest on Loan	1570.99	2323.03	2588.59	2134.59	1595.60

Depreciation

34. Depreciation allowed in para 58 of order dated 10.4.2017 is also revised as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Average Capital Cost	258957.85	272476.90	281733.30	283423.54	283423.54
Depreciable value @ 90%	229538.43	241705.57	250036.33	251557.55	251557.55
Remaining useful life at the beginning of the year	8.40	9.60	10.79	9.79	8.79
Balance depreciable value	31312.80	44116.26	54887.79	52663.72	47285.39
Depreciation (annualized)	3726.94	4596.98	5086.05	5378.33	5378.33
Cumulative depreciation at the end	201952.57	202186.29	200234.60	204272.16	209650.50
Less: Cumulative depreciation adjustment on account of de-caps	4363.26	7037.75	1340.77	0.00	0.00
Add: Cumulative depreciation adjusted on account of discharges out of un-discharged liabilities deducted as on 1.4.2009	0.00	0.00	0.00	0.00	0.00
Cumulative depreciation (at the end of the period)	197589.31	195148.54	198893.83	204272.16	209650.50

Receivables

35. The Receivable component in working capital under para 91 of the order is modified as under:



(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Variable Charges - for two months	18766.09	18817.82	18766.41	18766.41	18766.41
Fixed Charges - for two months	7577.12	8120.55	8456.26	8568.33	8607.29
Total	26343.21	26938.37	27222.67	27334.73	27373.69

Interest on Working Capital

36. Consequent on the above, the Interest on Working Capital allowed in para 95 of order is revised as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Fuel cost (APM, Non-APM and LNG) - 30 days	9383.05	9408.91	9383.20	9383.20	9383.20
Liquid fuel stock - 15 days	0.00	0.00	0.00	0.00	0.00
Maintenance Spares	3054.06	3235.50	3428.77	3633.88	3852.79
O&M expenses - 1 month	848.35	898.75	952.44	1009.41	1070.22
Receivables - 2 months	26343.21	26938.37	27222.67	27334.73	27373.69
Total Working Capital	39628.66	40481.52	40987.08	41361.22	41679.90
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	5349.87	5465.01	5533.26	5583.77	5626.79

37. Based on the above discussions, the annual fixed charges as approved in para 96 of the order dated 10.4.2017 stands revised as under:

(₹ in lakh)

	2014-15	2015-16	2016-17	2017-18	2018-19
Depreciation	3726.94	4596.98	5086.05	5378.33	5378.33
Interest on Loan	1570.99	2323.03	2588.59	2134.59	1595.60
Return on Equity	24634.73	25553.26	26100.45	26200.37	26200.37
Interest on Working Capital	5349.87	5465.01	5533.26	5583.77	5626.79
O&M Expenses	10180.19	10784.99	11429.23	12112.92	12842.62
Total	45462.73	48723.27	50737.57	51409.97	51643.71

38. Petition No. 32/RP/2017 is disposed of as above.

Sd/- Sd/-
(Dr. M.K.Iyer)
Member

(P.K.Pujari)
Chairperson

