



**ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION
HYDERABAD**

Present

Sri Justice G. Bhavani Prasad, Chairman

Dr. P. Raghu, Member

Sri P. Rama Mohan, Member

Dated 26th March, 2016

In the matter of

Determination of tariff of APGENCO generating stations for the control period from 01.04.2014 to 31.03.2019 in O.P.No. 3 of 2016

And

In the matter of

Andhra Pradesh Power Generation Corporation Limited, Vidyut Soudha, Hyderabad

... Petitioner

And

1. Eastern Power Distribution Company of A.P. Limited, Visakhapatnam
2. Southern Power Distribution Company of A.P. Limited, Tirupati
3. Southern Power Distribution Company of Telangana Limited, Hyderabad
4. Northern Power Distribution Company of Telangana Limited, Warangal

... Respondents

Dates of Hearing: 02.03.2016(Srikakulam), 03.03.2016(Visakhapatnam), 05.03.2016 (Anantapur), 09.03.2016(Vijayawada), 10.03.2016(Tirupati) and 14.03.2016(Hyderabad)

Parties present:

For Petitioner:

Sri K. Vijayanand, Managing Director/APGENCO, Sri G.V. Appa Rao, Director/HR&IR/APGENCO, Sri M.P. Sunder Singh/Director/Thermal, Sri G. Adinarayana, Director/Finance & Commercial/APGENCO and Sri D.V.S. Someswara Rao, SAO/APGENCO

For respondents:

Sri H.Y. Dora, CMD/APSPDCL and Sri R.Mutyala Raju, CMD/APEPDCL

ORDER
CHAPTER-I
INTRODUCTION

1. Consequent to the coming into force of the Andhra Pradesh Reorganisation Act, 2014 (Central Act No.6 of 2014) (hereinafter referred to as the Reorganisation Act), the erstwhile State of Andhra Pradesh was bifurcated in to two States i.e. Andhra Pradesh and Telangana w.e.f. 02.06.2014. Post bifurcation, the Government of Andhra Pradesh issued notification in G.O.Ms.No.35, Energy (Power III) Department, dated 01.08.2014 and constituted the Andhra Pradesh Electricity Regulatory Commission under the provisions of Schedule XII (C) (3) of the Reorganisation Act read with Section 82 of the Electricity Act, 2003.
2. Further, pursuant to the coming into force of the said Act, a separate company i.e. TSGENCO (Telangana State Power Generation Corporation Ltd) was carved out of APGENCO (a generating company owning power stations in the three regions i.e. Andhra, Rayalaseema and Telangana of the undivided Andhra Pradesh State) on 19.05.2014. The assets, liabilities, etc of APGENCO pertaining to the generating stations in Telangana State were provisionally transferred to TSGENCO in terms of the Transfer Scheme notified in GO Ms No 29 dated 31.05.2014
3. The erstwhile Andhra Pradesh Electricity Regulatory Commission for the undivided State of Andhra Pradesh determined the tariff of the generating stations of erstwhile APGENCO for the second control period i.e. FY 2009-10 to FY 2013-14 in the order dated 31.05.2014 in O.P. No. 15 of 2009.
4. The present APERC, in exercise of the power conferred by Section 181 of the Electricity Act, 2003(Central Act No.36 of 2003) and all other powers including those conferred by the Andhra Pradesh Electricity Reform Act, 1998 (State Act No.30 of 1998) and the Reorganisation Act, issued APERC (Adaptation) Regulation, 2014 (Regulation No.4 of 2014) and notified that with effect from 01.08.2014, all regulations made by, all decisions, directions or orders of, and all the licenses and practice directions issued by the erstwhile APERC shall apply in relation to the State of Andhra Pradesh and shall continue to have effect until duly altered, repealed or amended. The said Regulation No.4 of 2014 was published in the Extraordinary Gazette of the State of Andhra Pradesh on 29.11.2014.
5. The present APERC addressed a letter dated 19.10.2015 to APGENCO and brought it to their notice that as per section 86(1)(a) of Electricity Act, the Commission is required to determine the tariff for generation within the state of Andhra Pradesh and that the Commission determined the tariff for APGENCO stations up to FY 2013-14.

CHAPTER-II
Filings by APGENCO

6. In the above backdrop, APGENCO filed a petition before APERC on 02.01.2016 under Section 62 of the Electricity Act, 2003 and APERC Regulation 1 of 2008 for determination of Tariff for the control period FY 2014-2015 to FY 2018-19 for the electricity supplied from its various generating stations to the four Distribution Licensees in the States of Andhra Pradesh and Telangana.

The summary of the filings are tabulated below.

Table 1: Fixed charges filed by APGENCO (₹.Crs)

Station	(MW)	2014-15	2015-16	2016-17	2017-18	2018-19
HYDRO STATIONS:						
Sileru Complex	725	162.93	166.20	169.89	174.01	178.61
Nagarjuna Sagar RC PH	90	18.45	18.43	18.44	18.49	18.58
Srisailem Right bank PH	770	172.85	173.24	173.97	175.06	176.52
PABR PH	20	10.65	10.70	10.76	10.84	10.94
Chettipeta PH	1	0.75	0.76	0.78	0.79	0.80
Sub-Total	1606	365.63	369.33	373.84	379.19	385.45
THERMAL STATIONS						
Dr.NTTPS	1260	642.45	655.92	670.91	687.49	705.77
RTPP-I	420	274.93	277.39	280.37	283.88	287.98
RTPP-II	420	471.11	458.33	446.07	434.37	423.25
Dr NTTPS-IV	500	540.92	524.63	508.77	493.34	478.38
RTPP-III	210	315.00	306.04	297.33	288.91	280.79
NSTPD PH	50			58.94	58.37	57.85
Sub-Total	2860	2244.41	2222.31	2262.39	2246.36	2234.02
INTER-STATE POWER						
Tungabhadra PH	57.6	14.42	15.38	16.40	17.49	18.65
Machkund PH	84.0	30.66	31.96	33.30	34.20	35.11
Sub-Total	141.6	45.08	47.34	49.70	51.69	53.76
OTHER EXPENDITURE						
Additional Interest on Pension bonds		625.00	666.50	710.76	757.95	808.28
Total	4607.6	3280.12	3305.49	3396.67	3435.19	3481.50

Table 2: Variable rates

Station	Rate (Paise/kWh)
Dr NTTPS	281
Dr NTTPS-IV	314
RTPP - I	354
RTPP - II	354
RTPP- III	354

7. The variable rates filed are subject to adjustment based on the actual landed prices and GCVs of fuels. The incentives, secondary energy charges, duties & cess and Income Tax etc are to be allowed as per the relevant provisions of Regulation 1 of 2008. Revolving Letter of Credit is to be opened by DISCOMs for an amount equivalent to one month's receivables and delayed payment surcharge at 1.25% per month will be applicable.

8. Further, APGENCO stated the following in the petition.

- a. Allow pass-through of additional interest on pension bonds and contribution to P&G trust in terms of the statutory First Transfer Scheme dated 30.01.2000 notified by the State Government under the AP Electricity Reform Act, 1998 and transfer scheme notified by the State Government in G.O. Ms. 29 dated 31.05.2014 under the provisions of the A.P. Electricity Reform Act, 1998 in addition to the yearly contributions being made to the APGENCO's P & G Trust for funding the 26% Pension Liability for its employees who were in service as on 01/02/1999 and retiring thereafter and also gratuity liability for its employees which are included as part of O & M expenses.
- b. Nothing in the application be construed as any admission or to prejudice any disputes, issues, dissensions or contentions of APGENCO and/or the State of Andhra Pradesh, whether raised hitherto or hereafter, on any matter arising out of the provisions of the A.P. Reorganisation Act, 2014, or otherwise, including but not limited to issues relating to the supply of power from APGENCO generating stations to the Telangana DISCOMs or the validity of the PPAs.
- c. Nothing in the application be construed to limit or affect the provisional nature of any valuation of any asset or liability by or under any transfer scheme or otherwise, and provision may be made to give full consequential effect for any variation or upon any finalization of the same hereafter.

9. Prayer for interim tariff

To have a legal basis for the claim and recovery of fixed, variable and other costs

and amounts pending final disposal of the application, APGENCO requested the Commission to direct the Respondent DISCOMs to pay

- (a) Fixed cost of ₹2179.15 Crs each for FY 2014-15 and for FY 2015-16 in respect of the generating stations in operation as on 01.04.2014 in monthly installments duly adjusting any amounts paid on this account;
- (b) An amount of ₹21.78 Crs for FY 2014-15 towards income tax subject to adjustment for actual tax payments;
- (c) Variable costs for the energy delivered by APGENCO to DISCOMs from 01.04.2014 at the various rates set out in ANNEXURE-F3 of the Tariff Order dated 30.03.2013 passed by the erstwhile Commission duly adjusted for actual gross calorific value of the fuel and the actual landed costs of fuel for each month;
- (d) Variable costs for the energy delivered by APGENCO to DISCOMs from 01.04.2015 at the various rates set out in ANNEXURE 06 of the Tariff Order dated 23.03.2015 passed by the Commission duly adjusted for actual gross calorific value of the fuel and the actual landed costs of fuel for each month;
- (e) Incentives for generation as eligible on the basis of actual generation; and / or
- (f) Such other order as the Commission may consider fit and expedient in the facts and circumstances of the case.

10. Main Prayer

- (a) Accept and take on record the application for determination of tariff for the control period 2014-2019 under sections 62/64 of Electricity Act 2003;
- (b) Direct APGENCO to publish the application by notice as required by section 64, as per the draft annexed at Annexure A-7 to the application, or in such other form as may be specified by the Commission, in two English and two Telugu daily news papers as may be specified by the Commission;
- (c) Consider and adopt the normative Operation & Maintenance Expenses and year-on-year escalation thereof in respect of generating stations as provided in the CERC 2014 Regulation; and
- (d) Determine the tariff for the control period 2014-2019 for the supply of electricity generated by APGENCO from its various power generating stations to the DISCOMs at the rates proposed by APGENCO and/or as otherwise determined by the Commission in accordance with law and/or as the Commission considers fit in the facts and circumstances of the case.

CHAPTER-III

Public Notice, Public hearings, responses received from stakeholders, replies of APGENCO and views of APERC

11. A. APTEL in the order dated 14.09.2010 in Appeal No.183 of 2009 held that the tariff of a generating company including its supply to a distribution licensee outside the State, not falling under the jurisdiction of the Central Commission under Section 79(1)(a) and 79(1)(b), shall be determined by the Commission of the State where the energy is generated. Therefore, this petition has been entertained and decided accordingly.
- B. The Petition filed by APGENCO was taken on record by the Commission and assigned O.P.No. 3 of 2016. APGENCO was directed to publish a Public Notice in two (2) English Newspapers and two (2) Telugu Newspapers(in Telugu) having wide circulation in the States of Andhra Pradesh and Telangana inviting the stakeholders to offer their objections/suggestions on the tariff petition filed by APGENCO. A format of the Public Notice to be published was also provided to APGENCO. Further, in order to have as wider reach to the public as possible, APGENCO was also directed to place on its website copies of the Public Notice and its tariff filings and also to provide to the interested parties the soft copies(free of cost through E-Mail) & hard copies (₹100 per each copy) of the tariff filings at its Headquarters. Copies of the Public Notice and tariff filings of APGENCO were also placed on the website of APERC.
12. As per the directions of the Commission, APGENCO published Public Notices in two(2) English Newspapers and two (2) Telugu Newspapers(in Telugu) in the States of Andhra Pradesh and Telangana on 08.01.2016. The last date for receipt of objections/suggestions was by 5 P.M of 08.02.2016 and last date for arranging responses by APGENCO was by 5 P.M. of 15.02.2016 respectively.
13. In response to the Public notice, 8 sets of objections/suggestions/comments were received from various stakeholders to which APGENCO furnished the replies.
14. The Commission in the letter dated 01.02.2016 directed APGENCO to publish a public notice in two(2) English Newspapers and two(2) Telugu Newspapers (in Telugu) having wide circulation in the States of Andhra Pradesh and Telangana intimating the public/stakeholders that APERC would conduct public hearings at Srikakulam (03.03.2016), Visakhapatnam (04.03.2016), Anantapur (05.03.2016), Vijayawada (09.03.2016), Tirupati (10.03.2016) and Hyderabad (14.03.2016) on the

tariff filings of APGENCO for FY 2014-19 and that the interested persons/objectors/stakeholders who want to be heard in person or through authorized representatives may appear before the Commission on the above dates and submit their views/objections/suggestions. Accordingly, APGENCO published the public notices on 04.02.2016

15. The Commission conducted the Public hearings on the tariff filings of APGENCO along with the Public hearings on the Retail Supply Tariff filed by the DISCOMs at the above places.
16. During the public hearings, Sri K. Vijayanand/MD/APGENCO (at Vijayawada and Hyderabad) and Sri D.V.S. Someswara Rao, SAO/APGENCO(at Srikakulam, Visakhapatnam, Anantapur, Tirupati and Hyderabad) gave presentations on the tariff filings of APGENCO and furnished replies to the comments/suggestions/objections of the stakeholders.
17. The objections/comments/suggestions/requests received from the stakeholders, the replies given by APGENCO and the views of the Commission are as follows.
18. Sri M. Vedavyasa Rao, Secretary General/APSEB Engineers' Association, Sri M. Mohana Rao/General Secretary/APGENCO Accounts Officers' Association, Sri Z.V. Ganeswararao, State Finance Secretary/Electricity Backward Classes Employees Welfare Association, Sri A.V. Kiran, Secretary General, AP State Electricity Board SC & ST Employees' Welfare Association made similar requests, hence all are clubbed together and mentioned below.

a. Pension Commitments:

The Pension Commitments of APTRANSCO, APGENCO and Distribution companies are vested with APGENCO through a statutory transfer scheme. APGENCO has to meet this Commitment through tariff, otherwise it will affect the financial position of APGENCO badly and pension payments will be at stake. PPAs also provide for the payment of pensions through tariff. Hence, pension commitments may be allowed in tariff.

Reply of APGENCO: The PPAs with Discoms provide for payment of interest on pension bonds over and above the schedule. APGENCO has claimed interest on pension bonds over and above the schedule through the tariff. The issue is under the purview of Hon'ble APERC.

Commission's view: The Commission recognizes the fact that the obligation to meet the pension liability of the APSEB employees was vested in APGENCO in terms of the statutory First Transfer Scheme dated 30.01.2000 notified by the State Government under the AP Electricity Reform Act, 1998. Further, the

Commission is also aware of the fact that the erstwhile APERC at Para 100 of the order dated 24.03.2003 in O.P.No.402 of 2002 allowed actual liability of additional interest on pension bonds as a pass-through in the tariff on a year to year basis up to the FY 2032-33 . Based on the above, APGENCO collected the additional interest on pension bonds from DISCOMs up to the end of FY 2008-09. For the control period FY 2009-10 to FY 2013-14, APGENCO had not claimed any additional interest on pension bonds from the DISCOMs. Moreover, the PPAs entered in to by APGENCO with DISCOMs which were consented by the erstwhile APERC in the order dated 11.08.2014 in O.P.Nos. 14 to 25 of 2012 have a provision for pass-through of actual additional interest on pension bonds in the tariff. The G.O. Ms.No.29 (Transfer Scheme) issued on 31.05.2014 in terms of AP Electricity Reform Act, 1998 and AP Reorganisation Act, 2014 also provides for payment of pension liabilities by APGENCO. Keeping the above in view, the Commission allows pass-through of actual additional interest on pension bonds in the tariff of APGENCO stations for the third control period i.e. FY 2014-15 to FY 2018-19.

b. Pay revision commitment:

Pay revision commitment is common for APGENCO, APTRANSCO and DISCOMS. The same is considered as per the provisions of Reform Act. The actual commitment on account of pay revision may be allowed in the tariff. The above two factors will affect pension payments to about 25,000 pensioners and salaries to 6,000 employees. So far, APERC allowed the above commitment in tariff on earlier occasions. Further, a tripartite agreement is existing between AP State Govt, Power Utilities and Associations to safeguard the interests of the employees.

Reply of APGENCO: APGENCO has claimed the impact of pay revision through tariff. The issue is under the purview of Hon'ble APERC.

Commission's view: The erstwhile APERC allowed the impact of pay revisions affected in 2006 and 2010 while issuing APGENCO tariff orders for the first and second control periods respectively i.e. FY 2006-09 and FY 2009-14. Even the present Commission allowed the impact of pay revisions in the orders for True Up of Transmission and Distribution Tariffs for the Second Control period i.e. FY 2009-14 as periodic pay revisions and/or statutory wage increases are unavoidable to the extent they are prudent. O&M cost is a controllable item of tariff which consists of a)employee cost, b)repairs and maintenance expenditure and c)administrative and general expenses. Of the three, the employee cost is subject to wage revisions from time to time based on applicable agreements

with employee unions and general economic and policy environment that dictate decisions in this regard from time to time. The questions whether prudent limits have been observed in periodic wage revision and whether any subjectivity and imprudence in wage revision resulted in abnormal and unjustified increase in wages at different levels do not appear to be questions which legitimately fall within the scope of the present enquiry. Even otherwise, in the absence of any detailed data and information to conclusively indicate the unreasonableness of the wage revision in question, the Commission cannot close its eyes to the factum of APGENCO paying such increased wages during the relevant period. Hence, while expressing no opinion herein on the jurisdiction of the Commission to determine any limits on O & M expenditure including wage revision, it suffices to state that there is no material available on record as of now to refuse to take into account the wage revision that occurred during the relevant period. There is nothing on record to show that the increase in salaries is imprudent or unrealistic. Further, even CERC has also been allowing the impact of pay revisions in its tariff orders whenever such revisions take place. Therefore, the impact of pay revision has been allowed in the APGENCO tariff order for the third control period also i.e. FY 2014-19.

19. CGM/Commercial/Southern Power Distribution Company of Telangana Limited submitted the following comments/objections/suggestions (Northern power Distribution Company of Telangana Limited did not submit any comments/objections/suggestions)

a. **Additional Capital Costs:** The Hon'ble Commission is requested to make a judicious review of the additional capital costs shown in the filings to the tune of ₹174.73 Crs pertaining to old stations and ₹277.97 Crs relating to new stations i.e. Dr. NTPS-IV, RTPP-II and RTPP-III

Reply of APGENCO: APGENCO has made tariff filings for the control period FY 2009-14 in February 2009 before commencement of the control period. APGENCO has to file the details of additional capital expenditure on actual basis. Hence, the additional expenditure was not included in tariff filings for FY 2009-14. APGENCO now filed additional capital expenditure incurred during FY 2009-14 on actual basis. APGENCO will provide all relevant information sought by the Hon'ble Commission.

Commission's view: APGENCO furnished the details of the additional capital expenditure that are audited and certified by a Chartered Accountant. There are absolutely no circumstances or material on record to suspect the correctness or

authenticity of the claims made in this regard. Still, the Commission made a prudent check of the same and permitted amounts to the extent that are in line with the relevant provisions of the Regulations.

- b. **Return on Capital Employed:** The Weighted Average Cost of Capital (WACC) computed in the filings is 14.25% assuming the interest rate charged by PFC and REC @ 12.5 % and Return on Equity @ 15.5 % as per CERC norms and debt-equity ratio of 70:30. But, the Weighted Average Cost of Capital (WACC) considering the same assumptions as per the filings will work out to 13.40% with 70:30 debt/equity mix and 13.25% with 75:25 debt/equity mix. Hence, the Hon'ble Commission may examine the same and make necessary corrections to arrive at ROCE as per the Regulation

Reply of APGENCO: As per clause 12.1 of APERC regulation 1 of 2008, the debt equity ratio at the beginning of the control period has to be considered for arriving at WACC commencing from 70:30 from the date of COD as per clause 10.13 of APERC Regulation 1 of 2008. The Debt Equity ratio as on 01.04.2014 i.e. the beginning of the control period is 41:59 for APGENCO as a whole. Accordingly, the WACC works out to 14.25%

Commission's view: There is no arithmetical mistake in the computation of WACC as APGENCO considered the actual debt/equity ratio at the beginning of the control period i.e. as on 01.04.2014. However, the debt/equity considered by APGENCO is not in line with Clause 12.1.a.b of Regulation 1 of 2008. As per this Clause, debt to equity ratio shall be determined at the beginning of the control period (for the purpose of computing WACC), after considering the generating companies previous years' D/E mix, market conditions and other relevant factors. The Commission determined the D/E mix as 70:30 (for the purpose of computing WACC) after considering the above factors.

- c. **Operation & Maintenance expenses:** The O&M expenses in the filings are computed as per CERC Regulations. Hence, the Hon'ble Commission is requested to strictly allow O&M expenses as per the norms specified in APERC Regulation 1 of 2008 after considering pay revision impact.

Reply of APGENCO: The O&M rates considered by APERC for the control period FY 2009-14 are based on the O&M expenditure for the FY 2001-2006 as per APERC Regulation 1 of 2008. Hence, the actual expenditure is higher than the expenditure allowed. The O&M costs considered by APERC in Regulation 1 of 2008 are based on CERC Regulations issued in the year 2004. As per APERC Regulation 1 of 2008, the O&M costs need to be revised based on the amendments to CERC Tariff Regulation from time to time. CERC subsequently

revised O&M costs twice in 2009 and 2014 and allowed pay revision separately. Further, CERC has revised escalation rate from 4% to 6.64% based on Consumer Price Index and Whole Sale Price Index. In view of the above, APGENCO has claimed O&M costs in the tariff filings based on CERC norms which are nearer to the actual O&M expenditure incurred by APGENCO.

Commission's view: The reply of APGENCO is satisfactory.

20. Sri M. Venugopala Rao, senior journalist and Convener/Center for Power Studies submitted the following comments/objections/suggestions.

a. DISCOMs should submit PPAs with APGENCO well before the COD of the plants. There should be prudent check on capital costs.

Reply of APGENCO: For all the existing projects in operation, the capital cost was approved and tariff was determined up to FY 2013-14 by Hon'ble APERC vide its order dated 31.5.2014 in OP No.15/2009. There was certain delay in filing of tariff proposals for the second control period i.e. FY 2009-14 due to pendency of earlier petitions i.e. OP No.6 of 2006 and OP.No.7 of 2007 for want of Regulations. For future projects, petitions will be filed as per the provisions of Electricity Act, 2003 i.e. 120 days in advance.

Commission's view: The PPAs for the plants for which APGENCO is seeking the tariff now were already submitted to the Commission by DISCOMs and erstwhile APERC already gave consent to them. The Commission has been carrying out prudent checks on capital costs before admitting them.

b. International Competitive Bidding route should be followed for procurement of imported coal and there should be DISCOMs' representation also in the procurement process.

Reply of APGENCO: The present petition is for determination of fixed cost for APGENCO Stations. However, it is to inform that, in earlier years, APGENCO imported coal by inviting tenders from Central PSU. In recent procurements, APGENCO has gone for ICB route only. APGENCO is claiming variable cost based on actual landed cost of coal and GCV of coal on 'As Fired' basis in line with the provisions of PPA.

Commission's view: The reply of APGENCO is satisfactory.

c. Whether the amount of ₹ 2081.81 Crs was refunded by APGENCO/TSGENCO to the DISCOMs as directed by the Commission in the order dated 31.05.2015 in O.P.No. 15 of 2009? If not, what steps are being taken by the DISCOMs to recover the same from APGENCO/TSGENCO?

Reply of APGENCO: The amount of fixed charges provisionally ordered in the

retail tariff orders include fixed charges for new stations based on projected COD. Due to delay in commissioning of these new projects (i.e. Dr.NTTTPS-IV, RTPP-III, KTPP-I & PJHES), APGENCO has not raised the bills and payment by Discoms has also not taken place. Hon'ble APERC ordered for ₹19998.53 Crs towards fixed costs for FY 2009-2014 in OP.No.15/2009 against which DISCOMs have paid ₹18784.94 Crs for the same period. Hence, APGENCO has not collected any excess amount over the ordered amount in OP.No.15/2009. The same was submitted to Hon'ble APERC in D.O.Lr.No.MD/CE(Coal & Comm)/F.APERC /D.No.333/15, Dt.02.11.15 addressed to the Secretary, APERC.

Commission's view: APSPDCL and APEPDCL, in their letters to the Commission dated 20.02.2016 and 29.02.2016 respectively, confirmed what APGENCO stated above i.e. APGENCO has not collected any excess tariff from DISCOMs over that approved by the Commission in the order dated 31.05.2015 in O.P. No.15 of 2009 for the second control period.

- d. Commission may advise GoAP to take over pension liabilities of APGENCO under UDAY scheme and settle the issue permanently. GoAP should provide budgetary support to APGENCO to meet its equity requirements.

Reply of APGENCO: The pension liability was vested with APGENCO at the time of bifurcation of erstwhile APSEB in 1999. APGENCO has issued bonds to Master Trust which are repayable over 30 years with floating rate of interest duly matching the actual pension commitment. The actual rate of interest works out to about 30% at present. UDAY scheme is for taking over the working capital loans availed by DISCOMs (from Banks and Financial Institutions) by the State Government by issuing the bonds at 8% to 8.5%. Hence, the pension liabilities vested with APGENCO cannot be taken over by the State Government under UDAY scheme. APGENCO is meeting its equity requirement from internal sources and borrowings. APGENCO will take the Government support as and when required.

Commission's view: UDAY scheme does not appear applicable to generating companies or the liabilities incurred by the generating companies. It is for the State Government to take the policy decision on any budgetary support to APGENCO but not within the jurisdiction of the Commission.

- e. Other claims made by APGENCO related to tariff may be allowed by the Commission as per the applicable Regulations.

Reply of APGENCO: APGENCO has claimed them as per the provisions of tariff Regulations and provisions of PPA.

Commission's view: All the claims are considered as per the Regulations.

21. Sri M. Thimma Reddy, Convener, People's Monitoring Group on Electricity Regulation submitted the following comments/objections/suggestions.

- a. Already two financial years of the third control period FY 2014-15 and FY 2015-16 are over. APGENCO in its filings should have filed actual costs incurred rather than normative figures and should have explained the difference if any between the two figures. This should have helped to understand the actual situation better.

Reply of APGENCO: The tariff is on normative basis. Hence, filings were made as per the provisions in the Regulations. Due to AP Reorganisation Act, 2014, the demerger of APGENCO is under process and opening balances as on 02.06.2014 are yet to be notified. Hence, only provisional balances of current period are available and APGENCO has no objection in providing the same to Hon'ble APERC.

Commission's view: The consequences of the Reorganisation Act make the reply of APGENCO acceptable.

- b. APGENCO in its filings stated at para 1.9 as follows, "In view of the valuation of assets continuing to be uncertain even after the coming into force of the Reorganisation Act, and without prejudice to adjustments as may be necessary when provisional valuations are subsequently finalized, the Applicant is filing this application for determination of tariff for the control period FY 2014-2019 on the basis of the provisional valuation of assets and liabilities." APGENCO need to clearly state the uncertainties involved in the valuation of assets. There may be some uncertainty in sharing of power generated and we do not think that there is any uncertainty in the valuation of assets. We request the Commission to direct APGENCO to clearly state the uncertainties it is referring to and analyse their implications on valuation of assets as well as on tariffs.

Reply of APGENCO: As per AP Reorganisation Act, 2014, the assets and the liabilities are to be apportioned between APGENCO and TSGENCO. The demerger process is under progress for approval of both the Governments and an expert committee is necessary on sharing of common assets & liabilities. APGENCO has no objection in providing the information to Hon'ble APERC.

Commission's view: Any discrepancy between the provisional valuation of assets and liabilities now projected and the final assessment of the valuation of assets and liabilities on apportionment can be appropriately dealt with by the Commission when the occasion arises to exercise their jurisdiction in this regard.

c. According to Section 86(3), the Commission shall ensure transparency while exercising its powers and discharging its functions. Public hearings along with the public availability of all documents related to power purchases including PPAs is an important part of this process. No public hearings have taken place in the case of RTPP-III and Dr.NTTPS-IV plants though they have started power generation. Non-transparent treatment of APGENCO plants is continuing with these new plants also and it is not clear on what basis the Commission is determining the tariffs for these plants. We request the Commission to direct APGENCO and APDISCOMs to make PPAs and all documents related to these power plants public.

Reply of APGENCO: APGENCO and DISCOMs entered in to PPAs for these projects and submitted them to the Hon'ble APERC in the year 2009. The Commission has approved the capital cost of these projects after prudent check. APGENCO has filed ₹2357.16 Crs towards completed cost of Dr NTTPS-IV. The Commission has approved ₹2038.67 Crs Regarding RTPP-III, APGENCO has filed ₹1322.31Crs towards completed cost and APERC has approved ₹1170.26 Crs towards capital cost. The Commission has already given consent to these PPAs.

Commission's view: The erstwhile APERC determined the tariffs for RTPP-III and Dr.NTTPS-IV for the second control period after conducting public hearings and after carrying out prudent checks. Further, the PPAs of these plants were consented by the erstwhile APERC in the order dated 11.08.2014 in O.P.Nos 14 to 25 of 2012. Based on the above and the filings of APGENCO for the third control period, the present Commission has determined the tariffs of these plants for the third control period after conducting public hearings at six places and after carrying out prudent checks. From the above, it can be seen that the Commission has followed a fully transparent procedure while determining the tariffs of these plants. The objector is at liberty to approach APGENCO for any information relating to any documents in this regard.

d. Nagarjunasagar Tail Pond power plant (50 MW) has become operational recently and tariff for the power generated from this plant also needs to be determined through the public process.

Reply of APGENCO: Though the project is completed, the commercial operation has not yet started for want of availability of water. Regarding public hearing, Hon'ble Commission has to take a decision.

Commission's view: APGENCO stated in the filings that this plant is likely to

commence commercial operation in April, 2016. Further, audited capital cost details for this plant are not available which form the basis for the determination of final tariff for this plant. Therefore, the Commission has approved provisional fixed costs only for this plant. After the plant commences commercial operation and after the audited capital cost details are available, APGENCO may file a fresh application for determination of final tariff for this plant. The Commission will then determine the final tariff duly following the Regulatory process.

- e. According to APGENCO filings, total capital cost of RTPP-III (210 MW) is ₹1170.26 Crs. The per MW capital cost of this plant comes to ₹5.57 Crs. Similarly, in the case of Dr.NTTPS-IV (500 MW), total capital cost is ₹2038.67 Crs and the per MW capital cost in this case comes to ₹4.08 Crs. Though both the plants were set up at the same time, the per MW capital cost of RTPP-III is 36.5% higher than that of Dr. NTTP-IV plant. This shows the need to scrutinize the capital cost incurred by RTPP-III plant. We request the Commission not to allow the high capital cost of RTPP-III.

In the case of capital cost of RTPP-II plant, CAG in one of its earlier reports found that ₹308 Crs, constituting escalation of costs by 18%, were spent over and above than that allowed. In the background of this finding, the above excess capital cost of RTPP-III plant becomes even more significant. We request the Commission not to allow this cost escalation in both these plants.

Reply of APGENCO: For Dr NTTPS-IV, the orders were placed in the year 2005 and for RTPP-III, the orders were placed in the year 2008. Existing common facilities like Coal yard, land, staff quarters, water pumping system etc. are sufficient for Dr NTTPS-IV. In the case of RTPP-III, existing infra structure is sufficient to the existing two stages only. Hence, a need arose for further investment on infrastructure and common facilities. As a result, the per MW cost for RTPP-III is comparatively higher. The Commission has already approved capital costs of these projects after prudent checks. The capital costs are less than the Benchmark capital costs approved by CERC.

Commission's view: The capital costs for the above plants were determined by the erstwhile APERC after conducting public hearings and after carrying out prudent checks. Re-examination of the question of fixed/capital cost therefore does not arise.

- f. In the case of variable costs, the filings (paras 8.1 and 8.2) merely mentioned that these costs are computed on the basis of the operating norms specified

in the Regulation and considering the actual landed cost and the GCVs of fuels. Further, para 12.2 listed the variable costs applicable for April 2014. There is no further information to examine these claims. There is no information on the proportion of coal procured through long term fuel supply agreements, quantum of coal procured through imports and that proportion obtained through e-auctioning and related terms. We request the Commission to direct APGENCO and APDISCOMs to provide complete information on how determination of variable costs.

Reply of APGENCO: As per the Regulation, the variable cost of the last 3 months preceding the control period will be considered as base cost and any variation subsequently will be claimed through fuel cost adjustment by APGENCO from APDISCOMS after approval by APERC. Hence, average costs for Jan'14, Feb'14 and Mar'14 months were filed.

Commission's view: The Interest on Working Capital is one of the components of the fixed cost. The Working Capital among other things consists of 30 days coal cost, two months oil cost and two months receivables (fixed costs + variable costs). So, the variable costs (fuel costs) affect the Working Capital and thus in turn fixed costs though their contribution to fixed costs is not significant. Nevertheless, the Commission scrutinized the variable costs filed by APGENCO while determining the tariff for third control period. The objector is at liberty to approach APGENCO for further information he requires in this regard.

- g. As already two years of the present control period are over, we request the Commission to direct the APGENCO to provide information on actual experience on variable cost front during these two years. With this submission we are enclosing a letter written by Sri E.A.S. Sarma, I.A.S., former Secretary, Government of India to the Secretary, Department of Energy, Government of AP on issues related to imported coal. We request the Commission to direct APGENCO to respond to this letter also.

Reply of APGENCO: APGENCO claimed FCA bills based on actuals and DISCOMs will file the same before APERC as a part of Retail tariff. However, APGENCO has no objection in providing information on actual variable costs. Coal transportation is a composite contract. It involves rail-cum-sea-cum-rail transport besides responsibility for ensuring quality and quantity. APGENCO awarded the contract by calling open tenders. Shipping Corporation of India has not participated in the tender process and is now proposing for sea transportation only. The issue is under examination in view of composite

contract and contractual obligation already entered in to. Regarding reduction of freight charges on coal transportation, APGENCO has negotiated with existing coal transporters and reduced transportation costs by ₹100 per MT. Further, in the meeting between MD/APGENCO and Director/Shipping Corporation of India on 14.03.2016, the latter assured that they will examine the request of APGENCO to the Shipping Corporation to undertake composite transport of coal and will come up with a proposal shortly.

Commission's view: APGENCO may provide information on actual variable costs to the objector and Sri E.A.S. Sarma as offered in its reply.

22. Views/objections/Suggestions/Comments filed by APSPDCL & APEPDCL in the counter against O.P.No.3 of 2016(Tariff filing by APGENCO for FY 2014-19).

a. The additional capital expenditure claimed by APGENCO requires prudent check before allowing the same.

Reply of APGENCO: APGENCO has to file details of additional capital expenditure on actual basis. Hence, the additional expenditure was not included in tariff filings of FY 2009-14. APGENCO now filed additional capital expenditure incurred during FY 2009-14 on actual basis. APGENCO will provide all relevant information sought by the Hon'ble Commission.

Commission's view: The Commission has carried out the prudent check of additional capital expenditure filed by APGENCO and reduced the same to ₹258.53 Crs as against a claim of ₹452.7 Crs filed by APGENCO.

b. Return on Capital Employed: The ROCE works out to 13.4% with 70:30 debt equity ratio. The same may be adopted for computation of ROCE.

Reply of APGENCO: As per clause 12.1 of APERC Regulation 1 of 2008, the debt equity ratio at the beginning of the control period has to be considered for arriving at WACC commencing from 70:30 from the date of COD as per clause 10.13 of APERC Regulation 1 of 2008. The Debt/Equity ratio as on 01.04.2014 i.e. the beginning of the control period is 41:59 for APGENCO as a whole. Accordingly, the WACC works out to 14.25%.

Commission's view: The Commission has adopted a debt/equity ratio of 70:30 for computing WACC which works out to 13.4%.

c. The O&M expenditure has to be allowed based on APERC Regulations instead of CERC Regulations and 20% pay revision commitment. The O&M escalation rate to be considered is 4% instead of 6.64% considered based on CERC Regulations. The Commission determined the tariff of APGENCO stations for FY 2009-14 as per the norms specified in Regulation 1 of 2008. Unless Regulation 1 of 2008 is

amended, adopting the O&M component alone from CERC Regulations may not be appropriate for consideration. APDISCOMs have no objection to adopt all parameters of CERC Regulation but not O&M norms alone.

Reply of APGENCO: The O&M rates considered by APERC for the control period FY 2009-14 were based on O&M expenditure for the FY 2001-2006 as per APERC Regulation 1 of 2008. Hence, the actual expenditure is higher than the expenditure allowed. The O&M costs considered by APERC in Regulation 1 of 2008 were based on CERC Tariff Regulation issued in the year 2004. As per APERC Regulation, the O&M costs need to be revised based on the amendments to CERC Regulations from time to time. CERC subsequently revised O&M costs twice and allowed pay revision separately. Further, CERC has revised escalation rate from 4% to 6.64% based on Consumer Price Index and Whole Sale Price Index. Keeping the above in view, APGENCO has claimed O&M costs in the tariff filings considering CERC norms which are nearer to the actual O&M expenditure incurred by APGENCO. CERC determined the norms for old stations based on 5 years actuals and fresh norms for new stations. Most of the APGENCO stations were constructed long back with subcritical technology and served their life. Hence, revision of operating norms on par with CERC needs huge capital investment for up gradation of technology to meet the revised CERC norms causing burden on the end consumer.

Commission's view: The O&M norms specified in Regulation 1 of 2008 were based on CERC Tariff Regulation, 2004. Subsequently, CERC issued two Tariff Regulations; first one in 2009 and the second one in 2014. Clause 10 of Regulation 1 of 2008 permits the Commission to adopt CERC norms by a general or special order and clause 21 of Regulation 1 of 2008 enables the commission to make such orders as may be necessary to meet the ends of justice. Therefore, the Commission is persuaded to adopt the norms notified in CERC Tariff Regulation, 2014 to the extent it found necessary to meet the ends of justice for computing the O&M expenses, Working Capital etc so as to make the assessment economically realistic and practically just and reasonable.

- d. **Additional interest on pension bonds:** APGENCO did not claim any additional interest on pension bonds in its Tariff filings for FY 2009-14 but is claiming the same now for FY 2014-19. The Commission may prudently check the same and appropriate orders may be passed on this considering the effect of the Re-organization Act.

Reply of APGENCO: The claim is in line with PPA provisions and as per Go Ms

No. 29 dated 31.05.2014 issued as a part of AP Reorganisation Act, 2014. If the claim is not allowed as a part of generation tariff, the pension commitments are to be met by the respective companies only.

Commission's view: The Commission is provisionally allowing the amounts towards additional interest on pension bonds based on the actual amounts paid to the Master Trust during FY 2014-16. APGENCO shall carry out true up exercise of the provisional amounts received based on actuals at the end of each financial year.

- e. The normative oil consumption is 2ml for kWh as per Regulation 1 of 2008 and the same may be limited to 0.5ml/kWh on par with CERC Regulation, 2014.

Reply of APGENCO: ABT Regulations are not adopted for APGENCO stations and backing down of the generation of APGENCO stations is resulting in high oil consumption. The backed down generation during the current financial year up to Feb'16 is 2181 MU. As a result, the operating parameters are increasing for APGENCO stations.

Commission's view: The reply of APGENCO is satisfactory.

CHAPTER-IV

DETERMINATION OF TARIFF BY THE COMMISSION

23. Tariff for the third control period FY 2014-19:

The tariff for the third control period i.e. FY 2014-19 covers the following generating stations.

Table 3: Details of Generating Stations

PPA Date	Commissioning Date/COD	Stations	PPA Valid Up to
22.12.2009	01.11.1979 to 24.02.1995	Dr NTTPS- 1260 MW(6x210 MW)	31.03.2019
	31.03.1994 and 25.02.1995	RTPP I - 420 MW (2x210 MW)	
	30.08.1982 to 15.03.1987	SRBPH - 770 MW (7x110 MW)	
	14.10.1967 to 21.03.1995	Sileru complex PH- 725 MW (4x60 MW+4x115 MW+ 1x25 MW)	
	24.02.1983 to 10.10.1990	NSRCPH - 90 MW (3x30 MW)	
	24.07.1987 and 24.10.1987	PABR PH - 20 MW (2x10 MW)	
	01.10.1991 and 04.10.1991	Chettipeta PH- 1 MW (2x 0.5 MW)	
22.12.2009	28.01.2010	Dr NTTPS IV - 500 MW(1x500 MW)	27.01.2035
22.12.2009	12.08.2007 and 29.03.2008	RTPP II- 420 MW (2x210 MW)	28.03.2033
22.12.2009	29.11.2010	RTPP III- 210 MW (1x210 MW)	09.02.2036
20.12.2010	April, 2016	NSTPD PH- 50 MW (2x25 MW)	35 years from COD

24. Fixed charges:

a. Capital Costs/Gross Fixed assets:

The GFA(Gross Fixed Assets) of all the above Stations (except NSTPD PH) as on 31.03.2009 were already determined by the erstwhile APERC in the APGENCO

tariff order dated 31.05.2014 in O.P.No. 15 of 2009 for the control period FY 2009-14. They form the basis for determination of fixed costs for these Stations. In addition to the above, APGENCO has filed additional capital expenditure incurred for these plants during the period FY 2009-14. The GFAs and additional capital expenditure as filed by APGENCO are as per Table 4.

Table 4: GFAs and additional capital expenditure filed by APGENCO (₹.Cr)

Station Name	GFA as on 31.03.09 (1)	Additional capital expenditure during FY 2009-14 (2)	Total GFA as on 31.03.2014 (3)=(1)+(2)
Sileru complex	683.08	13.62	696.70
NSRCPH	113.6	0	113.60
SRBPH	929.59	16.69	946.28
PABR PH	56.68	0	56.68
Chettipeta PH	3.55	0	3.55
Dr.NTTPS	2865.57	96.67	2962.24
Dr.NTTPS-IV	2038.67	201.59	2240.26
RTPP-I	1963.58	47.75	2011.33
RTPP-II	1872.97	32.96	1905.93
RTPP-III	1170.26	43.42	1213.68
Total	11697.55	452.7	12150.25

The Commission scrutinized the item wise expenditure of additional capital works with reference to the audited certificate and limited the expenditure to that permitted under Clause 10.9 of Regulation 1 of 2008. The details of the reworked out GFAs are as shown in the table below.

Table 5: GFAs and additional capital expenditure as approved by APERC (₹.Cr.s)

Station Name	GFA as on 31.03.09 (1)	Additional capital expenditure during FY 2009-14 (2)	Total GFA as on 31.03.2014 (3)=(1)+(2)
Sileru complex	683.08	3.49	686.57
NSRCPH	113.6	0	113.6
SRBPH	929.59	16.69	946.28
PABR PH	56.68	0	56.68
Chettipeta PH	3.55	0	3.55
Dr.NTTPS	2865.57	96.67	2962.24
Dr.NTTPS-IV	2038.67	80.18	2118.85
RTPP-I	1963.58	47.75	2011.33
RTPP-II	1872.97	1.49	1874.46
RTPP-III	1170.26	12.16	1182.42
Total	11697.55	258.43	11955.98

b. WACC, D/E (Debt/Equity) Ratio, Return on Equity and Cost of Debt:

The Commission adopted a D/E mix of 70:30 for the control period FY 2014-19 against a D/E mix of 49:51 filed by APGENCO after considering APGENCO's previous years' D/E mix, market conditions and other factors like provisions of National Tariff policy, D/E ratio adopted by CERC etc, as per clause 12.1.b. of Regulation 1 of 2008. The Commission adopted the Return on Equity as 15.5% after considering CERC norms, APGENCO's proposals, previous years' D/E mix, risks associated with generating business, market conditions etc as per clause 12.1.b. of Regulation 1 of 2008. For Cost of Debt, the Commission adopted a normative rate of 12.5% after considering APGENCO's proposals, present cost of debt, market conditions as per clause 12.1.b. of Regulation 1 of 2008. Based on the above, the WACC (Weighted Average Cost of Capital) works out to 13.4% as against the rate of 14.25% filed by APGENCO.

c. Depreciation:

The depreciation amounts have been adopted as shown in the table below after considering the amounts filed by APGENCO, the depreciation amounts approved in the APGENCO tariff order for FY 2009-14 and MOP rates as per clause 12.2.b. of Regulation 1 of 2008.

Table 6: Depreciation (₹.Cr)

Station Name	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Sileru complex	20.62	20.62	20.62	20.62	20.62
NSRCPH	3.58	3.58	3.58	3.58	3.58
SRBPH	32.09	32.09	32.09	32.09	32.09
PABR PH	1.61	1.61	1.61	1.61	1.61
Chettipeta PH	0.08	0.08	0.08	0.08	0.08
Dr.NTTPS	72.00	72.00	72.00	72.00	72.00
RTPP-I	39.20	39.20	39.20	39.20	39.20
RTPP-II	144.22	144.22	144.22	144.22	144.22
Dr.NTTPS-IV	156.98	156.98	156.98	156.98	156.98
RTPP-III	90.11	90.11	90.11	90.11	90.11
Total	560.49	560.49	560.49	560.49	560.49

d. Working Capital and O&M expenses:

Regulation 1 of 2008 notified by APERC which governs generation tariff was framed based on the CERC Tariff Regulation, 2004. Subsequent to the notification of Regulation 1 of 2008, CERC issued two Tariff Regulations; first one in 2009 and the second one in 2014. Clause 10 of Regulation 1 of 2008 specifies as under

“Tariffs under this Part shall be determined in accordance with the norms specified herein, guided by the principles and methodologies specified in CERC (Terms and Conditions of Tariff) Regulations 2004 as originally issued and amended by CERC (Terms and Conditions of Tariff) (First Amendment) Regulations, 2006, issued on 1st June, 2006 vide No. L-7/25/(5)/2003 -CERC; any further amendments thereto shall be applicable on their adoption by the Commission, by means of a general or special order, with or without any modifications”

and clause 21 of Regulation 1 of 2008 specifies

“SAVING

Nothing in this Regulation shall be deemed to limit or otherwise affect the powers of the Commission to make such orders as may be necessary to meet the ends of justice or to prevent abuse of the process of the Commission.”

In view of the above and for the reasons stated at para 22(c), the Commission has decided to adopt the norms prescribed in CERC Tariff Regulation, 2014 for computing Working Capital and O&M expenses.

i. The Working Capital amounts computed based on CERC norms i.e. as per

Clauses 28(1)(a), 28(1)(c) and 28(2) CERC Tariff Regulations 2014 are indicated below. The total Working Capital approved for the control period (FY 2014-19) is ₹10886.63 Crs against the claim of ₹11981.91 Crs filed by APGENCO.

Table 7: Working Capital (₹.Crs)

Station Name	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Sileru complex	47.01	48.96	51.07	53.35	55.82
NSRCPH	4.57	4.68	4.80	4.93	5.08
SRBPH	44.25	45.44	46.76	48.22	49.83
PABR PH	2.61	2.68	2.76	2.84	2.93
Chettipeta PH	0.19	0.20	0.21	0.22	0.22
Dr.NTTPS	786.27	795.11	804.60	814.80	825.74
RTPP-I	319.08	321.68	324.50	327.55	330.85
RTPP-II	350.10	350.30	350.72	351.37	352.27
Dr.NTTPS-IV	370.40	369.60	368.98	368.53	368.29
RTPP-III	223.85	222.41	221.11	219.94	218.93
Total	2148.35	2161.06	2175.50	2191.76	2209.97

ii. O&M expenses:

APGENCO in its filings sought pay revision commitment for its employees at 20% of O&M expenses. The erstwhile APERC considered the impact of pay revisions in 2006 and 2010 while determining the tariff of APGENCO Stations for the first and second control periods i.e. FY 2006-09 and FY 2009-14. Even the present Commission also considered the impact of pay revisions in the orders for True Up of Transmission and Distribution Tariffs for the Second Control period i.e. FY 2009-14 as periodic pay revisions and/or statutory wage increases are unavoidable to the extent they are prudent. The tripartite agreements entered into between GoAP, APSEB and unions/associations in terms of the AP Electricity Reform Act, 1998 provide for wage revisions of the employees. Further, even CERC has also been allowing the impact pay revisions in its tariff orders whenever such revisions take place. Therefore, the impact of pay revision in 2014 has also been considered while computing the O&M expenses for FY 2014-19 as per CERC norms. After considering the pay revision commitment at 20% of O&M expenses as filed by APGENCO, the Commission has worked out the O&M expenses as per CERC norms i.e. as per Clause 29(1)(a) and 29(3)(b)(i) of CERC Tariff Regulations 2014. It is observed that the O&M expenses claimed in the filings are less than the O&M expenses computed by the Commission in the above manner and the actual O&M expenses incurred by APGENCO. Hence, the

O&M expenses filed by APGENCO have been allowed which are shown below.

Table 8: O&M expenses (₹.Crs)

Station Name	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
Sileru complex	89.13	95.05	101.36	108.09	115.27
NSRCPH	6.98	7.44	7.94	8.46	9.03
SRBPH	70.94	75.65	80.67	86.03	91.74
PABR PH	3.89	4.15	4.42	4.72	5.03
Chettipeta PH	0.31	0.33	0.35	0.38	0.40
Dr.NTTPS	361.37	384.13	408.33	434.06	461.41
RTPP-I	120.46	128.04	136.11	144.69	153.80
RTPP-II	120.46	128.04	136.11	144.69	153.80
Dr.NTTPS-IV	96.00	102.05	108.48	115.31	122.58
RTPP-III	60.23	64.02	68.06	72.34	76.90
Total	929.76	988.90	1051.84	1118.77	1189.96

e. ROCE (Return on Capital Employed)

The ROCE amounts have been worked out for different years in line with clause 12.1 of Regulation 1 of 2008 and are as per Tables 9 to 13. The total ROCE approved for the control period (FY 2014-19) is ₹4266.85 Crs against the claim of ₹4856.45 Crs filed by APGENCO.

Table 9: ROCE for FY 2014-15 (₹.Crs)

Station Name	GFA as on 31.03.14 (1)	Accumulated depreciation up to 31.03.14 (2)	Net fixed assets (3)=(1)-(2)	Working Capital (4)	WACC (5)	ROCE (6)= ((3)+(4))* (5)
Sileru complex	686.57	378.92	307.65	47.01	13.40%	47.52
NSRCPH	113.60	65.26	48.34	4.57	13.40%	7.09
SRBPH	946.28	519.34	426.94	44.25	13.40%	63.14
PABR PH	56.68	23.99	32.69	2.61	13.40%	4.73
Chettipeta PH	3.55	1.20	2.35	0.19	13.40%	0.34
Dr.NTTPS	2962.24	2311.58	650.66	786.27	13.40%	192.55
RTPP-I	2011.33	1568.06	443.27	319.08	13.40%	102.16
RTPP-II	1874.46	857.08	1017.38	350.10	13.40%	183.24
Dr.NTTPS-IV	2118.85	640.61	1478.24	370.40	13.40%	247.72
RTPP-III	1182.42	277.85	904.57	223.85	13.40%	151.21
Total/Average	11955.98	6643.89	5312.09	2148.35	13.40%	999.70

Table 10: ROCE for FY 2015-16 (₹.Cr.s)

Station Name	GFA as on 31.03.15 (1)	Accumulated depreciation up to 31.03.15 (2)	Net fixed assets (3)=(1)-(2)	Working Capital (4)	WACC (5)	ROCE (6)= ((3)+(4))* (5)
Sileru complex	686.57	399.54	287.03	48.96	13.40%	45.02
NSRCPH	113.60	68.84	44.76	4.68	13.40%	6.62
SRBPH	946.28	551.43	394.85	45.44	13.40%	59.00
PABR PH	56.68	25.60	31.08	2.68	13.40%	4.52
Chettipeta PH	3.55	1.28	2.27	0.20	13.40%	0.33
Dr.NTTPS	2962.24	2383.58	578.66	795.11	13.40%	184.09
RTPP-I	2011.33	1607.26	404.07	321.68	13.40%	97.25
RTPP-II	1874.46	1001.30	873.16	350.30	13.40%	163.94
Dr.NTTPS-IV	2118.85	797.59	1321.26	369.60	13.40%	226.58
RTPP-III	1182.42	367.96	814.46	222.41	13.40%	138.94
Total/Average	11955.98	7204.38	4751.60	2161.06	13.40%	926.30

Table 11: ROCE for FY 2016-17 (₹.Cr.s)

Station Name	GFA as on 31.03.16 (1)	Accumulated depreciation up to 31.03.16 (2)	Net fixed assets (3)=(1)-(2)	Working Capital (4)	WACC (5)	ROCE (6)= ((3)+(4))* (5)
Sileru complex	686.57	420.16	266.41	51.07	13.40%	42.54
NSRCPH	113.60	72.42	41.18	4.80	13.40%	6.16
SRBPH	946.28	583.52	362.76	46.76	13.40%	54.88
PABR PH	56.68	27.21	29.47	2.76	13.40%	4.32
Chettipeta PH	3.55	1.36	2.19	0.21	13.40%	0.32
Dr.NTTPS	2962.24	2455.58	506.66	804.60	13.40%	175.71
RTPP-I	2011.33	1646.46	364.87	324.50	13.40%	92.38
RTPP-II	1874.46	1145.52	728.94	350.72	13.40%	144.67
Dr.NTTPS-IV	2118.85	954.57	1164.28	368.98	13.40%	205.46
RTPP-III	1182.42	458.07	724.35	221.11	13.40%	126.69
Total/Average	11955.98	7764.87	4191.11	2175.50	13.40%	853.13

Table 12: ROCE for FY 2017-18 (₹.Cr)

Station Name	GFA as on 31.03.17 (1)	Accumulated depreciation up to 31.03.17 (2)	Net fixed assets (3)=(1)-(2)	Working Capital (4)	WACC (5)	ROCE (6)= ((3)+(4))* (5)
Sileru complex	686.57	440.78	245.79	53.35	13.40%	40.09
NSRCPH	113.60	76.00	37.60	4.93	13.40%	5.70
SRBPH	946.28	615.61	330.67	48.22	13.40%	50.77
PABR PH	56.68	28.82	27.86	2.84	13.40%	4.11
Chettipeta PH	3.55	1.44	2.11	0.22	13.40%	0.31
Dr.NTTPS	2962.24	2527.58	434.66	814.80	13.40%	167.43
RTPP-I	2011.33	1685.66	325.67	327.55	13.40%	87.53
RTPP-II	1874.46	1289.74	584.72	351.37	13.40%	125.44
Dr.NTTPS-IV	2118.85	1111.55	1007.30	368.53	13.40%	184.36
RTPP-III	1182.42	548.18	634.24	219.94	13.40%	114.46
Total/Average	11955.98	8325.36	3630.62	2191.76	13.40%	780.20

Table 13: ROCE for FY 2018-19 (₹.Cr)

Station Name	GFA as on 31.03.18 (1)	Accumulated depreciation up to 31.03.18 (2)	Net fixed assets (3)=(1)-(2)	Working Capital (4)	WACC (5)	ROCE (6)= ((3)+(4))* (5)
Sileru complex	686.57	461.40	225.17	55.82	13.40%	37.65
NSRCPH	113.60	79.58	34.02	5.08	13.40%	5.24
SRBPH	946.28	647.70	298.58	49.83	13.40%	46.69
PABR PH	56.68	30.43	26.25	2.93	13.40%	3.91
Chettipeta PH	3.55	1.52	2.03	0.22	13.40%	0.30
Dr.NTTPS	2962.24	2599.58	362.66	825.74	13.40%	159.25
RTPP-I	2011.33	1724.86	286.47	330.85	13.40%	82.72
RTPP-II	1874.46	1433.96	440.50	352.27	13.40%	106.23
Dr.NTTPS-IV	2118.85	1268.53	850.32	368.29	13.40%	163.29
RTPP-III	1182.42	638.29	544.13	218.93	13.40%	102.25
Total/Average	11955.98	8885.85	3070.13	2209.97	13.40%	707.53

f. Additional interest on pension bonds:

APGENCO claimed additional interest on pension bonds in its filings. The Commission recognizes the fact that the obligation to meet the pension liability of the APSEB employees was vested in APGENCO in terms of the statutory First Transfer Scheme dated 30.01.2000 notified by the State Government under the AP Electricity Reform Act, 1998. The G.O. Ms.No.29 (Transfer Scheme) issued on 31.05.2014 in terms of AP Electricity Reform Act, 1998 and AP Reorganisation

Act, 2014 also provides for payment of pension liabilities by APGENCO. At the time of bifurcation of erstwhile APSEB in to APGENCO and APTRANSCO on 01.02.1999, the pension liabilities of employees who already retired in APSEB and of those employees who were on the payrolls on the date of bifurcation to the extent of their service in APSEB, were transferred to APGENCO. In order to service the pension liabilities, a Master Trust was formed and APGENCO issued two types of bonds to the Trust, the first one for an amount of ₹1320 Crs to meet the full pension liabilities of employees who were already retired as on 01.02.1999 and the second one for an amount of ₹3066 Crs to meet past pension liabilities of the employees who were on pay rolls in APSEB as on 01.02.1999. The future pension liabilities of the latter are to be met by the respective companies. APGENCO has to meet the above pension liabilities that arise each year, through repayment of principal amounts and interest on bonds. The redemption of the first type of bonds will be completed by the year 2033 and the second type by the year 2029 by which time the entire bond amounts along with interest will be repaid to the Trust. To service the bonds, liabilities of APGENCO were increased by an amount of ₹4386(1320+ 3066) Crs with a corresponding increase in the amount of assets. APGENCO was expected to service the bonds from part of the depreciation and part of the Return on equity earned on the value of the total assets.

Erstwhile APERC in the order dt.24.03.2003 in O.P.No 402/2002 estimated the pension liabilities for each year up to 2033 under columns 5(which include repayment of pension bonds) and 6(c) of ANNEXURE-I of the order and allowed the same as part of the Tariff. Further, erstwhile APERC considered the possibility of higher pensions and extended longevity of the pensioners and accordingly permitted liability on account of actual interest on pension bonds in excess of that specified under column 6(c) as pass through in the tariff on a year to year basis. Similarly, any actual fall in the liability on this account is to be adjusted in the tariffs on a year to year basis. Based on the above order, APGENCO claimed and received the excess interest on pension bonds over and above the amounts allowed in order dt.24.03.2003 up to FY 2009.

Moreover, the PPAs entered in to by APGENCO with DISCOMs which were consented by the erstwhile APERC have a provision for pass-through of additional interest on pension bonds in the tariff. For the control period FY 2009-10 to FY 2013-14, APGENCO had not claimed the additional interest on pension bonds from the DISCOMs. Keeping the above in view, the Commission deems it fit to allow pass-through of additional interest on pension bonds in the tariff of APGENCO stations for

the third control period i.e. FY 2014-15 to FY 2018-19. The Commission provisionally approves the amounts filed by APGENCO towards additional interest on pension bonds for the third control period after verifying the actual expenses incurred by APGENCO during FY 2014-15 and FY 2015-16. The provisionally approved amounts are indicated in the Tables 14 to 18. The amounts indicated are estimates only and any excess or shortfall compared to the provisionally approved figures is a pass-through to DISCOMs at the end of each year when the details of actual amounts payable are available.

g. Interstate Power:

Hydel Power Stations of Machkund and Tungabhadra (including Hampi) are inter-government projects. AP's share of power in these projects is supplied to the DISCOMs. APGENCO collects AP's share of fixed charges in these projects from the DISCOMs, retains the salaries of APGENCO staff working in Machkund Hydel Station and passes on the rest to the Govt. of AP. APGENCO estimated these charges for the third control period and filed the same in the tariff application. The Commission has verified the actual payments made during the previous years and provisionally approves the charges as filed by APGENCO for FY 2014-19 and directs it to carry out true up exercise at the end of each year after actual figures are available.

h. Tariff of NSTPD PH(Nagarjunasagar Tail Pond Power House):

NSTPD PH (2x25 MW) project has not yet commenced commercial operation. Further, the audited capital cost details for the project are not available. Therefore, the commission provisionally approves its fixed cost at ₹48.26 Crs as filed by APDISCOMs in their ARR for FY 2016-17 against a fixed cost of ₹58.94 Crs filed by APGENCO for FY 2016-17. After the plant commences commercial operation and after the audited capital cost details are available, APGENCO may file a fresh application before the Commission for determination of final tariff for this plant.

i. Fixed charges:

The Commission approves the year wise fixed charges as shown in the Tables 14 to 18 below for the power supplied by APGENCO from its various generating stations to the respondents for the control period FY 2014-19.

Table 14: Fixed charges for FY 2014-15 (₹.Crs)

Station	ROCE	Depreciation	O&M charges	Fixed charges approved by APERC	Fixed charges filed by APGENCO
	1	2	3	4=1+2+3	5
Sileru complex	47.52	20.62	89.13	157.27	162.93
NSRCPH	7.09	3.58	6.98	17.65	18.45
SRBPH	63.14	32.09	70.94	166.17	172.85
PABR PH	4.73	1.61	3.89	10.23	10.65
Chettipeta PH	0.34	0.08	0.31	0.73	0.75
Dr.NTTPS	192.55	72	361.37	625.92	642.45
RTPP-I	102.16	39.2	120.46	261.81	274.93
RTPP-II	183.24	144.22	120.46	447.92	471.11
Dr.NTTPS-IV	247.72	156.98	96.00	500.70	540.92
RTPP-III	151.21	90.11	60.23	301.55	315.00
NSTPD PH	-	-	-	-	-
Interstate Power Hydel	-	-	-	45.08	45.08
Additional interest on pension bonds	-	-	-	625	625
Total	999.70	560.49	929.76	3160.03	3280.12

Table 15: Fixed charges for FY 2015-16 (₹.Crs)

Station	ROCE	Depreciation	O&M charges	Fixed charges approved now	Fixed charges filed by APGENCO
	1	2	3	4=1+2+3	5
Sileru complex	45.02	20.62	95.05	160.69	166.20
NSRCPH	6.62	3.58	7.44	17.65	18.43
SRBPH	59.00	32.09	75.65	166.74	173.24
PABR PH	4.52	1.61	4.15	10.28	10.70
Chettipeta PH	0.33	0.08	0.33	0.74	0.76
Dr.NTTPS	184.09	72	384.13	640.22	655.92
RTPP-I	97.25	39.2	128.04	264.49	277.39
RTPP-II	163.94	144.22	128.04	436.20	458.33
Dr.NTTPS-IV	226.58	156.98	102.05	485.61	524.63
RTPP-III	138.94	90.11	64.02	293.07	306.04
NSTPD PH	-	-	-	-	-
Interstate Power Hydel	-	-	-	47.34	47.34
Additional interest on pension bonds	-	-	-	666.5	666.5
Total	926.30	560.49	988.90	3189.53	3305.49

Table 16: Fixed charges for FY 2016-17 (₹.Crs)

Station	ROCE	Depreciation	O&M charges	Fixed charges approved now	Fixed charges filed by APGENCO
	1	2	3	4=1+2+3	5
Sileru complex	42.54	20.62	101.36	164.52	169.89
NSRCPH	6.16	3.58	7.94	17.68	18.44
SRBPH	54.88	32.09	80.67	167.64	173.97
PABR PH	4.32	1.61	4.42	10.35	10.76
Chettipeta PH	0.32	0.08	0.35	0.75	0.78
Dr.NTTPS	175.71	72	408.33	656.04	670.91
RTPP-I	92.38	39.2	136.11	267.69	280.37
RTPP-II	144.67	144.22	136.11	425.00	446.07
Dr.NTTPS-IV	205.46	156.98	108.48	470.92	508.77
RTPP-III	126.69	90.11	68.06	284.86	297.33
NSTPD PH	-	-	-	48.26	58.94
Interstate Power Hydel	-	-	-	49.7	49.70
Additional interest on pension bonds	-	-	-	710.76	710.76
Total	853.13	560.49	1051.84	3274.17	3396.67

Table 17: Fixed charges for FY 2017-18 (₹.Crs)

Station	ROCE	Depreciation	O&M charges	Fixed charges approved now	Fixed charges filed by APGENCO
	1	2	3	4=1+2+3	5
Sileru complex	40.09	20.62	108.09	168.79	174.01
NSRCPH	5.70	3.58	8.46	17.74	18.49
SRBPH	50.77	32.09	86.03	168.89	175.06
PABR PH	4.11	1.61	4.72	10.44	10.84
Chettipeta PH	0.31	0.08	0.38	0.77	0.79
Dr.NTTPS	167.43	72	434.06	673.49	687.49
RTPP-I	87.53	39.2	144.69	271.42	283.88
RTPP-II	125.44	144.22	144.69	414.35	434.37
Dr.NTTPS-IV	184.36	156.98	115.31	456.65	493.34
RTPP-III	114.46	90.11	72.34	276.91	288.91
NSTPD PH	-	-	-	48.26	58.37
Interstate Power Hydel	-	-	-	51.69	51.69
Additional interest on pension bonds	-	-	-	757.95	757.95
Total	780.20	560.49	1118.77	3317.36	3435.19

Table 18: Fixed charges for FY 2018-19 (₹.Crs)

Station	ROCE	Depreciation	O&M charges	Fixed charges approved now	Fixed charges filed by APGENCO
	1	2	3	4=1+2+3	5
Sileru complex	37.65	20.62	115.27	173.54	178.61
NSRCPH	5.24	3.58	9.03	17.85	18.58
SRBPH	46.69	32.09	91.74	170.52	176.52
PABR PH	3.91	1.61	5.03	10.55	10.94
Chettipeta PH	0.30	0.08	0.40	0.78	0.80
Dr.NTTPS	159.25	72	461.41	692.66	705.77
RTPP-I	82.72	39.2	153.80	275.72	287.98
RTPP-II	106.23	144.22	153.80	404.25	423.25
Dr.NTTPS-IV	163.29	156.98	122.58	442.85	478.38
RTPP-III	102.25	90.11	76.90	269.26	280.79
NSTPD PH	-	-	-	48.26	57.85
Interstate Power Hydel	-	-	-	53.76	53.76
Additional interest on pension bonds	-	-	-	808.28	808.28
Total	707.53	560.49	1189.96	3368.28	3481.50

25. Table 19: Summary of Fixed Charges (₹.Crs)

Year	Fixed charges Filed (1)	Fixed charges approved now (2)	Difference (3)=(2)-(1)
FY 2014-15	3280.12	3160.03	-120.09
FY 2015-16	3305.49	3189.53	-115.96
FY 2016-17	3396.67	3274.17	-122.50
FY 2017-18	3435.19	3317.36	-117.83
FY 2018-19	3481.50	3368.28	-113.22
Total	16898.97	16309.37	-589.60

26. Thus, the total fixed charges approved now by the Commission for the control period are ₹16309.37 Crs against ₹16898.97 Crs filed by APGENCO i.e. a reduction of ₹589.60 Crs compared to the filing.

27. Variable charges, income tax, incentives and other charges shall be paid as per Regulation 1 of 2008.
28. APGENCO is entitled to recover the tariff from the respondents in proportion to the power supplied to them.

This Original Petition No.3 of 2016 is ordered accordingly.

This order is corrected and signed on this day of 26th March, 2016.

Sd/-
(P.RAMA MOHAN)
MEMBER

(On leave)
(P.RAGHU)
MEMBER

Sd/-
(JUSTICE G.BHAVANI PRASAD)
CHAIRMAN