



# **ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION**

(Regulatory Commission for the States of Andhra Pradesh and Telangana)  
4<sup>th</sup> & 5<sup>th</sup> Floors, Singareni Bhavan, Red Hills, Hyderabad 500 004

Dated 23-08-2014

**Dr. V.Bhaskar, Chairman**  
**Sri R.Ashoka Chari, Member**  
**Sri P.Rajagopal Reddy, Member**

## **ORDER**

**In the matter of determination of tariff of Mini-Hydel Power Projects to take effect on completion of ten years of operation from the date of commissioning of the projects.**

### **Chapter - I INTRODUCTION**

1. For a fuller appreciation of the context of this order, it is necessary to study the historical policy environment for promotion of non-conventional energy generators. In the year 1993, Government of India (GoI) formulated a policy framework for promotion of generating capacity from non-conventional energy (NCE) sources with the objective of conserving fossil fuels and to reduce environmental pollution arising out of the emissions following the combustion of fossil fuels. The policy framework provided for certain incentives and facilities for promoting capacity addition through NCE sources including renewables. The incentives included subsidy (capital/interest) for setting up generating plants based on non-conventional (including renewable) sources. Among other parameters under the policy framework, the tariff payable for power from the NCE sources was predetermined in 1993-94 to take effect from 01-04-1994 with provision for annual escalation.

2. Various State Governments were also requested to formulate their policy frameworks including the tariff payable for encouraging generation from NCE sources, keeping in view the tariff guidelines laid down by GoI. Keeping in view, the guidelines of MNES, Government of Andhra Pradesh (GoAP) vide G.O.Ms.No.93

dated 18-11-1997 issued guidelines for promotion of NCE projects in Andhra Pradesh (as amended vide notification dated 12-12-1998), *inter-alia*, specifying the power purchase price of Rs.2.25/kWh, to be escalated at 5%, with base year being 1997-98 and to be reviewed after 3 years. In pursuance of such guidelines, several Mini Hydel based power projects were set up at different places in the then State of Andhra Pradesh after obtaining necessary approvals. The project developers have entered into Power Purchase Agreements (PPA) for sale of electricity generated by them to the then APTRANSCO / Distribution Licensees which are valid for twenty years from their respective dates of commercial operation.

3. Andhra Pradesh Electricity Reform Act, 1998 came into force on 01-02-1999. Pursuant to the said Act, Andhra Pradesh Electricity Regulatory Commission (APERC) was constituted on 03-04-1999. The uniform incentives extended to all projects based on non-conventional/renewable sources of energy were required to be reviewed after a period of 3 years from the date of issue of G.O.Ms.No.93 i.e., after 18-11-2000. The continuance of the incentives in the manner prescribed in the said order or in a suitably modified form to achieve the objectives of promotion of power generation through non-conventional sources was to be examined. Accordingly, this task was undertaken by the Commission. The Commission issued notices to all the stake holders and heard their views. Subsequently, the Commission issued orders on 20-06-2001 in O.P.No.1075/2000, stating *inter-alia*:

- (a) *the power generated by non-conventional energy developers is not permitted for sale to third parties.*
- (b) *developers of non-conventional energy shall supply power generated to APTRANSCO / DISCOMs of A.P. only.*
- (c) *price applicable for the purchase by the supply licensee should be Rs.2.25 per unit with 5% escalation per annum with 1994-95 as the base year.*
- (d) *a suo-motu review of the incentives to take effect from 01-04-2004 will be undertaken by the Commission after discussion with all the concerned parties.*

- (e) *there will also be a review of the purchase price with specific reference to each developer on completion of 10 years from the date of commissioning of the project (by which time the loans from financial institutions would have been repaid) when the purchase price will be re-worked on the basis of return on equity, O&M expenses and the variable cost.*

4. Subsequently, several NCE generators entered into PPAs on different dates with the then APTRANSCO / DISCOMs. After three years, the Commission initiated *suo-motu* proceedings and passed an order on 20-03-2004, determining the tariff for electricity generated by non-conventional energy sources to be effective from 01-04-2004 in R.P.No.84 of 2003 in O.P.No.1075 of 2000. The said tariff comprised of fixed costs and variable costs. The fixed costs for the 1<sup>st</sup> to 10<sup>th</sup> year of operation for all projects was determined. The variable costs for each of the financial years 2004-05 to 2008-09 for NCE projects other than Mini Hydel was also determined.

5. Aggrieved by the said order dated 20-03-2004, some of the Associations as well as individual NCE developers filed writ petitions before the Hon'ble High Court of Andhra Pradesh. However, consequent to constitution of the Hon'ble Appellate Tribunal for Electricity (ATE), the Hon'ble High Court of A.P. disposed off the said writ petitions with a direction to approach the Hon'ble ATE. In its judgment dated 02-06-2006 in Appeal No.1 of 2005 & others, the Hon'ble ATE allowed the appeals with certain directions. On further appeals by the APTRANSCO and the Commission, the Hon'ble Supreme Court set-a-side the judgement dated 02-06-2006 of the Hon'ble ATE and remanded the matter back to the Commission for determination of the tariff afresh in the light of the observations made therein. In the meanwhile, GoAP notified the Third Transfer Scheme, where under the rights and obligations of APTRANSCO in respect of PPAs of different NCE project developers stood transferred and vested by operation of law in the DISCOMs concerned with effect from 09-06-2005 in whose area of operation that particular project is located. Accordingly, the PPAs entered into by different project developers with erstwhile APTRANSCO stood transferred and vested with the DISCOM concerned.

6. In pursuance of the Hon'ble Supreme Court Order, the Commission passed orders dated 12-09-2011, wherein the then Chairman and the other two then Members determined different charges payable to NCE developers. The said order of the Commission was again challenged in appeal before the Hon'ble ATE in Appeal No.150 of 2011 & batch. In its order dated 20-12-2012, the Hon'ble ATE while disposing the said batch of appeals formulated the parameters required to be adopted for determining the fixed and variable cost for the period 2004-2009 and directed the Commission to finalise the tariff accordingly. Consequently, the Commission issued necessary orders on 22-06-2013. A part of this order, determined the fixed cost for Mini Hydel projects for the 1<sup>st</sup> to 10<sup>th</sup> year of operation. It now remains for the Commission to determine the fixed costs for the 11<sup>th</sup> to 25<sup>th</sup> year of operation.

7. In the meanwhile, several NCE projects have completed 10 years of operation from their respective CoDs. M/s.APEPDCL filed a petition before the Commission under section 62 and 86 (1) (b) of the Electricity Act, 2003 (for short, the Act) for determination of tariff (fixed cost) from 11<sup>th</sup> year of operation for the energy purchases from M/s. Manihamsa Power Projects Pvt. Ltd i.e., from the period from 17-01-2011 to 16-01-2021, vide O.P.No.10 of 2012. The said petition has come up for hearing on 22-02-2014 in the presence of Sri P.Shiva Rao, Advocate for the petitioner; Sri G.Rama Gopal, Advocate for the respondent. No other DISCOM or developers filed such petitions before the Commission for determination of tariff from 11<sup>th</sup> year onwards.

8. In respect of M/s. KM Power Ltd., and 5 others, Commission vide its order dated 16-11-2012 in O.P.No.63 of 2012 decided that pending finalisation of the 11-20 year tariff, an interim tariff be fixed for the 11<sup>th</sup> year onwards at Rs.2.57 per unit for the 11<sup>th</sup> year and being reduced for each successive year by Rs.0.09 per unit.

9. Since all the essential elements of the tariff frame work for Mini Hydel Projects which have completed 10 years will be similar, the Commission has decided to dispose of the petition filed by APEPDCL in O.P.No.10 of 2012 referred to supra, by a common order applicable to all the Mini Hydel power projects which have completed 10 years of operation. In pursuance thereof, the Commission

issued notice to all Mini Hydel developers requesting for information relating to (1) Performance indications of the projects over the last 10 years to be filled up in two prescribed annexures (2) Projections by developer of these parameters for the next ten years (3) Copies of Balance Sheets and Profit & Loss Accounts of the developer for the period from COD till 31-03-2013. The Commission despite pursuance and follow up received information from only 6 out of 12 operational Mini Hydel projects to whom this was sent. The Commission felt that the data received was an adequate sample based on which the operational history of Mini Hydel Projects in Andhra Pradesh could be fruitfully extracted. Accordingly, the Commission used this data received from the Mini Hydel Projects in its analysis. In addition, the Commission considered the averments mentioned by APEPDCL in O.P.No. 10 of 2012; counter/reply filed by M/s. Manihamsa Power Projects Pvt. Ltd therein; submissions of the parties concerned therein during the hearing before the Commission, Study Report of independent consultant instituted by Commission and all the other relevant material available on record.

10. Based on its analysis, Commission decided to issue a common order in respect of all Mini Hydel Power Projects which have completed 10 years of operation.

## **Chapter - II SUBMISSIONS OF APEPDCL**

**The averments mentioned in O.P.No. 10 of 2012 filed by APEPDCL, in brief, are as follows:**

11. M/s. Manihamsa Power Projects Pvt. Ltd commissioned (2 x 1.5 MW) 3 MW mini hydel project at Gap.No.2, Yeleru Reservoir Project, Yeleswaram Village, East Godavari District on 17-01-2001. On 05-01-2000, the said company entered into Power Purchase and Wheeling Agreement (PWPA) with APTRANSCO for sale of energy. The PWPA is valid for 20 years from the Commercial Operation Date.

12. The Commission passed orders in June 2001 fixing tariff payable to new and Renewable Energy projects for the period upto 31-03-2004 and indicated therein that the tariff for each individual project will be reviewed upon completion of 10 years of operation by which time the loans would have been repaid. Thereafter, the Commission passed order dated 20-03-2004 determining tariff payable to these

NCE projects from 01-04-2004 onwards, wherein it is reiterated that there will be review of tariff (fixed cost) for each individual project on completion of 10<sup>th</sup> year of operation.

13. The Government of Andhra Pradesh issued Third Transfer Scheme under the Act, transferring the trading of electricity and PPAs from APTRANSCO to APDISCOMs with effect from 09-06-2005. Accordingly, the project of the respondent came to be vested with the petitioner herein from 09-06-2005.

14. M/s. Manihamsa Power Projects Pvt. Ltd completed 10 years of operation on 16-01-2011 and therefore, the fixed cost payable to it for the period from 17-01-2011 (11<sup>th</sup> year of operation) is to be fixed by the Commission. Therefore, APEPDCL formulated the fixed cost proposals and filed them as annexure to the petition. Based on such detailed calculations and the parameters considered therein, APEPDCL proposed fixed cost for the period 11<sup>th</sup> to 20<sup>th</sup> year.

15. In view of the above, APEPDCL requested the Commission to approve fixed charges payable for the energy purchases from the M/s. Manihamsa Power Projects Pvt. Ltd during the period from 17-01-2011 to 16-01-2021 based on the following assumptions contained in the proposal of APEPDCL:

- (i) Capacity of the project = 3 MW
- (ii) Project Cost per MW = Rs.3.75 Crs
- (iii) Plant Load Factor (PLF) = 35%
- (iv) Auxiliary Consumption = 1%
- (v) Depreciation Rate = 6.70 %
- (vi) O&M Expenditure = 1.5% of PC
- (vii) O&M Escalation increase = 4%
- (viii) Debt : Equity Ratio = 70:30
- (ix) Debt Amount = Rs.7.875 Crs
- (x) Debt repayment = 10 years
- (xi) Payment Term = Quarterly
- (xii) Interest on Term Loan = 12%
- (xiii) Return on Equity = 16%
- (xiv) Equity Amount = Rs.3.375 Crs
- (xv) Interest on Working Capital = 12%

**CHAPTER - III**  
**SUBMISSIONS OF M/S. MANIHAMSA POWER PROJECTS PVT. LTD.**

On behalf of M/s. Manihamsa Power Projects Pvt. Ltd., “Reply” was filed divided into three heads, viz., (i) ‘Preliminary Facts’ (ii) Legal Propositions’ and (iii) ‘Specific Parameters for determination of its tariff’. These are summarised below:

**PRELIMINARY FACTS:**

16. Apart from narrating in detail the circumstances that lead to establishment of the 3 MW Mini-Hydel Project and the policies of Government of India and State Government, M/s. Manihamsa Power Projects Pvt. Ltd stated in the above mentioned ‘Reply’ that:

- (i) APEPDCL is paying interim tariff to M/s. Manihamsa Power Projects Pvt. Ltd from 11<sup>th</sup> year onwards i.e., from 17-01-2011 as per the orders of the Commission passed in O.P.No.63 of 2012 dt.16-11-2012, wherein interim tariff for 11<sup>th</sup> year onwards was fixed.
- (ii) APEPDCL filed the present petition in O.P.No.10 of 2012proposing highly reduced and adhoc tariff without any basis. M/s. Manihamsa Power Projects Pvt. Ltd submits that such a summary process for determining the tariff for sale of power from its project cannot be followed and tariff needs to be determined project - specific with all norms and parameters applicable to M/s. Manihamsa Power Projects Pvt. Ltd.

**LEGAL PROPOSITIONS:**

17. Apart from referring to Sections 61 & 62 of the Act; Clause 6.4 of the National Tariff Policy; Clause 5.12 of The National Electricity Policy and judgments of Hon’ble Appellate Tribunal for Electricity, M/s. Manihamsa Power Projects Pvt. Ltd alleged that APEPDCL is misleading the Commission by way of this summary petition. M/s. Manihamsa Power Projects Pvt. Ltd claimed that under the statutory powers of the Commission under Sections 61, 62 & 86 of the Act read with policies framed by the Central Government u/s 3 of the said Act, and the PPA dt.13-08-2011 entered into between the parties, the tariff needs to be determined afresh.

**SPECIFIC PARAMETERS FOR DETERMINATION OF TARIFF OF M/s. MANIHAMSA POWER PROJECTS PVT. LTD.**

18. M/s. Manihamsa Power Projects Pvt. Ltd further submitted that the norms and parameters for tariff determination are to be considered with the CERC Regulations 2012.

**Capital Cost / Return on Equity:**

19. It is not clear as to how APEPDCL has proposed the Return on Equity and the capital cost. To arrive at the capital cost relevant for determination of tariff, the effect of the original capital cost along with all further additional capitalisation incurred by M/s. Manihamsa Power Projects Pvt. Ltd over the last 10 years needs to be gone into. M/s. Manihamsa Power Projects Pvt. Ltd states that it had to incur capital expenditure on the project. As per the audited Balance Sheet as on 31-03-2011, the total capital cost including additional capitalisation after the adjustment of depreciation is Rs.7,50,21,972/-.

20. As per the CERC Regulations, 2012 (Regulation 13), the normative debt equity ratio of 70:30 has been provided for. Applying the same the equity component works out to Rs.4,35,33,809/- (30% of Rs.14,51,12,698/-) and the debt component works out to Rs.10,15,78,889/- (70% of Rs.14,51,12,698/-). The actual equity of M/s. Manihamsa Power Projects Pvt. Ltd is Rs.3,58,50,000/- and debt component is Rs.10,75,00,000/- which should be the basis for fixing the tariff from 11<sup>th</sup> year onwards.

21. M/s. Manihamsa Power Projects Pvt. Ltd requests for Return on Equity on the above amount as per Regulation 16 of the CERC Regulations. The Hon'ble ATE has decided 16% Return on Equity in its order dated 20-12-2012 with MAT / Income Tax being pass-through which works out to 20% for the 1<sup>st</sup> ten years and 24% from 11<sup>th</sup> year onwards. M/s. Manihamsa Power Projects Pvt. Ltd has not declared any dividend since inception and therefore Return on Equity to be calculated cumulatively from 2001 onwards, on compound basis.

22. Income tax as paid had to be borne by APEPDCL additionally over and above the tariff and ought to be allowed as a pass through.

**Interest on loan and working capital:**

23. It is also not understood as to how APEPDCL has calculated the interest on loan. The loan sanctioned by IREDA to M/s. Manihamsa Power Projects Pvt. Ltd carried interest @ 14% per annum (exclusive of interest tax) plus interest tax at applicable rate and the interest shall be payable quarterly on 31<sup>st</sup> March, 30<sup>th</sup> June, 30<sup>th</sup> September and 31<sup>st</sup> December each year without any rebate. Due to the highly inadequate tariff being paid by APEPDCL to M/s. Manihamsa Power Projects Pvt. Ltd over the last many years, the latter has defaulted in the payment of interest on loan. Due to the defaults in paying dues to financial institutions, the promoters are facing several criminal cases. Therefore, the interest on loan needs to be calculated as per Regulation 14 of the CERC Regulations, 2012.

**O&M Expenditure and O&M Escalation:**

24. As per the petition filed by APEPDCL, M/s. Manihamsa Power Projects Pvt. Ltd need not get any additional O&M expenditure or escalation on the same. However, the plant is more than 10 years old and naturally the maintenance cost is on the higher side. M/s. Manihamsa Power Projects Pvt. Ltd prays that the actual O&M expenses to be allowed to the respondent for an amount of Rs.90,59,407/- as per the balance sheet for the period ending 31-03-2011. In the alternative, O&M expenses may be paid as per CERC Regulations, 2012 in respect of small hydro plants.

**Interest on Working Capital:**

25. Generating units are not considered as priority sector and the interest rate applied to them is the highest. M/s. Manihamsa Power Projects Pvt. Ltd is having its working capital arrangements with Andhra Bank and the charges by it is about 16% PA considering the monthly rests and the other charges that are debited by the Bank including processing charges, Inspection charges, etc. In the alternative, Regulation 17 of the CERC Regulations, 2012 which provides for interest on working capital may be taken into consideration for calculation of interest on working capital.

**Depreciation:**

26. The CERC Regulations 2012 provided for the methodology for calculation of depreciation, vide clause 15 therein. The Hon'ble ATE has fixed the depreciation @

7% PA for 1<sup>st</sup> ten years and balance to be spread over the remaining 15 years in its order dated 20-12-2012. Accordingly, APEPDCL has to calculate the depreciation for arriving the tariff rate from 11<sup>th</sup> year onwards.

**Auxiliary Consumption:**

27. Normative auxiliary consumption for the small hydro projects shall be 1%.

**Capacity Utilisation Factor:**

28. APEPDCL has made the calculations of proposed tariff on the basis of Capacity Utilisation Factor of 35%. This is patently erroneous and contrary to record. M/s. Manihamsa Power Projects Pvt. Ltd achieved PLF of 30.28 in 2002/2003, 24.66 in 2003/2004, 22.62 for the year 2004/2005, 28.05 for the year 2005/2006, 32.54 for the year 2009/2010 and 24.01 in the year 2010/2011 as indicated in the Petition.

29. The Hon'ble ATE in its order dated 20-12-2012 in Appeal No.172 of 2011 has decided the Capacity Utilisation Factor of 32% for Mini Hydel power projects. The Hon'ble ATE has also determined that the tariff applicable to hydro plants should be a single part tariff and the penetration above the PLF of 32% up to PLF of 45% should also be paid at the same rate which is determined at normative PLF 32%. This will ensure that loss in generation in a particular year could be made up by the hydro power station by extra generation between PLF of 32% and 45% in other year. M/s. Manihamsa Power Projects Pvt. Ltd generation is less than 32% PLF in the years mentioned above. With the result, it could not recover the annual fixed charges. Therefore, the Commission may determine the revised tariff for these years to recover the annual fixed charges from the APEPDCL from 11<sup>th</sup> year onwards. M/s. Manihamsa Power Projects Pvt. Ltd has suffered under recoveries during the first ten years. Therefore, this aspect has to be taken into consideration for fixing the tariff from 11<sup>th</sup> year onwards.

30. It should be noted that M/s. Manihamsa Power Projects Pvt. Ltd., in the information separately submitted to the Commission relating to operating parameters was provided a total different version of the PLF achieved. The information submitted by M/s. Manihamsa Power Projects Pvt. Ltd., separately to the Commission is tabulated below:

**Actual PLF achieved (as per Annexure - I)**

Period	PLF (%)
17.01.2001 to 31.03.2001	42.89
01.04.2001 to 31.03.2002	56.36
01.04.2002 to 31.03.2003	17.90
01.04.2003 to 31.03.2004	36.60
01.04.2004 to 31.03.2005	30.06
01.04.2005 to 31.03.2006	43.12
01.04.2006 to 31.03.2007	67.11
01.04.2007 to 31.03.2008	75.13
01.04.2008 to 31.03.2009	68.13
01.04.2009 to 31.03.2010	16.48
01.04.2010 to 31.03.2011	53.32
01.04.2011 to 31.03.2012	66.30
01.04.2012 to 31.03.2013	47.65

The Commission notes that the Average PLF of 13 years was 47.77% and Average PLF of 10 years was 50.39%

**Projected PLF (as per Annexure - II)**

Period	PLF (%)
01.04.2011 to 31.03.2012	32.00%
01.04.2012 to 31.03.2013	
01.04.2013 to 31.03.2014	
01.04.2014 to 31.03.2015	
01.04.2015 to 31.03.2016	
01.04.2016 to 31.03.2017	
01.04.2017 to 31.03.2018	
01.04.2018 to 31.03.2019	
01.04.2019 to 31.03.2020	
01.04.2020 to 31.03.2021	

As will be seen, the respondent has projected a PLF of 32% for the period 2011-2021.

**Electricity Duty:**

31. As per the Hon'ble ATE this is a pass through and to be paid by APEPDCL.

**Royalty on Water:**

32. As per the Hon'ble ATE this is a pass through and to be paid by APEPDCL. M/s. Manihamsa Power Projects Pvt. Ltd paid water royalty charges to the Irrigation Department of GoAP to the tune of Rs.25,39,088/- as on 2009 for its Mini Hydel power plant. Out of the said amount, Rs.12,08,802/- pertains to the period

covered under the wheeling agreement upto 31-03-2004 and the balance amount of Rs.13,30,286/- pertains to the PPA from 01-04-2004. M/s. Manihamsa Power Projects Pvt. Ltd requested APEPDCL to reimburse the same as per the order of the Commission of the year 2004 with compound interest at 16%. APEPDCL did not pay the same.

33. M/s. Manihamsa Power Projects Pvt. Ltd received one more demand notice from the Irrigation Department for payment of Rs.1,71,17,100/- stating that if the same is not paid release of water generation purpose will be stopped.

**OTHER RELEVANT ASPECTS:**

**In the said 'Reply', M/s. Manihamsa Power Projects Pvt. Ltd further stated that:**

34. The petition filed by APEPDCL and the calculations proposed by it is totally incorrect and without any basis.

35. APEPDCL filed the petition with complete disregard to the pathetic situation of M/s. Manihamsa Power Projects Pvt. Ltd. The latter invested large sums of money in the project based on the facilities offered and borrowed large amounts from IREDA and other financial institutions for the implementation of the project. The package of incentives allowed to M/s. Manihamsa Power Projects Pvt. Ltd in respect of project is basic and fundamental for the viability of the project and for ensuring proper and timely servicing and repayment of the debts.

36. M/s. Manihamsa Power Projects Pvt. Ltd requested the Commission to take note that it implemented the project based on such package of incentives and promises by the State Government as well as APTRANSCO and as incentives are disappearing, its project is bound to become unviable.

37. Presently, when DISCOMs and APTRANSCO are purchasing conventional power at Rs.5 - 8 per unit, it is unfortunate that APEPDCL has filed the present petition in order to deny M/s. Manihamsa Power Projects Pvt. Ltd, a Non-conventional energy developer, a proper and cost reflective tariff.

38. In case, the Commission does not determine the tariff as per the norms mentioned by M/s. Manihamsa Power Projects Pvt. Ltd in its reply, it prays the Commission that it may be allowed to go with third party sales.

39. For all these reasons, M/s. Manihamsa Power Projects Pvt. Ltd., requested the Commission to determine tariff as per the information and details provided by them in its reply or alternatively allow third party sales with benefits of REC. Further, the Commission may be pleased to direct APEPDCL to reimburse water royalty charges of Rs.13,30,286/- paid by M/s. Manihamsa Power Projects Pvt. Ltd with compound interest @ 16% compounded quarterly and outstanding water royalty charges of Rs.1,71,17,100/- to the irrigation department as per the demand notice served by them to M/s. Manihamsa Power Projects Pvt. Ltd and also to direct APEPDCL to pay interest on difference amount if any arising out of higher tariff if allowed by the Commission than paid by the M/s.APEPDCL on the compound interest basis.

40. In addition to the submissions made by M/s. Manihamsa Power Projects Pvt. Ltd., the Commission has analysed below, the information submitted by the three other plants in response to the Commission request.

**Information provided by M/s. PMC Power Pvt. Ltd., in respect of 650 KW project situated at Pedanandipadu Branch Canal, Near G. Muppalla, Guntur District falling under APSPDCL, Tirupati:**

41. M/s. PMC Power Pvt. Ltd., provided the following information as required by the Commission:

(a) **Return on Equity (RoE):**

M/s. PMC Power Pvt. Ltd., was unable to pay any dividend (RoE) to the share holders during the initial 10 years, due to drought conditions in 2001-2004 and also due to reduction in purchase prices from 01-04-2004 as per Hon'ble APERC order dated 20-03-2004 and 07-07-2004 for the Mini Hydel Power Projects. Hon'ble ATE accepted the APERC determined RoE of 16%. The Equity including outstanding Return on Equity payable to the share holders is Rs.380.30 Lakhs (Equity of Rs.100 Lakhs + Rs.280.30 Lakhs unpaid RoE arrived at 16% compounding) at the end of the 10<sup>th</sup> year. M/s. PMC Power Pvt. Ltd., had proposed for recovery of unpaid RoE at Rs.28.03 Lakhs each year from 11<sup>th</sup> year to 20<sup>th</sup> year plus RoE of 16% on Rs.100.00 Lakhs Equity at the beginning of 11<sup>th</sup> year (Capital).

(b) **Plant Load Factor:**

The average Plant Load Factor achieved during the initial 10 years from CoD is 30.4%. However, the Hon'ble ATE decided 32% of PLF for the purpose of calculation of tariff from 1<sup>st</sup> year to 10<sup>th</sup> year. Therefore, PLF of 32% is adopted for calculation of tariff from 11<sup>th</sup> year to 20<sup>th</sup> year.

**Actual PLF achieved (as per Annexure - I)**

Period	PLF (%)
17-05-2001 to 31-03-2002	31.43
01-04-2002 to 31-03-2003	4.37
01-04-2003 to 31-03-2004	5.52
01-04-2004 to 31-03-2005	24.82
01-04-2005 to 31-03-2006	37.05
01-04-2006 to 31-03-2007	45.80
01-04-2007 to 31-03-2008	43.31
01-04-2008 to 31-03-2009	36.77
01-04-2009 to 31-03-2010	37.53
01-04-2010 to 31-03-2011	33.16

The Commission notes that the Average PLF of 10 years was 29.98% and Average PLF of 7 years was 36.92%

**Projected PLF (as per Annexure - II)**

Period	PLF (%)
01-04-2011 to 31-03-2012	32%
01-04-2012 to 31-03-2013	
01-04-2013 to 31-03-2014	
01-04-2014 to 31-03-2015	
01-04-2015 to 31-03-2016	
01-04-2016 to 31-03-2017	
01-04-2017 to 31-03-2018	
01-04-2018 to 31-03-2019	
01-04-2019 to 31-03-2020	
01-04-2020 to 31-03-2021	

(c) **Outstanding Loan as at the end of 10<sup>th</sup> year:**

The total outstanding loan including outstanding interest, funded interest, liquidated damages etc., as at the end of the 10<sup>th</sup> year is Rs.567.64 Lakhs.

(d) The calculation of the power purchase price is made on the following parameters.

- (i) Power Wheeling & Purchase Agreement dated 19-05-1999

- (ii) PPA dated 22-10-2001 as amended on 29-04-2009
- (iii) Capacity of the project = 0.65 MW (56,94,000 units per year)
- (iv) Plant Load Factor (PLF) = 32%
- (v) Auxiliary Consumption = 1%
- (vi) Date of Commissioning = 17-05-2001
- (vii) Project Cost = Rs.437.81 Lakhs (Annual Report 2010-11)
- (viii) Tariff Year = 11<sup>th</sup> year to 20<sup>th</sup> year
- (ix) Outstanding Loan as at the end of 10<sup>th</sup> year = Rs.567.64 Lakhs
- (x) Outstanding Loan repayment tenure = 10 years.
- (xi) Interest on Loan = 12%
- (xii) Income Tax pass-through
- (xiii) Depreciation at 2% per annum on Rs.437.81 Lakhs
- (xiv) Interest on Working Capital = 14%
- (xv) O&M Expenses = 3.5% of Project Cost with 5% escalation every year.
- (xvi) Water Royalty charges and Electricity Duty pass-through (To be reimbursed).
- (xvii) Tariff Applicability: The Hon'ble ATE decided for the initial 10 years, that the tariff determined shall be paid for delivered energy upto 45% PLF and Rs.0.35 paise per unit for energy delivered above 45% PLF. The PLFs achieved during 11<sup>th</sup>, 12<sup>th</sup> and 13<sup>th</sup> years are 36.9%, 2.7%, and 29.7%. The plant is unlikely to achieve even 32% PLF average in 11<sup>th</sup> year to 20<sup>th</sup> year. It is therefore requested that the tariff determined for 11<sup>th</sup> year to 20<sup>th</sup> year be paid for the entire delivered energy without any upper limit of PLF.

**Information provided by M/s.Janapadu Hydro Power Project Pvt. Ltd. (Amalgamated with Kallam Brothers Cottons Pvt. Ltd) in respect of 1 MW situated at Janapadu Branch Canal, Nereducherla, Nalgonda District falling under APCPDCL (now TSSPDCL), Hyderabad:**

42. The information provided by M/s. Janapadu Hydro Power Project Pvt. Ltd., is as under:

1. Date of Wheeling Agreement / PPA = 28-01-2000 / 19-09-2001
2. Capacity of the project = 1 MW
3. Plant Load Factor (PLF) = Ranging 1.50% to 54.08%

**Actual PLF achieved (as per Annexure - I)**

Period	PLF (%)
19-09-2001 to 31-03-2002	18.14
01-04-2002 to 31-03-2003	5.44
01-04-2003 to 31-03-2004	1.50
01-04-2004 to 31-03-2005	30.50
01-04-2005 to 31-03-2006	47.93
01-04-2006 to 31-03-2007	52.39
01-04-2007 to 31-03-2008	54.08
01-04-2008 to 31-03-2009	50.37
01-04-2009 to 31-03-2010	39.52
01-04-2010 to 31-03-2011	44.71
01-04-2011 to 31-03-2012	34.94
01-04-2012 to 31-03-2013	4.40

The Commission notes that the Average PLF of 12 years was 31.99% and Average PLF of 9 years was 39.87%.

**Projected PLF (as per Annexure - II)**

Period	PLF (%)
01-04-2013 to 31-03-2014	14.30
01-04-2014 to 31-03-2015	15.12
01-04-2015 to 31-03-2016	15.13
01-04-2016 to 31-03-2017	15.49
01-04-2017 to 31-03-2018	16.61
01-04-2018 to 31-03-2019	17.89
01-04-2019 to 31-03-2020	20.06
01-04-2020 to 31-03-2021	17.89
01-04-2021 to 18-09-2021	22.59

4. Auxiliary Consumption = 0.01%
5. Date of Commissioning = 19-09-2001
6. Project Cost = Rs.5.45 Crs per MW
7. Amount of Loan taken = Rs.4.32 Crs + Rs.0.81 Lakhs additional loan (Total Rs.5.13 Crs)
8. Outstanding Loan as at the end of 10<sup>th</sup> year = Rs.1.51 Crs + Funded amount Rs.1.66 Crs as on 31-03-2012
9. Outstanding Loan repayment tenure = 10 years.
10. Interest on Loan = 14 % per annum and then reduced to 10%
11. Return on Equity = 16% proposed
12. Interest on Working Capital = 14%

13. O&M Expenditure = Ranging Rs.4,44,246 Lakhs to Rs.59,75,450 Lakhs
14. M/s. Janapadu Hydro Power Project Pvt. Ltd., also stated that Generation depends upon water position at catchment area of Nagarjuna Sagar Dam and also depending upon decision of the Government of Andhra Pradesh regarding crop pattern.

**Information provided by M/s.K.M.Power Pvt. Ltd in respect of 3 Projects located at Guntakandala Village, Velpanuru Village and Madhavaram Village of Kurnool District falling under earlier APCPDCL (TSSPDCL) or Now APSPDCL, Tirupati:**

43. M/s. K.M. Power Pvt. Ltd., (I, II & III projects) vide their letter dated 29-04-2014 submitted only the Balance Sheets & Profit and Loss Account along with Schedules from 2002-2003 to 2012-2013 (12 years) and stated that the information relating to operational parameters for the last ten years sought by the Commission would be submitted in 10 days. No information was however submitted by M/s. K.M. Power Pvt. Ltd.

#### **Chapter - IV COMMISSION ANALYSIS**

44. In addition to the material placed before it by APEPDCL & M/s. Manihamsa Power Projects Pvt. Ltd, the Commission, had sought and obtained details of the functioning of the Mini Hydel generating units operated by others. These included Operational, Financial, Commercial and Generation details, supported by the relevant Balance Sheets & Profit and Loss Accounts from CoD till 31-03-2013 as well as projections into the future.

45. The Commission adopted a holistic approach for the determination of Fixed Costs norms for NCE sources. This approach incorporated four elements which are listed below.

- A. The Commission engaged M/s. KPMG as an independent consultant with a mandate to analyse the operating parameters/norms and economics of all NCE projects with special reference to their working in erstwhile undivided Andhra Pradesh to prepare a study report (hereinafter study report) on the determination of cost and performance norms for NCE sources.

- B. The Commission analysed relevant CERC and State Electricity Regulatory Commission's (SERC) orders with reference to determination of fixed cost norms for NCE sources including the Central Electricity Regulatory Commission (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 and its subsequent amendments.
- C. The written and oral submissions made by both the parties in their petitions and the documents submitted by them in support of their respective contentions.
- D. The Operational, Financial, Commercial and Generation details, supported by the relevant Balance Sheets & Profit and Loss Accounts (from CoD till 31-03-2013) as well as projections into the future submitted by the respondent as well as three other Mini Hydel developers.

46. The Commission, distilled the findings of the above four elements described above and determined the fixed cost for all the Mini Hydel Power Projects to whom this order is applicable from the 11<sup>th</sup> year of operation onwards through the process described below.

47. Prior to this exercise, it is appropriate to review the norms adopted by the Commission in its 2004 and the norms adopted by the Commission in its 2013 orders which were based on the Hon'ble ATE 2012 order. The parameters relevant to the determination of fixed costs are placed in Table 1 below:

**TABLE 1**

**Mini Hydel Power Project Norms**

	Units	Commission 2004 Order	Commission 2013 Order (Based on Hon'ble ATE norms)
<b>Applicability (Fixed Cost)</b>	<b>Period</b>	1-10 <sup>th</sup> year of Operation	1-10 <sup>th</sup> year of Operation
<b>Capital Cost</b>	<b>Rs. Cr/MW</b>	3.75	4.5
<b>Threshold (CUF)</b>	<b>PLF %</b>	35%	32%

	Units	Commission 2004 Order	Commission 2013 Order (Based on Hon'ble ATE norms)
O&M expenses (1 <sup>st</sup> year of operation)	% of Capital Cost	1.5%	3.5%
O&M Annual escalation	%	4%	6.69%
Debt: Equity Ratio	Ratio	70:30	70:30
Depreciation	%	6.7% (First 10 years) and the balance depreciation is spread over for the life of the project	7.0% (First 10 years) Balance 20% spread evenly over 15 years
Interest on Debt	%	10%	12%
ROE	%	16%	16% (MAT/Income Tax pass through)
Interest on Working Capital	%	12%	12%

48. After detailed analysis of the financial and operational parameters relevant to the performance of Mini Hydel Power Project Developers over the last ten years, including aspects like loan repayment, actual generation as compared to the normative Plant Load Factor (PLF) and the overall financial health of the project developers, the Commission came to the conclusion that the performance of all the project developers is broadly consistent with the existing norms as examined parameter-wise herein below:

#### **Capital Cost:**

49. M/s. Manihamsa Power Projects Ltd., indicated the actual project cost as Rs.5.7 Crs per MW. M/s. PMC indicated a project cost of Rs.449.7 Lakhs for 0.65 MW, working out to Rs.6.92 Crs per MW. M/s. Janapadu indicated a project cost of Rs.5.45 Crs per MW. On the other hand DISCOMs suggested a project cost of Rs.3.75 Crs per MW.

50. The Commission has carefully examined the matter. This order deals only with historical costs. This represents the cost incurred by the existing Mini-Hydel Power projects, which are functioning and in respect of which capital costs have been incurred more than 10 years ago. Further, Hon'ble ATE has fixed the capital

cost of Rs.4.5 Crs per MW (both for projects below 5 MW and above 5 MW) vide its order dated 20-12-2012. Hence the Commission hereby decides to retain the capital cost of 4.5 Crs per MW.

**Plant Load Factor:**

51. M/s. Manihamsa Power Projects Ltd., originally furnished in their reply stated that the Plant Load Factor (PLF) achieved in the last 10 years was less than 32% except for the year 2009-10. They further stated that they could not recover the annual fixed charges at this low PLF and as such this aspect has to be taken into consideration for fixing the tariff from 11<sup>th</sup> year onwards. Subsequently, pursuant to the Commission's direction, they have furnished information required. The PLF values reported are different from the earlier values as pointed out earlier. The 13 years average works out to 47.77%. Further, PLFs were less than 32% in only 3 years (i.e., FY 2002-03 - 17.9%, FY 2004-05 - 30.06% & FY 2009-10 - 16.48%). It is noteworthy that the developer projected a PLF of 32% for the rest of the agreement period.

52. M/s. PMC Power Pvt. Ltd., stated that the average Plant Load Factor during the initial 10 years from CoD is 30.4% and the Hon'ble ATE has however, decided 32% PLF for the purpose of calculation of tariff from 1<sup>st</sup> year to 10<sup>th</sup> year. As such, they stated that PLF of 32% is adopted for calculation of tariff from 11<sup>th</sup> year to 20<sup>th</sup> year. Having stated thus, they also stated that the PLFs achieved during 11<sup>th</sup>, 12<sup>th</sup> & 13<sup>th</sup> years are 36.9%, 2.7% & 29.7% respectively. As such, the plant is unlikely to achieve even 32% PLF average in 11<sup>th</sup> year to 20<sup>th</sup> year. Accordingly, they requested that the tariff determined for 11<sup>th</sup> year to 20<sup>th</sup> year be paid for the entire delivered energy without any upper limit of PLF.

53. M/s. Janapadu Hydro Power Project Pvt. Ltd., has furnished the details of PLF achieved from 19-09-2001 to 31-03-2013, the value ranges from 1.50% to 54.08% as **pointed out earlier**. Based on the above, the Company projected the PLFs from the year 01-04-2013 to till the end of the agreement between 14.30% and 22.59%.

54. The Commission has carefully considered the various contentions made by the developer. Based on the analysis of data furnished by the Developers, the

13 years average PLF for M/s. Manihamsa Power Projects Ltd., works out to 47.77% and the average PLF for the 10 years period reckoning from 01-04-2004 (the date of the Order on which threshold PLF of 35% is fixed) works out to 50.39%. As such, based on the analysis of this particular project, Commission feels that retaining a threshold PLF of 32% (as also decided by Hon'ble ATE in its Order dated 20-12-2012) for working out the tariff is appropriate. It is noteworthy that Developer has also requested for the same.

55. As regards to the submissions of M/s. PMC Power Pvt. Ltd., and based on the analysis of data furnished by the Developer, the 10 years average PLF works out to 29.98% and the average PLF for the 7 years period reckoning from 01-04-2004 works out to 36.92%. In this context, it is to be noted that relying on the average PLF for 7 years period is more appropriate in as much as the methodology of linking the tariff to a threshold PLF came into existence only upon passing of the Order dated 20-03-2004. As can be seen from the above, Commission feels that the applicability of threshold PLF of 32% is reasonable as fixed by the Hon'ble ATE.

56. In the case of M/s. Janapadu Hydro Power Project Pvt. Ltd., the 12 years average PLF works out to 31.99% and the average PLF for the 9 years period reckoning from 01-04-2004 works out to 39.87%.

57. In view of the above analysis, Commission hereby determines the threshold PLF of 32% for fixed cost recovery following the orders of Hon'ble ATE, the fixed cost so determined is to be paid upto a PLF of 45%. Beyond 45% PLF the Commission determined that and an incentive of Rs.0.50 ps. is to be paid by the DISCOMs.

**Auxiliary Consumption:**

58. M/s. Manihamsa Power Projects Ltd., and M/s. PMC Power Pvt. Ltd., have requested for an auxiliary consumption of 1%. M/s. Janapadu Hydro Power Project Pvt. Ltd., has requested for an auxiliary consumption of 0.01%. M/s. APEPDCL also suggested an auxiliary consumption of 1%.

59. Commission finds that the views of Developers and the DISCOM converge. The suggestion of M/s. Janapadu Hydro Power Projects Pvt. Ltd., appears to be a

typographical error. As such, Commission decides to adopt an auxiliary consumption of 1% in line with Hon'ble ATE's determination for the purpose of working out tariff for 11<sup>th</sup> year onwards.

**O&M Expenditure and Escalation:**

60. M/s. Manihamsa Power Projects Ltd., stated that the plant is more than 10 years old and naturally the maintenance cost will be on higher side and as such, they requested that the actual O&M expenditure may be allowed for an amount of Rs.90,59,407/- as per the Balance Sheet for the period ending 31-03-2011 @6.61% escalation.

61. M/s. PMC Power Pvt. Ltd. requested for O&M expenses of 3.5% of project cost with 5% escalation every year.

62. M/s. Janapadu Hydro Power Project Pvt. Ltd., requested for O&M expenses of Rs.2,42,560/- for FY 2013-14. However, the Developer has requested for O&M expenses ranging from Rs.23 Lakhs to Rs.25 Lakhs for FY 2014-15 onwards. No separate escalation has been indicated.

63. APEPDCL also suggested O&M expenses of 1.5% of project cost with an escalation of 4% every year.

64. The Commission has carefully considered the contentions made. The O&M expenses as requested by M/s. Manihamsa Power Projects Ltd., works out to about Rs.30 lakhs per MW. Whereas M/s. PMC Power Pvt. Ltd. requested for 3.5% of the project cost towards O&M expenses with an escalation of 5%. M/s. Janapadu Hydro Power Project Pvt. Ltd., requested for O&M expenses ranging from Rs.23 to Rs.25 lakhs per MW. Against the above, the O&M expenses fixed by the Hon'ble ATE vide its Order dated 20-12-2012, which was also subsequently adopted by this Commission, is 3.5% of the project cost with an escalation of 6.69% every year. On this basis, the O&M expenses for 11<sup>th</sup> year, works out to about Rs.30 lakhs per MW. Keeping in view the orders of Hon'ble ATE, which was subsequently adopted by this Commission, the Commission has decided to retain the O&M expenses at 3.5% of the project cost escalated year on year by 6.69%.

### **Debt Equity Ratio:**

65. DISCOMs suggested that the existing Debt Equity ratio of 70:30 be maintained whereas the project Developers have not mentioned anything specifically on this aspect. The Commission notes that this ratio had a historical base derived from the inception of the project. The existing Debt Equity ratio of 70:30 is an accepted norm across the country with other SERCs and the CERC adopting the same norm. Accordingly, the Commission is of view that the existing normative Debt Equity ratio of 70:30 for Mini-Hydel Power Projects applied for the first 10 years be continued for the computation of Fixed Cost for next 15 year period also.

### **Depreciation:**

66. M/s. Manihamsa Power Projects Ltd., stated that the Hon'ble ATE has fixed the depreciation at 7% per annum for first 10 years and balance to be spread over the remaining 15 years in its Order dated 20-12-2012. Accordingly, they stated that M/s. APEPDCL has to carryout the depreciation for arriving the tariff from 11<sup>th</sup> year onwards.

67. M/s. PMC Power Pvt. Ltd. also made a request to the similar effect.

68. M/s. Janapadu Hydro Power Project Pvt. Ltd., indicated a depreciation of Rs.24 lakhs without indicating the rate of depreciation adopted.

69. M/s. APEPDCL suggested depreciation of 6.7%.

70. In line with Hon'ble ATE's Judgment dated 20-12-2012, Commission has already allowed a depreciation of 70% in the first 10 years and the balance depreciation of 20% is equally to be spread over the next 15 years. This represents 1.33% in percentage terms. The Commission decides to continue this approach adopted earlier and allow depreciation beyond the 10<sup>th</sup> year following the above referred schedule.

### **Return on Equity:**

71. M/s. Manihamsa Power Projects Ltd., M/s. PMC Power Pvt. Ltd., and M/s. Janapadu Hydro Power Project Pvt. Ltd., have indicated a RoE of 16%. APEPDCL had suggested a RoE of 16%.

72. The Commission had examined the matter and in view of the fact that there is a broad agreement between the parties on the percentage of RoE to be adopted, the Commission is inclined to allow a post-tax RoE of 16% with a pass-through of Income Tax / Minimum Alternate Tax (MAT). Thus, the pre-tax return effectively works out to more than 23% (based on a notional tax rate of 30%) which is more than adequate return. This is also inline with the Hon'ble ATE order dated 20-12-2012 and subsequent orders of the Commission dated 22-06-2013 besides being similar to the treatment allowed in respect of Biomass and Bagasse project developers vide orders dated 19-07-2014 & 05-08-2014.

**Interest on Working Capital:**

73. M/s. Manihamsa Power Projects Ltd., had stated that they are having its working capital arrangement with Andhra Bank and charges of it is about 16% p.a. considering the monthly rests and other charges that are debited by the Bank including processing charges, inspection charges etc., or in the alternative Regulation No.17 of CERC Regulations, 2012 which provides for Interest on Working Capital may be taken into consideration for calculation of Interest on Working Capital.

74. M/s. PMC Power Pvt. Ltd., and M/s. Janapadu Hydro Power Project Pvt. Ltd., had sought for interest on working capital at 14% p.a.

75. On the other hand, APEPDCL suggested an interest on working capital of 12% p.a.

76. The Commission has carefully considered the contentions. The Hon'ble ATE vide its order dated 20-12-2012 had allowed interest on working capital of 12%, which was also subsequently adopted by the Commission in its order dated 22-06-2013. That apart, Commission in its recent orders dated 19-07-2014 & 05-08-2014, in respect of Biomass and Bagasse power projects had also allowed an interest on working capital of 12%. As such, this being a uniform rate across the sectors, there is no justification to give a special treatment to the Mini Hydel Power Projects.

77. Further, coming to the constituent components of working capital, the Hon'ble ATE had included (i). One (1) month's O&M expenses (ii). Two (2) month's receivables and (iii). One percent (1%) project cost towards maintenance and spares as requested by one of the Mini Hydel Project developers. As such, the Commission is not inclined to change the constituent components of working capital in the middle of the project cycle and accordingly the request of the developers is rejected.

**Incentive:**

78. DISCOMs have not made any proposal in this regard. Nor there is any proposal from the Mini-Hydel project developers. Notwithstanding the above, the Commission has examined the matter. The Electricity Act, 2003 mandates the Commission to promote generation of electricity from Non-Conventional Energy sources. Commission had permitted an incentive of Rs.0.50 paise per unit over and above the threshold PLF in respect of Biomass and Bagasse project developers vide orders dated 19-07-2014 & 05-08-2014. The same is in line with the CERC Tariff Regulations for Thermal Plants 2014, which offer the similar incentive to thermal plants for generation over the threshold PLF. That being the case, Commission is inclined to extend the same benefit to Mini-Hydel project developers also. As all the fixed costs would have been recovered at PLF of 32% / 45%, the Commission is of the opinion that such incentive beyond 45% PLF will encourage Mini-Hydel project developers to enhance their generation.

**Outstanding Loans and interests thereon and unpaid RoE:**

79. M/s. Manihamsa Power Projects Ltd., had indicated an outstanding loan at the end of the 10<sup>th</sup> year as Rs.5.86 Crs. Further, the company has shown the interest on outstanding loan from FY 2013-14 to FY 2020-21 ranging from Rs.39 Lakhs to Rs.82 Lakhs.

80. M/s. Manihamsa Power Projects Ltd., through their reply stated that they have not declared any dividend since inception and therefore Return on Equity to be calculated cumulatively from 2000 onwards on compound basis inline with this view point they have proposed RoE at 16% assuming no dues on RoE from FY 2013-14 onwards till FY 2020-21. The amount indicated as Rs.6.87 Crs.

81. M/s. PMC Power Pvt. Ltd., had indicated an outstanding loan at the end of the 10<sup>th</sup> year as Rs.5.68 Crs. [Rs.460.48 Lakhs (Secured Loan) + Rs.10.10 Lakhs (USL) + Rs.83.97 Lakhs (Interest outstanding) + Rs.13.09 Lakhs (Liquidated damages) = Rs.567.64 Lakhs]. Further, the company has shown the interest on outstanding loan from FY 2011-12 to FY 2020-21 ranging from Rs.4.26 Lakhs to Rs.60.56 Lakhs.

82. M/s. PMC Power Pvt. Ltd., stated that they were unable to pay any dividend (RoE) to the share holders during the initial 10 years, due to drought conditions during 2001-2004 and also due to reduction in purchase prices from 01-04-2004 as per Hon'ble APERC order dated 20-03-2004 and 07-07-2004 for the Mini Hydel Power Projects. The Equity including outstanding Return on Equity payable to the share holders is Rs.380.30 Lakhs (Equity of Rs.100 Lakhs + Rs.280.30 Lakhs unpaid RoE arrived at 16% compounding) at the end of the 10<sup>th</sup> year. M/s. PMC Power Pvt. Ltd., had proposed for recovery of unpaid RoE at Rs.28.03 Lakhs each year from 11<sup>th</sup> year to 20<sup>th</sup> year plus RoE of 16% on Rs.100.00 Lakhs Equity at the beginning of 11<sup>th</sup> year (Capital).

83. M/s. Janapadu Hydro Power Project Pvt. Ltd., had indicated an outstanding loan at the end of the 10<sup>th</sup> year as Rs.1.52 Crs. plus funded amount of Rs.1.66 Crs. totalling to Rs.3.18 Crs. as on 31-03-2012. Further, the company has shown the interest on term loans from FY 2013-14 to FY 2018-19 ranging from Rs.3.61 Lakhs to Rs.12.35 Lakhs.

84. M/s. Janapadu Hydro Power Project Pvt. Ltd., except for indicating a RoE of 16% beyond 10<sup>th</sup> year, had not made any specific request about the un-paid RoE.

85. The Commission has carefully considered the matter. It is not inclined to accept the submission of the project developers, that drought conditions during 2001-2004 and also due to reduction in purchase prices from 01-04-2004 lead to this situation where loans were not paid. The Hon'ble ATE in its order dated 20-12-2012 has not accepted the contention of developer that the tariff based on MNES guidelines should be continued after 01-04-2014. The Commission notes that these companies have undertaken substantial and significant additions to their gross block which is not adequately explained. The Commission sees no reason for

additional capital investment after the initial capital investment has been made and COD is achieved in a Hydel Project. Commission also notes that for most of the plants have achieved high PLFs well above 32% and generated net profit for significant period in the past. Accordingly the Commission is not inclined to accept the argument that loans should be carried forward beyond the 10<sup>th</sup> year. It also does not accept the plea that the alleged unpaid RoE should be carried forward beyond the tenth year. In this context, it is also to be noted that, the period prior to 01-04-2004 is covered by Commission's order dated 20-06-2001, which has attained finality and therefore the grievances pertaining to that period cannot be allowed to be agitated now before the Commission. Further the Commission's order dated 20-03-2004 and 07-07-2004 was challenged before Hon'ble ATE by the developers in the first instance and thereafter the matter was carried by the DISCOMs to the Hon'ble Supreme Court of India. The Hon'ble Supreme Court of India had passed orders on 08-07-2010 remanding the matter back to this Commission and Commission had passed orders on 12-09-2011, which was subsequently carried in appeal to Hon'ble ATE and Hon'ble ATE passed an order dated 20-12-2012 based on which the Commission passed consequential orders on 22-06-2013. The order of Hon'ble ATE dated 20-12-2012 has not been challenged before Hon'ble Supreme Court of India by the Mini Hydel Power developers. Thus, this order has been accepted by all stakeholders. There cannot be any outstanding loans or un-paid RoE which can be allowed to spill over to the 11<sup>th</sup> year onwards. As such, the Commission is not inclined to allow any outstanding loan or un-paid RoE to be recovered beyond 11<sup>th</sup> year. The Commission also notes that the Mini Hydel project developers are arrayed as respondents in the petition filed before the Hon'ble Supreme Court of India by the DISCOMs, where the dispute is over the Commission's order dated 20-03-2004 & 07-07-2004.

### **Third Party Sales:**

86. M/s. Manihamsa Power Projects Ltd., in their reply stated that in case, the Commission does not determine the tariff as per the norms mentioned by the respondent they may be allowed to go with third party sales.

87. The Commission has carefully examined this suggestion. The present exercise before the Commission is determination of tariff beyond 10<sup>th</sup> year of

operation till the end of agreement period. As such, if the project developer is aggrieved with the tariff determined by the Commission beyond 10<sup>th</sup> year, he has his legal remedies. However, he cannot be provided the option of seeking permission for third party sales after the 10<sup>th</sup> year more particularly when the tariff is front loaded and the DISCOMs and consequently the consumers are entitled for reduced tariff beyond the 10<sup>th</sup> year. For this reason and also keeping in view the finding of the Hon'ble ATE in its order dated 20-12-2012 to the effect that the developers who have entered into PPA with Distribution Licensees will also have the option of third party sale after the expiry of the term of the PPA, the request of the project developer for third party sales cannot be granted.

## Chapter - V CONCLUSION

88. Based on the detailed discussion in respect of different parameters as mentioned in the previous chapter, the Commission determines that the fixed cost payable for Mini Hydel Power Projects will be as follows:

<b>Fixed Cost for Mini Hydel Power Projects for 11<sup>th</sup>-25<sup>th</sup> year of operation (Rs./Unit)</b>	
<b>Year of Operation</b>	<b>Fixed Cost (Rs./Unit)</b>
11	2.15
12	2.22
13	2.30
14	2.39
15	2.48
16	2.58
17	2.68
18	2.79
19	2.91
20	3.03
21	3.17
22	3.31
23	3.46
24	3.62
25	3.80

89. The above mentioned tariff (Fixed Cost) per unit is exclusive of Income Tax and Minimum Alternate Tax. Further, the above mentioned tariff is to be paid upto 45% PLF. As mentioned earlier, Commission directs that the DISCOM concerned to pay an incentive of Rs.0.50 Ps. per unit generation of electricity above 45% PLF to

all such Mini Hydel project developers. The Commission also directs that Electricity Duty and Water Royalty charges paid by the Mini Hydel project developers during this period shall be reimbursed.

90. As will be seen, the Commission has determined a generic order for Fixed Cost for the 11-25 year period of their operation. The Commission therefore directs that the above Fixed Costs will be payable by the respective DISCOMs for all Mini Hydel based NCE projects which complete ten years irrespective of whether they have approached the Commission or not for such determination.

91. This order also disposes of petition filed in O.P.No.10 of 2012.

*This order is corrected and signed on this 23<sup>rd</sup> day of August, 2014.*

Sd/-  
(P.RAJAGOPAL REDDY)  
MEMBER

Sd/-  
(R.ASHOKA CHARI)  
MEMBER

Sd/-  
(Dr. V.BHASKAR)  
CHAIRMAN