



ANDHRA PRADESH ELECTRICITY REGULATORY COMMISSION

4th Floor, Singareni Bhavan, Red Hills, Hyderabad 500 004

O.P. No. 8 of 2016

Dated 18.06.2016

Present

Sri Justice G. Bhavani Prasad, Chairman

Dr. P. Raghu, Member

Sri P. Rama Mohan, Member

Between:

M/s PMC Power Pvt. Ltd.,

....Petitioner(s)

AND

M/s Southern Power Distribution Company of Andhra Pradesh Limited

...Respondent(s)

This petition has come up for hearing finally on 16.05.2016 in the presence of Sri M. Sreepathi Rao, Managing Director, M/s PMC Power Pvt. Ltd., (actually represented by Sri Anand K. Ganesan, learned Counsel) for the petitioner and Sri P. Shiva Rao, learned Standing Counsel for the respondent. After carefully considering the material available on record and after hearing the arguments of both parties, the Commission passed the following:

ORDER

A petition dated 16th February, 2016 praying to a) *determine the final tariff to be paid to the petitioner by the respondent for the 11th to 20th year of operation in terms of the Judgment dated 20.01.2016 passed by the Hon'ble Tribunal; (b) direct the respondent to pay the tariff as may be determined by the Commission; (c) direct the payment of interest on the arrears at the rate of 12%; (d) pass any such further order or orders which the Commission feels fit and proper.*

3. The averments of the petitioner are as hereunder:

- a) M/s PMC Power Private Limited is an electricity generating company in New and Renewable Energy sector who has established a 0.65 MW Mini Hydro Power Plant in the State of Andhra Pradesh in terms of the incentives granted from time to time by the Government of India and Government of Andhra Pradesh.
- b) M/s PMC Power Private Limited have signed a Power Purchase Agreement dated 22.10.2001 (hereinafter referred to as 'PPA') with the then AP TRANSCO which PPA has now been assigned to the respondent - Southern Power Distribution Company of Andhra Pradesh Ltd.
- c) The Commission passed an Order dated 20.06.2001 in a suo-motu exercise determining the purchase price for purchase of electricity by the Distribution Companies from the non-conventional energy developers in the State of Andhra Pradesh. In the Order dated 20.06.2001, the Commission, inter-alia, held as under :

"29. The existing incentives under G.O Ms No. 93, dated 18.11.1997, which are continued under the orders of the Commission from time to time till 24.06.2001 under our letter No.2473, dated 24.04.2001 are extended for the time being till 24.07.2001. (The temporary extension has been given to enable the developers to finalise agreements / arrangements relating to supply of power to AP TRANSCO prior to 24.07.2001). With effect from the billing month of August 2001, all generators of non-conventional energy shall supply power to AP TRANSCO only as per the following terms:

- a. 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 AP TRANSCO / DISCOMS of AP only.
- c. Price applicable for purchase by the supply licensee should be Rs. 2.23 per unit with 5% escalation per annum with 1994-95 as the base year.

30. A suo-motu review of the incentives to take effect from 1 April, 2004 will be undertaken by the Commission after discussions with all the concerned parties. 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 loans from the financial institutions would have been repaid) when the purchase price will be reworked on the basis of return on equity, O&M expenses and variable cost.

- d) The above principles were also adopted in the PPA. In this regard, the PPA in Article 2.2, inter-alia, provides as under:

"The Company shall be paid the tariff for energy delivered at the interconnection point for sale of APTRANSCO at Rs. 2.25 paisa per unit with escalation at 5% per annum with 1994-95 as base year and to be revised on 1st of April of every year upto the year 2003-04.

Beyond the year 2003-04, the purchase price by APTRANSCO will be decided by Andhra Pradesh Electricity Regulatory Commission.

There will be further review of purchase price on completion of 10 years from the date of Commissioning of the project, when the purchase price will be reworked on the basis of Return on Equity, O&M expenses and the Variable Cost."

- e) The Commission initiated suo-motu proceedings for determination of purchase price of power for AP TRANSCO / Distribution Companies from non-conventional energy projects effective from 01.04.2004 onwards. The above proceedings of the Commission culminated in the passing of the order dated 20.03.2004 whereby a reduced tariff was determined for the developers including the petitioner herein.
- f) Aggrieved by the Order dated 20.03.2004, the association of Small Hydro Power Developers in the State filed a writ petition before the Hon'ble High Court of Andhra Pradesh. By Order dated 27.4.2004, the Hon'ble High Court disposed of the above writ petition and directed the project developers to approach the Commission for a review of the order dated 20.03.2004.
- g) Pursuant to the above, a review petition being Review Petition No.5 of 2004 was filed before the Commission. The Commission, by Order dated 07.07.2004 disposed of the said review petition after considering minor modifications of the Capital cost and certain other aspects. The following tariff as the power purchase price for AP TRANSCO was determined:

Year of Operation (n th year)	Tariff (Rs./Unit)
1 st	2.69
2 nd	2.60
3 rd	2.52
4 th	2.43
5 th	2.34
6 th	2.26
7 th	2.17
8 th	2.09
9 th	2.00
10 th	1.92

- h) Aggrieved by the above order dated 07.07.2004 passed by the Commission, the Small Hydro Power Developers Association filed another Writ Petition No.16621 of 2004 in the Hon'ble High Court of Andhra Pradesh. Subsequently, upon the constitution of the Hon'ble Tribunal in the year 2005, the Hon'ble High Court by an order dated 15.06.2006 disposed off the Writ Petition with a direction to the Petitioners to approach the Hon'ble Tribunal by way of an appeal.
- i) The Hon'ble Tribunal allowed the Appeals of the project developers by a Judgment dated 02.06.2006 and set aside the Orders of the Commission revising the tariff applicable to the non-conventional project developers.
- j) Aggrieved by the order of the Hon'ble Tribunal, APTRANSCO filed an appeal being Civil Appeal 2926 of 2006 before the Hon'ble Supreme Court of India.
- k) The Hon'ble Supreme Court vide Judgment dated 08.07.2010 reported as Transmission Corporation of Andhra Pradesh Ltd. Vs Sai Renewable Energy Limited (2011) 11 SCC 34 set aside the Judgment dated 02.06.2006 passed by the Hon'ble Tribunal, inter-alia, holding as under -

"52 (a) The order of the Tribunal dated 02.06.2006 is hereby set aside.

(b) We hold that the Andhra Pradesh Electricity Regulatory Commission has the jurisdiction to determine tariff which takes within its ambit the purchase price for procurement of the electricity generated by the Non-conventional energy developers / generators, in the facts and circumstances of these cases.

- (c) We hereby remand the matters to the Andhra Pradesh Electricity Regulatory Commission with a direction that it shall hear the Non-conventional energy generators afresh and fix / determine the tariff for purchase of electricity in accordance with law, expeditiously.
- (d) It shall also re-examine in addition to the above or in the alternative, whether it would be in the larger interest of the public and the State, to permit sale of generated electricity to third parties, if otherwise feasible.
- (e) The Andhra Pradesh Electricity Regulatory Commission shall consider and pronounce upon all the objections that may be raised by the parties appearing before it, except objections in relation to its jurisdiction, plea of estoppel and legitimate expectancy against the State and / or APTRANSCO and the plea in regard to PPAs being result of duress as these issues stand concluded by this judgment.
- (f) We make it clear that the order dated 20.06.2001 passed by the Andhra Pradesh Electricity Regulatory Commission has attained finality and was not challenged in any proceedings so far. This judgment shall not, therefore, be in detriment to that order which will operate independently and in accordance with law.
- (g) We also hereby direct that State of Andhra Pradesh shall be added as party respondent in the proceedings and the Andhra Pradesh Electricity Regulatory Commission shall grant hearing to the State during pendency of proceeding before it."
- l) In the meantime, the Commission initiated proceedings for determination of tariff for sale of electricity by the Non-conventional energy developers in the State to the distribution licensees for the period from 1.4.2009 to 31.3.2014. By Order dated 31.3.2009, the Commission determined the applicable tariff for various types of non- conventional energy projects in the State of Andhra Pradesh. However, the Commission did not determine any tariff for the period from 1.4.2009 onwards for mini hydel projects, on the ground that tariff for mini hydel projects had been determined in the year 2004 for 10 years of operation of the project and no tariff was presently necessary to be determined. The relevant finding is as under:

“14. Mini Hydel Projects: Since the tariff for Mini Hydel Projects has been fixed in the 20.03.2004 Order from 1st year of operation to 10th year of operation, there is no need to make a determination w.e.f. 01.04.2009. The issues raised regarding this sector will be addressed separately by the Commission in due course.”

- m) Pursuant to the remand by the Hon'ble Supreme Court, the Commission re-heard the matter and by Order dated 12.09.2011, determined the tariff for the Non-conventional Energy. The matter was decided by three separate Orders given by each Member of the Commission. These Orders were also dated differently.
- n) After several litigations having been filed both by the developers and the Distribution Companies, the Hon'ble Tribunal vide a detailed Judgment dated 20.12.2012 fixed the norms and parameters for determination of tariff for Mini Hydel plants as under:-

Mini Hydel Power Plants

- i. Capital cost : Rs.4.5 Crore/MW
- ii. Capacity Utilisation Factor (PLF)
for determination of tariff : 32%
- iii. Auxiliary Consumption : 1%
- iv. O&M expenses : 3.5 % of capital cost
- v. Annual escalation of O&M : As per actual CAGR of CPI & WPI indices for the period 2004-09 with 40% weightage to CPI and 60% to WPI
- vi. Computation of Working Capital : i) one month's O & M expenses
ii) 2 month's receivables
iii) 1% project cost towards maintenance spares
- vii. Interest on Working Capital : 12 %
- viii. ROE : 16 % with MAT / income tax as pass through
- ix. Debt equity ratio : 70:30

- x. Interest on Debt : 12 %
 - xi. Incentive : For Energy generation above 45% PLF, incentive @ 35 paise/ kWh shall be payable.
 - xii. Depreciation : 7% p.a. for first 10 years and 20% spread over uniformly over next 15 years
 - xiii. Electricity duty : To be allowed as pass through
 - xiv. Water Royalty : To be reimbursed as pass through
- o) The Judgment has been implemented by the Commission vide the Orders dated 21.06.2013 and 22.06.2013. The litigations against the above orders and the Judgment of the Hon'ble Tribunal are pending before the Hon'ble Supreme Court.
- p) When the matters stood thus and after most of the developers had completed 10 years of operation, an application was filed under Sections 62 and 86 (1) (b) of the Electricity Act for determination of tariff (fixed cost / single part tariff from 11th to 20th year of operation for Manihamsa Power Projects Pvt. Ltd. The above application culminated into the Order dated 23.08.2014 wherein without hearing the developers, the Commission refixed the tariff for all the mini hydel plants who had completed 10 years of operation including the petitioner.
- q) The Order dated 23.08.2014 has been set aside by the Hon'ble Tribunal vide the Judgment dated 20.01.2016 in Appeal No. 268 of 2014, inter-alia, holding as under :

"21. We must at this stage revert to the judgment of the Supreme Court in Sai Renewable, where while remanding the matter to the State Commission to hear the Non-conventional Energy Generators afresh and fix / determine the tariff for purchase of electricity in accordance with law, the Supreme Court made it clear that Order dated 20.6.2001 passed by the State Commission had attained finality as it was as not challenged in any proceedings and that its judgment shall, therefore, not be in detriment to that order which will operate independently and in accordance with law. Thus, the Supreme Court expressly kept order dated 20.6.2001 passed by the State Commission untouched and made it clear that that order shall operate independently. As stated above, in that

order; the State Commission has observed that “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 reworked on the basis of return on equity, O&M expenses and variable cost.” Thus, it was necessary for the State Commission to follow its order dated 20.6.2001 and conduct review of the purchase price with specific reference to each developer. In this case, we feel that such exercise has not been done. It is admitted that Appellant No. 2 has not been served. It is not clear as to whether Appellant No. 3 has been served at all. One notice was sent to Appellant No.1 and Appellant No.1 supplied information pursuant thereto. However, no letter was issued to Appellant No.1 calling upon Appellant No.1 to attend the proceedings. The State Commission interpreted the record furnished by Appellant No.1 without giving Appellant No.1 chance to explain its case. As per the impugned order, only one hearing took place i.e. on 3.7.2013 which is much prior to the notice dated 18.3.2013 received by Appellant No. 1 on 19.3.2014.

22. Allegedly, a meeting was held on 28.4.2014 in which some of the Mini-Hydel project developers including Appellant No.3 was called. If that is so, it is not understood as to why such a notice was not given to Appellant Nos.1 and 2. In the aforementioned circumstances, we feel that this is a fit case where in the interest of justice the matter needs to be remanded to the State Commission with a direction to review the purchase price in the light of paragraph 30 of the order dated 20.6.2001 of the State Commission.

23. In the circumstances, the impugned order is set aside qua the Appellants to the extent it fixes the Appellants' tariff. The matter is remanded to the State Commission. The Appellants shall furnish such data to the State Commission as they feel necessary within one month from today. If any further data is required, the State Commission shall call upon the Appellants to furnish the same within two weeks thereafter. The said data shall be furnished by the Appellant within two weeks of receipt of such letter. The State Commission shall complete the entire exercise of determination of the Appellants' tariff in the light of paragraphs quoted herein above of Order dated 20.06.2001 of the State Commission within

a period of five months from today. The State Commission shall conduct the entire exercise independently and in accordance with law. We have expressed no opinion on the merits of the case. All the contentions of both sides are kept open.

24. Till such time as the State Commission conducts the entire exercise as directed by us, respondent Nos. 2 to 4 shall pay the tariff as per the impugned order without prejudice to the rights and contentions of all parties. Needless to say that the State Commission shall ensure that its order is given effect to by making necessary adjustments as regards the difference, if any, in the tariff received under the impugned order and the order that may be passed by the State Commission.

25. We make it clear that this order shall create no equities in favour of other Mini / Small Hydro Power Projects which have not challenged the impugned order and have accepted it.

- r) It is prayed for re-determination of tariff for the 11th to 20th year of operation with specific reference to the petitioner and based on the data furnished.

Legal Submissions

- s) What was contemplated all along including in the Order dated 20.06.2001 was that depending on the position of outstanding loan with specific reference to each developer, the tariff was to be re-determined. This is because for the initial ten years, the Commission fixed a generic tariff for all the mini-hydel developers. While for certain developers, the generic tariff would have resulted in substantial loan re-payment, for certain others, it may not have been sufficient for loan repayment. Therefore, the Order dated 20.06.2011 and the PPA, contemplated re-determination of project specific tariff with reference to each developer after ten years of operation.
- t) The above aspect was also specifically pointed out and accepted by the Hon'ble Supreme Court in the Sai Renewable judgment as under

“The order of 20th June 2001 read in conjunction with the PPA's extended by the parties controlled the entire field and all the persons including the Regulatory Commission as well as the State therein”,

52

(f) We make it clear that the order dated 20.06.2001 passed by the Andhra Pradesh Electricity Regulatory Commission has attained

finality and was not challenged in any proceedings so far. This judgment shall not, therefore, be in detriment to that order which will operate independently and in accordance with law.”

- u) The Electricity Act itself contemplates that tariff of ‘a generating company’ to a ‘distribution licensee’ should be determined. If a statute contemplates a thing to be done in a particular manner, it should be done in that very manner and in no other manner.
- v) The above principle has been accepted by the Hon’ble Tribunal in the Judgement dated 20.01.2016 and therefore, the Commission has to fix an individual tariff for the petitioner for the 11th year of operation, namely, years 2011-12 to 2020-21.

Submissions on Individual Parameters of Tariff redetermination :

I. Position of Outstanding Loans

- w) The total outstanding loan including, funded interest, Interest due, liquidated damages etc., as at the end of 10th year is Rs. 567.64 Lakhs.

The details are as follows:

Loan Outstanding	: Rs. 310.27 Lakhs
Interest Funded	: Rs. 150.21 Lakhs
Interest due	: Rs. 83.97 Lakhs
Liquidated Damages	: Rs. 13.09 Lakhs
U/S Loans	: Rs. 10.10 Lakhs
Total	: Rs. 567.64 Lakhs

- x) The Petitioner received Rs 87.42 Lakhs as arrears for the initial 10 years on the orders of the Hon’ble Tribunal and Hon’ble Supreme court from time to time as detailed below:

11-05-2012	: Rs 15.42 Lakhs
14-07-2012	: Rs 1.96 Lakhs
26-07-2012	: Rs 17.38 Lakhs
25-03-2014	: Rs 52.66 Lakhs
Total	: Rs. 87.42 Lakhs

- y) After adjusting the arrears against the above, the Outstanding loan remains as follows:

Loan Outstanding	: Rs. 261.97 Lakhs
Interest Funded	: Rs. 150.21 Lakhs
Interest due	: Rs. 44.85 Lakhs
Liquidated Damages	: Rs. 13.09 Lakhs
U/S Loans	: Rs. 10.10 Lakhs
Total	: Rs. 480.22 Lakhs

- z) Therefore, the above amount should be the basis for fixation of tariff including the determination of the amount and rate of interest on loan.

II. Project Cost and Additional Capitalization

- aa) The details of the project cost of the Petitioner's project is as under -

IREDA appraisal dt. 27.12.2000	: Rs 449.70 Lakhs
IREDA Loan	: Rs 353.20 Lakhs
Equity	: Rs 96.50 Lakhs

Actual project cost:

As per Annual Report 2001-02	: Rs 424.76 Lakhs
As per Annual Report 2002-03	: Rs 431.84 Lakhs
As per Annual Report 2003-04	: Rs 437.27 Lakhs

- bb) Further, it is a well settled principle that no power project can function without additional capitalization and the petitioner has incurred the following amounts towards additional capitalization in the years of operation so far.

Year	Amount of Additional Capitalization	Purpose for which Expenditure has been incurred
2002-03	Rs. 7.08 Lakhs	Canal Lining etc.
2003-04	Rs. 5.63 Lakhs	Canal Lining

- cc) The above amounts need to be capitalized and tariff allowed on them from the date of capitalization. This is consistent with the principle of capital cost based tariff determination.

III. Return on Equity

- dd) Due to the long drawn litigation and non-payment of the entire tariff for the first 10 years to the petitioner by the respondent, the petitioner has been unable to pay any dividend (ROE) to the share holders during the initial 10 years.

- ee) The above has also been due to drought conditions in 2001-2004 and also due to reduction in purchase prices from 01.04.2004 as per the Orders dated 20.03.2004 and 07.07.2004 for the Mini Hydel Plants.
- ff) The Equity including the outstanding Return on equity payable to the share holders is as shown below:

Year	Equity + ROE @ 16% (Rupees in Lakhs)
1 st	100.00
2 nd	116.00
3 rd	134.56
4 th	156.09
5 th	181.06
6 th	210.03
7 th	243.64
8 th	282.62
9 th	327.84
10 th	380.30

$$\text{Unpaid ROE} = 380.30 - 100.00 = \text{Rs. } 280.30 \text{ Lakhs}$$

- gg) The Equity including outstanding Return on Equity payable to the shareholders 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 10th year.
- hh) It is proposed that the unpaid ROE be recovered at Rs. 28.03 Lakhs each year from 11th year to 20th year plus ROE of 16% on Rs.100.00 Lakhs Equity (Capital).

IV. Operation and Maintenance Expenses

- ii) The petitioner is praying for fixation of O&M Expenses at 3.5% of the Project Cost with an escalation of 6.69% year on year.
- jj) The above is also consistent with the Judgment of the Hon'ble Tribunal dated 20.12.2012 and the consequential order dated 22.06.2013 passed by this Hon'ble Commission.

V. Plant Load Factor (PLF)

- kk) The Plant Load Factor (PLF) achieved during the initial 10 years from COD is as follows:

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

Average PLF for initial 10 years = 29.98 %

- ll) Thereafter, the PLF achieved from the 11th year of operation till date by the petitioner is as under –

PERIOD	PLF (%)
01-04-2011 to 31-03-2012	36.93
01-04-2012 to 31-03-2013	2.70
01-04-2013 to 31-03-2014	29.74
01-04-2014 to 31-03-2015	28.49
01-04-2015 to 31-03-2016	1.86

Average PLF for 11th to 15th years = 19.94%

- mm) In view of the above, the petitioner is praying for a fixation of a PLF of 20% for the 11th to the 20th year of operation. This would ensure that a proper and cost reflective tariff will be re-fixed for the 11th to the 20th year of operation.
- nn) The plant of the petitioner has achieved only 29.98% during the initial 10 years. The Average PLF achieved during 11th to 15th years is 19.94%. The plant is unlikely to achieve even average PLF of 32% in 11th year to 20th year.
- oo) For a coordinate period, the Central Commission has decided 20% PLF for tariff calculation and decided that the tariff shall be paid for entire energy delivered.
- pp) The petitioner submits that for the purpose of tariff calculation for 11th to 20th year, the PLF of 20% should be fixed. However, even if the PLF of 30 % is adopted, the tariff shall be paid for the entire generation without any upper

limit, so that the deficit in the years 11 to 15 can be recovered during the years 16 to 20.

VI. Other Operating Parameters

- qq) The petitioner is praying for the following operating parameters for tariff determination:

Capacity of the Project	0.65 MW (5694000 units / year)
Plant Load factor (PLF)	30%
Auxiliary Consumption	1%
Date of Commissioning	17.05.2001
Project Cost	Rs. 437.27 Lakhs
Tariff Period	11 th year to 20 th year
Outstanding Loan as at the Of 10 th year	Rs. 480.22 Lakhs
Outstanding Loan Repayment Period	10 Years
Interest on Loan	12 %
Equity at the beginning of the 11 th year	Rs. 380.30 Lakhs (unpaid ROE of Rs. 280.30 Lakhs proposed to be repaid in 10 years)
ROE (Post – tax)	16 % on (100+280.30) = Rs. 380.30 Lakhs
Income tax	Pass through
Depreciation	2% per year on 437.81 Lakhs {100% (-) 70 % during initial 10 years (-) 10% salvage value}
Interest on working capital	12%
O & M Expenses	3.5% with an escalation of 6.69% every year
Water royalty charges and electricity duty	Pass through (to be reimbursed)

The model tariff computation has been done by the petitioner for the 11th to 20th year of operation.

- rr) With regard to the applicability of tariff, the same would be applicable from the 11th year i.e. from the year 2011 and the difference in arrears as a result of the tariff re-determination by the Commission should be paid to the petitioner along with carrying cost from the date on which such tariff was actually due.
4. On 13th April 2016, the respondent filed a counter affidavit, the details of which are as hereunder:
- I. The main contention of the appellants was that APERC issued order dt.

23.08.2014 without hearing the appellants. The grievance was that they were neither served notices nor called for any meetings towards furnishing relevant data, in the context of determining tariff from 11th year of operation, as was called upon from other developers. As such, the Hon'ble Tribunal felt that in accordance with the APERC order dt. 20.06.2001 which stipulates for review of 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 reworked on the basis of Return on Equity, O&M expenses & variable cost, it is justified that these 3 developers shall be given opportunity to represent their data to the Commission. It is relevant to mention that the Hon'ble Tribunal did not go into the merits of the case and kept the contentions of both sides open.

- II. Had the Hon'ble APTEL heard the merits of the case, the Tribunal would have agreed that broadly the parameters based on which the tariff beyond 10 years of operation was determined are similar to all the developers and hence such determined tariff is generic to all the Mini Hydel developers.
- III. Further, though the petitioner's request for determination of tariff on a case to case basis is justified, since all the Mini Hydel developers are broadly placed on similar parameters, at the end generic tariff needs to be given. As such, generic tariff was determined for first 10 years of operation and so also for beyond 10 years of operation, the tariff has to be generic for all the developers.
- IV. The Commission order dated 20.06.2001 in a suo-motu exercise determining the purchase price for purchase of electricity by the Distribution Companies from the NCE developers, interalia, held that,

"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 reworked on the basis of return on equity, O&M expenses and variable cost". This order was not challenged by anybody and thus attained finality. This view was upheld by the Hon'ble Supreme Court order dated 08.07.2010. As such the Commission is empowered to review the purchase price of the

projects after completion of 10 years of operation confined to parameters viz., return on equity, O&M expenses of these projects.

- V. Further, APERC vide order dated 20.03.2004 reiterated that a further review of the individual projects will be undertaken on completion of 10 years from the date of commissioning of the project, by which time the loan is expected to have been substantially repaid, and the purchase price will be based on O&M expenditure, return on equity, variable cost and residual depreciation, if any. As such the scope of the review is limited to above parameters only.
- VI. Even the article 2.2 of petitioner's PPA articulates that there will be further review of purchase price on completion of 10 years from the date of commissioning of the project, when the purchase price will be reworked on the basis of Return on Equity, O&M expenses and the Variable Cost. Hence, the review shall be restricted based on these parameters only.
- VII. Since all the essential elements of the tariff frame work for Mini Hydel projects which have completed 10 years are similar, the common order dt. 23.08.2014 may be applied to all Mini Hydel projects which have completed 10 years of operation including the petitioner's project.
- VIII. The general tariff procedure is to arrive at the levellized tariff based on different operating norms and parameters. Other State Commissions such as Gujarat & Tamil Nadu also adopted for levellized tariff. As such, the tariff determined vide order dt. 23.08.2014 be extended to the petitioner's project also.
- IX. The Commission adopted a holistic approach for determination of the tariff beyond 10 years of operation for Mini Hydel projects incorporating elements of a) study by an independent consultant, b) relevant CERC and SERC orders, c) written & oral submissions of the parties and d) operation, financial, commercial & generation details, supported by relevant balance sheets and profit & loss accounts. Thus, the Commission analyzed the findings of the said elements and fixed the generic tariff. As such, the tariff determined vide order dt. 23.08.2014 be applied to the petitioner's project also.
- X. The Commission while passing orders during 2004, held that,

"A further review of the individual projects will be undertaken on completion of 10 years from the date of commissioning of the

project, by which time the loan is expected to have been substantially repaid, and the purchase price will be based on O&M expenditure, return on equity, variable cost and residual depreciation, if any". Thus according to the orders of the Commission the projects completing 10 years of operation have to be reviewed individually restricting to the said parameters. In the present scenario, however the Commission determined a generic order for 11 to 25 year period of operation of mini hydel projects since the Commission observed that the performance of all the project developers is broadly consistent with the existing norms. Therefore the order dt. 23.08.2014 is equally applicable to the petitioner.

- XI. Without prejudice to the above, the petitioner is praying the Commission to determine their tariff beyond 10 years of operation with PLF 20%, outstanding loan & unpaid ROE. The petitioner is not contesting on O&M expenses & escalation, viz., 3.5% with escalation 6.69%. However, DISCOMs preferred appeal before APTEL requesting for O&M escalation @ 5.72% as per CERC regulations.
- XII. The Commission may kindly note the findings in the order dt. 20.03.2004 & review order dt. 07.07.2004 viz., "It is a known fact that every business runs on risks of its own. But the power developers have set up their plants choosing the site and source on their own. If the sites selected are such that they support very low PLF, the APTRANSCO or the consumers at large cannot be expected to shoulder the consequential undue extra burden". As such, the request for adopting PLF specific to the petitioner is not tenable.
- XIII. The tariff w.e.f. 01.04.2004 was determined by APERC / Hon'ble Appellate Tribunal keeping in view that there shall be no outstanding loan after 10 years of completion from COD. Thus there cannot be any outstanding loans or unpaid RoE which can be allowed to spill over to the 11th year onwards. In this regard it is pertinent to note the remarks in the report of consultant which was accepted by APERC which observes that, *"The revised APERC order of June 2013 provided a significant relief to the Mini Hydel players in terms of a higher fixed cost per unit. The revised APERC order of June 2013 has ensured that mini hydel players get additional revenue to the tune of Rs. 2.0 Cr/MW even while operating at a low PLF. This revenue is sufficient to meet any cost overrun during the last 10 years or to pay off any outstanding*

liabilities”.

XIV. Para wise replies:

- a) In reply to para 3 (c) supra, the Commission order dt. 20.06.2001 was not challenged by anybody and thus attained finality. As such the Commission is empowered to review the purchase price of the projects after completion of 10 years of operation confined to parameters viz., return on equity, O&M expenses and variable cost.
- b) In reply to para 3 (d) supra, the purchase price on completion of 10 years from the date of COD shall be reworked on the basis limited to Return on Equity, O&M expenses & Variable Cost in accordance with the article 2.2 of the PPA with the petitioner.
- c) In reply to para 3 (e) supra, it is incorrect to state that by the order dt. 20.03.2004 reduced tariff was determined for the NCE projects. As stipulated in APERC order dt. 20.06.2001 that a suo moto review of the incentives to take effect from 1st April 2004 will be undertaken, the Commission examined the issue of tariff in a scientific manner by considering several parameters, operational norms, cost of fuel etc. for various categories of NCE projects viz., (i) Biomass, (ii) Bagasse (iii) Mini Hydel (iv) Industrial Waste to Energy (v) Wind and (vi) Municipal Solid Waste (MSW), and passed two part tariff i.e., fixed cost payable for 10 years period and the variable cost payable for 5 years period.
- d) In reply to para 3 (f) & 3 (g) supra, the Mini Hydel developers filed petition against APERC order dated 20.03.2004 before High Court. Upon the directions of the High Court review petition No. 5 of 2004 was filed before APERC. Accordingly, the Commission vide order dated 07.07.2004 while disposing the review petition held that "Except for the clarifications provided above on the settlement period and the year of operation, re-determination of capital cost due to additional information on capital subsidy by MNES now being made available, and revision of incentive beyond threshold PLF, the Commission hereby rejects the petitions filed by the petitioners".
- e) In reply to para 3 (h) supra, aggrieved by the order of APERC dated 07.07.2004 the developers filed a petition before High Court. The Hon'ble High Court issued the interim orders to pay the 50% differential tariff to the then existing tariff and new tariff. Consequently, the High Court

disposed the petition with a direction to approach APTEL, New Delhi. Accordingly, the developers approached APTEL by filing an appeal against APERC order dated 20.03.2004. Finally, APTEL vide order dated 02.06.2006 set aside the APERC order dated 20.03.2004 and instructed to continue to pay the power purchase price as per APERC order dated 20.06.2001.

- f) In reply to para 3 (i) & 3 (j) supra, AP DISCOMs filed Civil Appeal No. 2926 of 2006 against APTEL order dated 02.06.2006 before Hon'ble Supreme court. The Apex court passed orders dated 08.07.2010, inter-alia, held as follows:

52 (a) The order of the Tribunal dated 02.06.2006 is hereby set aside.

(b) -----

(c) we hereby remand the matters to Andhra Pradesh Electricity Regulatory Commission with a direction that it shall hear the Non- Conventional energy regulators afresh and fix / determine the tariff for purchase of Electricity in accordance with law expeditiously.

(d) -----

(e) -----

(f) we make it clear that the order dated 20.06.2001 passed by the to Andhra Pradesh Electricity Regulatory Commission has attained finality and was not challenged in any proceeding so far. This judgement shall not therefore in detriment to that order which will operate independently and in accordance with law.

As ordered by Apex court, the determination of the tariff beyond 10 years of operation is confined to parameters viz., Return on Equity, O&M expenses and variable cost, indicated in the order 20.06.2001.

- g) In reply to para 3 (k) & 3 (l) supra, since the tariff for the Mini Hydel projects for 10 years of operation was already determined by the

Commission order dated 20.03.2004, it is incorrect to state that APERC did not determine any tariff for the period from 01.04.2009 onwards for Mini Hydel projects. Such determined tariff vide Order dated 20.03.2004 was applicable for all the Mini Hydel projects which were existing as on 31.03.2004 and those commissioned between 01.04.2004 to 31.03.2009. Also, it was held that there shall be further review of the individual projects on completion of 10 years from the date of commissioning of the project, by which time the loan is expected to have been substantially repaid, and the purchase price will be based on O&M expenditure, Return on Equity & Variable Cost. APERC vide order dt. 31.03.2009 determined the variable cost for the period 01.04.2009 to 31.03.2014. As such in case of Mini Hydel projects, determination of variable cost doesn't arise since these projects are entitled to single part tariff which was already determined for 10 years of operation.

- h) In reply to para 3 (m) supra, in the light of the Hon'ble Supreme Court orders dated 08.07.2010, APERC heard NCE developers, DISCOMs, GoAP and public and Chairman & Members of APERC passed 3 different orders on three different dates viz., 13.06.2011, 19.08.2011 and 02.09.2011 under one covering letter dt. 12.09.2011.
- i) In reply to para 3 (n) supra, aggrieved by the APERC order dated 12.09.2011, APDISCOMs & NCE developers preferred appeals before APTEL. The Hon'ble Tribunal vide order dt. 20.12.2012 fixed the parameters and directed the Commission to determine the tariff accordingly.
- j) In reply to para 3 (o) supra, aggrieved by the order dt. 20.12.2012, APDISCOMs filed Civil Appeals 1376-85 of 2013 before Hon'ble Supreme Court. The apex court admitted the appeals which were pending for disposal. As such, APDISCOMs filed IA No. 22 of 2013 in RP No.84 of 2003 in OP No. 1075 of 2000 pleading for deferment of hearing of remand proceedings for tariff determination for NCE Projects as directed by the Hon'ble APTEL in its order dt. 20.12.2012 till the final disposal of civil appeals (1376 -1385) filed before Hon'ble Supreme Court of India. However, the Commission dismissed the petition and issued order dt. 22.06.2013, in pursuance to APTEL order dt. 20.12.2012 determining the tariff for the Mini Hydel projects (among other NCE projects) for 10 years of operation applicable for the existing projects as

on 31.03.2004 and those commissioned between 01.04.2004 to 31.03.2009.

k) In reply to para 3 (p) supra, APEPDCL filed O.P.No.10 of 2012 making M/s Manihamsa Power Projects Pvt. Ltd. as respondent before APERC for determination of tariff beyond 10 years of operation. Further, M/s K.M.Power Ltd. and 5 others filed O.P.No. 63 of 2012 before APERC seeking determination of adhoc tariff for the Mini Hydel projects after the expiry of 10 years period from COD. On the above APERC issued order dt. 6.11.2012 in the said petition directing to make payments as Rs. 2.57/unit for 11th year of operation and tariff for the subsequent years to be arrived by deducting 9 Paise from the previous year tariff. Since all the essential elements of the tariff frame work for Mini Hydel projects which have completed 10 years will be similar, the Commission decided to dispose the petition O.P.No.10 of 2012 by a common order dt. 23.08.2014 applicable to all Mini Hydel projects which have completed 10 years of operation.

l) In reply to para 3 (q) & 3 (r) supra, three Mini Hydel developers, viz. M/s PMC Power Pvt. Ltd., M/s NCL Industries Ltd., & M/s Bhavani Hydro Power Projects Ltd. preferred Appeal No. 268 of 2014 along with I.A No. 434 of 2014 before APTEL against APERC order dt. 23.08.2014 praying the following:

- i) To set aside the order dated 23.08.2014 passed by the State Commission to the extent challenged.
- ii) Direct the respondents (APDISCOMs & Others) not to recover the difference of amounts already paid from 11th year onwards, arising out of difference in interim tariff determined by the State Commission in the Order dated 16.11.2012 and Tariff determined by way of the impugned Order dated 23.08.2014 for 11th Year onwards.
- iii) Direct the State Commission to determine the tariff on a case-to-case basis, with specific reference to each developer on completion of 10 years from the date of commissioning.

The Tribunal vide order dt. 20.01.2016 set aside the APERC order dt. 23.08.2014 qua the appellants, viz., M/s PMC Power Pvt. Ltd, M/s NCL Industries Ltd. & M/s Bhavani Hydro Power Projects Ltd., to the

extent APERC fixed the tariff for these developers. The Tribunal held that it is a fit case in the interest of justice as these developers were not served notices and their data has not been considered while determining the tariff. As such, these 3 developers (including the petitioner herein) were given opportunity to furnish the data to the Commission.

However, the Tribunal also held that the State Commission shall complete the exercise of determination of tariff as per APERC order dt. 20.06.2001, i.e., review of purchase price of the projects after completion of 10 years of operation confined to parameters viz., Return on Equity, O&M Expenses and Variable Cost.

- m) In reply to para 3 (s) supra, APERC order dated 20.06.2001 stipulates that tariff after completion of 10 years of operation will be reviewed, by which time the loans from the financial institution would have been repaid. Further, APERC vide order dated 20.03.2004 reiterated that a further review of the individual projects will be undertaken on completion of 10 years from the date of commissioning of the project, by which time the loan is expected to have been substantially repaid, and the purchase price will be based on O&M expenditure, Return on Equity, Variable Cost and Residual Depreciation, if any. As such the scope of the review is limited to above parameters only.
- n) In reply to paras 3 (t) & 3 (u) supra, the petitioner misconceived the purport of judgement of Supreme Court in Sai Renewable's case and the meaning of Section 62 of Electricity Act 2003. The claim made by the petitioner in these said paras is not tenable.
- o) In reply to para 3 (v) supra, APTEL vide order dt. 20.01.2016 has given an opportunity to the petitioner to furnish the data to the State Commission. Further directed the Commission to conduct the review of power purchase price of the petitioner's project beyond 10 years of operation, keeping the contentions of both sides open. The COD of the petitioner's project being 17.05.2001 there shall be review of tariff for the period from 17.05.2011 to 16.05.2021 restricted to the parameters as per APERC order 20.06.2001 & 20.03.2004.
- p) In reply to paras 3 (w) to 3 (z) supra, although the tariff for beyond 10 years is to be reviewed, but the scope of said review is limited and the

claims made in the said paras are irrelevant for the purpose of review of tariff in view of the limited scope. The respondent denies the correctness of the figures submitted by the petitioner and he is called upon to prove the same. The tariff w.e.f 01.04.2004 was determined by APERC / Hon'ble Appellate Tribunal keeping in view that there shall be no outstanding loan after 10 years of completion from COD. Thus, there cannot be any outstanding loans or unpaid RoE which can be allowed to spill over to the 11th year onwards.

- q) In reply to paras 3 (aa) to 3 (cc) supra, APERC order dt. 20.06.2001 & 20.03.2004 empowers for review of tariff after completion of 10 years of operation confined to the parameters O&M expenditure, Return on Equity & variable cost. Since the petitioner is a Mini-Hydel project which is entitled for single part tariff, the scope of review shall be limited to O&M expenditure & Return on Equity.
- r) In reply to paras 3 (dd) to 3 (hh) supra, it is incorrect to state that due to the long drawn litigation and non-payment of the entire tariff for the first 10 years to the petitioner by the respondent, the petitioner has been unable to pay any dividend (RoE). It is a well known fact that the generators / petitioners dis-satisfied by the tariff determined by the APERC order dt. 20.03.2004 approached various forums, viz., High Court. APTEL & Hon'ble Supreme Court. Further, it is false that the petitioner was not paid the entire tariff for first 10 years. In fact, the petitioner was paid regularly the eligible tariff time to time and arrears were also released in pursuant to directions/interim orders of different forums. The revised APERC order dt. 22.06.2013 has substantially increased the tariff for these Mini Hydel projects. The tariff w.e.f. 01.04.2004 was determined by APERC / Hon'ble Appellate Tribunal keeping in view that there shall be no outstanding loan after 10 years of completion from COD. Thus, there cannot be any outstanding loans or unpaid RoE which can be allowed to spill over to the 11th year onwards. Therefore it is not justified to propose that the unpaid RoE be recovered. The said claim amounts to once again reopening the first 10 years tariff, which is not permissible.
- s) In reply to paras 3 (ii) & 3 (jj) supra, Hon'ble Appellate Tribunal vide order dated 20.12.2012 considering the data furnished by the developers, determined the O&M expenses @ 3.5% of capital cost for

the Mini Hydel projects. Further, O&M escalation was allowed on the basis of actual CAGR of inflation indices during the control period 2004-09 giving 60% weightage to WPI and 40% to CPI. Accordingly the State Commission arrived O&M escalation at 6.69%. However, CERC regulations 2012 recommends for O&M escalation @ 5.72% only. As such, O&M escalation be allowed @ 5.72%. Such contention is now pending consideration by APTEL.

- t) In reply to para 3 (kk) to 3 (pp) supra, APERC orders dt. 20.06.2001 & 20.03.2004 empower for review of tariff after completion of 10 years of operation confined to the parameters O&M expenditure & return on equity. As such the review shall be restricted to these parameters. Without prejudice to the above, it is to submit that the Commission determined the normative threshold PLF of 32% for fixed cost recovery following the orders of this Hon'ble Appellate Tribunal. The fixed cost so determined is to be paid upto a PLF of 45%. Beyond 45% PLF the Commission determined that an incentive of Rs 0.50 is to be paid. Para 55 of APERC order dated 23.08.2014 says. *"As regards to the submissions of M/s PMC Power Pvt. Ltd. and based on the 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 07.04.2004 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 normative threshold PLF of 32% is reasonable as fixed by the Hon'ble Appellate Tribunal"*. The report of consultant as accepted by APERC states that the revised APERC order of June 2013 provided a significant relief to the Mini Hydel players in terms of a higher fixed cost per unit. The revised APERC order of June 2013 has ensured that mini hydel players get additional revenue to the tune of Rs 2.0 Cr/MW even while operating at a low PLF. This revenue is sufficient to meet any cost overrun during the last 10 years or to pay off any outstanding liabilities. It is also submitted that the Hon'ble Appellate Tribunal in order dated 20.12.2012 noted that if the hydrological risk is passed on to the developers then the benefit of

hydrology should also be passed on to the developers. Thus, the petitioner's request for taking PLF @ 20% for the purpose of tariff calculation for 11th to 20th year, since contrary to the normative parameters, is not tenable.

- u) In reply to para 3(qq) supra, APERC orders dt. 20.06.2001 & 20.03.2004 empower for review of tariff after completion of 10 years of operation confined to the parameters O&M expenditure, Return on Equity & Variable Cost. As such the review shall be restricted to these parameters. O&M expenses be allowed @ 3.5% of capital cost and escalation @ 5.72%.
- v) In reply to para 3 (rr) supra, it is not justified to claim the difference in arrears along with carrying costs. Since all the essential elements of the tariff frame work for Mini Hydel projects which have completed 10 years are similar, the common order dt. 23.08.2014 may be applied to all Mini Hydel projects which have completed 10 years of operation including the petitioner's project.

5. On 21st April 2016, the petitioner filed a rejoinder to the reply filed by the respondent, the details of which are as hereunder:

- a) The respondent while accepting the requirement of determining the tariff on project specific basis, is once again seeking to apply the generic tariff which was determined by the Commission. The matter has been remanded to the Commission for determination of project specific tariff and it is not open to the Respondent to once again contend the applicability of the generic tariff order dated 23.08.2014.
- b) The basic premise of the Respondent to contend that only limited parameters are to be considered is also incorrect. Firstly, the order dated 20.06.2001 specifically stated that project specific tariff is to be determined. Further, the rationale was that the loans may have been repaid and individual costs and expenses of each project need to be considered.
- c) As per the Respondent, the loan repayment needs to be verified. Further, for determining the Return on Equity the equity base has to be considered. The project cost is the basis for considering the O&M expenses and therefore the same has to be considered. The depreciation is also directly related to the project cost. Therefore, there is no merit in the contention of the Respondent.

- d) The project cost cannot be benchmarked in all cases. The per MW cost per-se a 7.5 MW project will be substantially different from that of a 0.65 MW project. The PLF will also greatly vary. The contention that these cannot vary or cannot be considered, particularly when specific costs and expenses are being considered is misconceived.
- e) The project cost of the Petitioner is substantially higher. The Actual Project cost is furnished as below:

As per Annual Report 2001-02 : Rs 424.76 Lakhs

As per Annual Report 2002-03 : Rs 431.84 Lakhs

As per Annual Report 2003-04 : Rs 437.27 Lakhs

Project cost of Rs. 437.27 lakhs and the Equity Capital of Rs. 100 lakhs be adopted for Tariff determination for 11th to 20th years.

- f) The Return on Equity which was not recovered during the initial 10 years be taken into consideration for determination of Tariff for 11-20 years as requested in the petition.
- g) There are still substantial arrears due and payable by the respondent to the petitioner. It cannot be the contention of the respondent that the tariff determined need not be paid but the loans ought to be assumed to be repaid. The petitioner has already placed on record the details of the loans unpaid and outstanding as on date. Even assuming the entire tariff payment, there would still be loans outstanding which needs to be considered on a project specific- basis.
- h) The para wise replies are as under:
- (i) In reply to para 4 (I) supra, the order of the Hon'ble Tribunal is self-explanatory. The contention of the respondent seeking to restrict the present tariff determination exercise and the applicability of the order of the Hon'ble Tribunal is wrong and denied.
 - (ii) In reply to para 4 (II) supra, the respondent is proceeding on presumptions to contend that the Hon'ble Tribunal would have accepted the claims of the respondent and therefore the scope of the present proceedings need to be limited. This is baseless, wrong and denied. The Commission in its Order dated 20.06.2001 specifically held that each developer would be considered separately for tariff determination, which

clearly signifies that it was not the intention of the Commission that the determined tariff be deemed generic to all the Mini Hydel developers. While for certain developers, the generic tariff would have resulted in substantial loan re-payment; for many others, it may not have as has been demonstrated by the Appellant.

- (iii) The contents of para 4 (III) supra are wrong and denied, as its proceedings are contrary to the specific directions of the Commission and the Hon'ble Appellate Tribunal.
- (iv) In reply to paras 4 (IV) to 4 (VI) supra, the petitioner crave leave to refer to the documents on record including the previous orders passed for their true scope and import. It is wrong and denied that the scope of the present proceedings for tariff determination is restricted as contended by the respondent. It is stated that the direction of the Commission in Order dated 20.06.2001 has to be interpreted in a meaningful and purposeful manner. The purpose of the direction of the Commission is that loans would have been repaid by that time. But the loans will only be repaid if the tariff is enough for the same. And it is settled law that for determination of tariff, all the factors have to be considered. Return on Equity, O&M expenses and variable cost are merely indicators of the same.
- (v) In reply to paras 4 (VII) to 4 (X) supra, the respondent is seeking the applicability of the same tariff and same order, which has been set aside and remanded by the Hon'ble Tribunal. The Commission is to determine a project specific tariff for which the present proceedings have been initiated.
- (vi) In reply to para 4 (XI) supra, the petitioner is praying to determine their tariff considering the outstanding loan and unpaid ROE and reduction in PLF because these factors are the basis of project specific determination of tariff. It is wrong and denied that the appeal of the respondent on the issue of O&M expenditure escalation is relevant to the present proceedings at this stage.
- (vii) In reply to para 4(XII) supra, the reduction in PLF is being sought by the petitioner because the site area was drought-affected for many years. Since it was beyond the control of the petitioner, it is requested that PLF be reduced considering the said circumstances. It is wrong and denied

that the Commission has decided that there will be no revision of PLF under any circumstances, particularly when project specific data is being considered. The tariff determined should be consistent with Section 61 of the Electricity Act to ensure reasonable recovery of costs and expenses. The contentions to the contrary are wrong and are denied.

- (viii) In reply to para 4 (XIII) supra, it is wrong and denied that the Commission has held that there shall be no outstanding loan after 10 years. It was only an expectation. However, as demonstrated by the petitioner and on account of various factors, the loan repayment is not complete and the same needs to be considered in the tariff determination process.
- (ix) In reply to para 4 (XIV) (d) to 4 (XIV) (g) supra, the petitioner crave leave to refer to the various orders passed for their true scope and intent. The present exercise is for determination of project specific tariff for the petitioner after 10 years of operation. The applicability of the past orders and the High Court proceedings are not relevant, except to the extent that the respondent has been in default of payment of tariff which has severely affected the petitioner. It is stated that the Commission vide order dated 31.03.2009 determined the variable cost for the period 01.04.2009 to 31.03.2014. The respondent admitted that determination of Variable cost does not arise for the petitioner since these projects are entitled for single part tariff which was already determined for 10 years of operation. The Commission did not determine the tariff for initial 10 years for projects likely to be set up from 01.04.2009 to 31.03.2014 on the lines of CERC. If it was a two part tariff for Mini Hydels also, the petitioner could have been saved from the unpaid interest during drought years. The determination of Tariff from 11th to 20th years should therefore be taken into consideration the Low PLF achieved during the years 11 to 15, which is about 20%. The same is likely to be for the future as well.
- (x) In reply to para 4 (XIV) (h) to 4 (XIV) (l) supra, the petitioner crave leave to refer to the orders passed for their true scope and intent. The contention of the respondent to however restrict the scope of the present proceedings is wrong and denied. It is also stated that the order dated 16.11.2012 was only determination of ad-hoc tariff and cannot be considered a precedent for the present case. In any event, the scope of the present proceedings is completely different, namely, project specific tariff.

- (xi) In reply to para 4 (XIV) (n) supra, the petitioner's claim is justified in terms of the Commission's Order as upheld by the Hon'ble Supreme Court. The Hon'ble APTEL has clearly justified the claim of petitioner in its Order dated 20.01.2016 in view of the intention of the adjudicatory bodies in directing review of the purchase price specific to each project individually. The tariff is to be determined in terms of Section 62 of the Electricity Act and not on different principles as is sought to be contended by the Respondent.
- (xii) In reply to para 4 (XIV) (o) supra, restricted interpretation be not given to the Orders dated 20.06.2001 and 20.03.04 of APERC. The Orders may be given a purposeful interpretation in the interest of justice, as intended by the Commission, APTEL and Supreme Court.
- (xiii) In reply to para 4 (XIV) (p) supra, the factors mentioned by the petitioner i.e. outstanding loans, return on equity, non-payment of tariff and PLF are highly relevant for claiming review of tariff. Since the intent of review is to ensure repayment of loans, it is imperative in the interest of justice to consider why the loans have not been able to be paid by the petitioner and why there is a dire need to reduce the PLF. Further, the intention of the Commission / APTEL in determining tariff w.e.f. 01.04.04 was to facilitate repayment of loans. It did not mean at all that repayment of loans is mandatory within 10 years and it is incorrect to say that it could not be allowed to spill over to 11th year onwards. The dues of the petitioner are outstanding due to unavoidable circumstances beyond the control of the petitioner. The petitioner has already given the details of the loans outstanding, the interest payable to IREDA and also the liquidated damages payable to IREDA.

The details are as under:

Secured Loans:

Term Loan from IREDA	: Rs 310,27,563/-
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Interest Funded:

Interest Funded -1	: Rs. 34,25,310/-
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Interest Funded -2	: Rs. 67,56,119/-
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Interest Funded -3	: Rs. 48,39,206/-
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Total	: Rs 150,20,635/-
Interest payable to IREDA	: Rs 83,96,980/-
Liquidated Damages payable IREDA	: Rs 13,08,615/-
Unsecured Loans	: Rs 10,10,5007-
Total	: Rs 567,64,293/-

The Funded Interest of Rs.150,20,635/- is obviously outstanding because the Funded Interest is scheduled to be repaid after repayment of Principal Loan. The Amount of sanction was Rs. 353.20 lakhs and the amount disbursed was Rs. 341.86 lakhs. The outstanding loan position as on 30.09.2011 is as follows:

Loan	: Rs 310.28 Lakhs
Interest	: Rs 90.54 Lakhs
Liquidated damages	: Rs 13.71 Lakhs

The Interest and the L.D. figures are higher because the same are as on 30.09.2011.

- (xiv) In reply to para 4 (XIV) (r) supra, it is stated that the entire details and financials have been provided by the petitioner which clearly establishes the losses suffered by the petitioner including for reasons of default on the part of the respondent. The Commission, considering the project specific tariff of the petitioner for the year 11th onwards, is required to examine the actual financial data which has been given by the petitioner.
- (xv) In reply to para 4 (XIV) (s) supra, the O&M escalation has been correctly determined by the Commission.
- (xvi) In reply to para 4 (XIV) (t) supra, It is wrong and denied that the PLF is not liable to be re-determined considering the project specific data. There would be no purpose otherwise in considering project specific data. It is wrong and denied that the Hon'ble APTEL has held that hydrological risk is to be borne by the developers. On the contrary the same is to be considered in tariff determined under Section 62 so long it is not attributable to the petitioner. It is wrong and denied that the claim of PLF at 20% is to be rejected.
- (xvii) In reply to para 4 (XIV) (v) supra, it is wrong and denied that the petitioner is not entitled to carrying cost on the difference in arrears. It is stated that

the petitioner has been denied the legitimate tariff in time, which is to be compensated by way of interest as has been done in the past and also as per the decision of the Hon'ble Tribunal. The prayer of the respondent for dismissal of the petition is wrong and denied.

6. On 16th May 2016, the respondent made written submissions; the details are as hereunder:

A. Parameters sought by the petitioner:

The petitioner has commissioned the 0.65 MW Mini Hydel project on 17.05.2001 and sought the tariff ranging from Rs. 13.68 / unit for 11th year of operation to Rs.9.61 / unit for 20th year of operation with the following parameters:

- | | |
|--|---|
| a) Plant Load Factor (PLF) | : 30% |
| b) Project Cost | : Rs. 437.27 Lakh. |
| | (Capital cost arrived as
Rs.672.72 Lakhs / MW) |
| c) Outstanding Loan as at the end of 10 th year | : Rs.480.22 Lakh |
| d) Outstanding Loan repayment period | : 10 years |
| e) Interest on loan | : 12% |
| f) Equity at the beginning of the 11 th year | : Rs. 380.30 Lakh |
| g) ROE (Post tax) | : 16% on Rs. 380.30 Lakhs |
| h) Income tax | : Pass through |
| i) Depreciation | : 2% per year on Rs. 437.81
lakhs |
| j) Interest on working capital | : 12% |
| k) O&M expenses | : 3.5% with escalation 6.69% per
year |
| l) Royalty charges | : Pass through |

B. Contention of the Respondents:

1) Legal:

- i. The main contention of the appellants in the appeal filed before APTEL against APERC Order dated 23.08.2014 was that APERC issued it without hearing the appellants. The grievance was that they

were neither served notices nor called for any meetings to furnish relevant data, in the context of determining tariff from 11th year of operation, as was called upon from other developers.

- ii. As such, the APTEL vide order dated 20.01.2016 directed that the petitioner shall be given opportunity to represent their data before commission.
- iii. APTEL while remanding the matter to APERC for determination of the tariff beyond 10 years of operation of the said projects held that "*We have expressed no opinion on the merits of the case. All the contentions of both sides are kept open.*"
- iv. The Commission order dt. 20.06.2001 in a suo-motu exercise determining the purchase price for purchase of electricity by the Distribution companies from the NCE developers, inter-alia held that, "*There wilt 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 reworked on the basis of return on equity, O&M expenses and variable cost*". The said order was not challenged by anybody and thus attained finality. This view was upheld by the Hon'ble Supreme Court order dt. 08.07.2010. As such this Hon'ble Commission is empowered to review the purchase price of the projects after completion of 10 years of operation confined to parameters viz., return on equity, O&M expenses of these projects.

2) Technical Parameters:

Capital Cost:

- i. The Hon'ble APERC vide order dated 20.03.2004 determined the capital cost of Rs.3.625 Crs / MW (Rs. 4.5 Crs less capital subsidy of Rs. 0.875 Crs) for mini-hydel projects. Subsequently, APERC vide review order dated 07.07.2004 revised the capital cost of Rs.3.75 Crs/MW considering the capital subsidy of Rs.0.75 Crs/MW for first MW and Rs. 12.5 lacs/MW for capacity beyond 1 MW.
- ii. Further, APTEL vide order dated 20.12.2012 while fixing capital cost Rs.4.5 Crs/MW (excluding capital subsidy of Rs.0.75 Crs/MW) held as

follows:

“xii) However, the actual subsidy amount received by the project developer from the Government of India after adjusting the pre-payment penalty , if any, may be adjusted against the arrears due to the developer as a result of determination of tariff as per the directions given in this judgment or against the payment made to the developer for the energy supplied ”.

- iii. Also, the APTEL while issuing the order dated 20.12.12 have gone through all the records for averments made in the appeals and fixed the capital cost @ 4.5 and also given liberty to M/s Sardar power Limited for filing petition before the Commission for redetermination of the capital cost.
- iv. As per the norms stipulated by the APTEL vide order dated 20.12.12, the Commission determined the tariff to NCE projects vide order dated 22.06.2013. The tariff payable to Mini Hydel developers has been escalated considerably due to increase in the capital cost.
- v. The capital cost fixed by the APTEL vide order dated 20.12.12 for first 10 years of operation have not been contested by any of the Mini Hydel developers including the petitioner except M/s Sardar Limited who were given liberty by APTEL. Hence the capital cost @ Rs. 4.5 Crs/MW fixed by APTEL vide order dated 20.12.2012 attained its finality. As such, amount of capital cost is not permitted to be reopened.
- vi. The claim of revision of capital cost other than already determined by the APTEL vide order dated 20.12.2012 & adopted by the APERC, is not tenable.

PLF:

- i. The petitioner achieved average PLF of 30.57% during first 10 years of operation.
- ii. APERC determined the tariff for NCE projects vide order dated 22.06.2013 duly adopting the PLF @ 32% for Mini hydel projects fixed by APTEL in its order dated 20.12.2012.
- iii. The background on determination of PLF is as follows:

- The APERC vide order dated 20.03.2004 fixed the PLF @ 35% for Mini Hydel Projects. Commission may kindly note the findings in the order dt. 20.03.2004 & review order dated 07.07.2004, viz., "It is a known fact that every business runs on risks of its own. But the power developers have set up their plants choosing the site and source on their own. If the sites selected are such that they support very low PLF, the APTRANSCO or the consumers at large cannot be expected to shoulder the consequential undue extra burden.
- As seen from the 2004 APERC order, there is no role of AP DISCOMs in selecting the site for setting up of the project. The developer themselves selected the site duly knowing the facts of Hydrology & Hydrological risks and got approvals from the competent authorities.
- Further, APTEL vide order dated 20.12.2012 while fixing the parameters & norms to the NCE projects held as follows: "we also feel that for small hydro power projects due to uncertainty of Hydrology which is beyond the control of developers, the tariff should be single part tariff and the generation above the PLF of 32% upto PLF of 45% should also be paid at the same rate at which is determined at normative PLF of 32%. This will ensure that less 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 years. On the energy generation above PLF of 45% only incentive @ 35 paise/kWh shall be payable. This will ensure that the benefit of the generation above 45% PLF is shared between the generator and the distribution licensees. Thus the hydrological risks and the benefit will be borne by the developer. " Accordingly, APTEL fixed the PLF @32% by reducing from 35%.
- In pursuance of the said APTEL order dated 20.12.2012, APERC passed order dated 22.06.2013 duly revising the tariff adopting PLF of 32% instead of 35%. Due to this revision, the tariff payable to Mini Hydel developers has been escalated considerably. The tariff payable was also fixed @ 45 % PLF beyond which incentive @35 paise was payable.

- It is also pertinent to note the remarks in the report of consultant which was accepted by APERC which reads that, “The revised APERC order of June 2013 provided a significant relief to the Mini Hydel players in terms of a higher fixed cost per unit. The revised APERC order of June 2013 has ensured that mini hydel players get additional revenue to the tune of Rs 2.0 Cr/MW even while operating at a low PLF. This revenue is sufficient to meet only cost overrun during the last 10 years or to pay off any outstanding liabilities”.
 - Since hydrology & hydrological risks have to be borne by the developer, the contention of the developer for nonpayment of loans & un paid RoE due to Low PLF is not tenable. Hence, the question of non-payment of loan & non recoverable RoE would not fall for determination of the tariff beyond 10 years of operation. As per the APERC order dated 20.06.2001 it has attained finality which fact was upheld by Hon'ble Supreme court vide order dated 08.07.2010 and as stated by Hon'ble APTEL order dated 20.01.2016, the only factor for determination of the tariff is O&M cost. However, now the developer is not contesting the component of the O&M cost.
- iv. Without prejudice to the above specific to the project, the average PLF achieved during the first 10 years of operation by the petitioner is 30.57%. The developer achieved PLF more than threshold PLF of 32% for most of the years. The PLF achieved by the petitioner is almost in line with the PLF fixed by the Commission.
- v. Hence, the higher tariff sought by the petitioner ranging from Rs.13.68 /Unit for 11th year of operation to Rs.9.61/unit for 20th year of operation due to the simple 1.4% reduction of PLF is baseless besides being not tenable.
- vi. It can be concluded that this project satisfies the parameters fixed under generic tariff vide order dt 23.08.2014 and the such tariff determined in the said order is applicable for this petitioner's project also.
- 3) As per the norms, life of the Mini Hydel project is 35 years. APDISCOMs entered PPA with Mini Hydel petitioner for a period of 20

years. Hence, the total cost incurred for setting up of the project is only met from the DISCOMs is not correct though remaining 15 years life of the project still exists after completion of the PPA tenure as the project is not on BOT model. Further, the claim of payment of outstanding liabilities to funding authorities viz, IREDA & other financial institutions, is not correct.

- 4) Though the APERC order dated 20.6.2001 stipulating that the revision of tariff beyond 10 years of operation is limited to Return on Equity, O&M expenses and variable cost, the Commission while determining tariff beyond 10 years of operation to Mini Hydel Projects have broadly analyzed all the parameters & extended the parameters fixed by APTEL vide order dated 20.12.12 for first 10 years of operation, thus passed generic tariff order dated 23.08.2014.
- 5) In case the petitioner's request to determine the tariff on a case to case basis is considered, the same would have to be extended to the other NCE projects also. There are 40 NCE (Mini Hydel, Biomass, Bagasse & Industrial Waste) projects in total in the State of Andhra Pradesh. Individual case to case basis means such a huge number of orders may increase complexity in tariff determination.
- 6) It is pertinent to mention that the Hon'ble Supreme Court vide order dated 08.07.2010 while remanding the matter to APERC for determination of tariff to the NCE projects held that "(c) It shall also re-examine that in addition to the above or in the alternative, whether it would be in the larger interest of the public and the State, to permit sale of generated electricity to third parties, if otherwise feasible.
- 7) APERC vide order dated 21.06.2013 in the matter of IA No 22 of 2013 in RP No 84 of 2003 in OP No 1075 of 2000 filed by APDISCOMs seeking deferment of hearing of remand proceedings for tariff determination of NCE projects as directed by APTEL in its order dated 20.12.2012 till final disposal of Civil appeals Nos. 1376 to 85 filed before Hon'ble Supreme court held as follows: "If the DISCOMS feel, that the tariff determined based on the parameters fixed by the Hon'ble APTEL is very high and instead of litigating further in the Hon'ble Supreme Court and depriving itself additional energy available and depriving its consumers also the energy availability, the DISCOMs can

very well get rid of the claims of developers for higher tariff by allowing them for the third party sale through open access.”

- 8) The present tariff fixed by the Commission vide order dated 23.8.2014 is already on much higher side. Further enhancement of any parameters will cause the APDISCOMs to colossal financial crunch, in view of the prevailing situation after bifurcation of the State.
- 9) The general tariff procedure is to arrive at the levlized tariff based on different operating norms and parameters. If the tariff determination is through back loaded approach, it is advantageous to APDISCOMs and if it is levlized then it will be beneficial to both DISCOMS & Developers. However, unfortunately, APERC earlier determined tariff is based on front loaded approach for first 10 years of operation, wherein APDISCOMs are burdened with higher tariffs during the initial period.
- 10) Generally State Commission or Central Commission issues tariff / regulation duly stating the normative parameters. Commission will determine the tariff with these parameters. Accordingly, the developer will get the tariff applicable during the commissioned year for entire agreement period. APDISCOMs entered PPA with certain developers viz. JVK, having provision for transfer of project to the Licensees after completion of the agreement tenure. However, the NCE projects not having such provisions and further it is not correct that the entire project cost has to be recovered during the 20 years of agreement period where as the life of the project is 35 years.

Hence, the tariff determined vide order dated 23.08.2014 be applied to the petitioner's project also.

7. The point for consideration, with the above background is determination of the tariff to be paid to the petitioner by the respondent for the 11th year to 20th year of operation.
8. This consideration arose pursuant to a remand from the Appellate Tribunal for Electricity (APTEL) vide its order dated 20th January, 2016 setting aside the order of the Commission dated 23rd August, 2014 qua this appellant to the extent Commission fixed the appellant's tariff. The ground for setting aside the Commission's order, inter-alia, is that the petitioner was neither served notices nor called for any meetings to furnish relevant data, in the context of determining tariff

from 11th year of operation as was called upon from other developers. Further, APTEL directed that the State Commission shall complete the entire exercise of determination of appellant's tariff in the light of paragraph 30 of the order dated 20th June, 2001 of the State Commission within a period of five (5) months from 20th January, 2016 with due regard to the data submitted by them. It was also ordered that the State Commission shall conduct the entire exercise independently and in accordance with law duly qualifying that they have expressed no opinion on the merits of the case and all the contentions of both sides are kept open.

9. Before going any further, it is apt to extract para 30 of the Commission's order dated 20th June, 2001 as hereunder:

"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 project (by which time the loans from financial institutions would have been repaid) when the purchase price will be reworked on the basis of return on equity, O&M expenses and variable cost".

10. Having regard to the rival contentions of the parties as narrated supra, the two issues on which the commission has to take a decision are:

- (a) What is the scope of review in terms of remand order dated 20.01.2016?
- (b) What is the tariff payable to the petitioner from 11th year to 20th year of operation?

11. **What is the scope of review in terms of remand order dated 20.01.2016?** The scope of the review has become a bone of contention. On this, the respondent having quoted orders dated 20th June, 2001; 20th March, 2004 and with regard to the provisions of the PPA under Article 2.2 took a stand that even though, the review of purchase price is with specific reference to each developer on completion of 10 years from the date of commissioning of the project, the same has to be limited to parameters such as O&M expenditure, Return on Equity, Variable Cost and residual Depreciation, if any. In fact, they wanted that the common order dated 23rd August, 2014 be applied to all mini hydel projects which have completed 10 years of operation including the petitioner's project in as much as all the essential elements of tariff framework for mini hydel projects which have completed 10 years are similar. On the other hand the petitioner had stated that since the matter has been remanded to the Commission for determination of

project specific tariffs, it is not open to the respondent to once again seek the application of the generic tariff order dated 20th August, 2014. Further, they also stated that the basic premise of the respondent to contend that only limited parameters are to be considered is also not correct as the rationale in the order dated 20th June, 2001 was that the loans may have been repaid and individual cost and expenses of each project need to be considered. For determining the Return on Equity, the equity base has to be considered. The project cost is the basis for considering the O&M expenses and therefore, the same has to be considered. The depreciation also directly relates to the project cost. Further, they have also pointed out that the project cost cannot be bench marked in all cases. The per MW cost for a 7.5 MW project will be substantially different from that of a 0.65 MW project. The PLF will also greatly vary. The contention that these cannot vary or cannot be considered, particularly when specific costs and expenses are being considered is misconceived.

12. As can be seen from the remand order dated 20th January, 2016, the APTEL while interpreting the Hon'ble Supreme Court Order dated 8th July, 2010, has opined that it was necessary for the State Commission to follow its order dated 20th June, 2001 and conduct review of purchase price with specific reference to each developer and they further opined that such an exercise has not been done in this case. Accordingly, they remanded the matter. As such, there cannot be two views about the scope of review. Accordingly, the Commission has to go for a review with specific reference to this developer as mandated in the order dated 20th June 2001 and also consider all issues as APTEL has expressed no opinion on the merits of the case, keeping all the contentions of both sides open albeit in accordance with law.
13. **What is the tariff payable to the petitioner from 11th year to 20th year of operation?** Before deciding the applicable tariff, it is necessary to trace back briefly the sequence of events that led to the present remand. The Commission passed an order dated 20th June, 2001 in a suo-motu exercise determining the price for purchase of electricity by the distribution companies from the non-conventional energy developers as Rs. 2.25 per unit with 5% escalation per annum with 1994-95 as base year. The other conditions contained in the said order include (1) banning sale of power to third parties by the non-conventional energy developers; (2) directing the non-conventional energy developers to supply power only to AP Transco / AP Discoms together with stipulating a condition as quoted in para (3) above. The order also speaks about a suo-motu review by the

Commission of the incentives to take effect from 1st April, 2004. Pursuant to that the Commission passed order dated 20th March, 2004 determining tariffs for different types of non-conventional energy projects namely Bio-mass, Bagasse, Municipal solid waste, Industrial Waste, Wind and Mini-hydel projects following parametric approach for the first time. As per the said approach the general parameters that are taken into consideration while working out the tariff include (a) capital cost; (b) capacity utilization factor (PLF); (c) auxiliary consumption; (d) O & M expenses; (e) O & M escalation; (f) interest on working capital; (g) return on equity; (h) debt equity ratio; (i) interest on debt; (j) incentives; (k) depreciation; (l) electricity duty and (m) water royalty charges. The above order of the Commission was challenged initially by filing a writ petition in the Hon'ble High Court. The Hon'ble High Court disposing of the same and directed the project developers to approach the Commission for a review of the order dated 20th March, 2004. Thereafter pursuant to the review petitions filed, Commission vide its order dated 7th July 2004, after considering minor modifications of the capital cost and certain other aspects, determined a tariff which is marginally higher than the earlier tariff ranging from Rs. 2.69 to Rs. 1.92 per unit from 1st year to 10th year of operation applicable for mini hydel projects. Aggrieved by the above order, the small hydro developers association filed another writ petition no. 1661 of 2004 in the Hon'ble High court of Andhra Pradesh, subsequently culminating in appeals before the APTEL. Thereafter, the Tribunal allowed the appeals by a judgment dated 2nd June, 2006 and set aside the orders of the Commission. Aggrieved by the above order, AP Transco filed an appeal before the Hon'ble Supreme Court and finally the Hon'ble Supreme Court vide judgment dated 8th July, 2010 had set aside the judgment dated 2nd June 2006 passed by the Tribunal with certain other conditions as mentioned therein besides remanding the matter to Andhra Pradesh Electricity Regulatory Commission to determine the tariff for purchase of electricity. Pursuant to the remand, the Commission determined the tariff for the Non-conventional energy projects by order dated 12th September, 2011 (the matter was decided by three separate orders given by each member of the Commission). After several litigations having been filed by both the developers and distribution companies, the Tribunal vide detailed judgment dated 20th December, 2012 fixed, inter-alia, the norms and parameters for determination of tariff for mini-hydel plants. A comparative statement of the norms fixed by the Commission by its order dated 20th March, 2004 as revised by its order dated 7th July, 2004 and the norms fixed by APTEL vide its order dated 20th December, 2012 is as hereunder:

COMPARATIVE STATEMENT OF NORMS

	Units	Commission Order Dt.20.03.2004 (As revised by order dt. 7.7.2004)	Hon'ble ATE order Dt. 20.12.2012
Applicability (Fixed Cost)	Period	1 to 10 th year of operation	1 to 10 th year of operation
Capital Cost	Rs. Cr/MW	3.75	4.5
Threshold PLF (CUF)	%	35	32
O&M Expenses (1 st 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 balance deprecation is spread over for the life of the project.	7 % (first 10 years) and balance 20% spread evenly over 15 years.
Interest on debt	%	10	12
Return on Equity	%	16	16 (MAT / Income Tax pass through)
Interest on Working Capital	%	12	12

14. A comparison of the tariffs determined by the Commission vide its order dated 20th March, 2004 as revised by its order dated 7th July, 2004 and the tariff determined by the Commission vide its order dated 22nd June, 2013 based on the Hon'ble ATE order dated 20th December, 2012 is given below:

Year of Operation Since commencement of unit	Commission Order Dt.20.03.2004 (As revised by order dt. 7.7.2004)	Commission Order Dt.22.06.2013 (Based on Hon'ble ATE order Dt. 20.12.2012)
1 st	2.69	3.89
2 nd	2.60	3.79
3 rd	2.52	3.69
4 th	2.43	3.60
5 th	2.34	3.51
6 th	2.26	3.42
7 th	2.17	3.33
8 th	2.09	3.25
9 th	2.00	3.17
10 th	1.92	3.10

15. Subsequently, Commission also issued the impugned orders dated 23rd August, 2014 in the matter of determination of tariff of mini hydel power projects to take effect on completion of 10 years of operation from the date of commissioning of the projects. The norms adopted in the said order and the consequent tariff determined are as below:

Norms:

S. No.	Parameter	Adopted
1.	Capital Cost	Rs. 4.5 Cr/MW
2.	Auxiliary Consumption	1%
3.	O&M Expenditure	3.5 % of the Project Cost
4.	O&M Escalation	6.69 % year on year
5.	Debt Equity Ratio	70:30
6.	Depreciation	7% for 1 st 10 Years and 1.33 % for the next 15 years
7.	Return on Equity	16%
8.	Interest on working Capital	12%
9.	PLF	32%

Tariff:

Year of Operation	Fixed Cost (Rs./Unit)
11 th	2.15
12 th	2.22
13 th	2.30
14 th	2.39
15 th	2.48
16 th	2.58
17 th	2.68
18 th	2.79
19 th	2.91
20 th	3.03
21 st	3.17
22 nd	3.31
23 rd	3.46
24 th	3.62
25 th	3.80

16. Against the above back drop, the request of the petitioner is to consider the following parameters, while determining the tariff from 11th year to 20th year of operation.

Capacity of the Project	0.65 MW (5694000 units / year)
Plant Load factor (PLF)	30%
Auxiliary Consumption	1%
Date of Commissioning	17.05.2001
Project Cost	Rs. 437.27 Lakhs
Tariff Period	11 th year to 20 th year
Outstanding Loan as at the end of 10 th year	Rs. 480.22 Lakhs
Outstanding Loan Repayment Period	10 Years
Interest on Loan	12 %
Equity at the beginning of the 11 th year	Rs. 380.30 Lakhs (unpaid ROE of Rs. 280.30 Lakhs proposed to be repaid in 10 years)
ROE (Post – tax)	16 % on (100+280.30) = Rs. 380.30 Lakhs
Income tax	Pass through
Depreciation	2% per year on 437.27 Lakhs {100% (-) 70 % during initial 10 years (-) 10% salvage value}
Interest on working capital	12%
O & M Expenses	3.5% with an escalation of 6.69% every year
Water royalty charges and Electricity duty	Pass through (to be reimbursed)

17. The Petitioner had worked out the tariff based on the above parameters as can be seen from Annexure-D of the petition, which ranges from Rs. 13.68 per unit from 11th year to Rs. 9.61 per unit till the 20th year.
18. The petitioner has not disputed parameters in relation to auxiliary consumption, interest on loan, rate of return on equity, depreciation for the first 10 years, interest on working capital, O&M expenses, O&M escalation and other provisions related to income tax and water royalty charges and electricity duty which are allowed either as pass through or to be reimbursed. As such, the same need not be delved upon by this Commission to the extent also not disputed by the respondent. However, the respondent is disputing the O&M escalation to be taken as 5.72% as against 6.69% followed earlier. The materially significant parameters the developer is requesting to be considered as different from the impugned order dated 23rd August 2014 include project cost of Rs. 6.72 Cr/MW (as against Rs. 4.5 Cr/MW considered earlier); depreciation of 2% per year on the project cost for period beyond 10 years (as against 1.33%); outstanding loan as at the end of 10th year being Rs. 4.80 Cr.; equity at the beginning of 11th year being considered as Rs. 3.803 Cr. (unpaid RoE of Rs. 2.803 Cr. proposed to be repaid in 10 years) and plant load factor of 30% (as against 32% considered earlier).

19. Having identified the materially significant parameters and disputed parameters on which a decision has to be taken, an examination of each of the parameters has to be done with due regard to the rival contentions of the parties so that the tariff that is applicable from 11th year onwards can be determined.

a) Project Cost: The developer is asking for a capital cost of Rs. 6.72 Cr./MW. The respondent has stated that the APTEL having gone through all the records and averments made in the appeals, fixed a capital cost of Rs. 4.5 Cr./MW (while giving liberty to M/s Sardar Power Limited for filing petition before the Commission for re-determination of the capital cost). They further stated that the capital cost, thus fixed has not been contested by any of the mini hydel developers including the petitioner except for M/s Sardar Power Limited and hence the same has attained finality and is not permitted to be reopened.

The impugned order dated 23rd August, 2014 adopted a project cost of Rs. 4.5 Cr./MW based on APTEL order dated 20th December, 2012, which order has now become final not having been challenged. The developer is now asking for a capital cost of Rs. 6.72 Cr./MW at this distance in time which he claims to have incurred way back prior to and in the year 2001 when the project got commissioned and later. The balance sheets for 2001-02 to 2010-11 have been filed in support of the claim but not for the years in which the generating plant was constructed. No proof of the actual expenditure towards capital cost during the relevant period has been furnished through any documents or otherwise in respect of any item that is a component of the project cost. Verification of the claims on capital cost physically at this distance of time may not be practically feasible. While the APTEL's determination of capital cost on verifiable and dependable criteria for the relevant period has become final, the petitioner did not produce any specific material or give any specific reasons as to why this project costed much higher than normal. Any change in the project cost would result in the change in tariff for the first 10 years, which have become final after much litigation and with upward revision as alluded to earlier while tracing the history of the case, creating further complications. Under the circumstances, it is unsafe to accept the claim of higher capital cost and hence the time tested capital cost as assessed by APTEL is followed herein also.

- b) Depreciation: As regards this parameter, there is no dispute for the first 10 years for which it is determined as 7%. The Hon'ble ATE vide its order dated 20th December 2012 determined a depreciation of 1.33% for the rest of 15 years. This implicitly means a plant life of 25 years. In line with the same, the Commission in its impugned order dated 23rd August 2014 has determined tariffs from 11th year to 25th year. However, the petitioner has now proposed a depreciation rate of 2% over 10 years, which implicitly means a plant life of 20 years. This perhaps is based on the agreement period of 20 years. The respondent on the other hand has now pointed out that the life of the project is 35 years and as such it is not correct that the entire project cost has to be recovered during the 20 years of agreement period specially when there are no provisions for transfer of project to the respondent after completion of the agreement period as in the case of certain developers like GVK.

Respondent has suggested a plant life of 35 years. However, the same has not been substantiated, by any material. On the other hand, the Commission earlier in its impugned order adopted a plant life of 25 years in line with APTEL order dated 20th December 2012 to deviate from which there is no plausible reason. Hence it continues to adopt a depreciation rate of 1.33% from 11th to 25th year. In passing, the Commission agrees with the view point of the respondent that since the agreement expires in 20 years, the entire cost need not necessarily be borne by them or alternately if the parties agreed to extend the agreement beyond 20 years, the tariff will be fixed by the Commission in the circumstances prevailing at that time following the principles of equity and prudence.

- c) Outstanding loan and unpaid Return on Equity: The petitioner had indicated the outstanding loan at the end of 10th year as Rs. 480.22 lakhs, which according to him, should form the basis for fixation of tariff. This was after adjusting for Rs. 87.42 lakhs stated to be the arrears for the initial 10 years paid as per the orders of Hon'ble Tribunal and Hon'ble Supreme Court. On the other hand, the respondent had stated that the revised APERC order of June 2013 has ensured that mini hydel players get additional revenue to the tune of Rs. 2 Cr./ MW, which is sufficient to meet any cost over run during the last 10 years or to pay off any outstanding liabilities. The issue of arrears being paid or substantially not paid pursuant to the earlier order was also raised by the parties. In any case, the actual outstanding liabilities will get crystallized only upon payment of the full arrears. Till then the same can only

be a matter of estimation. In any view, action for payment of full arrears is not the subject of present consideration.

Notwithstanding the above observation, the fact remains that an amount of Rs. 480.22 lakhs reportedly stands as an outstanding loan at the end of 10th year. The break-up for the same is as hereunder:

Term Loan from IREDA – Rs. 310.27 lakhs	
Interest Funded	- Rs. 150.21 lakhs
Interest due to IREDA	- Rs. 83.97 lakhs
Liquidated damages payable to IREDA	- Rs. 13.09 lakhs
Unsecured Loans (Directors & Relatives)	- Rs. 10.10 lakhs
Total	- Rs. 567.64 lakhs

When the amount of arrears of Rs. 87.42 lakhs is reduced, the outstanding loan (Including Interest Funded, Interest due and liquidated damages) comes to Rs. 480.22 lakhs. The amounts indicated as above are borne out of the audited accounts of the company. Moreover a major chunk of Rs. 480.22 lakhs (Including an unsecured loan of Rs. 10.10 lakhs stated to be funded by Directors and Relatives), which the petitioner is requesting to form the basis for fixation of tariff, is owed to Indian Renewable Energy Development Agency Limited (A Govt. of India Enterprise). That being the case, the actual amounts owed cannot be questioned, they being verifiable.

Leaving aside the issue of allowing or not allowing the outstanding loans to be recovered as part of the tariff for 11th year to 20th year, it may be appropriate at this juncture also to consider the contentions of the parties as it relates to unpaid return on equity.

On this issue, the petitioner submitted that due to the long drawn litigation and non-payment of the entire tariff for the first 10 years, he has been unable to pay any dividend (RoE) to the share holders during the initial 10 years. The above situation was also due to drought conditions in 2001 to 2004 and also due to reduction in purchase prices from 1.4.2004 as per the orders dated 20.03.2004 and 07.07.2004 for the mini hydel plants. The unpaid RoE, which the petitioner wants to be recovered from 11th year onwards, is Rs. 280.30 lakhs. The following is the working out for the above said unpaid Return on Equity:

Year	Equity + ROE @ 16% (Rupees in Lakhs)
1 st	100.00
2 nd	116.00
3 rd	134.56
4 th	156.09
5 th	181.06
6 th	210.03
7 th	243.64
8 th	282.62
9 th	327.84
10 th	380.30

$$\text{Unpaid ROE} = 380.30 - 100.00 = \text{Rs. } 280.30 \text{ Lakhs}$$

On the other hand the respondent stated that due to the long drawn litigation and non-payment of the entire tariff for the first 10 years, they have not been able to pay any dividend (RoE) is not correct. It is a fact that the petitioner, being aggrieved by the tariff determined by the APERC order dated 20.03.2004, approached various courts. Further, the statement that the petitioner was not paid the entire tariff for the first 10 years is also false. Infact, the petitioner was paid the entire tariff for first 10 years. The petitioner was paid regularly the eligible tariff from time to time, the arrears were also released in pursuance to directions / interim orders of different forums. A revised APERC order dated 22.06.2013 has substantially increased the tariff for these mini hydel projects. The tariff with effect from 1.04.2004 was determined by APERC / Appellate Tribunal keeping in view that there shall be no outstanding loan after 10 years from completion of COD. Thus there cannot be any unpaid RoE which can be allowed to spill over from the 11th year onwards. Therefore it is not justified to propose RoE to be recovered. The said claim amounts to reopening the first 10 years tariff which is not permissible.

As can be seen from the above, the predominant reasons being given either for accumulation of outstanding loans or for the unpaid return on equity are the full tariff not being paid, the long drawn litigation and there being drought in certain years. The loss, if any, suffered either due to the long drawn litigation or due to the full tariff not being paid due to the orders of Apex Court is to be borne only by the parties to the litigation and the remedy does not now lie with the Commission more so when the matters are pending with the Apex Court. As regards to the issue of drought since the same is not in anybody's control, perhaps the risks on this account are to be shared.

That apart, it is strange to note that while huge amounts of outstanding loan is sitting in the books of the petitioner as at the end of 10th year, the petitioner is simultaneously requesting for unpaid Return on Equity. At this juncture, Commission cannot take a view that the earlier orders of the Commission fixing the tariff for first 10 years are responsible for the present predicament of the petitioner in as much as the said orders have become final. From that stand point, the responsibility for such unpaid RoE falls squarely on the developer. That being the case, Commission is unable to allow any unpaid Return on Equity to be recovered as part of the tariff. There is also much force in the contention of the respondent that allowing unpaid RoE amounts to once again reopening the first 10 years tariff. The Equity base of Rs. 100 lakhs also cannot be cognized in as much as the project cost stands fixed at Rs. 4.5 Cr./MW and return on Equity on the corresponding Equity base has anyway been allowed while working out the tariffs from 11th to 20th year. Hence, the same cannot be accepted. Accordingly it is decided not to factor any unpaid Return on Equity as a line item to be recovered in the tariff determination from 11th year onwards.

Having said thus, and duly noting the peculiar situation of the developer and by taking a liberal and sympathetic view from the standpoint of ensuring the survival of the New and Renewable Sources of power and more particularly Mini Hydel power projects, in this case, Commission would like to allow the outstanding loans as an element of tariff to be recovered from 11th to 20th year to the extent they are due to IREDA, since the same are verifiable. Accordingly, we feel just and fair to allow an amount of Rs. 470.12 lakhs to be recovered from 11th to 20th year. However, the fact that the actual arrears payable would crystallize only when the Apex Court decides the matter in CAs 1376 to 1385 of 2013, cannot be lost sight off. As and when the Apex Court decides and the arrears get crystallized, there must be a mechanism to ensure that the tariff is reworked taking into account the revised outstanding loans. Accordingly Commission gives the liberty to the Discom to approach this Commission for revision of tariff by filing an appropriate petition before the Commission under Section 62 read with Section 64 of the Electricity Act, 2003. This view of providing for revision / review was also provided under Regulation 1 of 2008 (Terms and Conditions for determination of tariff for supply of Electricity by a generating company to a distribution licensee and purchase of Electricity by distribution licensees).

- d) Plant Load Factor (PLF): The petitioner adopted a PLF of 30% in the calculation sheet as at Annexure-D to the petition. On the other hand the respondent stated that the petitioner's request is not tenable since contrary to the normative parameters. Further, the respondent having quoted the earlier orders dated 20.3.2004 and 07.07.2004, brought to the attention of the Commission that if the sites selected are such that they support very low PLF, the AP Transco or the consumers at large cannot be expected to shoulder the consequential undue extra burden.

A plant load factor of 35% was determined by the Commission in its order dated 20th March, 2004. The import of this parameter is that when a plant is able to generate equivalent to a PLF of 35%, it would be able to recover its full fixed charges. An incentive of 21.5 paise/kWh was allowed to be paid when the generation exceeds 35% PLF. In the subsequent appeals, the small hydro developers have brought to the attention of various forums that when the PLF was less than 35% due to drought or otherwise, they will have a cut in the fixed charges and in a bountiful year where the generation exceeds 35% PLF, they are only provided with an incentive of 21.5 paise per unit resulting in under recovery of fixed charges. As such, while the hydrological risks have been passed on to them, hydrological rewards are not allowed to be retained by them. The APTEL having regard to the above problems being faced by the mini hydel developers provided a mechanism in its order dated 20th December, 2012. The mechanism included, working out of the tariff with a PLF of 32% and also allowing them to be paid for the actual generation full fixed charges up to 45% PLF. Thereafter, an incentive of 35 paise/unit is to be paid, which finally got increased to 50 paise/unit. In the above mechanism it was expected to enable the generators to recover the shortfall in fixed charges when the PLF was below 32% by allowing them an extra 13% of fixed charges (45%–32%) in a year where the generation exceeds 32%. This mechanism works well as long as the shortfall in a drought year matches with the additional fixed charges of 13% that he can get in a reasonably good subsequent year in terms of rain fall. Otherwise, the plant economics go haywire. Precisely this was the contention of the petitioners which would have resulted in alleged outstanding loans and also unpaid return on equity and the same have been addressed as above. A careful study of the PLFs of the petitioner's project appears to be falling in that category as extracted supra. As such, and with due regard to the specific data submitted by this developer, it appears just and fair to allow a plant load factor

of 30% as requested and also adopted for computation by the petitioner. This, however, has to be allowed from the 11th year onwards.

Taking 30% as a threshold PLF as against 32% adopted in the impugned order, would result in a per unit increase in tariff. This also proportionately increases the share towards debt repayment and return on equity, more so in view of the plant life much beyond the agreement period. The above position is also fortified by the passing comment of the Commission at the end of para (b) above.

- e) O&M Escalation: The petitioner proposed a year on year O&M escalation of 6.69% consistent with the judgment of APTEL dated 20.12.2012 and the consequential order dated 22.06.2013. On the other hand, the respondent suggested an escalation of 5.72% on the ground that the same is as per CERC procedures and also the escalation of 6.69% was under appeal.

Earlier, in the impugned order 23rd August, 2014, Commission adopted an escalation of 6.69% in respect of all the NCE developers. Commission sees no reason to deviate from the same while working out the tariffs from 11th year onwards, more so when there is no stay or suspension pending the appeal.

20. With due regard to the parameters on which there is no dispute and the findings of the Commission on some of the parameters requested by the petitioner as discussed in the above paragraphs, the tariff to be paid from 11th year to 20th year stands fixed as hereunder:

Year of Operation	Tariff (Rs./Unit)
11 th	5.57
12 th	5.31
13 th	5.06
14 th	4.81
15 th	4.56
16 th	4.33
17 th	4.10
18 th	3.87
19 th	3.66
20 th	3.45

The Commission also agrees with the view of the respondent that the entire cost need not be passed on to them and to the end consumers in as much as the agreement is going to be terminated on completion of 20 years whereas the plant life as per APTEL extends at least up to a period of 25 years. The broad approach taken by the Commission in this order has been to go for a specific tariff

determination wherever justified in order to provide required reasonable relief to the petitioner, however without changing the tariffs for the first 10 years in as much as the same have been finalized and the mandate is to determine the subsequent tariff in accordance with the law. Any outstanding issues as relates to under recovery remaining unaddressed, the same can be addressed at the end of 20th year, if the party so desires to extend the agreement thereafter.

21. The tariff (Fixed Cost) per unit mentioned in the above para 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 the DISCOM concerned to pay an incentive of Rs. 0.50 Ps. Per unit generation of electricity above 45% PLF. The Commission also directs that Electricity duty and Water Royalty charges paid by the Mini Hydel project developers during this period shall be reimbursed.
22. There shall be no interest payable as the obligation to pay devolves on the respondent only from the date of this order when the tariff is determined.
23. The petitioner shall submit the details of his claim to the respondent towards the difference between the earlier tariff and the tariff now determined by this order for the period from 11th year of operation of the generating unit of the petitioner up to 30th June 2016. On submission of such claim, within 15 days from the date of this order, the respondent shall cause verification of the same and inform the petitioner its acceptance of the claim or any objection for the same. On finalization of the quantum payable between the parties, the amount so arrived shall be paid in six equal installments by 20th of each month commencing from July 2016. In default, the respondents shall be liable to pay interest @ 6% per annum from the date of default, till the date of payment. The petition is ordered accordingly.
24. If there is revision of outstanding loans for reasons specified in this order necessitating revision of tariff, the respondent is at liberty to approach the Commission by filing an appropriate petition under Section 62 read with Section 64 of the Electricity Act, 2003.
25. The parties shall bear their own costs.

This order is corrected and signed on this the 18th day of June, 2016.

Sd/-
P. Rama Mohan
Member

Sd/-
Dr. P. Raghu
Member

Sd/-
Justice G. Bhavani Prasad
Chairman