

**Appellate Tribunal for Electricity
(Appellate Jurisdiction)**

Appeal No. 196 of 2013 & I.A. No. 272 of 2013
And
Appeal No. 199 of 2013 & IA No. 277 of 2013

Dated: 27th October, 2014

**Present: Hon'ble Mr. Justice M. Karpaga Vinayagam, Chairperson
Hon'ble Mr. Rakesh Nath, Technical Member**

Appeal No. 196 of 2013 & I.A. No. 272 of 2013

In the matter of:

M/s OPG Renewable Energy Private Limited

Represented by its General Manager – Finance,
No. 167, St. Mary's Road, Alwarpet,
Chennai – 600 018

... **Appellant**

Versus

**1. Tamil Nadu Generation and Distribution
Corporation Limited (TANGEDCO),**

Represented by its Chairman and Managing Director,
No. 144, Anna Salai, Chennai- 600 002.

2. Tamil Nadu Electricity Regulatory Commission (TNERC)

TIDCO Office Building,
No. 19-A, Rukmani Lakshmi pathy Salai,
Marshalls Road, Egmore,
Chennai-600 008.

...**Respondent(s)**

Counsel for the Appellant(s)

: Mr. N.L. Rajah,
Mr. S. Santanam Swaminadhan
Mr. Arun Anbumani
Ms. Shagufa Salim
Mr. Ram Gupta

Counsel for the Respondent(s) : Mr. S. Vallinayagam for R-1
Mr. G. Umapathy for TNERC
Mr. T. Mohan
Mr. A. Yogeshwaran for R-2
Ms R. Mekhala for TNERC
Mr. B. Balathandayuthapani (Dir.)

Appeal No. 199 of 2013 & I.A. No. 277 of 2013

In the matter of:

Tamil Nadu Electricity Consumers' Association (TECA)

Represented by its President

1st Floor, SIEMA Building, P.B. No. 3847,
8/4/, Race Course, Coimbatore – 641 018.

... **Appellant**

Versus

2. Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO),

Represented by its Chairman and Managing Director,
No. 144, Anna Salai, Chennai- 600 002.

2. Tamil Nadu Electricity Regulatory Commission (TNERC)

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Mr. Arun Anbumani
Ms Shagufa Salim
Mr. Ram Gupta

Counsel for the Respondent(s) : Mr. S. Vallinayagam for R-1
Mr. G. Umapathy for TNERC
Mr. T. Mohan
Mr. A. Yogeshwaran for R-2
Ms R. Mekhala for TNERC
Mr. B. Balathandayuthapani (Dir.)

JUDGMENT

RAKESH NATH, TECHNICAL MEMBER

Appeal No. 196 of 2013 has been filed by M/s. OPG Renewable Energy Private Limited challenging the impugned order dated 20.6.2013 in Tariff Petition No. 1 of 2013 passed by Tamil Nadu Electricity Regulatory Commission (“State Commission”) regarding the tariff for generation and distribution for Tamil Nadu Generation and Distribution Corporation Ltd. (“TANGEDCO”). In this order the final true up for FY 2010-11, provisional true up for FY 2011-12, Annual Performance Review for FY 2012-13, Annual Revenue Requirement for second Control Period for FY 2013-14 to 2015-16 and tariff for FY 2013-14 were decided. Appeal No. 199 of 2013 has been filed by Tamil Nadu Electricity Consumers’ Association challenging the same order.

2. TANGEDCO is the Respondent No.1 and the State Commission is the Respondent No. 2.

3. The Appellants in these Appeals have raised the following issues:

- (i) Violation of public hearing process.
- (ii) Violation of requirement relating to filing Capital Investment Plan by TANGEDCO.
- (iii) Employees cost.
- (iv) Incorrect allowance of interest on loans taken to cover accumulated losses.
- (v) Error in calculation of Cross Subsidy Surcharge.
- (vi) Error in including demand charges while computing Cross Subsidy Surcharge.
- (vii) Error in determination of average billing rate.
- (viii) Errors in determination of weighted average cost of power.
- (ix) Failure to ensure compliance by TANGEDCO with the statutory advice of the State Commission.

- (x) Peak hours and off-peak hours tariff.
- (xi) Voltage wise cost of supply and cost to serve.
- (xii) Failure to notify road map for reduction of cross subsidy.
- (xiii) T&D losses

4. On the above issues, we have heard learned counsel for the Appellants, TANGEDCO and the State Commission. We shall be discussing the issues raised by the Appellant one by one considering the contentions of the parties.

5. The first issue is violation of public hearing process.

6. The Appellant has submitted that subsequent to the public hearing, the State Commission has accepted several clarifications from TANGEDCO altering the facts and figures which were originally submitted and made public for the hearing. These

clarifications subsequently furnished were not made public thereby violating the public hearing process. The conduct of the TANGEDCO in altering the facts and figures originally submitted by it would amount to camouflaging and violating the public hearing process and is also against the specific observations made by this Tribunal in Judgment dated 9.4.2013 passed in Appeal No. 257 of 2012.

7. According to the learned counsel for the State Commission, the clarifications were not submitted by TANGEDCO on their own but submitted only in response to the queries raised/additional information sought by the State Commission in the process of prudence check of various expenses proposed by TANGEDCO. The tariff determination process is not adversarial in nature and hence each and every clarification need not be put in public domain. As

suggested by the Tribunal in Appeal No. 257 of 2012, the State Commission has issued an amendment to its Tariff Regulations 2005 for hosting all the documents or proposals submitted by the Appellants on its own subsequent to filing the Tariff Petition other than in response to the State Commission's queries by way of prudence check. When the order of the Tribunal dated 9.3.2013 was issued, the State Commission had already undertaken the process of tariff determination and therefore, the State Commission did not see it prudent to amend its Regulations, midway in the tariff finalization process and therefore, did the same after the tariff order was passed. The allegation that the facts and figures which were originally submitted have been altered is not correct. In the Tariff Petition filed by TANGEDCO on 19.2.2013 the actual expenses incurred for FY 2012-13 were for half of the Financial

Year for estimating the expenses. In order to have much more accuracy of the said estimate and to prudently verify the expenses, the State Commission directed TANGEDCO to provide actual expenses and operational data for entire FY 2012-13. Accordingly, the additional information sought by the State Commission was provided by TANGEDCO.

8. According to Shri Vallinayagam, learned counsel for TANGEDCO, the statement of the Appellant that TANGEDCO had corrected the information furnished in the Petition is incorrect as TANGEDCO had only provided additional information sought by the State Commission over and above that provided in the Petition. The Appellants have also not brought out the injury caused to them by providing additional information by TANGEDCO to the State Commission

in the process of prudence check by the State Commission.

9. The question that arises for our consideration is whether the procedure followed by the State Commission in seeking and then accepting clarifications from the Respondents after public hearing and not making such clarifications public would violate the public hearing process and direction of this Tribunal in Appeal No. 257 of 2012 and is also against the principles of natural justice?

10. We find that the above issue has been dealt with by this Tribunal in its Judgment dated 18.10.2014 in Appeal No. 197 of 2013 as under:

“12. We find that in pursuance to the above suggestions, the State Commission has since

amended its Regulations on 26.11.2013. However, the impugned order was passed on 20.6.2013, before the notification of the amendment to the Regulations. Thus, there is no violation of the directions of this Tribunal.

13. The impugned order was passed after duly following the provisions of Section 64 of the Electricity Act, 2003. We also find that the State Commission has since modified its Regulations in pursuance of the directions given by us in our judgment in Appeal No. 257 of 2012. In view of the explanation given by the State Commission regarding information furnished by the first Respondent in response to the query of the State Commission, we do not find any violation of public hearing process and principles of natural justice.”

11. The facts of this case are similar to Appeal No. 197 of 2013 and therefore, the above judgment will squarely apply to the present Appeals. Accordingly, this issue is decided against the Appellants.

12. The second issue is violation of requirement relating to filing Capital Investment Plan by TANGEDCO.

13. Shri N.L. Rajah, learned counsel for the Appellant has argued that under Regulation 17 of the Tariff Regulations, the first Respondent is obligated to obtain the State Commission's approval of the Capital Investment Plan before filing ARR and application for determination of tariff. Without the Capital Investment Plan being approved, the State Commission should not have approved the corresponding capital expenditure in the ARR.

14. According to Shri G. Umapathy, learned counsel for the State Commission, TANGEDCO had submitted its business plan for capital expenditure and

capitalization for various schemes to be implemented. The State Commission on review of the same has allowed the capital expenditure on a provisional basis and any deviations from the approved numbers will be appropriately dealt with in the true up exercise. The State Commission has also issued a strong directive to the TANGEDCO for approval of the capital expenditure schemes on a timely basis and the State Commission intends to approve and closely follow the progress of such capital expenditure plans to be undertaken by TANGEDCO.

15. Shri Valliyanagam, learned counsel for the first Respondent has submitted that based on the capital expenditure and capitalization schedule filed before it, the State Commission has approved the capital expenditure on provisional basis. Respondent No. 2 has been directed by the State Commission to file the

progress of the capital expenditure and capitalization on a quarterly basis in the format approved by the State Commission. Accordingly, the progress of the capital expenditure and capitalization schedule will be filed before the State Commission.

16. The question that arises for our consideration is whether the State Commission was correct in according provisional approval to the capital expenditure proposed by the first respondent without approving the Capital Investment Plan, in violation of the Regulations?

17. We find that the Regulation 17(5) of the Tariff Regulations, 2005 and Regulation 3 (v) of MYT Regulations, 2009 specifies that the licensee shall get the Capital Investment Plan approved by the State Commission before filing of the ARR and application

for determination of tariff. However, the State Commission has approved the capital expenditure without approval of the Capital Investment Plan, contrary to the Regulations.

18. We find that the State Commission has provisionally accepted capital expenditure and capitalization for the first Control Period i.e. FY 2010-11 to 2012-13 and for the second Control Period i.e. FY 2013-14 to FY 2015-16 as submitted by the Appellant without any prudence check. The capitalization and capital expenditure for the second Control Period has been accepted without considering the past performance of the TANGEDCO. The capitalization approved for FY 2010-11, FY 2011-12 and FY 2012-13 was Rs.327.09 crores, Rs.1120.42 crores and Rs.2216.92 crores respectively. As against this, the capitalization accepted for FY 2013-14,

FY 2014-15 and FY 2015-16 was Rs.13852.95 crores, Rs.3324.27 crores and Rs.7437.49 crores respectively, without giving any reasons for such high increase in the capital expenditure. The capital expenditure and capitalization for the second Control Period appears to be highly optimistic considering the past performance of TANGEDCO. We feel that the State Commission erred in approving the capital expenditure/capitalization without considering the details of the Capital Investment Plan and the past performance of TANGEDCO.

19. This Tribunal has dealt with similar matter in Appeal No. 197 of 2013 wherein the tariff order relating to Transmission licensee was challenged. The Tribunal in Judgment in Appeal No. 197 of 2013 held

as under :

“We, therefore, direct the State Commission to true up/provisionally true up the capitalization for FY 2013-14 immediately and the short fall if any should be accounted for while determining the tariff for the FY 2015-16, with carrying cost on the impact of the variation on this account on the ARR. We direct TANTRANSCO to submit the actual accounts for capital expenditure and capitalization during FY 2013-14 by 30.11.2014 to the State Commission. TANTRANSCO shall also submit the application for Capital Investment Plan for FY 2014-15 and 2015-16 in the requisite formats to the State Commission for approval as per the Tariff Regulations by 30.11.2014, if not already done. The State Commission shall accordingly approve the Capital Investment Plan of TANTRANSCO for the FY 2014-15 and 2015-16 after following due process of law, if not already done, and consider the same while approving the tariff for the FY 2015-16.”

20. The findings in the above judgment will squarely apply to the present case. We, therefore, direct the State Commission to true up/provisionally true up the capitalization for FY 2013-14 immediately and the short fall if any should be accounted for while determining the tariff for the FY 2015-16, with carrying cost on the impact of the variation on this account in the ARR. We direct TANGEDCO to submit the actual accounts of capital expenditure and capitalization during FY 2013-14 by 30.11.2014 to the State Commission. TANGEDCO shall also submit the application for Capital Investment Plan for FY 2014-15 and 2015-16 in the requisite formats to the State Commission for approval as per the Tariff Regulations by 30.11.2014, if not already done. The State Commission shall approve the Capital Investment Plan

of TANGEDCO for the FY 2014-15 and 2015-16 after following due process of law, if not already done, and consider the same while approving the tariff for the FY 2015-16. Accordingly, directed.

21. The third issue is regarding Employees costs.

22. According to Shri Rajah, learned counsel for the Appellant the O&M cost is controllable as per the Regulations and the escalation to be allowed in O&M expenses is 4% as per the Tariff Regulations. However, the State Commission has allowed higher escalation cost in the Employees cost. The State Commission has approved dearness allowance to the employees at a very high rate.

23. The question that arises for our consideration is whether the State Commission was right in

**allowing escalation of 9% p.a. to Employees cost
against specified norm of 4% in the Regulations?**

24. This issue has been dealt with by this Tribunal in Judgment dated 18th October, 2014 in Appeal No. 197 of 2013. The findings of the Tribunal are as under:

“33. For estimating employees expenses for FY 2013-14 to FY 2015-15 also, the State Commission has escalated the approved employees expenses for FY 2012-13 at 4% on all components except DA.

34. We agree with the State Commission that DA increase is based on the All India Consumer Price Index to mitigate the impact of inflation on the employees. TANGEDCO has proposed DA increase in line with the State Government policy in this regard.

35. The State Commission has estimated the employees expenses for the base year (2012-13), taking into account the impact of DA. The MYT

Regulation provides that the licensee can also suggest the escalation factor which the State Commission can consider. Accordingly, we do not find any infirmity in the State Commission considering the DA enhancement in the employees expenses. The expenses on account of DA increase allowed to TANTRANSCO is a prudent cost to compensate the employees for inflation. The Regulation provides for allowing costs on account of inflation as uncontrollable costs. Accordingly, we decide this issue as against the Appellant.

25. The Regulations for generation and distribution business are similar to that of transmission business and, therefore, the above findings will squarely apply to the present case. Accordingly, this issue is decided against the Appellants.

26. The fourth issue is regarding allowance of interest on loans taken to cover the accumulated losses.

27. The Appellants have submitted that the State Commission was not right in allowing interest on revenue expenditure when the State Commission itself has observed that TANGEDCO has mixed up capital expenditure and that capital borrowings have been used to fund revenue deficit indicating that the total loan on which interest has been claimed is more than allowable capital expenditure. The State Commission has incorrectly allowed the ARR as per the opening balance sheet of TANGEDCO dated 01.11.2010 even though the said balance sheet has inflated assets base and also includes capital borrowings that were diverted to fund the revenue expenditure.

28. Shri Vallinayagam, learned counsel for the TANGEDCO has submitted that TANGEDCO has made the claim for the entire expenses. However, the State

Commission has allowed the interest on expenses limited to the extent of capital expenditure and loan repayment. TANGEDCO was also not allowed any return on equity on the equity base and only full interest expenditure has been allowed and the State Commission limited the quantum of loan only to the extent of asset based capital expenditure.

29. Shri Umapathy, learned counsel for the State Commission has submitted that the approach adopted by the State Commission has already been accepted by the Tribunal in its judgment in Appeal No. 102 of 2012. The State Commission has considered the opening balance of loans as on 01.11.2010 based on the Provisional Transfer Scheme notified as on 02.01.2012. The State Commission has not allowed return on equity for the distribution licensee. This has led to net reduction of expenditure.

30. The question that arises for the consideration is whether the State Commission has erred in allowing interest and finance expenses without considering that the loans shown in the balance sheet included debt taken to fund revenue deficit?

31. We find that this issue has been dealt by this Tribunal in Judgment dated 04.02.2013 in Appeal No. 102 of 2013 and judgment dated 18th October, 2014 in Appeal No.197 of 2013 wherein the tariff order in respect of transmission licensee for the same period was challenged. The Tribunal in Appeal No. 197 of 2013 after referring to the findings of the Tribunal in Judgment dated 04.02.2013 in Appeal No. 102 of 2012 has held as under:

“18. We notice from the impugned order that the State Commission has not allowed Return on Equity on the equity base as on 01.11.2010 since

the actual loans borrowed by TANTRANSCO are more than the capital expenditure amounts. The excess interest allowed is Rs.186.22 crores while ROE disallowed is Rs.230.89 crores. The State Commission has also taken a view that the entire equity base allocated to TANTRANSCO as on 01.11.2010 has been diverted for funding the revenue expenditure prior to unbundling. Hence, the State Commission has considered the opening equity base as on 01.11.2010 as zero.

19. In view of above, we do not want to interfere with the findings of the State Commission with regard to interest and finance charges.”

32. The findings of this Tribunal in the above Judgment will squarely apply to the present case. We are, therefore, not inclined to interfere with the findings of the State Commission with regard to interest and finance charges. Accordingly, this issue is decided as against the Appellants.

33. The fifth to eighth issues are relating to errors in calculation of cross subsidy surcharge.

34. The Appellant has raised the following issues in respect of calculation of cross subsidy surcharge:

(i) The transmission charge has not been considered even though it is an expense to the distribution company.

(ii) The State Commission should not have taken into account the demand charge paid by the consumer while fixing the tariff component in the formula for calculating Cross Subsidy Surcharge (“CSS”) when in fact the demand charge would in any case be paid by the consumer to the licensee even if consumer moved away from the licensee to open access.

(iii) There is an error in determination of average billing rate as the State Commission should have included only the energy charges in determining the average billing rate. The State Commission re-estimated the sale figure of various categories instead of accepting the figures given by TANGEDCO.

(iv) There is error in determining the weighted average cost of power used for determination of CSS as per the Tariff Policy formula.

35. Shri Vallinayagam, learned counsel for Respondent No.1 has argued that the State Commission has used the surcharge formula as specified in the Tariff Policy. The formula considers the tariff rate, weighted average power purchase cost of top 5% at margin, line loss and wheeling charges.

There is no provision in the formula to include transmission charges. There is no substance in the contention of the Appellant that demand charges should not have been considered in calculation of the cross subsidy. The tariff payable by the relevant category of consumer includes demand charges also. The Appellant has proposed the marginal cost of power purchased at Rs.4.06 per unit without any basis.

36. Shri Umopathy, learned counsel for the State Commission has submitted that the State Commission has used the formula as per Tariff Policy for determining the cross subsidy for open access. The Tariff Policy does not differentiate between the demand charges and energy charges as the tariff includes both these charges. The State Commission has applied merit order principles and arrived at power purchase cost for top 5% at margin excluding liquid fuel based

and renewable energy generating stations for computing CSS for open access.

37. We find that the State Commission has used the formula as specified in the Tariff Policy for calculating the cross subsidy surcharge payable by open access consumers which is as per law. The formula does not take into consideration the transmission charges.

38. We do not find any merit in the contention of the Appellant that demand charges should not be included in the formula and in calculating the average billing rate. The tariff includes both demand and energy charges and demand charge is also a part of the tariff. The formula specified in the Tariff Policy states that Tariff payable by the relevant category of consumer has to be used in the formula. As the tariff payable by the consumer includes the demand charge, the State

Commission has correctly included the demand charges while calculating the average billing rate for the consumer category. The State Commission is not bound to follow the figures furnished by the Licensee in determining the value of the various components used in the formula and has to apply the figures after prudence check.

39. However, we find merit in the contention of the Appellants that the State Commission has erred in calculating the weighted average cost of power purchase of top 5% at margin excluding liquid fuel and renewable energy based generation.

40. We find that the State Commission has determined the weighted average cost of power purchase as under :

Table 309:

Weighted average cost of power purchase of top 5% at the margin as approved by the Commission.

<i>Station</i>	<i>Units Purchased MUs</i>	<i>Total Purchase Cost Rs. Crores</i>	<i>Cost per Unit Rs./unit</i>
<i>Penna</i>	<i>353</i>	<i>130</i>	<i>3.68</i>
<i>Mettur</i>	<i>353</i>	<i>130</i>	<i>3.59</i>
<i>Tuticorin Thermal Power Station</i>	<i>2723</i>	<i>972</i>	<i>3.57</i>
	<u><i>3429</i></u>	<u><i>1232</i></u>	<u><i>3.59</i></u>

41. We find that the State Commission has wrongly considered the cost per unit in respect of Mettur. The summary of Power Purchase Cost approved by the State Commission in the impugned order under paragraph 4.224 indicates energy of 2758 MU and total charges of 1153 crores for MTPs. The cost per unit in respect of MTPS, therefore, would work out to Rs.4.18 per unit. Therefore, the weighted average cost of power purchase per unit for top 5% at the margin

used in the formula and consequently the cross subsidy surcharge has to be re-determined by the State Commission. We direct the State Commission to determine cost per unit in respect of all the generating sources and correctly draw up the merit order before determining the weighted average cost of power purchase for top 5% excluding liquid fuel and renewable energy generation and CSS. Accordingly, the State Commission will pass consequential relief on account of the re-determination of CSS to the open access consumers/customers in their current bills. TANGEDCO will also be entitled to claim the relief granted to the open access consumers /customers, if any, as expenses in the true up of its ARR.

42. The ninth issue is regarding compliance by TANGEDCO with the statutory advice of the State Commission.

43. According to the Appellants, the State Commission has not taken any fresh action on the issue of accumulated losses which have to be absorbed by the Government of Tamil Nadu in line with its statutory advice dated 09.12.2010 and consistent failure of the licensee to ensure that such advice was implemented by the Government of Tamil Nadu.

44. According to Shri Vallinayagam, Ld. counsel for TANGEDCO the finalization of the Transfer Scheme by the State Government is under progress and accumulated loss as on 30.10.2010 are expected to be absorbed in the final transfer scheme.

45. We find from the impugned order that the State Commission in its Tariff Order dated 31.07.2010 as well as 30.03.2012 had indicated that the accumulated losses upto the date of unbundling will be dealt with in accordance with the National Electricity Policy and Tariff Policy. The State Commission had indicated that any losses incurred after 01.11.2010 only are being dealt with in the tariff orders subsequent to unbundling. TANGEDCO in its petition had also indicated that they have not claimed any relief on account of accumulated losses prior to the unbundling on 01.11.2010.

46. Ld. Counsel for the Appellants have argued that even though the losses have not been passed on to the consumers, the interest expenses on the loans taken to cover these losses have been passed on to them.

47. We have already dealt with the issue of interest on loans taken to cover the accumulated losses in paragraph 26 to 32 of this Judgment. Therefore, we do not find any merit in the contention of the Appellants regarding passing on the burden of past losses on the consumers.

48. In this regard it is pertinent to refer to the provisions of the National Electricity Policy:

“5.4.1 Distribution is the most critical segment of the electricity business chain. The real challenge of reforms in the power sector lies in efficient management of the distribution sector.

5.4.2 The Act provides for a robust regulatory framework for distribution licensees to safeguard consumer interests. It also creates a competitive framework for the distribution business, offering options to consumers, through the concepts of open access and multiple licensees in the same area of supply.

5.4.3 *For achieving efficiency gains proper restructuring of distribution utilities is essential. Adequate transition financing support would also be necessary for these utilities. Such support should be arranged linked to attainment of predetermined efficiency improvements and reduction in cash losses and putting in place appropriate governance structure for insulating the service providers from extraneous interference while at the same time ensuring transparency and accountability. For ensuring financial viability and sustainability, State Governments would need to restructure the liabilities of the State Electricity Boards to ensure that the successor companies are not burdened with past liabilities. The Central Government would also assist the States, which develop a clear roadmap for turnaround, in arranging transition financing from various sources which shall be linked to predetermined improvements and efficiency gains aimed at attaining financial viability and also putting in place appropriate governance structures.”*

49. The State Commission has also taken up the matter with the State Government in this regard. TANGEDCO in its written submission has also indicated that the State Government was considering to absorb the accumulated losses as on 30.10.2010 while finalizing the transfer scheme which is under process.

50. We also feel that in the interest of financial viability and sustainability of the Respondent 1, the issue of accumulated losses as on 30.10.2010 has to be decided by the State Government at the earliest. The State Commission may also reiterate its advice to the State Government and request for an early action in the matter. With these observations, this issue is disposed of.

51. The tenth issue is regarding peak hours and non-peak hours tariff raised in Appeal No.199 of 2013.

52. According to the Appellants, this Tribunal in Judgment dated 09.04.2013 in Appeal No.257 of 2012 had remanded the matter regarding determination of the differential price of energy during peak and off-peak hours to the State Commission with certain directions. The State Commission has fixed the tariff for peak and off-peak hours without complying with the directions of the Tribunal.

53. We find that the State Commission has considered the findings of this Tribunal in Appeal No.257 of 2012 as under :

“5.81. The Commission feels that a detailed study pertaining to load pattern needs to be done by TANGEDCO. Hence Commission pending a

detailed study, proposes to retain the peak hour charges and off peak rebate at the existing levels. Commission directs TANGEDCO in this order to carry out a detail study on this regard and furnish the same to the Commission. Accordingly after reviewing the report furnished by TANGEDCO, Commission will address this issue in the next tariff order.

Continuation of ToD peak charges

5.82. The Commission has sought and analyzed the system load curve data from July 2012 to May 2013. It can be inferred from the load data that there is no surplus even in the off-peak hours, even in the month of May to September when wind energy is available./ Similarly in the peak hour, it is only the restricted demand under R&C that is being met. Hence it can be concluded that there is a shortage in the peak hours and no surplus power available in the off peak hours.

5.83. Also with respect to the question of discontinuing the peak hour charge when R&C is

being imposed, the Commission would like state that R&C by design enforces demand cut, in a situation of shortage. This mechanism unlike peak hour charge is not aimed at shifting load to other time slabs, as this mechanism ensures reduction in demand across all time slabs. Hence when even in the case of reduced demand the utility is procuring costly power to supply to its consumers, the question of disallowing that as a pass through does not arise.”

54. The State Commission has then referred to the provisions of the Electricity Act, National Electricity Policy and Tariff Policy to justify imposition of TOD tariff. The State Commission decided to maintain status quo till the issue remanded by the Tribunal in Appeal No.257 of 2012 is decided. The State Commission also directed TANGEDCO to conduct a study of power purchase for consumption during peak hours and also taking into cognizance the time slots

during which R&C is imposed which will help the Commission in clearly understanding of the additional costly power purchase as well as relief availed under R&C and its impact on power purchase.

55. Let us examine the findings of this Tribunal in Appeal No.257 of 2012.

“vi) The aim of providing differential tariff for peak and off-peak hours is to shift load from peak to off-peak hours with a view to optimize the generation capacity and minimize the cost of power procurement for the distribution licensee. However, in the absence of a specific study on pricing of electricity for different time blocks the weighted average energy rate for peak, off-peak and normal hours (other than peak and off-peak) should be equal to the average energy rate decided for a particular category of consumer. In the present case when no specific study for pricing of electricity has been carried out, the energy rate of tariff decided by the Commission for the Appellant’s

category is lower than the weighted average rates of energy for peak, off-peak and normal hours. It is also to be considered whether in view to the Restriction and Control Measures and penal rates for withdrawal in excess of peak hours demand and energy quota, whether there is any purpose of having a differential tariff for peak and off-peak hours. We, therefore, direct the State Commission to reconsider and re-determine the differential price of electricity for peak and off-peak hours. Accordingly, the matter is remanded back to the State Commission.”

56. The National Electricity Policy and Tariff Policy provide for time of the day tariff and imposition of ToD tariff is in order, in principle. However, there is a clear finding of the Tribunal in Appeal No.257 of 2012 that in the absence of a specific study on pricing of electricity the weighted average energy rate for peak, off peak and normal hours (other than peak and off-peak) should be equal to the average energy rate

decided for a particular category of consumer. This means that the differential energy rates for peak and off-peak hours should be designed in such a way that the weighted average energy rate for peak, off-peak and the normal hours should be equal to the energy rate decided in the tariff schedule of the category of consumers. Even though there was no study regarding purchase price of peak power was furnished by TANGEDCO, the State Commission has maintained the status quo.

57. Therefore, we set aside the findings of the State Commission regarding rates for peak and off peak hours and direct the State Commission to re-determine the same as per the findings of the judgment in Appeal No.257 of 2012. Accordingly, decided.

58. The eleventh issue is regarding voltage wise cost of supply and cost to serve raised in Appeal No.199 of 2013.

59. According to the Appellant, the State Commission has failed to comply with the directions of this Tribunal in Judgment dated 28.07.2011 passed in Appeal Nos.192 and 206 of 2010 and determined the tariff without determination of voltage-wise cost of supply.

60. The findings of this Tribunal in Appeal Nos. 192 of 2010 and 206 of 2010 are as under:

“13.4 The fourth issue is regarding cost to serve each category of consumer. We have noticed that the State Commission has not determined the cost of supply according to its Regulations as also the variation in Tariff of different categories of consumers with reference to average cost of supply. In the absence of this information, we are

not able to verify that the Tariff of categories of consumers is within ± 20 per cent of the average cost of supply and whether the cross subsidy has been reduced or increased with respect to the previous year. The issue regarding cost of supply has been dealt with in this Tribunal's judgment dated 30th May, 2011 in Appeal Nos. 102, 103 and 112 of 2010 in the matter of Tata Steel Limited v. Orissa Electricity Regulatory Commission, etc. Accordingly, the State Commission is directed to determine the voltage wise cost of supply within six months from the date of this judgment to ensure that in the future Tariff Orders cross subsidies for different categories of consumers are determined according to the Regulations and the cross subsidies are reduced as per the provisions of the Act. The State Commission is also directed to determine the variation of Tariff of different categories of consumers with respect to average cost of supply and provide consequential relief, if any, to the Appellant's consumer category in terms with our findings after hearing all concerned."

61. We find that in the impugned order the State Commission has not determined the voltage wise cost to serve based on various assumptions. However, the State Commission has not determined the cross subsidy with respect to cost to serve. Thus, the exercise is only academic. The State Commission has also given directions to TANGEDCO to carry out study for voltage-wise cost of supply.

62. We had given very simple method for determination of voltage-wise cost of supply in our judgment in Appeal No. 102 of 2010 and batch which was relied upon in judgment dated 28.07.2011 in Appeal No.192 of 2010 and 206 of 2010. The relevant portion of the judgment is reproduced as under:

“31. We appreciate that the determination of cost of supply to different categories of consumers is a difficult exercise in view of non-availability of metering data and segregation of the network

costs. However, it will not be prudent to wait indefinitely for availability of the entire data and it would be advisable to initiate a simple formulation which could take into account the major cost element to a great extent reflect the cost of supply. There is no need to make distinction between the distribution charges of identical consumers connected at different nodes in the distribution network. It would be adequate to determine the voltage-wise cost of supply taking into account the major cost element which would be applicable to all the categories of consumers connected to the same voltage level at different locations in the distribution system. Since the State Commission has expressed difficulties in determining voltage wise cost of supply, we would like to give necessary directions in this regard.

32. Ideally, the network costs can be split into the partial costs of the different voltage level and the cost of supply at a particular voltage level is the cost at that voltage level and upstream network. However, in the absence of segregated network

costs, it would be prudent to work out the voltage-wise cost of supply taking into account the distribution losses at different voltage levels as a first major step in the right direction. As power purchase cost is a major component of the Tariff, apportioning the power purchase cost at different voltage levels taking into account the distribution losses at the relevant voltage level and the upstream system will facilitate determination of voltage wise cost of supply, though not very accurate, but, a simple and practical method to reflect the actual cost of supply.

33. The technical distribution system losses in the distribution network can be assessed by carrying out system studies based on the available load data. Some difficulty might be faced in reflecting the entire distribution system at 11 KV and 0.4 KV due to vastness of data. This could be simplified by carrying out field studies with representative feeders of the various consumer mix prevailing in the distribution system. However, the actual distribution losses allowed in the Annual Revenue

Requirement which include the commercial losses will be more than the technical losses determined by the system studies. Therefore, the difference between the losses allowed in the Annual Revenue Requirement and that determined by the system studies may have to be apportioned to different voltage levels in proportion to the annual gross energy consumption at the respective voltage level. The annual gross energy consumption at a voltage level will be the sum of energy consumption of all consumer categories connected at that voltage plus the technical distribution losses corresponding to that voltage level as worked out by system studies. In this manner, the³ total losses allowed in the ARR can be apportioned to different voltage levels including the EHT consumers directly connected to the transmission system of GRIDCO. The cost of supply of the Appellant's category who are connected to the 220/132 KV voltage may have zero technical losses but, will have a component of apportioned distribution losses due to difference between the loss level allowed in Annual Revenue Requirement (which includes commercial losses)

and the technical losses determined by the system studies, which they have to bear as consumers of the distribution licensee.

34. Thus, Power Purchase Cost which is the major component of Tariff can be segregated for different voltage levels taking into account the transmission and distribution losses, both commercial and technical, for the relevant voltage level and upstream system. As segregated network costs are not available, all the other costs such as Return on Equity, Interest on Loan, depreciation, interest on working capital and O&M costs can be pooled and apportioned equitably, on pro-rata basis, to all the voltage levels including the Appellant's category to determine the cost of supply. Segregating Power Purchase cost taking into account voltage-wise transmission and distribution losses will be a major step in the right direction for determining the actual cost of supply to various consumer categories. All consumer categories connected to the same voltage will have the same cost of supply. Further, refinements in formulation

for cost of supply can be done gradually when more data is available.”

63. We find that instead of beginning with a simple approach wherein annual power purchase costs are apportioned to the different voltage levels taking into account the respective T&D losses and all other costs are loaded on pro rata basis, the State Commission has chosen to adopt a complex approach. However, no clear directions or terms of reference of the study to be conducted have been given by the State Commission. In more than 3 years the voltage-wise cost of supply has not been determined. We fear that if the complex approach is followed without any clarity about the terms of reference of the study by the State Commission, the matter will keep on postponing. We, therefore, direct the State Commission to start with a simple approach as suggested by this Tribunal. We,

however make it clear that the tariffs need not be a mirror image of voltage-wise cost of supply. Only cross subsidy will have to be determined with reference to voltage-wise cost of supply with the purpose of determining the cross subsidies transparently and also ensure that the cross subsidy of the subsidizing consumers are not increased in the subsequent years.

64. We find that in the impugned order, the tariff of the subsidizing consumers has not been increased and, therefore, the cross subsidies with regard to average cost of supply have reduced because of increase in average cost of supply. On the other hand, the tariff and cross subsidies of huts and Agriculture consumers have been increased substantially. Thus, the endeavour of the State Commission has been to reduce cross subsidy.

65. In our judgment dated 09.04.2013 in Appeal No.257 of 2012 in respect of tariff order of TANGEDCO for the previous year, we had decided not to interfere with the tariff determined by the State Commission. There being no change in tariff of the subsidizing categories, we are not inclined to interfere with the tariff decided in the impugned order. However, the State Commission is directed to determine the voltage wise cost of supply as directed and determine the cross subsidy transparently for FY 2012-13 and 2013-14 and 2014-15 in the tariff order for 2015-16. TANGEDCO is directed to provide the necessary data as required by the State Commission. Our direction shall be complied with forthwith.

66. The twelfth issue is regarding failure to notify road map for reduction of cross subsidy raised in Appeal No.199 of 2013.

67. According to the Appellant, the State Commission has failed to notify a road map for reduction of cross subsidy to be within $\pm 20\%$ of the average cost of supply as per the Tariff Policy.

68. Learned counsel for the State Commission has stated that road map for reduction of cross subsidy will be notified once the voltage wise cost to serve of all consumer categories is finalized by the State Commission.

69. The Tariff Policy provides as under:

“1. In accordance with the National Electricity Policy, consumers below poverty line who consume below a specified level, say 30 units per month, may receive a special support through cross subsidy. Tariffs for such designated group of consumers will be at least 50% of the average cost of supply. This provision will be re-examined after five years.”

2. For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the SERC would notify roadmap within six months with a target that latest by the end of year 2010-2011 tariffs are within \pm 20% of the average cost of supply. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy. For example if the average cost of service is Rs.3 per unit, at the end of year 2010-2011 the tariff for the cross subsidized categories excluding those referred to in para 1 above should not be lower than Rs. 2.40 per unit and that for any of the cross-subsidising categories should not go beyond Rs.3.60 per unit.”

Thus as per the Tariff Policy except for consumers below poverty line, the State Commission would notify roadmap within six months with a target that latest by the end of year 2010-11 tariffs are within \pm 20% of the average cost of supply. For notifying a roadmap for

tariffs within $\pm 20\%$ of the overall average cost of supply determination of voltage-wise cost of supply is not required. According to the Tariff Policy the roadmap for cross subsidy within $\pm 20\%$ of average cost of supply upto the end of 2010-11 had to be notified with six months of notification of the Tariff Policy.

70. We find that the tariffs of the consumers for the FY 2013-14 are still not within $\pm 20\%$ of the overall average cost of supply. As recorded in the judgment dated 09.04.2013 in Appeal No. 257 of 2012 relating to tariff for FY 2012-13, the retail supply in Tamil Nadu was not revised for the period for the FY 2003-04 to FY 2009-10 on account of non-filing of the tariff petition by the erstwhile Electricity Board. This has led to existence of high level of cross subsidy at the time of unbundling and formation of the TANGEDCO.

In the circumstances of the case, the State Commission has to now notify a roadmap for reduction of the cross subsidy with a view to bring the cross subsidies for all the categories of consumers except those below poverty line within $\pm 20\%$ of average cost of supply as per the Tariff Policy. Accordingly, the State Commission is directed to notify the roadmap after following due process of law which should be undertaken immediately.

71. The thirteenth issue is regarding T&D losses raised in Appeal No. 199 of 2012.

72. According to the Appellant, the State Commission has accepted the assumed T&D losses when TANGEDCO has failed to accurately quantify these losses for the past ten years.

73. According to Mr. Umapathy, Ld. Counsel, the State Commission has not accepted the T&D loss projected by TANGEDCO but has fixed stringent T&D loss targets. The State Commission has given directions to TANGEDCO to carry out scientific study for correctly assessing the actual T&D losses.

74. We find that the State Commission has fixed T&D loss level trajectory of 16.4%, 16% and 15.6% for FY 2013-14, 2014-15 and 2015-16 respectively. The Annual Revenue Requirement and retail supply tariff has been decided based on the normative T&D loss decided by the State Commission and not the actual T&D loss level achieved by TANGEDCO.

75. We agree that the actual energy consumption of the unmetered consumers and loss level assessed by TANGEDCO may not be correct for which the State

Commission has given suitable directions to TANGEDCO. However, the loss trajectory decided by the State Commission for determining the Annual Revenue Requirement and retail supply tariff is based on good industry practice and, therefore, we are not inclined to interfere with the order of the State Commission in this regard. Accordingly, decided.

76. Summary of our findings:

i) Violation of Public Hearing Process:

We do not find any violation of public hearing process and principles of natural justice in the present case.

ii) Approval of Capital Expenditure without approval of the Capital Investment Plan:

We direct the State Commission to true up/provisionally true up the capitalization for FY 2013-14 immediately and the short fall if any should be accounted for while determining

the tariff for the FY 2015-16, with carrying cost on the impact of the variation on this account in the ARR. We direct TANGEDCO to submit the actual accounts of capital expenditure and capitalization during FY 2013-14 by 30.11.2014 to the State Commission. TANGEDCO shall also submit the application for Capital Investment Plan for FY 2014-15 and 2015-16 in the requisite formats to the State Commission by 30.11.2014 for approval as per the Tariff Regulations, if not already done. The State Commission shall approve the Capital Investment Plan of TANGEDCO for the FY 2014-15 and 2015-16 after following due process of law, if not already done, and consider the same while approving the tariff for the FY 2015-16.

iii) Employees Cost:

We do not find any infirmity in the State Commission considering the DA enhancement in the employees expenses as this is required to compensate the employees for inflation.

iv) Interest and Finance Charges:

This issue has been dealt with by this Tribunal in Appeal no. 197 of 2013 and the findings will squarely apply to the present case. We are, therefore, not inclined to interfere with the findings of the State Commission with regard to interest and finance charges.

v) Cross Subsidy:

We do not find any infirmity in the State Commission not considering transmission charges, taking into account demand charges in the tariff and determination of average

billing rate in the impugned order. However, there is error in determining the Weighted Average Cost of power used for determination of CSS as per the Tariff Policy formula. We find that the State Commission has wrongly considered the cost per unit in respect of Mettur Thermal Power Station. We direct the State Commission to determine Weighted Average Cost of power for top 5% excluding liquidity fuel and renewable average generation and Cross Subsidy Surcharge as per the directions given under paragraph 41 of the judgment.

vi) Compliance of statutory advice of State Commission:

We dispose this issue as per our observations in paragraph 50 of this judgment.

vii) Peak hour and Non-peak hour Tariffs: This issue is covered by the findings of this Tribunal in Judgment in Appeal No. 257 of 2012. We set aside the findings of the State Commission regarding rate for peak hours/off peak hours and direct the State Commission to re-determine the same as per the findings given in paragraph 56 and 57 of this judgment.

viii) Voltage-wise cost of supply and cost to serve:

The State Commission is directed to determine the voltage wise cost of supply as per our directions in this Judgment and determine the cross subsidy transparently for FY 2012-13 and 2013-14 and 2014-15 in the tariff order for 2015-16. TANGEDCO is directed to provide the necessary data as required by the State Commission.

ix) Road Map for reduction of Cross Subsidy:

The State Commission is directed to notify road map for reduction of cross subsidy as per the Tariff Policy after following due process of law which should be undertaken immediately.

x) T&D Losses:

The loss trajectory decided by the State Commission for determining the Annual Revenue Requirement and Retail Supply Tariff is based on the normative T&D loss decided by the State Commission and not the actual T&D loss level achieved by TANGEDCO.

We agree that the actual energy consumption of the unmetered consumers and loss level assessed by TANGEDCO may not be correct for which the State Commission has given suitable

directions to TANGEDCO. However, the loss trajectory decided by the State Commission for determining the Annual Revenue Requirement and retail supply tariff is based on good industry practice and, therefore, we are not inclined to interfere with the order of the State Commission in this regard

77. In view of above findings, the Appeals are allowed in part to the extent indicated above. No order as to costs.

78. Pronounced in the open court on this **27th day of October, 2014.**

**(Rakesh Nath)
Technical Member**

**(Justice M. Karpaga Vinayagam)
Chairperson**

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REPORTABLE/NON-REPORTABLE

Vs