



**TAMIL NADU TRANSMISSION CORPORATION LTD
CHENNAI**

**BEFORE THE HON'BLE
TAMIL NADU ELECTRICITY REGULATORY COMMISSION,
PETITION
FOR
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 FY 2013-14,
TARIFF DETERMINATION FOR FY 2013-14
AND
MYT FOR FY 2013-14 TO 2015-16**

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List of Abbreviations

Sr. No	Abbreviations	Descriptions
1.	A&G	Administration and General Expenses
2.	APR	Annual Performance Review
3.	APTEL	Appellate Tribunal
4.	ARR	Annual Revenue Requirement
5.	AS	Accounting Standard
6.	AT&C	Aggregate Technical & Commercial
7.	CAG	Comptroller Auditor General
8.	CAPEX	Capital Expenditure
9.	CERC	Central Electricity Regulatory Commission
10.	Ckt Km	Circuit Km
11.	CPS	Contributory Pension Scheme
12.	Crs	Crores
13.	CTU	Central Transmission Utility
14.	DA	Dearness Allowance
15.	EA	Electricity Act 2003
16.	FY	Financial Year
17.	GFA	Gross Fixed Assets
18.	GoTN	Government of Tamil Nadu
19.	Hr	Hour
20.	HTLS	High Temperature Low Sag
21.	IPP	Independent Power Producer
22.	JICA	Japan International Cooperation Agency
23.	KERC	Karnataka Electricity Regulatory Commission
24.	KPTCL	Karnataka Power Transmission Corporation Limited
25.	kV	kilo Volt
26.	LL	Line Loss
27.	MERC	Maharashtra Electricity Regulatory Commission
28.	MoP	Ministry of Power
29.	MoU	Memorandum of Understanding
30.	MPP	Merchant Power Plant
31.	MVA	Mega Volt Ampere
32.	MW	Megawatt
33.	MYT	Multi-Year Tariff
34.	NCES	Non-Conventional Energy Sources
35.	Nos	Numbers

Sr. No	Abbreviations	Descriptions
36.	O&M	Operation & Maintenance
37.	PFC	Power Finance Corporation
38.	R&M	Repairs & Maintenance
39.	R-APDRP	Restructured Accelerated Power Development and Reforms Programme
40.	REC	Rural Electrification Corporation
41.	RoE	Return on Equity
42.	RoW	Right of Way
43.	SLDC	State Load Despatch Centre
44.	SS	Substation
45.	STOA	Short Term Open Access
46.	STU	State Transmission Utility
47.	TANGEDCO	Tamil Nadu Generation and Distribution Corporation Ltd
48.	TANTRANSCO	Tamil Nadu Transmission Corporation Ltd
49.	TNEB	Tamil Nadu Electricity Board
50.	TNERC	Tamil Nadu Electricity Regulatory Commission
51.	TPC	Tata Power Company
52.	UG	Underground
53.	WEG	Wind Energy Generator

1. INTRODUCTION

1.1 Preamble

1.1.1 This section presents the background and reasons for filing of this Petition.

1.2 Background

1.2.1 Tamil Nadu Electricity Board (TNEB) came into existence on 1st July 1957 and has been in the business of generation, transmission and distribution of electricity in the state of Tamil Nadu. The Electricity Act 2003 mandates unbundling of State Electricity Boards under section 131.

1.2.2 Over the last few years, there has been significant interest in opening the Electricity sector to competition and, by extension, interest in designing electricity markets to push the sector toward more efficient outcomes. Accordingly, the Electricity Act, 2003 (“the Act” or “EA 2003”) was enacted with effect from June 10, 2003 which requires the State Governments to initiate major changes in the Industry Structure and Operations of the state power sector. The objective of the enactment was to make competition feasible or desirable in a sector that has been vertically integrated and highly regulated or state owned.

1.2.3 In line with the Electricity Act 2003, the Sections 131 to 134 mandates reorganisation of the State Electricity Boards into functional entities and corporatisation of the same. Regardless of the design of the electricity sector reforms, the ultimate goal of reforms is to make the sector more efficient. Therefore, in order to meet the requirements under the Act and to become more efficient and competitive, the Government of Tamil Nadu (GoTN) and the Tamil Nadu Electricity Board (TNEB) proposed to restructure the state power sector.

1.2.4 In accordance with the above mandate the Government of Tamil Nadu (GOTN) has given in principle approval for the re-organization of TNEB by the establishment of a holding company, named TNEB Ltd and two subsidiary companies, namely Tamil Nadu Transmission Corporation Limited (TANTRANSCO) and Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) vide G.O.Ms.No.114 Energy (B2) Department dated 8th Oct 2008 with the stipulation that the aforementioned companies shall be fully owned by Government.

1.2.5 Based on the approval of Memorandum of Association and Articles of Association of TANTRANSCO by the Government of Tamil Nadu vide G.O.Ms.No.38 Energy (B2) Department dated 21st May 2009, Tamil Nadu Transmission Corporation Ltd (TANTRANSCO) was incorporated on 15th June 2009 with an authorized share capital of Rs. 5.00 Crores. The Certificate of commencement of business has been obtained for the TANTRANSCO on 11th Dec 2009 and started functioning with from 14th Jan 2010 onwards.

1.2.6 The proposal for Assets Transfer and Employee transfer called as Tamil Nadu Electricity Board (Reorganization and Reforms) Transfer Scheme 2010 has been notified by Government of Tamil Nadu vide G.O.(Ms).No.100 Energy (B2) Department dated 19th Oct 2010 with the effective date of implementation as 1st Nov 2010. Based on the above notification TNEB has been unbundled and re-organized from 1st Nov 2010.

1.2.7 As per the Transfer Scheme the Provisional period for transfer of Assets is 1 year and for transfer of employees is 3 years. From 1st Nov 2010 onwards all the employees of the erstwhile TNEB shall stand transferred to and absorbed in TANGEDCO on a provisional

basis and assigned to the services of the relevant transferee viz., TANTRANSCO and TNEB Ltd., on deputation on “as-is-where-is” basis until further notice for permanent absorption into respective entities.

- 1.2.8 Subsequently, as per the request of TNEB Limited, the second provisional transfer scheme was notified by the State Government vide G.O. (Ms.) No.2, Energy (B2) department, dated 2nd January 2012 with amendment in the restructuring of Balance Sheet of TNEB for the successor entities i.e. TANGEDCO and TANTRANSCO, considering the audited balance sheet of TNEB for FY 2009-10 and have extended the provisional time for final transfer of assets and liabilities to the successor entities of erstwhile TNEB upto 31st Oct 2012.
- 1.2.9 TNEB Limited has approved the proposal to seek 6 months time extension i.e up to 30.04.2013 for final transfer of assets and liabilities to successor entities of erstwhile TNEB and the same has been addressed to the GoTN for approval and notification.
- 1.2.10 Post restructuring, TANTRANSCO as per the notification was provided with the function of transmission of electricity in the State of Tamil Nadu.
- 1.2.11 Also, TANTRANSCO has been notified as an State Transmission Utility under section 39 of the Electricity Act 2003 and TANTRANSCO is acting as a State Transmission Utility and a Transmission Licensee also and has to comply with the duties specified in section 39 and 40 of the Electricity Act 2003.
- 1.2.12 Currently, the functions of SLDC have been vested with TANTRANSCO till further orders of the State Government from the date of transfer.
- 1.2.13 The enactment of the Electricity Act, 2003 has opened up the power sector for competition in all spheres of activities. TANTRANSCO as the State Transmission Utility is entrusted with the duty of transmitting the power generated in the state from the generating stations to the destination or the load centres.

1.3 Provisional Transfer Scheme

- 1.3.1 In terms of the Transfer Scheme notification dated 2nd January 2012, the Government of Tamil Nadu had assigned the Assets and Liabilities (as on 31.03.2010) to TANTRANSCO on a Provisional basis and hence the transaction for 7 months i.e. from 1st April 2010 to 30th October 2010, does not get reflected in the opening balance sheet of the TANTRANSCO as specified in the Transfer Scheme. The notified copy of Transfer Scheme is attached as per Annexure 1.
- 1.3.2 Impact of Provisional Balance Sheet:
 - a. According to Rule 9 (1) of Transfer Scheme, 2010 issued on 19th October 2010, the transfer of assets and liabilities under the scheme is Provisional and will be made final upon the expiry of 12 months from the effective date of transfer.
 - b. The date was extended vide notification dated 2nd January 2012 for additional 1 year i.e. upto 31st October 2012 for final transfer of assets and liabilities to successor entities of erstwhile TNEB
 - a. As on the date of filing of this petition, TANGEDCO and TANTRANSCO have sought permission for extension of 6 months i.e up to 30.04.2013 for final transfer of assets and liabilities to successor entities of erstwhile TNEB and the same has been addressed to the GoTN for approval and notification.
 - b. In the absence of availability of opening balances based on the final Notification of Government of Tamil Nadu, as per transfer scheme, TANTRANSCO has considered the opening balance as per the provisional transfer scheme notified on 2nd January 2012.

- i. The GFA (Gross Fixed Assets) of Rs. 12,232 Crores, as per transfer scheme, has been considered as opening balance as on 1st November 2010 which also includes SLDC.
- ii. For the purpose of Return on Equity, Equity Capital of Rs. 1928 Crores has been considered as per the second provisional transfer scheme. The RoE has been calculated based on the opening balance as notified for the transmission business.
- iii. Long Term Loan has been considered as Rs. 12348 Crores in line with the notified balance sheet and interest is calculated on the actual basis which was accrued from 1st November 2010 to 31st March 2011. Some of the generic loans such as bonds, loan from HUDCO, LIC, Tamil Nadu Powerfin and Medium Term Loan is availed by erstwhile TNEB and has been considered as the long term loan of TANTRANSCO.
- iv. TANTRANSCO submits that the opening balance sheet as per second provisional transfer scheme has been considered for the calculation of ARR in the given tariff petition.
- v. TANTRANSCO submits to the Hon'ble Commission that once the final transfer scheme is notified by the State Government, the revision in the opening balance of Fixed Assets, Loan and equity may be allowed which will have a resultant effect on the Depreciation, Interest on Loan and equity. TANTRANSCO request the Hon'ble Commission to allow such expenses with retrospective effect and allow to adjust in the ARR in the next tariff petition or at the time of separate petition which can be filed by TANTRANSCO. The direction of the Hon'ble Commission is requested for the same.
- vi. The revenue from open access is only from consumer using the transmission system of TANTRANSCO. All customers seeking open access to Transmission System are classified under two categories i.e. long term open access customers and short term open access customers. Currently as per the direction provided in the tariff order of the TANGEDCO dated 30th March 2012, the transmission charges as determined for TANTRANSCO is recovered in a monthly installments from TANGEDCO.
- vii. In the event, the Government of Tamil Nadu issues the final Notification for transfer of assets and liabilities to the successor Utilities under rule 9(1) of Tamil Nadu Power Sector Reforms Transfer Scheme, 2010, during the pendency of this petition, TANTRANSCO shall submit revised figures of the ARR and tariff for consideration of the Hon'ble Commission.

2. OVERALL APPROACH FOR PRESENT FILING

2.1 Present Approach

- 2.1.1 As per the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, the licensee has to file the Aggregate Revenue Requirement (ARR) on or before 30th November of each year in the format prescribed, containing the details of the expected aggregate revenue that the licensee is permitted to recover at the prevailing tariff and the estimated expenditure. In line with the same, TANTRANSCO is filing the petition for Annual Transmission Charges for consideration of the Hon'ble Commission in the formats laid down for providing information relating to past, current and future performance.
- 2.1.2 Further, as per TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 the application for determination of tariff for Transmission Licensee shall be accompanied by information in the formats provided by the Hon'ble Commission for the previous years, current year and ensuing years. Thus, TANTRANSCO is filing the petition for its transmission businesses.
- 2.1.3 As per TNERC Tariff MYT Regulation, MYT petition for a licensee shall be on the basis of the business plan approved by the Hon'ble Commission. As per the Amendment to Tamil Nadu Electricity Regulatory Commission Terms and conditions for determination of tariff for intra state transmission / Distribution of Electricity under MYT framework Regulations 2009 dated 28th November 2012, the control period is defined as:
“(i) Control Period: The control period under the MYT framework shall be for a duration of 3 years. The year preceding the first year of the control period shall be the base year.”
Based on the above amendment, the control period for TANTRANSCO will be from FY 2013-14 to FY 2015-16.
- 2.1.4 In line with the same, TANTRANSCO is filing its MYT Petition for the Control Period (FY 2013-14 to FY 2015-16) and Tariff Determination for consideration of the Hon'ble Commission in the formats laid down for providing information relating to past, current and future performance. Currently, TANTRANSCO is in the process of preparation of the business plan for the control period (FY 2013-14 to FY 2017-18) and will be submitted at the earliest for the approval of the Hon'ble Commission.
- 2.1.5 In accordance with section 62 of the Electricity Act 2003 and Regulation 5 of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, TANTRANSCO is filing this present petition for approval of the Annual Revenue Requirement (ARR) for the Control Period and Determination of Tariff for FY 2013-14. This Petition also includes final True-up for FY 2010-11 based on audited accounts for 5 months, provisional True-up for FY 2011-12 based upon provisional accounts, as well as Review of the performance for the year FY 2012-13 based on the provisional figures in the books of TANTRANSCO. For the APR of FY 2012-13, TANTRANSCO has considered estimated figures for the entire year of FY 2012-13. The figures for ARR for FY 2013-14 are considered on the basis of escalation on figures of FY 2012-13 whereas the estimated figures for the control period are done on basis of projections on the base year.

2.2 Data/Information for ARR-APR

2.2.1 This petition contains the truing-up of the ARR of FY 2010-11, figures of which are based upon the audited annual accounts for 5 months which is annexed to this petition as per Annexure 2. The APR of FY 2012-13 is based upon the estimation for the entire year. The ARR for FY 2013-14 has been projected based on the past performance and expected growth in each of the cost element and revenue for the ensuing year. TANTRANSCO has studied the past trends and other internal and external developments to estimate the projections for FY 2013-14.

2.2.2 The ARR indicated in the above Para, is exclusive of Foreign Exchange Rate Variation (if applicable), any statutory taxes, levies, duties, cess, filing fees or any other kind of imposition(s) and/ or other surcharges etc. whatsoever imposed/ charged by any Government (Central/State) and/ or any other local bodies/ authorities/regulatory authorities in relation to transmission of electricity, environmental protection, and/ or in respect of any of its installation associated with the Transmission system and the same shall be borne and additionally paid by the beneficiaries to the applicant and the same shall be charged in the monthly bills raised by the petitioner on the beneficiaries. The applicant shall also claim the filing fee in the same manner

2.3 Regulatory Framework

2.3.1 TNATRANSCO has considered norms as specified by TNERC Tariff Regulations 2005. However certain deviations have been considered with a justification for the purpose of this Petition and request the Hon'ble Commission to approve the same.

2.4 Summary of Assumptions

2.4.1 TANTRANSCO has premised its tariff petition while projecting its revenue requirements on the following:

- a. The provisional figures of FY 2011-12 have been considered for creation of baseline data against various heads.
- b. The relevant Judgments of Hon'ble Appellate Tribunal have been referred to while projection of some of the heads.
- c. Escalation factors have been considered for projecting certain expenses on a realistic basis.
- d. In the tariff order dated 30th March 2012, the Hon'ble Commission has approved the figures for a whole year for each component. Since the company has started its operation from 1st November 2010 and was in operation for 5 months only, the approved figures are re-calculated on a proportionate basis.
- e. The cost claimed by the appellant for the transmission activities includes the expenses of SLDC and transmission function as the ring fencing is under process and not yet been finalized.

3. FINAL TRUE UP FOR FY 2010-11

3.1 Background

3.1.1 TANTRANSCO in its previous petitions had submitted the provisional figures of ARR for the year FY 2010-11. Now, TANTRANSCO in this chapter submits the actual performance based on the audited accounts of 5 months for true up. This chapter summarizes each of the components of Annual Transmission Charges for FY 2010-11 and requests the Hon'ble Commission to true - up the Annual Revenue Requirement for FY 2010-11 and the resultant gap to be recovered through transmission tariffs to be determined for FY 2013-14.

3.1.2 A comparison of the figures projected by TANTRANSCO in its previous petition, approved by the Hon'ble Commission and figures based on audited accounts are shown in the table under relevant sections discussed herein:

3.2 Operation & Maintenance Expenses

3.2.1 Operation & Maintenance Expenses consists of three elements viz Employee Expenses, A&G Expense and R&M Expense:

- Employee expenses comprise of salaries, dearness allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses;
- Administrative expenses mainly comprise of rents, telephone and other communication expenses, professional charges, conveyance and travelling allowances and other debits;
- Repairs and Maintenance Expenses go towards the day to day upkeep of the transmission network of the Company and form an integral part of the Company's efforts towards reliable and quality power supply as also in the reduction of losses in the system.

3.2.2 **Employee Expense:** As stated in the paragraph above, Employee Expense consists of Basic Salary, Dearness Allowance, Bonuses, Medical expense reimbursement and Terminal Benefits etc. The Employee Expenses for TANTRANSCO for the year FY 2010-11 is outlined in the table below:

Table 1: Employee Expenses for FY 2010-11

Details	Approved by Commission			Rs. Crs
				FY 2010-11
	Year	5 months		Audited
Salary				80.42
Overtime wages				2.46
Dearness Allowance				37.44
Other Allowances				6.06
Bonus & Exgratia				2.83
Medical expenses reimbursement				0.17
Leave Travel concession				0.09
Earned Leave encashment				7.16
Terminal benefits				9.79
Staff welfare expenses				1.48
Payment under workmen's compensation Act				-
Thermal Performance/commissioning/ Golden Jubilee incentive				-
Grand Total				147.91
Less: Capitalisation				31.90
Net Expenses	563.24	234.68		116.01

3.2.3 **A&G Expenses:** Administration and General Expenses consists of expenses pertaining to Rent, Rates, Taxes, Telephone and Postage, Printing and Stationary, Electricity and Water Charges, Advertisements Expenses etc. A comparison of A&G Expenses with that approved by the Hon'ble Commission is shown in the table below:

Table 2: A&G Expense for FY 2010-11

Details	Approved by Commission			Rs. Crs
				FY 2010-11
	Year	5 months		Audited
Rent, Rates & Taxes				0.53
Conveyance & Travel				3.79
Legal & Consulting Charges				0.08
Telephone/Postage/Telegram/Telex charges				0.43
Electricity & Water Charges				0.13
Advertisement Expenses				0.03
Misc Expenses				0.59
Watch and Ward Services				1.14
Freight				0.58
Others				0.70
Total Admin and General Expenses				8.01
Less: Capitalized				4.95
Net Admin and General Expenses	19.14	7.98		3.06

3.2.4 **Repair & Maintenance Expenses:** R&M Expenses are generally incurred on maintaining the transmission assets in order to ensure uninterrupted operations. TANTRANSCO would like to submit that the current infrastructure of transmission system is old and the life of the majority of the assets is already over. To maintain the assets in a more efficient way, TANTRANSCO has been carrying out the repair and maintenance activities. The R&M expense for the year FY 2010-11 is shown below:

Table 3: R&M Expense for FY 2010-11

Details	Approved by Commission			Rs. Crs
	FY 2010-11		Audited	
	Year	5 months		
Plant & Machinery				1.98
Building				0.03
Civil Works				0.07
Hydraulic work				-
Lines & Cable network				1.22
Vehicles				0.23
Furniture & Fixtures				0.00
Office equipments				0.11
Total Expenses				3.64
Less: Capitalisation				1.88
Net Repair & Maintenance expenses	21.60	9.00		1.76

3.2.5 Based on the above tables, the actual performance related to O&M Expenses (after deducting capitalization) for the year FY 2010-11 is outlined in the table below:

Table 4: O&M Expenditure for FY 2010-11

Particulars	Approved by Commission				Rs. Crs
	FY 2010-11		FY 2010-11 (Actuals)	Difference	
	Year	5 months			
Employee Expense	563.24	234.68	116.01		(118.68)
Administration & General Expenses	19.14	7.98	3.06		(4.91)
Repair & Maintenance Expenses	21.60	9.00	1.76		(7.24)
Total	603.98	251.66	120.82		(130.83)

3.2.6 As seen from the above table, the actual O&M expense for the year FY 2010-11 was Rs. **120.82** Crs for 5 months (i.e. Nov 2010 to Mar 2011). Further, looking at each element wise, it is observed that the employee expenses, A&G expenses and R&M expenses are well within the limits as approved by the Hon'ble Commission. Therefore, TANTRANSCO requests the Hon'ble Commission to approve the same.

3.2.7 TANTRANSCO submits that the staff transfer scheme is not yet been finalised and employees are working on a deputation basis on "As is where is basis". Employees of TANTRANSCO are working with TANGEDCO and based on the final staff transfer scheme, the employee cost will be finalised. TANTRANSCO request Hon'ble Commission to consider such additional cost as and when it arises.

3.3 GFA and Depreciation

3.3.1 The actual depreciation charge for the year FY 2010-11 as per the audited accounts for 5 months is **Rs. 121 Crs** as against 5 monthly depreciation charge of **Rs. 124 Crs** approved by the Hon'ble Commission on a proportionate basis. The Hon'ble Commission in its order approved depreciation charges at Rs. 297 Crs for the entire year FY 2010-11. The average rate of depreciation as a percentage of the Opening GFA for the year FY 2010-11 works out to 2.38%.

Table 5: GFA and Depreciation for FY 2010-11

Particulars	Rs. Crs		
	Approved by Commission		FY 2010-11
	Year	5 months	(Actuals)
Opening Gross Block	9,474	9,474	12,232
Closing Gross Block	9,933	9,933	12,292
Depreciation during the year	297	124	121
Difference in Depreciation			(3)
Rate of Depreciation	3.14%	3.14%	2.38%

3.3.2 The Hon'ble Commission is requested to approve the depreciation as per the audited accounts for FY 2010-11.

3.4 Interest Calculations

3.4.1 TANTRANSCO in this petition has categorized Interest on Loan, Interest and Finance Charges under Interest Calculations. The Interest on Loan for the year FY 2010-11 is **Rs. 336 Crs** for 5 months and interest capitalised is **Rs. 50 Crs**. The Hon'ble Commission approved the Interest on Loan at **Rs. 1292 Crs** which works out to be **Rs. 538 Crs** for 5 months.

3.4.2 The Interest and Finance charge comprises of Interest on General Provident Fund, Bank charges, premium on redemption etc. The Other Interest and Finance charges for the year FY 2010-11 is **Rs. 6 Crs**.

3.4.3 TANTRANSCO would like to submit that the interest liability calculated and accrued during the period of 5 months of FY 2010-11 are on actual basis which are calculated based on the loans of erstwhile TNEB segregated as per the provisional transfer scheme. Since the same has been in the books of the TANTRANSCO, it is an obligation of TANTRANSCO to service the debt.

3.4.4 The interest calculation for the year FY 2010-11 is shown in the table below:

Table 6: Interest and Finance Charges for FY 2010-11

Particulars	Rs. Crs			
	Approved by Commission		FY 2010-11	Difference
	Year	5 months	(Actuals)	
Interest on Loan	1,292	538	336	(201.94)
Interest & Finance charge		-	6	6.05
Less: Interest Capitalized		-	50	49.85
Total	1,292	538	293	(246)

3.4.5 The Hon'ble Commission is requested to approve Interest on Loan and Interest & Finance charges at **Rs. 336 Crs.** and **Rs. 6 Crs** respectively as well as interest capitalised of **Rs. 50 Crs.** for FY 2010-11.

3.5 Working Capital and Interest on Working Capital

3.5.1 The Hon'ble Commission in its order has approved Interest on Working Capital as a part of Interest Charges as it contends that TANTRANSCO has been borrowing for working capital and interest on such borrowings is already included along with interest on capital loan.

- 3.5.2 TANTRANSCO would like to submit that the profit and loss account does not highlight any interest on working capital and the interest on loan specified in the accounts is based on the project specific loan and the loan which has been segregated and allocated to TANTRANSCO as per provisional transfer scheme dated 2nd January 2012. Based on such transfer scheme, it is an obligation of TANTRANSCO to service the debt allocated to them.
- 3.5.3 TANTRANSCO would like to submit that though there is NIL amount as interest on working capital, in the petition the same has been claimed on normative basis. It is submitted that TANTRANSCO has employed internal sources to meet the demand for working capital and the internal sources also carry cost. It is further submitted that such funds employed elsewhere would have carried interest income.
- 3.5.4 Further, the Tariff Regulations stipulates that rate of interest on working capital shall be considered on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on the date on which the application for determination of tariff is made.
- 3.5.5 As per APTEL Order No. 111 of 2008 dated 28th May 2009, it states as follows:
“It is true that internal funds also deserve interest in as much as the internal fund when employed as working capital loses the interest it could have earned by investment elsewhere. Further the licensee can never have any funds which has no cost. The internal accruals are not like some reserve which does not carry any cost. Internal accruals could have been inter corporate deposits, as suggested on behalf of the appellant. In that case the same would also carry the cost of interest.
.....Emphasis added”.
- 3.5.6 Based on the above order, TANTRANSCO is entitled on the interest on working capital as shown in the table below:

Table 7: Interest on Working Capital for FY 2010-11

Particulars	Approved by Commission			Difference
	Year	5 months	FY 2010-11 Actuals	
O & M expenses			24	
Maintenance Spares			54	
Receivables			210	
Total Working Capital	-	-	288	
Rate of Interest on Working Capital	14.75%	14.75%	11.75%	
Total Interest on Working Capital	28	11	14	3

3.6 Reasonable Rate of Return on Equity

- 3.6.1 Return on Equity for TANTRANSCO for the year FY 2010-11 has been calculated based on the average equity for the corresponding year. This has been done in line with the TNERC Regulations. The Normative Rate of Equity has been taken at 14%.
- 3.6.2 TANTRANSCO would like to submit that the opening equity is as per the 2nd provisional transfer scheme notified by the Government dated 2nd Jan 2012 and the GFA is funded

partly by loan and equity. Accordingly, the opening equity and the GFA for the year FY 2010-11 are determined.

- 3.6.3 The Hon'ble Commission in its tariff order disallowed Return of Equity on the grounds that loan borrowing is more than the capital expenditure incurred. However, TANTRANSCO would like to submit that a utility is entitled for Return on Equity as the RoE earned is invested every year to carry out future capacity additions. The relevant extracts of TNERC (Terms & Conditions of Tariff) Regulation 2005 is reproduced herein:

21. Debt-Equity Ratio

For the purpose of determination of tariff, debt-equity ratio as on the date of commercial operation of Generating Station and transmission projects, sub-station, distribution lines or capacity expanded after the notification of these Regulations shall be 70:30. Where equity employed is more than 30% the amount of equity shall be limited to 30% and the balance amount shall be considered as loans, advanced at the weighted average rate of interest and for weighted average tenor of the long term debt component of the investment”

“Provided that in case of a Generating Company or other licensees, where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of return on equity in tariff computation.” (Emphasis Added)

- 3.6.4 TANTRANSCO would like to submit that Return on Equity is a surplus generated which entitles a utility to safeguard itself against any uneven contingencies or a force majeure event in future. Also, clause 5.3(a) of the National Tariff Policy states that:

“Balance needs to be maintained between the interests of consumers and the need for investments while laying down rate of return. Return should attract investments at par with, if not in preference to, other sectors so that the electricity sector is able to create adequate capacity. The rate of return should be such that it allows generation of reasonable surplus for growth of the sector. (Emphasis Added)”

- 3.6.5 Also, APTEL order in the case for KPTCL v/s. KERC, states as follows:

The Appellate Tribunal observed that merely because there is no notification or allocation indicating the capital or investment or such other sum cannot be reason enough to deny return of equity.

- 3.6.6 TANTRANSCO is entitled on RoE on the opening balance of equity as per the second transfer scheme. The Reasonable Rate of Return of TANTRANSCO for the year FY 2010-11 is shown in the table below:

Table 8: RoE for FY 2010-11

Particulars	Rs. Crs			Difference
	Approved by Commission		FY 2010-11	
	Year	5 months	(Actuals)	
Opening Equity	-	-	1,928	
Additions during the year	-	-	-	
Closing Equity	-	-	1,928	
Average Equity	-	-	1,928	
Return on Equity (%)	-	-	14%	
Total	-	-	270	270

3.6.7 Based on the foregoing paragraphs, TANTRANSCO requests the Hon'ble Commission to approve the Reasonable Rate of Equity for FY 2010-11 at **Rs. 270 Crs.**

3.7 Other Income

3.7.1 Other Income includes interest on staff loans, income from investment, income from sale of scrap, interest from banks, income from short term open access, etc. The amount of Other Income for FY 2010-11 is **Rs. 10 Crs** and the Hon'ble Commission is requested to approve the same.

3.8 Other Debits & Prior Period Expenses

3.8.1 Other Debits incurred by TANTRANSCO for the year FY 2010-11 is **Rs. 0.02 Crs** as against **Rs. 0.34 Crs** (for 5 months) approved by the Hon'ble Commission.

3.8.2 Although the Hon'ble Commission has approved Prior Period Income at **Rs. 6.38 Crs** which was on the basis of the petition based on provisional figures submitted by TANTRANSCO for FY 2010-11. However, the Prior Period Income submitted in the petition was on the basis of provisional accounts. After the audit of the accounts, it was seen that there was no account of Prior Period Income; therefore TANTRANSCO has not considered the same in the true up for FY 2010-11.

Table 9: Other Debits & Prior Period Expenses for FY 2010-11

Particulars	Approved by Commission			Difference
	Year	5 months	FY 2010-11 (Actuals)	
Other Debits	0.82	0.34	0.02	(0.32)
Prior Period Income	(6.38)	(2.66)	-	
Total	(5.56)	(2.32)	0.02	2.34

3.8.3 TANTRANSCO requests the Hon'ble Commission to approve Other debits and prior period expenses as showcased in the above table for the year FY 2010-11.

3.9 Incentive

3.9.1 As per TNERC (Terms & Conditions for determination of tariff) Regulations 2005, a transmission licensee is entitled for an incentive at 1% of equity for each percentage point of increase in annual availability beyond the target availability i.e. 98%.

3.9.2 The incentive computation based on the actual availability is as under:

Table 10: Incentive for FY 2010-11 (Rs. Crs)

Sr. No.	Particulars	FY 2010-11
		%
1	Equity (@ 1%)	1927.55
2	Annual Availability achieved	99%
3	Target Availability	98%
4	Incentive	25.86

3.9.3 It is requested to Hon'ble Commission to approve the incentive at **Rs. 25.86 Crs.**

3.10 Revenue from Transmission Charges

3.10.1 The Hon'ble Commission in its tariff order dated 30th March 2012 approved the Revenue from Transmission Charges as **Rs. 1785.84 Crs** for the year FY 2010-11. Hence, for a period of 5 months, the revenue from transmission charges comes out to **Rs. 744 Crs**. As against this, TANTRANSCO has realized **Rs. 524 Crs**. as per the audited accounts for the year FY 2010-11.

3.10.2 Therefore, TANTRANSCO requests the Hon'ble Commission to approve the Revenue from transmission charges as per the audited accounts.

3.11 Annual Transmission Tariff

3.11.1 Based on the foregoing paragraphs, the Annual Transmission Charges of TANTRANSCO for the year FY 2010-11 is shown in the table below:

Table 11: Annual Transmission Charges for FY 2010-11

Particulars	Approved by Commission		FY 2010-11	Difference
	Year	5 months	(Actuals)	
O&M Expense	604	252	121	(131)
Employee Expense	563	235	116	(119)
Administration & General Expenses	19	8	3	(5)
Repair & Maintenance Expenses	22	9	2	(7)
Depreciation	297	124	121	(3)
Net Interest & Finance charges	1,292	538	293	(246)
Interest on Working Capital			14	14
Return on Equity	-	-	270	270
Other Debits	0.82	0.34	0.02	(0)
Prior Period Income	(6)	(3)	-	3
Incentive			26	26
Annual Transmission Charges	2,188	912	845	(67)
Less: STOA charges and Other income			10	10
Less: Revenue from Short term Transmission charges, Scheduling charges & reactive charges	29	12.05		(12)
Net Transmission Charges	2,159	899	834	(65)
Less: Revenue from Transmission charges	1,786	744	524	(220)
Revenue Gap	373	155	310	155

3.11.2 TANTRANSCO requests the Hon'ble Commission to consider the justification given by TANTRANSCO and approve the ARR for FY 2010-11 as shown in the table above and allow to recover the gap from the transmission charges of FY 2013-14.

4. PROVISIONAL TRUE UP FOR FY 2011-12

4.1 Background

4.1.1 This chapter elucidates the performance of TANTRANSCO for the year FY 2011-12 based on the provisional accounts for FY 2011-12. This chapter summarizes each of the components of Annual Transmission Charges for FY 2011-12 and requests the Hon'ble Commission to true - up the Annual Transmission Charges provisionally for FY 2011-12 and the resultant gap may be recovered through transmission tariffs to be determined for FY 2013-14. However, once the accounts are audited finally, the figures/projections shall be subjected to change and the same shall be submitted at the time of final true up for FY 2011-12.

4.1.2 The Hon'ble Commission may appreciate that on unbundling of the State Electricity Board and functioning of the TANTRANSCO as an independent company, the expenses have been increasing substantially as compared to the cost incurred when the TANTRANSCO functions were being conducted by erstwhile Tamil Nadu State Electricity Board, as the TANTRANSCO has to undertake independently number of activities such as planning, safety, quality assurance, human resources, IT, corporate office, regulatory affairs, legal, accounts, finances, auditing etc and various miscellaneous activities.

4.1.3 A comparison of the figures projected by TANTRANSCO in its previous petition, approved by the Hon'ble Commission and figures based on provisional accounts are shown in the table under relevant sections discussed herein:

4.2 Operation & Maintenance Expenses

4.2.1 Operation & Maintenance Expenses consists of three elements viz Employee Expenses, A&G Expense and R&M Expense:

4.2.2 Employee Expense consists of Basic Salary, Dearness Allowance, Bonuses, Medical expense reimbursement and Terminal Benefits etc. The Employee Expenses for TANTRANSCO for the year FY 2011-12 is outlined in the table below:

Table 12: Employee Expense for FY 2011-12

Details	Approved by Commission	Rs. Crs
		FY 2011-12
		Provisional
Salary		190.94
Overtime wages		62.02
Dearness Allowance		47.23
Other Allowances		14.96
Bonus & Exgratia		6.28
Medical expenses reimbursement		0.36
Leave Travel concession		0.05
Earned Leave encashment		18.88
Terminal benefits		22.79
Staff welfare expenses		5.47
Payment under workmen's compensation Act		-
Thermal Performance/commissioning/ Goldern Jubilee incentive		-
Grand Total		369.00
Less: Capitalisation		72.75
Net Expenses	585.77	296.25

4.2.3 **A&G Expenses:** Administration and General Expenses consists of expenses pertains to Rent, Rates, Taxes, Telephone and Postage, Printing and Stationary, Electricity and Water Charges, Advertisements Expenses etc. A comparison of A&G Expenses with that approved by the Hon'ble Commission is shown in the table below:

Table 13: A&G Expense for FY 2011-12

Details	Approved by Commission	Rs. Crs
		FY 2011-12
		Provisional
Rent, Rates & Taxes		0.43
Conveyance & Travel		8.76
Legal & Consulting Charges		0.23
Telephone/Postage/Telegram/Telex charges		0.92
Electricity & Water Charges		0.25
Advertisement Expenses		0.08
Misc Expenses		0.64
Watch and Ward Services		3.01
Freight		0.89
Others		2.20
Total Admin and General Expenses		17.40
Less: Capitalized		10.22
Net Admin and General Expenses	10.16	7.18

4.2.4 **Repair & Maintenance Expenses:** R&M Expenses are generally incurred on maintaining the transmission assets in order to ensure uninterrupted operations. The R&M expense for the year FY 2011-12 is shown below:

Table 14: R&M Expense for FY 2011-12

Details	Approved by Commission	Rs. Crs
		FY 2010-11
		Provisional
Plant & Machinery		3.73
Building		0.08
Civil Works		0.26
Hydraulic work		-
Lines & Cable network		3.45
Vehicles		0.37
Furniture & Fixtures		0.00
Office equipments		0.15
Total Expenses		8.05
Less: Capitalisation		1.34
Net Repair & Maintenance expenses	22.50	6.71

4.2.5 Based on the above tables, the actual performance related to O&M Expenses (after deducting capitalization) for the year FY 2011-12 is outlined in the table below:

Table 15: O&M Expenditure for FY 2011-12

Particulars	Approved by Commission	Rs. Crs	
		FY 2011-12 (Provisional)	Difference
Employee Expense	585.77	296.25	(289.52)
Administration & General Expenses	10.16	7.18	(2.98)
Repair & Maintenance Expenses	22.50	6.71	(15.79)
Total	618.43	310.15	(308.28)

4.2.6 As seen from the above table, the provisional O&M expense for the year FY 2011-12 is **Rs. 310.15 Crs**. Further, looking at each element wise, it is observed that the employee expenses, A&G expenses and R&M expenses are well within the limits as approved by the Hon'ble Commission. Therefore, TANTRANSCO requests the Hon'ble Commission to approve the same.

4.2.7 TANTRANSCO submits that the staff transfer scheme is not yet been finalised and employees are working on a deputation basis on "As is where is basis". Employees of TANTRANSCO are working with TANGEDCO and based on the final staff transfer scheme, the employee cost will be finalised. TANTRANSCO request Hon'ble Commission to consider such additional cost as and when arises.

4.3 GFA and Depreciation

4.3.1 The actual depreciation charge for the year FY 2011-12 as per the provisional accounts is **Rs. 293 Crs** as against depreciation charge of **Rs. 323 Crs** as approved by the Hon'ble Commission. The average rate of depreciation as a percentage of the Opening GFA for the year FY 2011-12 works out to **2.38%**.

Table 16: GFA and Depreciation for FY 2011-12

Particulars	Approved by Commission	Rs. Crs	
		FY 2011-12 (Provisional)	
Opening Gross Block	9,933	12,292	
Additions	835	88	
Closing Gross Block	10,767	12,380	
Depreciation during the year	323	293	
Difference in Depreciation			(30)
Rate of Depreciation	3.25%		2.38%

4.3.2 TANTRANSCO would like to submit that the above capitalisation is based on the provisional accounts and is likely to be revised at the time of audited figures as certain expenses has not been capitalised due to the pending of the work completion certificate. TANTRANSCO is in the process of collecting all the relevant information to complete the work related to identification of the capitalisation details and request the Hon'ble Commission to allow TANTRANSCO to revise the figures as and when the exercise is completed.

4.3.3 The Hon'ble Commission is requested to approve the depreciation as per the provisional accounts for FY 2011-12.

4.4 Interest Calculations

4.4.1 TANTRANSCO has categorized Interest on Loan, Interest and Finance Charges under Interest Calculations. The Interest on Loan for the year FY 2011-12 is **Rs. 1360 Crs** and interest capitalised is **Rs. 244 Crs** as against **Rs. 1466 Crs** as approved by the Hon'ble Commission.

4.4.2 The interest on the loan has been calculated considering the loans allocated to TANTRANSCO at the time of segregation of erstwhile TNEB and based on such notified transfer scheme, it is an obligation of TANTRANSCO to service such debts and repay the debt alongwith the interest.

4.4.3 The Interest and Finance charge comprises of Interest on General Provident Fund, Bank charges, premium on redemption etc. The Interest and Finance charges for the year FY 2011-12 is **Rs. 23 Crs**.

4.4.4 The interest calculation for the year FY 2011-12 is shown in the table below:

Table 17: Interest and Finance Charges for FY 2011-12

Particulars	Rs. Crs	
	Approved by Commission	FY 2011-12
	Year	(Actuals)
Interest on Loan	1,466	1,360
Interest & Finance charge		23
Less: Interest Capitalized		244
Total	1,466	1,140

4.4.5 The Hon'ble Commission is requested to approve Interest on Loan and Interest & Finance charges at **Rs. 1360 Crs** and **Rs. 23 Crs** respectively and interest capitalised of **Rs. 244 Crs** for FY 2011-12.

4.5 Working Capital and Interest on Working Capital

4.5.1 The Hon'ble Commission in its order has not approved Interest on Working Capital as a part of interest on loan as it contends that TANTRANSCO has been borrowing for working capital and interest on such borrowings is already included along with interest on capital loan.

4.5.2 TANTRANSCO would like to submit that the profit and loss account does not highlight any interest on working capital and the interest on loan specified in the accounts is based on the project specific loan and the loan which has been segregated and allocated to TANTRANSCO as per provisional transfer scheme dated 2nd January 2012. Based on such transfer scheme, it is an obligation of TANTRANSCO to service the debt allocated to them.

4.5.3 TANTRANSCO would like to submit that though there is NIL amount as interest on working capital, in the petition the same has been claimed on normative basis. It is submitted that TANTRANSCO has employed internal sources to meet the demand for working capital and the internal sources also carry cost. It is further submitted that such funds employed elsewhere would have carried interest income.

4.5.4 Further, the Tariff Regulations stipulates that rate of interest on working capital shall be considered on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on the date on which the application for determination of tariff is made.

4.5.5 As per APTEL Order No. 111 of 2008 dated 28th May 2009, it states as follows:
*“It is true that internal funds also deserve interest in as much as the internal fund when employed as working capital loses the interest it could have earned by investment elsewhere. Further the licensee can never have any funds which has no cost. The internal accruals are not like some reserve which does not carry any cost. Internal accruals could have been inter corporate deposits, as suggested on behalf of the appellant. In that case the same would also carry the cost of interest.
Emphasis added”.*

4.5.6 Based on the above order, TANTRANSCO is entitled on the interest on working capital as shown in the table below:

Table 18: Interest on Working Capital for FY 2011-12

Particulars	Approved by Commission	Rs. Crs	
		FY 2011-12	Difference
	Year	Actuals	
O & M expenses		26	
Maintenance Spares		131	
Receivables		285	
Total Working Capital	-	442	
Rate of Interest on Working Capital		13.00%	
Total Interest on Working Capital		57	57

4.6 Reasonable Rate of Return on Equity

4.6.1 TANTRANSCO has calculated Return on Equity for the year FY 2011-12 on the basis on the average equity for the corresponding year. This has been done in line with the TNERC Regulations. The Normative Rate of Equity has been taken at 14%.

4.6.2 TANTRANSCO would like to submit that the opening equity is as per the 2nd provisional transfer scheme notified by the Government dated 2nd Jan 2012 and the GFA is funded partly by loan and equity. Accordingly, the opening equity and the GFA for the year FY 2011-12 are determined. The Hon’ble Commission in its tariff order disallowed Return of Equity on the grounds that loan borrowing is more than the capital expenditure incurred. TANTRANSCO would like to submit that a utility is entitled for Return on Equity as the RoE earned is invested every year to carry out future capacity additions. The relevant extracts of TNERC (Terms & Conditions of Tariff) Regulation 2005 is reproduced herein:

21. Debt-Equity Ratio

For the purpose of determination of tariff, debt-equity ratio as on the date of commercial operation of Generating Station and transmission projects, sub-station, distribution lines or capacity expanded after the notification of these Regulations shall be 70:30. Where equity employed is more than 30% the amount of equity shall be limited to 30% and the balance amount shall be considered as loans, advanced at the weighted average rate of interest and for weighted average tenor of the long term debt component of the investment”

“Provided that in case of a Generating Company or other licensees, where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of return on equity in tariff computation.” (Emphasis Added)

- 4.6.3 TANTRANSCO would like to submit that Return on Equity is a surplus generated which entitles a utility to safeguard itself against any uneven contingencies or a force majeure event in future. Also, clause 5.3(a) of the National Tariff Policy states that:

“Balance needs to be maintained between the interests of consumers and the need for investments while laying down rate of return. Return should attract investments at par with, if not in preference to, other sectors so that the electricity sector is able to create adequate capacity. The rate of return should be such that it allows generation of reasonable surplus for growth of the sector. (Emphasis Added)”

- 4.6.4 Also, APTEL order in the case for KPTCL v/s. KERC, states as follows:

The Appellate Tribunal observed that merely because there is no notification or allocation indicating the capital or investment or such other sum cannot be reason enough to deny return of equity.

- 4.6.5 TANTRANSCO would like to submit that Return on Equity is a surplus generated which entitles a utility to safeguard itself against any uneven contingencies or a force majeure event in future. Also, the National Tariff Policy

- 4.6.6 The Reasonable Rate of Return of TANTRANSCO for the year FY 2011-12 is shown in the table below:

Table 19: RoE for FY 2011-12

Particulars	Rs. Crs	
	Approved by Commission	FY 2011-12
	Year	(Actuals)
Opening Equity	-	1,928
Additions during the year	-	406
Closing Equity	-	2,334
Average Equity	-	2,131
Return on Equity (%)	-	14%
Total	-	298

- 4.6.7 Based on the foregoing paragraphs, TANTRANSCO requests the Hon’ble Commission to approve the Reasonable Rate of Equity for FY 2011-12 at **Rs. 298 Crores.**

4.7 Other Income

4.7.1 Other Income includes interest on staff loans, income from investment, income from trading, interest from banks, income from short term open access, etc. The amount of Other Income as per provisional accounts for FY 2011-12 is **Rs. 35.16 Crores** and the Hon'ble Commission is requested to approve the same.

4.8 Other Debits & Prior Period Expenses

4.8.1 Other Debits incurred by TANTRANSCO for the year FY 2011-12 is **Rs. 2.08 Crs** as against **Rs. 0.84 Crs** approved by the Hon'ble Commission.

4.8.2 The Hon'ble Commission has not considered Prior Period Income for FY 2011-12. However, as per the provisional account for the year FY 2011-12, the Prior Period Income for TANTRANSCO is **Rs. 1.56 Crs**.

Table 20: Other Debits & Prior Period Expenses for FY 2011-12

Particulars	Approved by Commission	Rs. Crs	
		FY 2011-12	Difference
	Year	(Actuals)	
Other Debits	0.84	2.08	1.24
Prior Period Income	-	1.56	
Total	0.84	3.64	2.80

4.8.3 TANTRANSCO would like to submit that that the disclosure of prior period items is in line with Accounting Standard (AS)-5 on Prior Period and Extraordinary Items, which emphasizes that Prior period items should be separately disclosed in the current statement of profit and loss together with their nature and amount; and in a manner that their impact on current profit or loss can be perceived.

4.8.4 The term 'prior period items', refers only to income or expenses which arise in the current period as a result of errors or omissions in the preparation of the financial statements of one or more prior periods. The items covered under the Prior Period Charges in the present petition had been missed out in the previous audited accounts and hence is not claimed earlier. Therefore, prior period items are the expenses which are legitimate in nature and have not been claimed in the previous year accounts or ARR, due to "Error of omission" or "Error of Commission" and same has been identified in FY 2011-12 and has been accounted in that year. These are the daily routine expenses which includes interest, any excess provision related to income or expenses and employee cost which are necessary for smooth functioning of the company and are pertaining to the previous financial year but recognized during current year.

4.8.5 Based on the above submission, TANTRANSCO request the Hon'ble Commission to allow the prior period expenditure and other debits as showcased in the above table for the year FY 2011-12.

4.9 Incentive

4.9.1 As per TNERC (Terms & Conditions for determination of tariff) Regulations 2005, a transmission licensee is entitled for an incentive at 1% of equity for each percentage point of increase in annual availability beyond the target availability i.e. 98%.

4.9.2 The incentive computation based on the actual availability is as under:

Table 21: Incentive for FY 2011-12

Sr. No.	Particulars	FY 2011-12
		%
1	Equity (@ 1%) (Rs. Crs)	2131
2	Annual Availability achieved	100%
3	Target Availability	98%
4	Incentive (Rs Crs)	32.85

4.9.3 It is requested to Hon'ble Commission to approve the incentive at **Rs. 32.85 Crs.**

4.10 Revenue from Transmission Charges

4.10.1 The Hon'ble Commission in its tariff order dated 30th March 2012 approved the ARR / Revenue from Transmission Charges as **Rs. 1917 Crs** for the year FY 2011-12. As against this, TANTRANSCO has realized **Rs. 1710 Crs** as per the provisional accounts for the year FY 2011-12.

4.10.2 Therefore, TANTRANSCO requests the Hon'ble Commission to approve the Revenue from transmission charges as per the audited accounts.

4.11 Annual Transmission Tariff

4.11.1 Based on the foregoing paragraphs, the Annual Transmission Charges of TANTRANSCO for the year FY 2011-12 is shown in the table below:

Table 22: Annual Transmission Charges for FY 2011-12

Particulars	Rs. Crs		
	Approved by Commission	FY 2011-12	Difference
	Year	(Actuals)	
O&M Expense	618.43	310	(308)
Employee Expense	586	296	(290)
Administration & General Expenses	10	7	(3)
Repair & Maintenance Expenses	23	7	(16)
Depreciation	323	293	(30)
Interest & Finance charges	1,466	1,140	(327)
Interest on Working Capital		57	57
Return on Equity	-	298	298
Other Debits	1	2	1
Prior Period Expenses	-	2	2
Calculation error in order dtd 30.3.12	(20)		20
Incentive		33	33
Annual Transmission Charges	2,388	2,135	(254)
Less: Other Income		35	35
Less: Revenue from Tx charges, Sch charges & reactive charges	29		(29)
Less: Misc	-	-	-
Net Transmission Charges	2,359	2,100	(259)
Less: Revenue from Tx	1,917	1,710	(206)
Revenue Gap	442	389	(53)

4.11.2 TANTRANSCO requests the Hon'ble Commission to consider the justification given by TANTRANSCO and approve the ARR for FY 2011-12 as shown in the table above and adjust the surplus in the transmission charges of FY 2013-14.

5. CAPITAL EXPENDITURE FOR FY 2010-11 TO FY 2012-13

5.1 Capital Expenditure and Capitalization

5.1.1 TANTRANSCO submits that the expenditure incurred in each of the operational circles is on account of regular need based repairs and maintenance works like replacement of worn-out apparatus, damaged equipments, transformers, repairs on account of overhead transmission lines etc which are necessary works to be carried out for efficient working of the transmission system.

5.1.2 The additional capitalization details submitted for FY 2010-11 is for a period of five months (Nov 2010 to March 2011) i.e. after formation of TANTRANSCO as a separate entity on 1st November 2010. The details submitted for FY 2011-12 is based on provisional accounts while details furnished for FY 2012-13 is on the basis of transmission programme projected for the year.

5.1.3 The capitalization for FY 2010-11 to FY 2012-13 is on account of the following reasons

- Improvement in Tail End Voltage Levels;
- Avoidance of System Overloading;
- To provide load relief and to meet out the load growth in particular area;
- To evacuate Power from various sources;
- Reduction in Line Loss;

5.1.4 TANTRANSCO submits the following list of lines and substation commissioned during FY 2010-11 (1st November 2010 to 31st March 2011) to FY 2012-13

Table 23: Lines and Substations Commissioned during FY 2010-11 (5 months)

Sr No	Substations			Lines	
	Rating of the SS	Nos	MVA	Voltage Level	Ckt Km
1	400KV	-	-	230 KV OH Line	55
2	230KV	1	180	110 KV OH Line	355
3	110KV	14	251	110 KV Cable	18
	Total	15	431		428

Table 24: Lines and Substations Commissioned during FY 2011-12

Sr No	Substations			Lines	
	Rating of the SS	Nos	MVA	Voltage Level	Ckt Km
1	400KV	1	630	400 KV OH Line	16
2	230KV	-	-	230 KV OH Line	198
3	110KV	13	232	110 KV OH Line	462
4	66KV	-	-	110 KV Cable	15
	Total	14	862		691

Table 25: Lines and Substations Commissioned during FY 2012-13 (upto September 2012)

Sr No	Substations			Lines	
	Rating of the SS	Nos	MVA	Voltage Level	Ckt Km
1	400KV	-	-	400 KV OH Line	-
2	230KV	2	300	230 KV OH Line	22
3	110KV	7	119	110 KV OH Line	359
4	66KV	-	-	110 KV Cable	1
	Total	9	419		382

5.1.5 TANTRANSCO submits that in addition to above, works for enhancement of power transformer was also undertaken. The detail of the works carried out is given as below.

Table 26: Enhancement of Power Transformers during FY 2010-11 (5 months) to FY 2012-13

Sr. No	Rating of the SS	FY 2010-11		FY 2011-12		FY 2012-13	
		Nos	MVA	Nos	MVA	Nos	MVA
1	230KV	6	500	3	200	-	-
2	110KV	27	357	64	767	19	206
3	66KV	-	-	-	-	-	-
	Total	33	857	67	967	19	206

5.1.6 TANTRANSCO submits that the additional expenditure incurred on transmission asset is in line with the clause 19 of the TNERC Tariff Regulations which have been incurred for efficient and successful operation of the Transmission System.

5.1.7 TANTRANSCO based on the additional capitalisation carried out for each operational circle, submits herewith the consolidated additional capitalisation by TANTRANSCO during the FY 2010-11 to FY 2012-13 in the following table:

Table 27: Summary of additional capitalisation for Transmission during FY 2010-11 to FY 2012-13

Rs. Crores				
Sr. No.	Works/Schemes	Capitalization		
		FY 2010-11	FY 2011-12	FY 2012-13
1	Substations			
a	230 KV Substation	16.06	22.83	274.26
b	110 KV Substation	30.24	58.58	95.32
c	66 KV Substation	0.05	-	-
2	Power Evacuation / Link Lines			
a	400 KV Line	-	0.11	845.17
b	230 KV Lines	6.62	0.00	81.16
c	110 KV Lines	6.08	4.96	232.51
d	66 KV Lines	0.06	-	-
3	Other Circles			
a	Mettur Workshop	0.04	-	-
b	Erode SLDC Circle	0.06	0.09	-
c	P&C Coimbatore Circle	0.00	0.01	-
d	Tirunelveli Wind Circle	-	3.04	-
4	Other Activities			
a	Enhancemnet / Additional Power Transformers	-	-	150.00
b	Improvement of lines	-	-	100.00
c	Capacitor bank	-	-	22.90
d	R- APDRP	-	-	40.36
	Total	59.22	89.63	1,841.67

5.1.8 The detail of the additional capitalization submitted in the present petition is actual capitalization during FY 2010-11 and provisional expenses for FY 2011-12.

5.1.9 It is submitted to the Hon'ble Commission to reconsider additional capitalization for FY 2011-12 after submission of audited accounts for FY 2011-12.

5.1.10 The projected capitalization for FY 2012-13 is on the basis of transmission programme projected for the year.

6. ANNUAL PERFORMANCE REVIEW – FY 2012-13

6.1 Background

6.1.1 This section deals with the performance of TANTRANSCO for the year FY 2012-13 based on the projections made for the current year over the previous year i.e. FY 2011-12. TANTRANSCO in this chapter has compared its performance with the corresponding approval by the Hon'ble Commission in its previous order.

6.1.2 The Hon'ble Commission may appreciate that on unbundling of the State Electricity Board and functioning of the TANTRANSCO as an independent company, the expenses have been increasing substantially as compared to the cost incurred when the TANTRANSCO functions were being conducted by erstwhile Tamil Nadu State Electricity Board, as the TANTRANSCO has to undertake independently number of activities such as planning, safety, quality assurance, human resources, IT, corporate office, regulatory affairs, legal, accounts, finances, auditing etc and various miscellaneous activities.

6.2 Existing capacity of TANTRANSCO in FY 2012-13

6.2.1 The existing capacity of TANTRANSCO network was 51653 MVA as on 31st March, 2012. Beside this TANTRANSCO is undertaking rapid augmentation of transmission network to cater the Power requirement across the state. The table below summarises voltage level wise capacity of TANTRANSCO System i.e. as on 31st march, 2012.

Table 28: Existing capacity as on 31st March 2012

Voltage Class	400 Kv	230 Kv	110 Kv	66 Kv	Total
Capacity in MVA	10450	15496	25643	64	51653

6.3 Operation & Maintenance Expenses

6.3.1 O&M Expenses for FY 2012-13 have been arrived at on the basis of escalation over the O&M expense of previous years. O&M expense comprises of employee expense, A&G expense and R&M expense. As per TNERC (Terms & Conditions for determination of tariff) Regulations 2005, O&M expenses are to be derived on the basis of actual O&M expenses for the last 5 years based on the audited accounts. However, TANTRANSCO would like to submit that TANTRANSCO was unbundled from the erstwhile TNEB only on 30th Oct 2010. As such, it is difficult for TANTRANSCO to derive the O&M expenses pertaining to transmission activities for the last 5 years.

6.3.2 It is submitted that the employees cost are more in the nature of standard costs of the TANTRANSCO and it does not retain much control over the same. TANTRANSCO has taken all reasonable steps to ensure that the employees cost are not high.

6.3.3 Although the TNERC (Terms & Conditions for determination of tariff) Regulations 2005 provides for an escalation of 4% on O&M expenses for previous year; TANTRANSCO has considered escalation rates on the basis of certain ground realities. The rationale for considering the rates for certain particulars is given below:

A. Employee Cost:

i. Salaries

- The basic salary and the grade pay have been considered at an escalation of 5%. This is on account of the fact that yearly increments on the basic salary and grade pay are provided at 3%. Further, seniority based promotions are being provided depending on the number of vacancies created every year; for which an additional 3% rise is provided to the employees who are promoted. Also, due to assigning of additional responsibilities to the officers, 20% of the basic and grade pay will be additionally paid for a maximum of 5 months depending on the vacancies and the nature of work. Hence, considering all the above factors, basic salary and grade pay are escalated at 5% for the year FY 2012-13.
- TANTRANSCO would like to submit that, wage revisions are generally provided to the employees once in four years. The last revision fell on 1st Dec 2011 which is already due and is in process of being finalized in the current year and for this purpose a committee has been formed. The next wage revision will be from 1st Dec 2015. Therefore, a hike of 10% has been considered for the years FY 2012-13 and FY 2015-16.

ii. Dearness Allowance

- The rate of dearness allowance is applied on the basic salaries plus grade pay; the rate is subjected to revision as notified by the Central Government in every six months i.e. in January and July on the basis of consumer price index. the DA rates in effect in the previous years were as under:

Table 29: Dearness Allowance rates for past years

Year	1 st Half	2 nd Half	% Hike
2010	35	45	29%
2011	51	58	29%
2012	65	72	24%

- Based on the trend during previous years, the escalation of DA rate is considered at 15%.

iii. Surrender Leave Salary, Terminal Benefits (including pension), Pension Scheme

- The amount equivalent to 15 days of salary and DA with applicable HRA is generally encashed by employees every year. In addition, the leave salary for the period of 8 months or the amount pertaining to balance leave whichever lesser is paid at the time of retirement to the retirees. Since this includes both DA and a lump sum of 8 month salary, the escalation is considered at 10%. Likewise, the emoluments related to Terminal Benefits (including pension) also tend to increase every year. Hence, escalation for surrender leave salary and terminal benefits (including pension) is considered at 10%. On the Basic and DA quantum of eligible employees to Contributory Pension Scheme (CPS), the utility has to contribute 10% as employer's portion and thus a hike of 10% over previous years has been considered for CPS.

6.3.4 Thus, the Employee Expense of TANTRANSCO for the year FY 2012-13 is shown as under:

Table 30: Employee Expenses for FY 2012-13

Details	Rs. Crs	
	Approved by Commission	FY 2012-13
	Year	Estimate
Salary		210.04
Overtime wages		64.50
Dearness Allowance		54.31
Other Allowances		15.56
Bonus & Exgratia		6.53
Medical expenses reimbursement		0.38
Leave Travel concession		0.06
Earned Leave encashment		20.77
Terminal benefits		25.07
Staff welfare expenses		6.01
Grand Total		403.24
Less: Capitalisation		79.50
Net Expenses	609.20	323.75

B. Administration & General Expenses

i. Legal Fees, Audit Fees & Professional charges

- The fees payable to CAG Auditors, Statutory Auditors, Advocate General, Technical experts, Design & developers are booked under this group which are getting inflated in manifold. Moreover the related expenditure like travelling expenditure and allowances incurred on these activities will also be accounted under this head. Thus an escalation of 10% is considered.

ii. Watch & ward Expenses:

- The engagement of retired Ex-servicemen for the security purposes was made in all power stations, certain sub-stations and central stores, etc. The expenditure relating to these particulars are increased every year on the basis of hike in DA and certain annual increase and thus 10% escalation has been considered.

iii. Salary to fire service personnel:

- Similar to the ex-service men, the fire service personnel from Government Department are being engaged in power stations whose expenses is also governed as per DA hike, etc. Thus 10% hike may be taken.

6.3.5 The A&G expense for the year FY 2012-13 is as follows:

Table 31: A&G Expenses for FY 2012-13

Details	Approved by Commission	Rs. Crs
		FY 2012-13
		Estimate
Rent, Rates & Taxes		0.44
Conveyance & Travel		9.11
Legal & Consulting Charges		0.24
Telephone/Postage/Telegram/Telex charges		0.96
Electricity & Water Charges		0.26
Advertisement Expenses		0.09
Misc Expenses		0.66
Watch and Ward Services		3.31
Freight		0.93
Others		2.30
Total Admin and General Expenses		18.30
Less: Capitalized		10.75
Net Admin and General Expenses	11.05	7.55

6.3.6 For the other particulars of the above expenses and R&M expenses, the escalation has been considered at 4% which is in line with the TNERC (Terms & Conditions for determination of Tariff) Regulations 2005. The R&M expenses for the year FY 2012-13 is shown in the table below:

Table 32: R&M Expenses for FY 2012-13

Details	Approved by Commission	Rs. Crs
		FY 2012-13
	Year	Estimate
Plant & Machinery		3.88
Building		0.09
Civil Works		0.27
Lines & Cable network		3.59
Vehicles		0.38
Furniture & Fixtures		0.00
Office equipments		0.16
Total Expenses		8.38
Less: Capitalisation		1.39
Net Repair & Maintenance expenses	23.44	6.98

6.3.7 Based on above paragraphs, the O&M cost for TANTRANSCO for the year FY 2012-13 works out to be **Rs. 338 Crs** as against **Rs. 644 Crs**. The breakup of O&M expenses for the year FY 2012-13 is shown as under:

Table 33: O&M Expenses for FY 2012-13

Particulars	FY 2012-13		Rs. Crs
	Approved	Estimate	Difference
Employee Expense	609	324	(285)
Administration & General Expenses	11	8	(4)
Repair & Maintenance Expenses	23	7	(16)
Total	644	338	(305)

6.3.8 It is requested to the Hon'ble Commission to approve the O&M expenses as showcased in the above table.

6.4 GFA and Depreciation

6.4.1 The depreciation rate considered in the petition are in line with the rates specified in the Tariff Regulations. The total depreciation is calculated on the opening balance of the Gross Fixed Assets (GFA) and on a average basis on the addition of the assets during the year.

6.4.2 This is calculated in line with the tariff regulations and the APTEL order, the abstract of which is outlined below:

The Hon'ble Appellate Tribunal vide its Order dated July 15, 2009 (Appeal No. 137 of 2008) allowed the Appeal and ruled as under (TPC Vs MERC):

"In view of the provisions of the Tariff Regulations the Companies Act and the Accounting Standard-6, we find full justification and rationale in the contention of the appellant that proportionate depreciation has to be allowed even for part of the year when the assets have been put to use. The asset once put to use will be exposed to wear and tear which will not wait to depreciate till the start of the new financial year. We, therefore, allow the appeal in this view of the matter also."

6.4.3 In line with the above decision of Hon'ble Appellate Tribunal, TANTRANSCO has claimed depreciation on the assets added during the year by assuming that the assets will be added during the mid of the year.

6.4.4 The actual depreciation charge for the year FY 2012-13 is **Rs. 323 Crs** as against a depreciation charge of **Rs. 354 Crs** as approved by the Hon'ble Commission. The average rate of depreciation as a percentage of the Opening GFA for the year FY 2012-13 works out to 2.61%.

Table 34: GFA and Depreciation for FY 2012-13

Particulars	Rs. Crs	
	FY 2012-13	
	Approved	Estimate
Opening Gross Block	10,767	12,380
Additions	1,001	1,842
Closing Gross Block	11,768	14,221
Depreciation during the year	354	323
Difference in Depreciation		(30)
Rate of Depreciation	3.28%	2.61%

6.4.5 The Hon'ble Commission is requested to approve the depreciation as projected by TANTRANSCO for the year FY 2012-13.

6.5 Interest Calculation

6.5.1 Interest calculations have been estimated based on the heads viz Interest on Loan and Interest & Finance charges. The Interest on Loan for the year FY 2012-13 is **Rs. 1253 Crs** and interest capitalised is **Rs. 226 Crs** as against **Rs. 1477 Crs** as approved by the Hon'ble Commission.

6.5.2 The interest on the loan has been calculated considering the loans allocated to TANTRANSCO at the time of segregation of erstwhile TNEB and based on such notified transfer scheme, it is an obligation of TANTRANSCO to service such debts and repay the debt alongwith the interest.

6.5.3 The Interest and Finance charge comprises of Interest on General Provident Fund, Bank charges, premium on redemption etc. The Interest and Finance charges for the year FY 2012-13 is **Rs. 27 Crs**. The Interest and Finance charges for FY 2012-13 has been arrived considering an escalation of 10% over the previous year.

6.5.4 The interest calculation for the year FY 2012-13 is shown in the table below:

Table 35: Interest and Finance Charges for FY 2012-13

Particulars	Rs. Crs	
	Approved	Estimate
Interest on Loan	1,477	1,253
Interest & Finance charge		27
Less: Interest Capitalized		226
Total	1,477	1,054

6.5.5 The Hon'ble Commission is requested to approve the Interest on Loan and Interest & Finance charge as projected for the year FY 2012-13.

6.6 Working Capital and Interest on Working Capital

6.6.1 The Hon'ble Commission in its order has not approved Interest on Working Capital as a part of interest on loan as it contends that TANTRANSCO has been borrowing for working capital and interest on such borrowings is already included along with interest on capital loan.

6.6.2 TANTRANSCO would like to submit that interest on working capital in the petition has been claimed on the normative basis.

6.6.3 Further, the Tariff Regulations stipulates that rate of interest on working capital shall be considered on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on the date on which the application for determination of tariff is made.

6.6.4 Based on the above Regulations, TANTRANSCO is entitled on the interest on working capital as shown in the table below:

Table 36: Interest on Working Capital for FY 2012-13

Particulars	Rs. Crs	
	Approved	Estimate
O & M expenses		28
Maintenance Spares		150
Receivables		513
Total Working Capital	-	690
Rate of Interest on Working Capital		14.75%
Total Interest on Working Capital		102

6.7 Reasonable Return on Equity

6.7.1 TANTRANSCO has calculated Return on Equity for the year FY 2012-13 on the basis on the average equity for the corresponding year. This has been done in line with the TNERC Regulations. The Normative Rate of Equity has been taken at 14%.

6.7.2 The Hon'ble Commission in its tariff order has disallowed Return of Equity on the grounds that loan borrowing is more than the capital expenditure incurred. However, TANTRANSCO has explained the necessity of RoE in **Para 3.6**.

6.7.3 The Reasonable Rate of Return of TANTRANSCO for the year FY 2012-13 is shown in the table below:

Table 37: RoE for FY 2012-13

Particulars	FY 2012-13	
	Approved	Estimate
Opening Equity	-	2,334
Additions during the year	-	553
Closing Equity	-	2,887
Average Equity	-	2,610
Return on Equity (%)	-	14%
Total	-	365

6.7.4 Based on the foregoing paragraphs, TANTRANSCO requests the Hon'ble Commission to approve the Reasonable Rate of Equity for FY 2012-13 at **Rs. 365 Crores**.

6.8 Other Income

6.8.1 The Other Income includes interest on staff loans, income from investment, income from trading, interest from banks, income from short term open access, etc. The amount of Other Income for the year FY 2012-13 is arrived at by escalation over the values from previous years. The escalation for interest on staff loans & advances, delayed payment surcharge, income from staff welfare has been considered at 10% while on other hand particulars such as Interest on Advance to suppliers, interest from banks are escalated by 5%.

6.8.2 The Other Income for FY 2012-13 works out to **Rs. 38.34 Crores** and the Hon'ble Commission is requested to approve the same.

6.9 Other Debits and Prior Period Income

6.9.1 Other Debits incurred by TANTRANSCO for the year FY 2012-13 is **Rs. 2.29 Crs** as against **Rs. 0.85 Crs** approved by the Hon'ble Commission. Other debit expense has been arrived at with an escalation of 10% over the previous year.

6.9.2 For the year FY 2012-13 TANTRANSCO does not envisage any Prior Period Income; hence it has not considered any prior period income.

Table 38: Other Debits & Prior Period Expenses for FY 2012-13

Particulars	FY 2012-13	
	Approved	Estimate
Other Debits	0.85	2.29
Prior Period Income	-	-
Total	0.85	2.29

6.10 Incentive

6.10.1 The incentive computation is based on the availability considered to be equivalent to FY 2011-12. TANTRANSCO feels that it will be able to maintain the same System Availability which is considered to be the efficient system availability. The incentive available to TANTRANSCO works out to be **Rs. 40.24 Crs.**

Table 39: Incentive for FY 2012-13

Sr. No.	Particulars	Rs. Crs
		FY 2012-13
		%
1	Equity (@ 1%)	2610
2	Annual Availability achieved	100%
3	Target Availability	98%
4	Incentive	40.24

6.10.2 It is requested to Hon'ble Commission to approve the incentive as shown in the table above.

6.11 Revenue from Transmission Charges

6.11.1 The Hon'ble Commission in its tariff order dated 30th March 2012 approved the Revenue from Transmission Charges as **Rs. 3076 Crs** for the year FY 2012-13. TANTRANSCO plans to realize the entire amount of **Rs. 3076 Crs** by the end of FY 2012-13 as per the provisional accounts for the year FY 2011-12 in line with the direction provided in TANGEDCO Tariff order dated 30th March 2012 whereby the recovery of such transmission charges is to be done on equal instalment basis from TANGEDCO.

6.11.2 Therefore, TANTRANSCO requests the Hon'ble Commission to approve the Revenue from transmission charges as per the audited accounts.

6.12 Annual Transmission Charges

6.12.1 The Annual Transmission charge for the year FY 2012-13 is shown below:

Table 40: Annual Transmission Charges for FY 2012-13

Particulars	FY 2012-13		Rs. Crs
	Approved	Estimate	Difference
O&M Expense	644	338	(305)
Employee Expense	609	324	(285)
Repair & Maintenance Expenses	23	7	(16)
Administration & General Expenses	11	8	(4)
Depreciation	354	323	(30)
Interest & Finance charges	1,477	1,054	(423)
Interest on Working Capital		102	102
Return on Equity	-	365	365
Other Debits	1	2	1
Incentive	-	40	40
Annual Transmission Charges	2,475	2,226	(249)
Less: Other Income		38	38
Less: Revenue from Tx charges, Sch charges & reactive charges	30		(30)
Net Transmission Charges	2,445	2,187	(258)
Add: Gap related to FY 2010-11 approved in tariff order dated 30th March 2012	164	164	-
Add: Gap related to FY 2011-12 approved in tariff order dated 30th March 2012	467	467	-
Annual Transmission Charges entitled to recover in FY 2012-13	3,076	2,818	258
Less: Revenue from Tx Business	3,076	3,076	-
Revenue Gap	(0)	(258)	(258)

6.12.2 TANTRANSCO requests the Hon'ble Commission to consider the justification given by TANTRANSCO and approve the ARR for FY 2012-13 as shown in the table above and adjust the surplus in the transmission charges of FY 2013-14.

7. ANNUAL TRANSMISSION CHARGES: FY 2013-14

7.1 Introduction

- 7.1.1 This chapter outlines the details of Annual Transmission Charges and its components proposed by TANTRANSCO for the year FY 2013-14 based on the projections carried out in the year FY 2012-13.
- 7.1.2 The Electricity Act 2003 provides that a STU (TANTRANSCO) should provide intra state transmission system for use by any licensee or generating company on payment of the transmission charges; or any Consumer as and when it requests for the open access on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission.
- 7.1.3 It is necessary that all the costs are recovered through the proposed method of charging the use of system and other components thereof. Even stranded costs, if any, resulting from intra state transmission, need to be recovered so that the financial viability of the TANTRANSCO is established. For the purpose of this petition the user charges leviable for Intra State Transmission is termed as **“Transmission Charges”**.
- 7.1.4 Components of User Charges: - The users of the TANTRANSCO transmission system use the system for transferring the energy and hence are liable to pay the transmission charges towards the use of TANTRANSCO grid. Beneficiaries utilizing transmission system would be billed by calculating the percentage on the basis of their megawatt capacity allotted to the transmission system per month (billing cycle) as per the present policy or any other method as approved by the Hon’ble Commission.
- 7.1.5 TANTRANSCO also requires generating adequate amount of profit from its operations so that it can maintain the system properly and simultaneously take up R&M projects to upgrade its transmission system. It also needs to incur capital expenditure for creating capacities which are required to cater to the future needs of the system.
- 7.1.6 In the circumstances mentioned above, it will be just and proper that the transmission tariff and charges for the assets covered under this petition be allowed to be charged from the beneficiaries on the basis set out in paragraph above. The petitioner submits that the enclosures may please be treated as an integral part of this petition.

7.2 Operation & Maintenance Expenses

- 7.2.1 O&M Expenses for FY 2013-14 have been arrived at on the basis of escalation over the O&M expense of previous years. O&M expense comprises of employee expense, A&G expense and R&M expense. The methodology and the escalations adopted for O&M expense is similar to that adopted in the year FY 2012-13 specified in para 6.3 of this petition.

7.2.2 The Employee Expense of TANTRANSCO for the year FY 2013-14 is proposed as under:

Table 41: Proposed Employee Expenses for FY 2013-14

Rs. Crs	
Details	FY 2013-14
	Projected
Salary	220.54
Overtime wages	67.08
Dearness Allowance	62.46
Other Allowances	16.19
Bonus & Exgratia	6.79
Medical expenses reimbursement	0.39
Leave Travel concession	0.06
Earned Leave encashment	22.85
Terminal benefits	27.58
Staff welfare expenses	6.62
Grand Total	430.56
Less: Capitalisation	84.88
Net Expenses	345.68

7.2.3 Administration & General expenses mainly comprises of rents, telephone and other communication expenses, professional charges, conveyance and travelling expenses etc. The escalations considered are similar to the rates applied for the year FY 2012-13. The proposed A&G expenses for the year FY 2013-13 is as follows:

Table 42: Proposed A&G Expenses for FY 2013-14

Rs. Crs	
Details	FY 2013-14
	Estimate
Rent, Rates & Taxes	0.46
Conveyance & Travel	9.47
Legal & Consulting Charges	0.26
Telephone/Postage/Telegram/Telex charges	1.00
Electricity & Water Charges	0.27
Advertisement Expenses	0.09
Misc Expenses	0.69
Watch and Ward Services	3.64
Freight	0.97
Others	2.40
Total Admin and General Expenses	19.25
Less: Capitalized	11.31
Net Admin and General Expenses	7.94

7.2.4 Repair and Maintenance expenses depend upon the population of the substation, age of the transmission lines. R&M expenses are generally incurred in order to ensure the maintenance of the transmission lines/systems. The major components of Repairs and Maintenance cost are Substation equipment and transformer maintenance cost, line maintenance cost, auxiliary consumption charges, substation maintenance (O&M) charges and general civil maintenance of substation infrastructure and buildings.

7.2.5 The proposed R&M charges for FY 2013-14 is shown in the table below:

Table 43: R&M Expenses for FY 2013-14

Rs. Crs	
Details	FY 2013-14
	Estimate
Plant & Machinery	4.03
Building	0.09
Civil Works	0.28
Lines & Cable network	3.74
Vehicles	0.40
Furniture & Fixtures	0.00
Office equipments	0.17
Total Expenses	8.71
Less: Capitalisation	1.45
Net Repair & Maintenance expenses	7.26

7.2.6 Based on above paragraphs, the proposed O&M cost for TANTRANSCO for the year FY 2013-14 is **Rs. 361 Crs.** The breakup of O&M expenses for the year FY 2013-14 is shown as under:

Table 44: O&M Expenses for FY 2013-14

Rs. Crs	
Particulars	FY 2013-14
	Projections
Employee Expense	346
Administration & General Expenses	8
Repair & Maintenance Expenses	7
Total	361

7.2.7 It is requested to the Hon'ble Commission to approve the O&M expenses as showcased in the above table.

7.3 GFA and Depreciation

7.3.1 The depreciation rate considered in the petition are in line with the rates specified in the Tariff Regulations. The total depreciation is calculated on the opening balance of the Gross Fixed Assets (GFA) and on a average basis on the addition of the assets during the year.

7.3.2 This is calculated in line with the tariff regulations and the APTEL order, the abstract of which is outlined below:

The Honble Appellate Tribunal vide its Order dated July 15, 2009 (Appeal No. 137 of 2008) allowed the Appeal and ruled as under (TPC Vs MERC):

"In view of the provisions of the Tariff Regulations the Companies Act and the Accounting Standard-6, we find full justification and rationale in the contention of the appellant that proportionate depreciation has to be allowed even for part of the year when the assets have been put to use. The asset once put to use will be exposed to wear and tear which will not wait to depreciate till the start of the new financial year. We, therefore, allow the appeal in this view of the matter also."

7.3.3 In line with the above decision of Hon'ble Appellate Tribunal, TANTRANSCO has claimed depreciation on the assets added during the year by assuming that the assets will be added during the mid of the year.

7.3.4 The depreciation charge proposed for the year FY 2013-14 is **Rs. 391 Crs.** The average rate of depreciation as a percentage of the Opening GFA for the year FY 2013-14 works out to 2.75%.

Table 45: GFA and Depreciation for FY 2013-14

Particulars	Rs. Crs
	FY 2013-14
	Projections
Opening Gross Block	14,221
Additions	2,611
Closing Gross Block	16,832
Depreciation during the year	391
Rate of Depreciation	2.75%

7.3.5 The Hon'ble Commission is requested to approve the depreciation as projected by TANTRANSCO for the year FY 2013-14.

7.4 Interest Calculation

7.4.1 Interest calculations have been estimated based on the heads viz Interest on Loan and Interest & Finance charges. The Interest on Loan for the year FY 2013-14 is proposed at **Rs. 1437 Crs** and interest capitalised is **Rs. 258 Crs.**

7.4.2 The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. The Interest and Finance charges for the year FY 2013-14 is **Rs. 29 Crs.** The Interest and Finance charges for FY 2013-14 have been arrived considering an escalation of 10% over the previous year.

7.4.3 The interest calculation proposed for the year FY 2013-14 is shown in the table below:

Table 46: Interest and Finance Charges for FY 2013-14

Particulars	Rs. Crs
	FY 2013-14
	Projections
Interest on Loan	1,437
Interest & Finance charge	29
Less: Interest Capitalized	258
Total	1,208

7.4.4 The Hon'ble Commission is requested to approve the Interest on Loan and Interest & Finance charge as projected for the year FY 2013-14.

7.5 Capital Expenditure and Capitalization

7.5.1 For improving the transmission network availability and to strengthen the overall transmission network, TANTRANSCO proposes massive Capital Expenditure in construction of new transmission lines and substation along with augmentation and R&M work. The detailed breakup of proposed capital expenditure during the control period of FY 2013-14 has been indicated below:

Table 47: Capital Expenditure proposed for FY 2013-14 (Rs. Crs)

		Rs. Crores
Sr. No	Particulars	FY 2013-14
I	New Projects	
	400 kV Sub Stations	578
	230 kV Sub Stations	539
	110 kV Sub Stations	208
		-
	400 kV Lines	693
	230 kV Lines	472
	110 kV Lines	213
II	Improvement of SS/lines	
	SS	66
	LINES	-
	400 kV Lines	1,373
	230 kV Lines	110
	110 kV Lines	174
	HTLS	-
III	Enhancemnet / Additional Power Transformers	100
	Total Capital Expenditure	4,525

Table 48: Capitalisation proposed for FY 2013-14 (Rs. Crs)

		Rs. Crores
Sr. No	Particulars	FY 2013-14
I	New Projects	
	400 kV Sub Stations	-
	230 kV Sub Stations	194
	110 kV Sub Stations	55
		-
	400 kV Lines	-
	230 kV Lines	146
	110 kV Lines	38
II	Improvement of SS/lines	
	SS	24
	LINES	-
	400 kV Lines	1,957
	230 kV Lines	10
	110 kV Lines	86
	HTLS	-
		-
III	Enhancemnet / Additional Power Transformers	100
	Total Capitalization	2,611

7.5.2 The funding of the CAPEX is shown in the table below:

Table 49: Funding of Capitalization for FY 2013-14 (Rs. Crs)

		Rs. Crores
Particulars	FY 2013-14	
Total Capex	4,525	
Total Capitalization	2,611	
Funding of Capitalization		
Total Debt (70%)	1,828	
Total Equity (30%)	783	

7.6 Working Capital and Interest on Working Capital

7.6.1 TANTRANSCO would like to submit that interest on working capital in the petition has been claimed on the normative basis.

7.6.2 Further, the Tariff Regulations stipulates that rate of interest on working capital shall be considered on normative basis and shall be equal to the short-term Prime Lending Rate of State Bank of India as on the date on which the application for determination of tariff is made.

7.6.3 Based on the above Regulations, TANTRANSCO is entitled on the interest on working capital as shown in the table below:

Table 50: Interest on Working Capital for FY 2013-14

Rs. Crs	
Particulars	FY 2013-14
	Projections
O & M expenses	30
Maintenance Spares	177
Receivables	420
Total Working Capital	627
Rate of Interest on Working Capital	14.75%
Total Interest on Working Capital	93

7.7 Reasonable Return on Equity

7.7.1 TANTRANSCO has calculated Return on Equity for the year FY 2013-14 on the basis on the average equity for the corresponding year. This has been done in line with the TNERC Regulations. The Normative Rate of Equity has been taken at 14%.

7.7.2 The Hon'ble Commission in its previous tariff order has disallowed Return on Equity on the grounds that loan borrowing is more than the capital expenditure incurred. However, TANTRANSCO has explained the necessity of RoE in **Para 3.6**.

7.7.3 The Reasonable Rate of Return proposed by TANTRANSCO for the year FY 2013-14 is shown in the table below:

Table 51: RoE for FY 2013-14

Rs. Crs	
Particulars	FY 2013-14
	Projections
Opening Equity	2,887
Additions during the year	783
Closing Equity	3,670
Average Equity	3,278
Return on Equity (%)	14%
Total	459

7.7.4 Based on the foregoing paragraphs, TANTRANSCO requests the Hon'ble Commission to approve the Reasonable Rate of Equity for FY 2013-14 at **Rs. 459 Crores**.

7.8 Other Income

7.8.1 The Other Income includes interest on staff loans, income from investment, income from trading, interest from banks, income from short term open access, etc. The amount of Other Income for the year FY 2013-14 is arrived at by escalation over the values from previous years. The escalation for interest on staff loans & advances,

delayed payment surcharge, income from staff welfare has been considered at 10% while on other hand particulars such as Interest on Advance to suppliers, interest from banks are escalated by 5%,

7.8.2 The Other Income for FY 2013-14 works out to **Rs. 41.83 Crores** and the Hon'ble Commission are requested to approve the same.

7.9 Other Debits and Prior Period Income

7.9.1 Other Debits proposed by TANTRANSCO for the year FY 2013-14 is **Rs. 3 Crores**. Other debit expense has been arrived at with an escalation of 10% over the previous year.

7.9.2 Further for the year FY 2013-14 TANTRANSCO has not considered any prior period income.

Table 52: Other Debits & Prior Period Expenses for FY 2013-14

Particulars	Rs. Crs
	FY 2013-14 Projections
Other Debits	2.52
Prior Period Income	-
Total	2.52

7.9.3 The Hon'ble Commission is requested to approve the Other Debits as proposed by TANTRANSCO for the year FY 2013-14.

7.10 Incentive

7.10.1 The incentive computation is based on the availability considered to be equivalent to FY 2011-12. TANTRANSCO feels that it will be able to maintain the same System Availability which is considered to be the efficient system availability. The incentive available to TANTRANSCO works out to be Rs. 40.24 Crs.

Table 53: Incentive for FY 2013-14

Sr. No.	Particulars	Rs. Crs
		FY 2013-14 %
1	Equity (@ 1%)	3278
2	Annual Availability achieved	100%
3	Target Availability	98%
4	Incentive	51

7.11 Submission to CERC for Approval of Transmission Tariff

7.11.1 TANTRANSCO has filed a petition for approval of Transmission Tariff for the interstate transmission lines owned by TANTRANSCO upto the border of Tamil Nadu for the period FY 2012 - 14 before CERC for the following lines:

- i. Chittoor – Tniruvalam 230 kV SC line
- ii. Sulurpet – Gummidipoondi 230 kV SC line
- iii. Yeerandahalli – Hosur 230 kV SC line
- iv. Mooziyar – Theni 230 kV SC line
- v. Iduki – Udumalpet 230 kV SC line

7.11.2 The petition is filed under CERC (Terms & Conditions of Tariff) Regulations 2009. TANTRANSCO would like to submit that the matter is subjudice with CERC and also the impact of the transmission tariff has not been considered in the current petition for APR FY 2012-13 and ARR for FY 2013-14.

7.12 Annual Transmission Charges

7.12.1 Based on the category-wise expenses as described above, the Actual Aggregate Revenue Requirement for FY 2013-14 for TANTRANSCO has been summarised in the table given below for the approval of the Hon'ble Commission.

Table 54: Annual Transmission Charges for FY 2013-14

Particulars	Rs. Crs
	FY 2013-14 Projected
O&M Expense	361
Employee Expense	346
Repair & Maintenance Expenses	7
Administration & General Expenses	8
Depreciation	391
Interest & Finance charges	1,208
Interest on Working Capital	93
Return on Equity	459
Other Debits	3
Incentive	51
Annual Transmission Charges	2,564
Less: Other Income	42
Net Transmission Charges	2,522

8. DETERMINATION OF TARIFF FOR FY 2013-14

8.1.1 As per regulation 6 (1) of MYT Regulation, it states that

1) *The State Transmission Utility / Transmission licensee shall make an application for determination of Transmission tariff for each year of the control period in accordance with the provisions in Tariff Regulations.*

8.1.2 As per Regulation 20 of MYT regulations, it states that

20) Determination of Transmission charges

The transmission charges payable by the long term intra state open access customers like the distribution licensees and other beneficiaries, for each year shall be arrived at as per Regulation 59 of the Tariff Regulations. The charges for usage of transmission facilities by long term beneficiaries shall be based on the capacity allotted and on MW / Day basis.

8.1.3 TANTRANSCO is required to file a petition for determination of tariff for FY 2013-14 based on revenue gap / (Surplus) resulted from previous years.

8.1.4 The Hon'ble Commission has approved the tariff for FY 2012-13 in its Tariff Order dated 30th March 2012. Based on the actual true-up of FY 2010-11, provisional true-up of FY 2011-12 and for FY 2012-13, TANTRANSCO propose the following tariff and requests the Hon'ble Commission to approve the same.

Table 55: Transmission Charges proposed for FY 2013-14

Sr. No.	Transmission Tariff	Unit	FY 2013-14
1	Annual Transmission Charges for FY 2013-14	Rs. Crores	2,522
2	Add: Revenue gap/(Surplus) for FY 2010-11 Computed in this petition	Rs. Crores	155
3	Add: Revenue gap/(Surplus) for FY 2011-12 Computed in this petition	Rs. Crores	(53)
4	Add: Revenue gap/(Surplus) for FY 2012-13 Computed in this petition	Rs. Crores	(258)
6	TOTAL RECOVERIES OF THE PAST (2+3+4+5)	Rs. Crores	(156)
7	ARR after considering Gaps of Previous years (1+6)	Rs. Crores	2,366
8	Total MW Allocation in FY 2013-14	MW	21,984
9	Transmission Tariff (Rs/MW/day)	Rs/MW/day	2,949
10	Transmission Tariff for Short Term open access	(Rs./MW/Hr)	122.88

8.1.5 TANTRANSCO submits that the gap / (surplus) calculated for previous years are adjusted while calculating transmission charges for FY 2013-14 without considering any carrying cost for the same.

9. TRANSMISSION CHARGES FOR CONTROL PERIOD

The Tamil Nadu Electricity Regulatory Commission notified the Regulations “TNERC (Terms and Conditions of Tariff) Regulations, 2005 and MYT Regulations, 2009 for the determination of tariff based on certain norms of operation and financial parameters.

As per the Amendment to Tamil Nadu Electricity Regulatory Commission Terms and conditions for determination of tariff for intra state transmission / Distribution of Electricity under MYT framework Regulations 2009 dated 28th November 2012, the control period is defined as:

“(i) Control Period: The control period under the MYT framework shall be for a duration of 3 years. The year preceding the first year of the control period shall be the base year.;”

Based on the above amendment, the control period for TANTRANSCO will be from FY 2013-14 to FY 2015-16. However, since the ARR for FY 2013-14 has already been determined in the petition in Chapter 7, this chapter provides details of the expenditure estimates of TANTRANSCO for the balance Control Period from 2014-15 to 2015-16 which are proposed to be approved by the Hon’ble Commission to work out applicable transmission charges.

9.1 Principles for determination of ARR

- 9.1.1 The Electricity Act 2003 provides that the STU (TANTRANSCO) should provide intra state transmission system for use by any licensee or generating company on payment of the transmission charges; or any Consumer as and when it requests for the open access on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission.
- 9.1.2 It is necessary that all the costs are recovered through the proposed method of charging the use of system and other components thereof. Even stranded costs, if any, resulting from intra state transmission need to be recovered so that the financial viability of the TANTRANSCO is established. For the purpose of this petition the user charges leviable for Intra State Transmission is termed as **“Transmission Charges”**.
- 9.1.3 Components of User Charges: - The users of the TANTRANSCO transmission system use the system for transferring the energy and hence are liable to pay the transmission charges towards the use of TANTRANSCO grid. Beneficiaries utilizing transmission system would be billed by calculating the percentage on the basis of their megawatt capacity allotted to the transmission.
- 9.1.4 TANTRANSCO also requires generating adequate amount of profit from its operations so that it can maintain the system properly and simultaneously taking up R&M projects to upgrade its transmission system. TANTRANSCO also needs to incur capital expenditure for creating capacities which are required to cater to the future needs of the system.
- 9.1.5 In the circumstances mentioned above, it will be just and proper that the transmission tariff and charges for the assets covered under this petition be allowed to be charged from the beneficiaries on the basis set out in para above. The petitioner submits that the enclosures may please be treated as an integral part of this petition.

9.2 Details of Fixed Cost for Control Period

This section discusses the approach employed to compute the fixed cost for the transmission system for the control period which is based on the audited accounts for the FY 2010-11, provisional accounts for FY 2011-12, estimates for FY 2012-13 & ARR for FY 2013-14. The Annual Revenue Requirement for the control period is projected based on methodologies discussed in detail in subsequent paragraphs.

Projection of Operational Performance

9.2.1 Transmission Losses

TANTRANSCO has a projected gradual increase in efficiency and reduction in transmission loss in past. TANTRANSCO takes central power into account after the calculation of inter-state transmission losses for the total quantum injected into the Tamil Nadu Grid and other input within the State for calculation of intra-state transmission loss calculation.

The actual loss in the Intra-State transmission system is 4.71% for FY 2010-11 and provisional is expected to be around 4.25% in FY 2011-12. The proposed transmission losses also factor the fact that the current load is present on the southern side, whereas the generation is predominantly on the other part of the States. As this situation is expected to continue in the future, the transmission loss being a function of the quantum of power, direction of power flow in the network and the inherent technical loss present in the wire network, for the next five year period of FY 2013-14 to FY 2015-16, the proposed loss will be 4.25%. TANTRANSCO humbly requests the Hon'ble Commission to approve the Intra-State Transmission loss as 4.25% for the control period.

9.2.2 System Availability and incentive

As per the clause 58(b) of the Tariff Regulations, overall normative system availability for recovery of full transmission Charges is 98%. Since the past system availability is more than 99%, TANTRANSCO proposed to maintain the system availability of 99.54% for the MYT control period FY 2013-14 to FY 2015-16 which is equivalent to FY 2011-12. Accordingly TANTRANSCO has claimed incentive as per clause 16 of MYT Regulations which is @ 1% of equity for each percentage point of increase in annual availability and calculated as follows:

$$\text{Incentive} = \text{Equity} * (\text{Annual Availability achieved} - \text{Target availability}) / 100.$$

9.2.3 Loading of Transmission system

TANTRANSCO is expecting additional loading of MW from central, state and private generating station which will make the total loading on TANTRANSCO system as given below:

Table 56: Transmission loading for control period

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Sources of Power	Projections of Loading of Transmission System (MW)		
<u>State Generating Station</u>			
Coal	4,332	4,332	4,936
Gas	491	491	491
Hydro	2,283	2,283	2,283
Wind	17	17	17
Total State Generating Station	7,123	7,123	7,727
Central Generating Station	5,012	5,475	5,475
IPP's	1,106	1,106	1,106
Non-Conventional Energy Sources	8,743	8,743	8,743
Other sources	-	-	-
Total Loading	21,984	22,447	23,051

9.2.4 Proposed Capital Expenditure for FY 2013-14 to FY 2015-16

For improving the transmission network availability and to strengthen the overall transmission network, TANTRANSCO proposes massive Capital Expenditure in construction of new transmission lines and substation along with augmentation and R&M work. The detailed breakup of proposed capital expenditure during the control period FY 2013-14 to 2015-16 has been indicated below:

Table 57: Capital Expenditure proposed for Control Period

		Rs. Crores		
Sr. No	Particulars	FY 2013-14	FY 2014-15	FY 2015-16
I	New Projects			
	400 kV Sub Stations	578	1,311	309
	230 kV Sub Stations	539	493	277
	110 kV Sub Stations	208	140	140
		-	-	-
	400 kV Lines	693	2,027	507
	230 kV Lines	472	730	231
	110 kV Lines	213	176	154
		-	-	-
II	Improvement of SS/lines	-	-	-
	SS	66	64	64
	LINES	-	-	-
	400 kV Lines	1,373	409	530
	230 kV Lines	110	101	43
	110 kV Lines	174	76	150
	HTLS	-	185	-
		-	-	-
III	Enhancemnet / Additional Power Transformers	100	100	100
	Total Capital Expenditure	4,525	5,812	2,505

Table 58: Capitalisation proposed for Control Period

Sr. No	Particulars	FY 2013-14	FY 2014-15	FY 2015-16
I	New Projects			
	400 kV Sub Stations	-	1,671	529
	230 kV Sub Stations	194	735	307
	110 kV Sub Stations	55	206	140
	400 kV Lines	-	2,311	917
	230 kV Lines	146	950	256
	110 kV Lines	38	279	154
		-	-	-
II	Improvement of SS/lines			
	SS	24	80	64
	LINES	-	-	-
	400 kV Lines	1,957	400	346
	230 kV Lines	10	222	43
	110 kV Lines	86	174	170
	HTLS			
III	Enhancemnet / Additional Power Transformers	100	100	100
	Total Capitalization	2,611	7,127	3,026

The funding of the CAPEX is shown in the table below:

Table 59: Funding of CAPEX for the control period

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Total Capex	4,525	5,812	2,505
Total Capitalization	2,611	7,127	3,026
Funding of Capitalization			
Total Debt (70%)	1,828	4,989	2,118
Total Equity (30%)	783	2,138	908

The figures given below depict Substations and Network proposed to be constructed as per the CAPEX plan for the control period FY 2013-14 to 2015-16.

Table 60: Network proposed to be added in control period

Particulars	Unit	FY 2013-14	FY 2014-15	FY 2015-16
<u>New Substations and associated lines</u>				
400 kV Substation	Nos.	1	9	5
230 kV Substation	Nos.	9	14	6
110 kV Substation (New)	Nos.	27	28	28
110 kV Substation (U/G. /intro)	Nos.	12	12	12
<u>Link Lines / Improvement in lines</u>				
EHT lines	Ckt. Km	1958	100	100
230 kV Lines	Ckt. Km	361	100	100
110 kV Lines	Ckt. Km	500	1000	500
Power Transformers Enhancement	Nos.	120	120	120

Rationale for Capital Expenditure

This capital expenditure is mainly for establishment of new substations along with associated transmission network to take care of the existing and future load demand. In addition to above, the Capital Expenditure is required for following purposes:

- To reduce load on existing substation and transmission lines;
- To meet demand & load growth;

- To maintain % voltage regulation and peak load with permissible limit;
- Reliable system availability.
- Strengthen the transmission network for system improvement like voltage profile, catering more power, etc
- In view of the evacuation of around wind power and Kudunkalam power as well as to strengthen the transmission network and associated transmission lines are quite necessary.
- Augment of existing infrastructure in the transmission network, considering the existing over-loading on the equipments and future increase in load demand.

Major CAPEX Schemes

1. Japan International Cooperation Agency (JICA):

- A Memorandum of Understanding (MoU) has been signed between the Government of India and Government of Japan for availing a loan assistance of Rs 3500 crore from JICA for the improvement of Transmission system in Tamil Nadu.
- Under the Transmission System Improvement undertaken throughout the state of Tamil Nadu for the next 5 years, TANTRANSCO proposes to install 5 sub-stations of 400 KV and 14 sub-stations of 230 KV. TANTRANSCO also proposed to induct Low Loss (LL) conductor and High Temperature Low Sag (HTLS) conductor under selected transmission lines. Furthermore, 400 KV GIS sub-stations and 400 KV UG Cable are also proposed to be installed in Chennai.
- Around Rs. 3078.60 Crs has been tied up with an interest rate of 0.55% and moratorium period of 10 years and 0.1% as a commitment charges on the difference in the amount balance to be disbursed.

2. R-APDRP works executed by TANTRANSCO

- Restructured Accelerated Power Development and Reforms Programme (R-APDRP) is being implemented in TNEB during the XI Five Year Plan as a Central Sector Scheme under MoP. M/s PFC, New Delhi, is the nodal agency for the scheme.
- R-APDRP is being implemented in two parts, Viz., Part-A & Part-B. Part-A includes establishment of IT infrastructure to deploy Information technology in the areas of establishment of baseline data, Energy Accounting & Auditing, Customer satisfaction, SCADA/DMS etc.
- Part-B includes regular distribution strengthening works aimed at actual & demonstrable performance in terms of reduction of Aggregate Technical & Commercial (AT&C) losses in the Project Area on a sustained basis for 5 years commencing one year after the completion of Part-A works. Part-B guidelines are enclosed herewith.
- SCADA/DMS implementation in 7 towns with population more than 4 Lakhs & Annual energy input more than 350 MU is sanctioned for a total value of Rs. 182.17 Crores.
- Part-B DPRs for 87 towns of Tamil Nadu in 5 slots (with a span of schedule end dates from 18.03.13 to 21.02.14) have been sanctioned by MoP/PFC for a total value of Rs. 3279.56 Crores including new Substations at 110/33/22/11KV level and related works and other distribution strengthening works.
- In this regard, the following works have been entrusted to TANTRANSCO.

- ▶ Works to Transmission Wing amounting to Rs. 199.17 Crores :
 - a. 33 Nos. of new Substations at 110/33/22/11KV level (in towns other than Chennai project area) sanctioned for a value of Rs. 74.33 Crores.
 - b. Of the above 6 Nos. new Substations have been commissioned so far.
 - c. Enhancement of 63 Nos. existing Power Transformers at 110/33/22/11KV level at various Substations sanctioned for a total value of Rs. 73.05 Crores.
 - d. Erection of 19 Nos. additional power transformers at various Substations sanctioned for a total value of Rs. 30.92 Crores.
 - e. Of the above, 10 Nos. Power transformers in the category of enhancement of capacity have been commissioned so far.
 - f. Erection of 23 Nos. Capacitor Banks on turnkey basis sanctioned for a total value of Rs. 4.40 Crores at various SS.
 - g. Renovation & Modernisation of existing of SS like replacement of Breakers, CTs, PTs, Batteries etc., sanctioned for a total value of Rs. 16.47 Crores.
- ▶ Works to P&C wing amounting to Rs. 182.17 Crores in Part-A (SCADA/DMS implementation) & Rs. 482.14 Crores in Part-B :
 - a. Implementation of SCADA/DMS in 7 Project towns, viz., Chennai, Coimbatore, Madurai, Trichy, Salem, Tirunelveli and Tirupur.
 - b. Provision of 28022 Nos. Automatic Power Factor Correction Panels on turnkey basis at the LT side of the DTs sanctioned for a total value of Rs. 128.54 Crores.
 - c. Installation of total No. of 2954 Nos. of new automated 11KV & 22KV RMUs on turnkey basis for enabling SCADA/DMS in Chennai, Coimbatore, Madurai, Trichy, Salem & Tirunelveli towns and 20 Nos. of standalone 11KV RMUs for Kanchipuram(non-SCADA) town sanctioned for a total value of Rs. 223.59 Crores and 250 Nos. of automated 11KV RMUs are to be installed for a value of Rs. 42.92 Crores in Tirupur under Board's funds.
 - d. Installation of 1348 Nos. of new automated Sectionalisers for enabling SCADA/DMS in towns as above except Kanchipuram sanctioned for a total value of Rs. 87.09 Crores.

Fixed Cost for FY 2013-14 to FY 2015-16

Total fixed cost for the control period has been bifurcated into following elements:

- O & M Expenses:
 - ✓ Employee cost;
 - ✓ Administrative and general expenses;
 - ✓ Repairs and Maintenance expenses;
- Depreciation;
- Interest and Financing Charges;
- Return on Equity;
- Interest on Working Capital;
- Insurance;

9.2.5 Operation and Maintenance expenses (O&M)

9.2.5.1 O&M Expenses for the control period have been arrived at on the basis of escalation over the O&M expense of previous years. O&M expenses comprises of employee expense, A&G expense and R&M expense. As per TNERC (Terms & Conditions for determination of tariff) Regulations 2005, O&M expenses are to be derived on the basis of actual O&M expenses for the last 5 years based on the audited accounts. However, TANTRANSCO would like to submit that it was unbundled from the erstwhile TNEB on 01st Nov 2010. As such, it is difficult for TANTRANSCO to derive the O&M expenses pertaining to generation and distribution activities for the last 5 years.

9.2.5.2 The Hon'ble Commission may appreciate that on unbundling of the State Electricity Board and functioning of the TANTRANSCO as an independent company, the expenses have been increasing substantially as compared to the cost incurred when the TANTRANSCO functions were being conducted by erstwhile Tamil Nadu State Electricity Board, as the TANTRANSCO has to undertake independently number of activities such as planning, safety, quality assurance, human resources, IT, corporate office, regulatory affairs, legal, accounts, finances, auditing etc and various miscellaneous activities. Therefore, it is submitted that since the company has been formed in line with the transfer scheme notified by State Government, the comparison of the past year data wont arise and it will be erroneous to calculate average O&M expenses for the last five year to arrive at the O&M expenses for projection purpose.

9.2.5.3 TANTRANSCO would also like to submit that the tariff regulations provide for only 4% escalation to the average O&M cost which needs to be considered as a base cost for escalation and projection purpose. TANTRANSCO would like to submit that mere 4% escalation would not suffice enough for O&M expenses for following reason:

1. The real inflation factors itself is more than 7% for last one year;
2. Certain cost such as material cost, labour used for R&M, employee cost etc are not in the control of TANTRANSCO. The cost of material varies based on the market trend and the employee cost are more in the nature of standard costs and it does not retain much control over the same;
3. Since this is the early stage of the formation of the company, there are many expenses which will be resulted due to such segregation of the erstwhile TNEB;
4. Even the riskfree interest rate is around 6% which means that it guarantees the consumer to have a investment which take care of inflation.

9.2.5.4 Although the TNERC (Terms & Conditions for determination of tariff) Regulations 2005 provides for an escalation of 4% on O&M expenses for previous year; TANTRANSCO has considered escalation rates on the basis of certain ground realities. The rationale for considering the rates for certain particulars is given below:

A. Employee Cost:

i. Salaries

- The basic salary and the grade pay have been considered at an escalation of 5%. This is on account of the fact that yearly increments on the basic salary and grade pay are provided at 3%. Further, seniority based promotions are being provided depending on the number of vacancies created every year; for which an additional 3% rise is provided to the employees who are promoted. Also, due to assigning of additional responsibilities to the officers, 20% of the basic and grade pay will be additionally paid for a maximum of 5 months depending on the vacancies and the nature of work. Hence, considering all the above factors, basic salary and grade pay are escalated at 5% for the year FY 2012-13.
- TANTRANSCO would like to submit that, wage revisions are generally provided to the employees once in four years. The last revision came in on 1st Dec 2011 which is already due and is in process of being finalized in the current year and for this purpose a committee has been formed. The next wage revision will be from 1st Dec 2015. Therefore, a hike of 10% has been considered for the years FY 2012-13 and FY 2015-16.

ii. Dearness Allowance

- The rate of dearness allowance is applied on the basic salaries plus grade pay; the rate is subjected to revision as notified by the Central Government in every six months i.e. in January and July on the basis of consumer price index. the DA rates in effect in the previous years were as under:

Table 61: Dearness Allowance rates for past years

Year	1 st Half	2 nd Half	% Hike
2010	35	45	29%
2011	51	58	29%
2012	65	72	24%

- Based on the trend during previous years, the escalation of DA rate is considered at 15%.

iii. Surrender Leave Salary, Terminal Benefits (including pension), Pension Scheme

- The amount equivalent to 15 days of salary and DA with applicable HRA is generally encashed by employees every year. In addition, the leave salary for the period of 8 months or the amount pertaining to balance leave whichever lesser is paid at the time of retirement to the retirees. Since this includes both DA and a lump sum of 8 month salary, the escalation is considered at 10%. Likewise, the emoluments related to Terminal Benefits (including pension) also tend to increase every year. Hence, escalation for surrender leave salary and terminal benefits (including pension) is considered at 10%. On the Basic and DA quantum of eligible employees to Contributory Pension Scheme (CPS), the utility has to contribute 10% as employer's portion and thus a hike of 10% over previous years has been considered for CPS.

B. Administration & General Expenses

i. Legal Fees, Audit Fees & Professional charges

- The fees payable to AG Auditors, Statutory Auditors, Advocate General, Technical experts, Design & developers are booked under this group which are getting inflated in manifold. Moreover the related expenditure like travelling expenditure and allowances incurred on these activities will also be accounted under this head. Thus an escalation of 10% is considered.

ii. Watch & ward Expenses:

- The engagement of retired Ex-servicemen for the security purposes was made in all power stations, certain sub-stations and central stores, etc. The expenditure relating to these particulars are increased every year on the basis of hike in DA and certain annual increase and thus 10% escalation has been considered.

iii. Salary to fire service personnel:

- Similar to the ex-service men, the fire service personnel from Government Department are being engaged in power stations whose expenses is also governed as per DA hike, etc. Thus 10% hike may be taken.

C. Repair & Maintenance Expenses

- i. For the other particulars of the above expenses and R&M expenses, the escalation has been considered at 4% which is in line with the TNERC (Terms & Conditions for determination of Tariff) Regulations 2005.

Table 62: O&M Expenses for the Control Period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
Employee Expense	346	370	405
Administration & General Expenses	8	8	9
Repair & Maintenance Expenses	7	8	8
Total	361	385	422

9.2.6 Depreciation

- 9.2.6.1 The Tariff regulations provide for recovery of Depreciation under Paragraph 23 which is reproduced hereunder:

For the purpose of tariff, depreciation shall be computed in the following manners:

- (i) *The value base for the purpose of depreciation shall be historical cost of the asset.*
- (ii) *The depreciation shall be calculated at the rates as per the Annexure to these Regulations.*
- (iii) *The residual value of assets shall be considered as 10% and depreciation shall be allowed upto maximum of 90% of the estimated cost of the Asset.*
- (iv) *Land is not a depreciable asset and its cost shall be excluded from the capital cost while computing 90% of the historical cost of the asset.*
- (v) *The historical cost of the asset shall include additional capitalisation.*

- (vi) *Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for part of the year, depreciation shall be charged on pro-rata basis.*
- (vii) *After the assets are fully depreciated the benefit of reduced tariff shall be made available to the consumer.*

9.2.6.2 As per clause 8 of MYT Regulations, the method of computing Depreciation which is reproduced as under:

8) Depreciation

Depreciation rates shall be as per the Schedule annexed to the Tariff Regulations.

Addition to the asset base in each year of the control period shall be as per the approved capitalization schedule.

9.2.6.3 Depreciation has been calculated taking into consideration the opening balance of assets in the beginning of the year based on the provisional transfer scheme. The Depreciation rates are used as per the TNERC Tariff Regulations. The estimated depreciation for the control period is shown in the following table:

Table 63: Depreciation for the control period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
Opening Gross Block	14,221	16,832	23,960
Additions	2,611	7,127	3,026
Closing Gross Block	16,832	23,960	26,985
Depreciation during the year	391	539	693
Rate of Depreciation	2.75%	3.20%	2.89%

9.2.7 Interest & Finance Charges

9.2.7.1 Interest calculations have been estimated based on the heads viz Interest on Loan and Interest & Finance charges.

9.2.7.2 The interest expenditure on account of long-term loans depends on the outstanding loan, repayments, and prevailing interest rates on the outstanding loans. Further, the projected capital expenditure and the funding of the same also have a major bearing on the long-term interest expenditure.

9.2.7.3 The interest on the loan has been calculated considering the loans allocated to TANTRANSCO at the time of segregation of erstwhile TNEB and based on such notified transfer scheme, it is an obligation of TANTRANSCO to service such debts and repay the debt alongwith the interest.

9.2.7.4 The interest on the opening loans has been computed considering the weighted average rate of interest as per the existing loan arrangement and the interest rate at which the loan is sourced from financial institution for the projection period.

- 9.2.7.5 The funding for new capital expenditure in the control period has been assumed to be undertaken at a normative debt: equity ratio of 70:30 in accordance with the TNERC (Terms and Conditions of Tariff) Regulations, 2005 and accordingly the new loan additions during the year has been estimated.
- 9.2.7.6 For the purpose of repayment, average tenure of the loan has been assumed as 10 years for all TANTRANSCO loans and accordingly repayments for all years under consideration have been calculated.
- 9.2.7.7 The Interest and Finance charge comprises of Interest on General Provident Fund, Bank charges, premium on redemption etc. Also, commitment charges on JICA Loan of 0.1% on the balance outstanding to be disbursed in line with the agreement has been considered in the control period. The Interest and Finance charges for the control period have been arrived considering an escalation of 10% over the previous year.

Table 64: Interest and Finance Charges for Control period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
Interest on Loan	1,437	1,708	1,889
Interest & Finance charge	29	32	34
Less: Interest Capitalized	258	307	339
Total	1,208	1,433	1,584

9.2.8 Interest on Working Capital

- 9.2.8.1 The Interest on Working Capital in line with the clause 10 of MYT Regulations and clause 26 of Tariff Regulations which has been computed as follows:

Interest on Working Capital =

1. Operation and Maintenance Expenses for one month;
2. Maintenance spares @ 1% of the historical cost of the transmission asset escalated at 6% per annum from the date of commencement of operation;
3. Receivables equivalent to two months transmission charges calculated on target availability level.

- 9.2.8.2 As per regulation 10 of MYT Regulations and Regulations 27 of the Tariff regulations. The rate of interest on working capital shall be equivalent to short term primary lending rate of State Bank of India as on 1st April of the initial year of the control period. The rate of interest on working capital considered is 14.75% which is the SBI interest rate as on 1st April 2012.

- 9.2.8.3 The interest on working capital for the control period is as outlined below:

Table 65: Interest on Working Capital for Control period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
O & M expenses	30	32	35
Maintenance Spares	177	250	284
Receivables	420	549	688
Total Working Capital	627	831	1,007
Rate of Interest on Working Capital	14.75%	14.75%	14.75%
Total Interest on Working Capital	93	123	149

9.2.9 Other Expenses / debits

9.2.9.1 The other expenses comprise of the expenditure on account of interest to suppliers/contractors and other expenses viz. compensation for injuries to staff and outsiders. Nominal rise over previous year 5% has been considered. Other Expenses projected for control period is tabulated in the following table:

Table 66: Other Expenses / Debit for control period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
Material Cost Variance	0.03	0.04	0.04
Miscellaneous losses and write off	0.61	0.67	0.74
Extra Ordinary Items	2.75	3.03	3.33
Less:			
Fabrication charges added to the stock	0.00	0.00	0.00
Other debits capitalised	0.88	0.96	1.06
Total	2.52	2.77	3.05

9.2.10 Insurance

9.2.10.1 TNERC (Terms & Conditions for determination of tariff) Regulations, 2005 provides for a licensee to adopt practice of Self Insurance upto 0.5% of the capital cost. This is to insure the transmission assets against damage due to natural calamities viz earthquake, storms etc.

9.2.10.2 TANTRANSCO proposes the Insurance amount for the control period based on the Tariff Regulations. It is requested to the Hon'ble Commission to approve the Insurance amount as proposed by TANTRANSCO.

Table 67: Insurance for the control period

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
Insurance	-	119.80	134.93

9.2.11 Return on Equity

9.2.11.1 Return on Equity for TANTRANSCO for the control period has been calculated based on the average equity for the corresponding year. This has been done in line with the TNERC Regulations. The Normative Rate of Equity has been taken at 14%.

9.2.11.2 TANTRANSCO would like to submit that the opening equity is as per the 2nd provisional transfer scheme notified by the Government dated 2nd Jan 2012 and the GFA is funded partly by loan and equity. Accordingly, the opening equity and the GFA for the year FY 2010-11 are determined.

9.2.11.3 The Hon'ble Commission in its tariff order disallowed Return on Equity on the grounds that loan borrowing is more than the capital expenditure incurred. However, TANTRANSCO would like to submit that a utility is entitled for Return on Equity as the RoE earned is invested every year to carry out future capacity additions. The relevant extract of TNERC (Terms & Conditions of Tariff) Regulation 2005 is reproduced herein:

21. Debt-Equity Ratio

For the purpose of determination of tariff, debt-equity ratio as on the date of commercial operation of Generating Station and transmission projects, sub-station, distribution lines or capacity expanded after the notification of these Regulations shall be 70:30. Where equity employed is more than 30% the amount of equity shall be limited to 30% and the balance amount shall be considered as loans, advanced at the weighted average rate of interest and for weighted average tenor of the long term debt component of the investment”

“Provided that in case of a Generating Company or other licensees, where actual equity employed is less than 30%, the actual debt and equity shall be considered for determination of return on equity in tariff computation.” (Emphasis Added)

9.2.11.4 TANTRANSCO would like to submit that Return on Equity is a surplus generated which entitles a utility to safeguard itself against any uneven contingencies or a force majeure event in future. Also, clause 5.3(a) of the National Tariff Policy states that:

“Balance needs to be maintained between the interests of consumers and the need for investments while laying down rate of return. Return should attract investments at par with, if not in preference to, other sectors so that the electricity sector is able to create adequate capacity. The rate of return should be such that it allows generation of reasonable surplus for growth of the sector. (Emphasis Added)”

9.2.11.5 Also, APTEL order in the case for KPTCL v/s. KERC, states as follows:

The Appellate Tribunal observed that merely because there is no notification or allocation indicating the capital or investment or such other sum cannot be reason enough to deny return of equity.

9.2.11.6 TANTRANSCO is entitled on RoE on the opening balance of equity as per the second transfer scheme. The Reasonable Rate of Return of TANTRANSCO for the control period is shown in the table below:

Table 68: RoE for the control period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
Opening Equity	2,887	3,670	5,808
Additions during the year	783	2,138	908
Closing Equity	3,670	5,808	6,716
Average Equity	3,278	4,739	6,262
Return on Equity (%)	14%	14%	14%
Total	459	663	877

9.3 Other Income

9.3.1 The Other Income includes interest on staff loans, income from investment, income from trading, interest from banks, income from short term open access, etc. The amount of Other Income for the control period is arrived at by escalation over the values from previous years.

9.3.2 Income tax

9.3.2.1 As per the terms and condition of tariff, tax on the income streams of the transmission licensee from its core business, shall be computed as an expense and shall be recovered from the beneficiaries.

9.3.2.2 However, TANTRANSCO is allowed to offset their profit if any occurred during the year against the part of the accumulated losses of erstwhile TNEB and therefore is not suppose to claim any income tax and may become eligible for claiming income tax on the RoE from FY 2015-16.

Table 69: Income tax for the control period

Particulars	Rs. Crs
	FY 2015-16
	Projections
Normative RoE	877
Grossed up RoE @ MAT (20%)	1,096
MAT	219
Provision for Tax / Tax Expenses	219

9.3.3 ARR of TANTRANSCO

9.3.3.1 The table given below depicts the ARR of TANTRANSCO under MYT projection for the second control period FY 2013-14 to 2015-16.

Table 70: ARR of the control period

Particulars	Rs. Crs		
	FY 2013-14	FY 2014-15	FY 2015-16
	Projections		
O&M Expense	361	385	422
Employee Expense	346	370	405
Administration & General Expenses	8	8	9
Repair & Maintenance Expenses	7	8	8
Depreciation	391	539	693
Interest & Finance charges	1,208	1,433	1,584
Interest on Working Capital	93	123	149
Return on Equity	459	663	877
Other Debits	3	3	3
Insurance	-	120	135
Provision for Tax paid	-	-	219
Incentive	51	73	97
Annual Transmission Charges	2,564	3,338	4,177
Less: STOA Charges and Other Income	42	46	50
Net Transmission Charges	2,522	3,293	4,127

9.3.4 TANTRANSCO requests the Hon. Commission to approve the Net Annual Transmission Charges for the control period as proposed in the above table. These charges shall then be recovered from the existing consumers as per the methodology described in the next section.

10. METHODOLOGY FOR RECOVERY OF NET ANNUAL TRANSMISSION CHARGES

10.1 TNERC Regulations

10.1.1 Calculation of Transmission Charges

The transmission charges are fixed on the basis of the principles set out in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. As per clause 59(1), the methodology for calculation of transmission charges are highlighted as below:

“.....The annual transmission charges computed as per this regulation shall be total aggregate revenue requirement of the STU / Transmission licensee. The following shall be deducted from the total revenue requirement.

- a. Transmission charges collected from the short term intra state open access consumers, captive power plant and generating stations using Non Conventional Energy Sources.*
- b. Income from other business to the extent of portion to be passed on to the beneficiaries.*
- c. Reactive Energy Charges and Transmission charges received from CTU for use of facilities of the licensee / STU.*

Till such time a common transmission tariff is evolved to maintain consistency in transmission pricing framework in interstate and in the state transmission system the monthly transmission charges payable by the Distribution licensees and other long term intra state open access consumers shall be based on the capacity allocated to each beneficiaries as detailed below:

$$\left\{ \frac{TC - (a + b + c) \times CL}{12} \right\} \div SCL$$

Where TC = Annual Transmission Charges

a = Total transmission charges by the short term open access consumers

b = Income from other business to the extent of portion to be passed on to the beneficiaries.

c = Reactive Energy Charges and Transmission charges received from CTU for use of facilities of the licensee / STU

CL = Allotted capacity to the long term transmission customers

SCL= Sum of allotted Transmission capacity to all the long term open access customers of the intra state transmission system.

10.2 Payment of Transmission Charges

10.2.1 As per clause 61 of the Tariff Regulations, the total recovery of annual charges will be based on the target availability of 98% and below that will be on pro-rata basis. The same is stated as below:

“Full annual transmission charges shall be recoverable at the target availability of 98%. Payment of transmission charges below the target availability shall be on prorata basis.”

10.2.2 TANTRANSCO submits that since the system availability is more than 98% in FY 2010-11 to FY 2011-12, TANTRANSCO is proposing the total recovery of the transmission charges with incentive.

10.3 Components of Transmission Tariff

10.3.1 As per section 63 (3) of the Tariff Regulations 2005, it has been clearly stated that the petition needs to determine the transmission charges, system operation charges and reactive power charges. The clause has been stated as below:

3) *The components of transmission tariff are:*

a) Charges for use of network:

This component of transmission tariff shall be distance sensitive and would reflect cost of capital investment in and maintenance and operation of, a transmission system to transfer bulk power to and from different locations. The revenue from this component of transmission tariff will meet the annual revenue requirement of transmission entity in respect of owning the transmission asset. The charges for use of network would be worked out on distance slabs to reflect the distance travelled by the energy transmitted.

b) System Operation Charges

This component of transmission tariff shall reflect the cost associated with operating the load dispatch center.

The cost, among other things, shall include the cost of owning and maintaining load dispatch center. This system operation charges shall be charged as SLDC charges to users of such services, based on total energy of transactions.

c) Reactive Power Charges

This component of transmission tariff would be a variable charge reflecting voltage related drawal of reactive power. Reactive power drawals by beneficiaries are to be priced as follows:

- i. The beneficiary pays for reactive power drawal when voltage at the metering point is below 97%*
- ii. The beneficiary gets paid for reactive power (return) supply when voltage is below 97%*
- iii. The beneficiary gets paid for reactive power drawal when voltage is above 103%*
- iv. The beneficiary pays for reactive power (return) supply when voltage is above 103%*
- v. The charges for reactive energy shall be as decided by the Commission.*

10.3.2 TANTRANSCO would like to submit that in the current petition, TANTRANSCO is proposing the Transmission charges for the long term and short term open access Transmission System users, Reactive Charges and System and Scheduling Charges and request the Hon'ble Commission to approve the same.

10.4 Loading of the Transmission System for the control period

10.4.1 TANTRANSCO system has been mainly connected to the following sources of power supplies:

- TANGEDCO generating stations;
- Independent Power Producers (IPPs);
- Merchant Power Plant (MPPs);
- Central Sector Power Stations;
- Captive Power Plants;
- CPP wheeling;
- Wind Energy;

10.4.2 The total connected load in the TANTRANSCO system expected for the control period is as follows:

Table 71: Loading of Transmission lines for control period

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
Sources of Power	Projections of Loading of Transmission System (MW)		
<u>State Generating Station</u>			
Coal	4,332	4,332	4,936
Gas	491	491	491
Hydro	2,283	2,283	2,283
Wind	17	17	17
Total State Generating Station	7,123	7,123	7,727
Central Generating Station	5,012	5,475	5,475
IPP's	1,106	1,106	1,106
Non-Conventional Energy Sources	8,743	8,743	8,743
Other sources	-	-	-
Total Loading	21,984	22,447	23,051

10.5 Proposed Transmission Charges

10.5.1 As per the APTEL order no. 91 of 2012 dated 23rd November 2012, the following order has been passed by the Hon'ble APTEL for calculation of transmission charges:

48. Summary of findings.

- 1)However, the Tariff Regulation provide for the determination of transmission charges for open access customer by apportioning the total transmission charges to the ratio of capacity allotted to long term open access customer and sum of open access capacity allotted to all long term open access customers of intra-state transmission system. Therefore, computing the transmission charges on PLF adjusted capacity will be contrary to the Regulations.
- 2)
- 3) For the wind energy generators allotted capacity shall be the installed capacity of the respective generator. For TANGEDCO, the allotted capacity shall be calculated on the basis of sum of net capacity of own generation connected to the intra-state transmission system, long term contracted capacity from IPPs, share in Central Sector Stations, etc.

10.5.2 Based on the above APTEL order and In line with the above Regulations, TANTRANSCO proposed the following transmission charges for the control period which is calculated based on the installed capacity / capacity allotted to long term open access customer.

- a) The table given below depicts the revenue projected from the transmission charges for FY 2013-14 to 2015-16 under MYT projection. The company recovers all of its costs through transmission charges that are charged to the participants

who use the transmission Network of TANTRANSCO. It is also eligible to earn a 14% return on equity as per the provisions of the Terms and Conditions of Tariff issued by the TNERC. The transmission charges payable by long term and short term open access users are determined in the following table. However, the transmission charges for short-term open access customers and Intra-State OA customers using Intra-State net work has been worked at 100% of the transmission charges applicable to long-term open access customer on MWhr basis.

Table 72: Proposed Transmission Charges for Control period

Particulars	FY 2013-14	FY 2014-15	FY 2015-16
	Projections (Rs. Crs)		
Transmission charges for Control Period	2,366	3,293	4,127
Total MW allocation - Loading	21,984	22,447	23,051
Transmission Tariff (Rs./MW/Day)	2,949	4,019	4,905
Transmission Tariff for Short Term open access (Rs./MW/Hr)	123	167	204

10.5.3 The contracted capacity over the control Plan period is based on the existing installed generation capacity in the state connected with the TANTRANSCO grid and the proposed additions by TANGEDCO, Central Sector and the IPPs in the upcoming years.

10.5.4 TANTRANSCO would like to submit that the transmission charges as proposed in this petition is calculated based on the APTEL order no. 91 of 2012 dated 23rd November 2012 whereby the total installed capacity of the generator such as wind, bagasse and biomass is considered.

10.5.5 However, TANTRANSCO would like to submit that as per the various orders issued by the Hon'ble Commission on 31st July 2012, to harness the renewable power U/s. 86(1)(e) of the Electricity Act 2003, a concession in the transmission charges were allowed to the generators which ranges from 40% to 60%. The reference of such orders are cited as below:

10.5.6 As per Comprehensive Tariff Order on WIND ENERGY, Order No 6 of 2012 dated 31- 07- 2012, it has been stated that:

8.3.3 Commission in its order No. 1 of 2012 and 2 of 2012 has fixed Transmission Charges of Rs.6483/MW/day and wheeling charges of 23.27 paise/kWh. Now that the TNEB has been unbundled, charging a single charge in kind as transmission and wheeling charges is not implementable. Therefore it has been decided to fix transmission and wheeling charges in terms of rupees/paise as in the case of conventional power. As a promotional measure, under section 86(1) (e) of the Act, the Commission has decided to fix 40% of the transmission charges and 40% of the wheeling charges as applicable to the conventional power to the Wind power. Apart from these charges, the WEGs shall have to bear the actual line losses in kind as specified in the respective orders of the Commission and amended from time to time.

8.3.4 For the WEGs availing RECs, normal transmission charges, wheeling charges and line losses shall apply.

10.5.7 As per Comprehensive Tariff Order on Bagasse based Co-generation plants, Order No 7 of 2012 dated 31- 07- 2012, it has been stated that:

8.2.1.3. As a promotional measure under section 86 (1) (e) of the Electricity Act 2003, the Commission decides to adopt 60% of the transmission charges and 60% of wheeling charges of conventional power to the bagasse based co-generation plants. Apart from these charges, actual line losses as specified in the respective Orders of the Commission and as amended from time to time are also deductible in kind for the captive use and third party sale.

8.2.1.4. For generators who are availing Renewable Energy Certificates, normal transmission charges, wheeling charges and line losses will apply.

10.5.8 As per Comprehensive Tariff Order on Biomass based Co-generation plants, Order No. 8 of 2012 dated 31- 07- 2012, it has been stated that:

8.2.1.6. As a promotional measure under section 86 (1) (e) of the Electricity Act 2003, the Commission decides to adopt 50% of the transmission and 50% of the wheeling charges of conventional power to the Non-conventional energy sources power. Apart from these charges, actual line losses in kind as specified in the respective Order of the Commission and as amended from time to time are also payable for the captive use and third party sale.

8.2.1.7. For generators who are availing Renewable Energy Certificate (REC), Normal Transmission Charges, Wheeling Charges and Line Losses will apply.

10.5.9 In line with the APTEL order and the order related to promotion of renewable energy providing concession in the transmission charges, TANTRANSCO humbly submits that there is an ambiguity in the methodology to calculate the transmission charges. Though the APTEL order clearly states that installed capacity of the generator needs to be considered while calculating the transmission charges for the ensuing year, the concessional treatment as provided in the order dated 31st July 2012 and highlighted above will result in a lower revenue recovery for TANTRANSCO.

10.5.10 Therefore TANTRANSCO request the Hon'ble Commission to approve the transmission charges considering the above highlighted fact such that there is no revenue loss to TANTRANSCO and there is a revenue neutral position after considering the concessional treatment of transmission charges to the generators such as wind, bagasse and biomass.

10.6 System and Scheduling Charges

10.6.1 TANTRANSCO submits the Hon'ble Commission to approve Rs.2500/- per day or part of the day, as Scheduling and System Operating Charges for Long Term and Short Term open access customers 25% hike in the last year charges of Rs. 2000/- per day or part of day considering the recent restructuring of erstwhile TNEB whereby major cost has to be incurred for streamline of the process of scheduling and energy accounting and also to obtain the operational efficiency.

10.7 Reactive Energy Charges:

- 10.7.1 Reactive energy flows in the transmission network reduces the active power carrying capability of the system apart from increasing transmission losses and reducing voltage at the points of drawal. Reactive energy flows can be compensated by means of capacitor installations in the local networks.
- 10.7.2 The Central Electricity Regulatory Commission (CERC) has approved the reactive energy charge as 10 paise / KVARh w.e.f. 1.5.2010. This would improve the system voltage and in turn ensure quality power.
- 10.7.3 For the inter-State energy transactions, the associated reactive energy has not been assigned a price, but there is a scheme under the Indian Electricity Grid Code, 2010 notified on April 28, 2010, which penalizes reactive energy drawal and rewards reactive energy injection @ 10.00 paise/kVARh, w.e.f April 1, 2010, escalated at 0.5 paise/kVARh when the voltage at the inter-State connection point is below 97% of nominal value. Similarly, the scheme penalizes reactive energy injection and rewards reactive energy drawal @ 10.00 paise/kVARh, w.e.f April 1, 2010, escalated at 0.5 paise/kVARh, when the voltage at the inter-State connection point is above 103% of nominal value. The reactive energy accounting is done by the RLDCs based on the readings of the Special Energy Meters (SEMs) installed at the point of interconnections over the inter-State transmission system.
- 10.7.4 Therefore in line with the tariff order dated 30th March 2012 and as specified by the Hon'ble Commission, it is prayed that this Hon'ble Commission may also fix the reactive Energy Charges as 10.50 paise / KVARh annually for FY 2013-14 which will be escalated by 0.50 paise /kvarh in subsequent years.

11. DIRECTIVES OF THE HON'BLE COMMISSION

The Hon'ble Commission in its Tariff Order dated 30th March 2012 has laid down certain directives to be complied by TANTRANSCO. The directives as provided by the Hon'ble Commission and the status of the said directives are replied in a single submission/response as below:

11.1 Not to mix Capital Accounts and Revenue Accounts.

11.1.1 The Hon'ble Commission in its tariff order directed TANTRANSCO not to mix capital accounts and revenue accounts. In lieu of this, TANTRANSCO would like to submit that the same is being complied with.

11.2 Submit all its Capital Schemes for the Commission's approval.

11.2.1 The Hon'ble Commission directed TANTRANSCO to submit their Capital Schemes for its approval. TANTRANSCO has complied with this directive and had submitted the Capital Schemes vide Letter no. **CE/TR/SE/TRI/EW/A4/F.Tariff Petition/66/2012 dt 21/08/2012.**

11.3 Ring Fencing & Budget of SLDC

11.3.1 The Hon'ble Commission had asked TANTRANSCO to submit the status of Ring Fencing of SLDC within 90 days and also had directed SLDC to submit its budget for Hon'ble Commission's approval. As per the direction of the Hon'ble Commission, necessary steps have been taken for Ring Fencing of SLDC, filing the ARR and Tariff petition for the SLDC and submission of its Comprehensive Business plan. Since this is the first time and involves various details and data to be gathered from various agencies and assessment of physical assets and liabilities of three SLDCs located at Chennai, Madurai and Erode, extension of time has been sought upto 21st Jan 2013 for filing the petition and ARR vide letter no. Dir/O/SE/LD&GO/EE/G/AEE2/F.Ring Fencing/D3174/12 dated 19/11/2012. Further, it is submitted that the same will be sent within 2nd week of February 2013.

11.4 Monitor Ongoing projects

11.4.1 The Hon'ble Commission directed TANTRANSCO to monitor the ongoing projects to ensure that the power generated from the generating stations which are to be commissioned during the year FY 2012-13 are transmitted upto Load Centres without any bottle necks. In lieu of this, TANTRANSCO would like to submit that the associated transmission system for evacuation of power from the generating stations which are getting commissioned during the year 2012-13 will be made ready in order to transmit the power up to the load centres.

11.4.2 It is submitted that in respect of Mettur Thermal Power Station – Stage III, power evacuation line works connecting MTPS with Arasur 400 kV SS has been completed. Similarly, in respect of North Chennai Power Station Stage II, the connectivity with Vallur JV Project and Alamathy 400 kV SS are ready. Only in respect of S.V. Chatram connectivity, there are still certain ROW issues persisting. This will also be sorted out and the line charged by May 2013.

12. PRAYER TO THE PETITION

TANTRANSCO respectfully prays to the Hon'ble Commission:

1. To admit this petition
2. To approve the ARR for the control period as requested in this petition and to allow its recovery.
3. To approve methodology for recovery of net annual transmission charges as given in Para 10 of this petition.
4. To approve capital expenditure as proposed in the petition.
5. To grant any other relief as the Hon'ble Commission may consider appropriate. The petitioner craves leave of the Hon'ble Commission to allow further submissions, addition and alteration to this Petition as may be necessary from time to time.
6. To allow fair recovery mechanism to recover total transmission charges & losses from the consumers who use the wheeled energy from Non-Conventional Energy Sources (NCES) generators. Therefore, TANTRANSCO proposes to recover normal transmission charges & losses from all open access consumers wheeling the Non-Conventional Energy Sources (NCES) energy generation for their own consumption or for third party sale.
7. To allow the recovery of Scheduling charges and Reactive charges as proposed in this petition.
8. Pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.

PETITIONER

TAMIL NADU TRANSMISSION CORPORATION LIMITED