TAMIL NADU ELECTRICITY REGULATORY COMMISSION

Determination of Intra-State Transmission Tariff and other related charges

T.P. No. 2 of 2013
Date of Order - 20-06-2013
(effective from 21-06-2013)

TAMIL NADU ELECTRICITY REGULATORY COMMISSION

(Constituted under section 82 (1) of Electricity Act 2003)

(Central Act 36 of 2003)

PRESENT : Thiru. K.Venugopal – Member

Thiru. S.Nagalsamy – Member

T.P. No. 2 of 2013

Date of Order: 20-06-2013

In the matter of: Determination of Intra-State Transmission Tariff and other related charges

In exercise of power conferred by Clauses (b) of sub section (1) of Section 62 and Clause (a) of sub-section(1) of Section 86 of the Electricity Act 2003, (Central Act 36 of 2003) and all other powers hereunto enabling in that behalf and after considering the views of the State Advisory Committee meeting held on 26-04-2013 and after considering suggestions and objections received from the public during the public hearings held on 03-05-2013, 08-05-2013, 10-05-2013, and 17-05-2013, as per sub-section (3) of Section 64 of the said Act, the Tamil Nadu Electricity Regulatory Commission, hereby, passes this order for Intra-state Transmission Tariff and other related charges.

This Order shall take effect on and from the21st June 2013.

Sd/-	Sd/-
(S. Nagalsamy)	(K.Venugopal)
Member	Member

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List of Abbreviations

Abbreviation	Description
A & G	Administration and General Expenses
ABC	Aerial Bunched Cables
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
CAGR	Compounded Annual Growth Rate
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Station
COS	Cost of Supply
CPP	Captive Power Plant
CSD	Consumer Security Deposit
CWIP	Capital Work in Progress
DA	Dearness Allowance
EA	Electricity Act
FRP	Financial Restructuring Plan
FY	Financial Year
GFA	Gross Fixed Assets
G.O.	Government Order
GPF	General Provident Fund
GoTN	Government of Tamil Nadu
HT	High Tension
HVDS	High Voltage Distribution System
kWh	Kilo-watt Hour
LT	Low Tension
LTOA	Long Term Open Access
MU	Million Units
MW	Mega-watt
MYT	Multi-Year Tariff
O & M	Operation & Maintenance
PLF	Plant Load Factor
R & M	Repair & Maintenance
O & M	Operation & Maintenance
RoE	Return on Equity
SLDC	State Load Despatch Centre
STOA	Short Term Open Access
T&D	Transmission & Distribution
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Ltd.
TANTRANSCO	Tamil Nadu Transmission Corporation Ltd.
TNEB	Tamil Nadu Electricity Board
TNERC	Tamil Nadu Electricity Regulatory Commission
TO	Tariff Order
TP	Tariff Policy

A1: INTRODUCTION

Preamble

1.1 Consequent to the enactment of the Electricity Regulatory Commissions Act 1998 (Central Act 14 of 1998), the Government of Tamil Nadu (GoTN) constituted the Tamil Nadu Electricity Regulatory Commission (TNERC)vide G.O.Ms.No.58, Energy (A1) Department, dated 17-03-1999.

1.2 The Commission issued its first tariff order under Section 29 of theElectricity Regulatory Commission Act, 1998, on 15-03-2003 based on thepetition filed by the Tamil Nadu Electricity Board (TNEB) on 25-09-2002.

1.3 Electricity Regulatory Commission Act,1998 was repealed and the Electricity Act 2003 (Central Act 36 of 2003) (hereinafter called Act)was enacted with effect from 10-06-2003.

1.4 The Commission notified the Tamil Nadu Electricity RegulatoryCommission (Terms and Conditions for Determination of Tariff)Regulations 2005 (herein after called Tariff Regulations) on 03-08-2005under Section 61 read with Section 181 of the Act.

1.5 The Commission issued **first** order (Order No. 2 of 2006) on Transmission charges,Wheeling charges, Cross Subsidy surcharge and Additional surcharge on15-05-2006, based on the petition filed by TNEB on 26-09-2005 under Section 42 of the Act.

1.6 The Commission notified the TNERC (Terms and Conditions forDetermination of Tariff for Intra state Transmission / Distribution ofElectricity under MYT Framework) Regulations, 2009 (herein after calledMYT Regulations) on 11-02-2009.

1.7 Subsequently, TNEB filed an application for determination of tariff with Aggregate Revenue Requirement (ARR) for all functions on 18-01-2010, which was admitted by the Commission after initial scrutiny on 09-02-2010.The Commission issued its second Retail Tariff Order (Order No 3 of 2010) on 31.07.2010 which also decided the annual transmission charges.

1.8 TNEB was formed as a statutory body by the Government of Tamil Nadu (GoTN) on 01-07-1957 under the Electricity (Supply) Act 1948.The Board was primarily responsible for generation, transmission, distribution and supply of electricity in the State of Tamil Nadu.

1.9 Government of Tamil Nadu, in G.O (Ms) No 114 Energy Dept, dated 08-10-2008 accorded in principle approval for the re-organisation of TNEB by establishment of a holding company, namely TNEB Ltd and two subsidiary companies, namely Tamil Nadu Transmission Corporation Ltd (TANTRANSCO) and Tamil Nadu Generation and Distribution Corporation Ltd (TANGEDCO) with the stipulation that the aforementioned companies shall be fully owned by the Government.

1.10 Tamil Nadu Transmission Corporation Ltd. (TANTRANSCO) was incorporated on 15-06-2009 and started functioning as such with effect from 1-11-2010.

1.11 Subsequent to the filing of tariff petitions by TANTRANSCO for determination of tariff for Intra-State Transmission tariff for the year FY 2012-13, the Commission scrutinised and reviewed the same. After a thorough review the **second** Order (Order. No. 2 of 2012) of the Commission on Intra-State Transmissiontariff and other related charges was passed on 30-03-2012.

1.12 This is the **third** order of the Commission on determination of Intra-State Transmission Tariff and other related charges.

Tariff Filing

1.13 TANTRANSCO has filed its application before the Commission on 19-02-2013 for final true-up and approvalof Aggregate Revenue Requirement (ARR) for the year 2010-11based on 5 months audited accounts, provisional true-up and approval of ARR for the year 2011-12 based on provisional accounts, Annual Performance Review (APR) for the year 2012-13 based on estimates and its Multi Year Tariff petition for 2013-14 to 2015-16 along with application for determination of Intra-State Transmission Tariff and other related charges. There was a delay of 81 days in filing this Petition and the Petitioner filed an Interim Application for condonation of the delay of 81 days.

1.14 The Commission has written three letters to TANTRANSCO directing them to file the Tariff Petition for FY 2013-14. Copies of letters dated 8th January 2013, 21st January 2013 and 8th February 2013 are placed as Annexure I. After hearing the submissions of TANTRANSCO, the Petition was admitted on 21-02-2013 after condoning the delay and registered as T.P. No 2 of 2013. Copy of the admission order is placed as Annexure II

Procedure Adopted

1.15 Regulation 7 (2) of Tariff Regulation specifies the following:

"The applicant shall publish, for the information of public, the contents of the application in an abridged form in English and Tamil newspapers having wide circulation and as per the direction of the Commission in this regard. The copies of Petition and documents filed with the Commission shall also be made available at a nominal price, besides hosting them in the website."

1.16 The public notice containing the salient details with regard to the petition was approved and communicated to TANTRANSCO on February 28, 2013, with a direction to arrange publication of the notice in news papers and it was published on 02-03-2013. The written objections/suggestions/views from stakeholders were invited by 02-04-2013.

1.17 TANTRANSCO has published the public notice in the following newspapers on March 02, 2013.

a) The New Indian Express (English Daily);
b) The Deccan Chronicle (English Daily);
c) Dinamani (Tamil Daily) and
d) Makkal Kural (Tamil Daily)

1.18 The Petition was placed before the State Advisory Committee on 26-04-2013. The list of Members who participated in the meeting is detailed as Annexure III to this Order.

1.19 The list of stakeholders who have submitted objections/suggestions/views regarding the petition in response to the public notice are detailed in Annexure IV and Objections/suggestions/views are included in Chapter A2.

1.20 The Commission conducted public hearing at the following places on the dates noted against each:

Date	Day	Place	Venue
03-05-2013	Friday	Chennai	Tamil Isai Sangam, Raja AnnamalaiMandram, (Near High Court),5, Esplanade Road, Chennai- 108
08-05-2013	Wednesday	Tiruchirappalli	KalaiarangamThirumanaMahal, (Near central bus stand), Tiruchirappalli
10-05-2013	Friday	Madurai	Platinum Jubilee Hatsun Auditorium, Tamil Nadu Chamber of Commerce and Industry, 178-B Kamarajar Salai, Madurai
17-05-2013	Friday	Coimbatore	Corporation Kalaiarangam, R.S. Puram, Coimbatore

1.21 The list of participants in each public hearing, is attached as Annexure V to this Order. The views / comments / objections raised by the participants are discussed in Chapter A2.

The Electricity Act, 2003, Tariff Policy (TP) and Regulations

1.22 Section-61 of the Act stipulates the guiding principles for determination of Tariff by the Commission and mandates that the Tariff should 'progressively reflect cost of supply of electricity', 'reduce cross-subsidy', 'safeguard consumer interest' and 'recover the cost of electricity in a reasonable manner'.

Section-62 (1) of Act states as under:

"Section-62 (1):

1. *The Appropriate Commission shall determine the tariff in accordance with provisions of this Act for*

   a. *............................;*

b. transmission of electricity ;

c. wheeling of electricity;

1.23 In the State of Tamil Nadu, Tamil Nadu Electricity Regulatory Commission in exercise of powers vested in it under the Electricity Act, 2003 (Act) passes the Tariff Orders.

Transfer scheme

1.24 The proposal for Assets Transfer and Employee transfer called as Tamil Nadu Electricity Board (Reorganization and Reforms) Transfer Scheme 2010 was notified by the 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 re-organized from 1st Nov 2010.

1.25 This Transfer Scheme is provisional and addresses various issues like transfer of assets, revaluation of assets and partly addresses the issue of accumulated losses. This Transfer Scheme envisages deployment of staff of the erstwhile TNEB to TANGEDCO and TANTRANSCO. The Commission in its earlier Tariff Order No. 3 of 2010 dated 31-07-2010 had suggested in line with the National Electricity Policy (para 5.4.3) and Tariff Policy that the accumulated losses should not be passed on to the successor entities and financial restructuring has to be resorted to clean up the Balance Sheet of the successor companies and allow them to start on a clean slate so that the successor entities could start performing better. The statutory advices that have been sent to the Government of Tamil Nadu in this regard are appended as Annexure VI.

1.26 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 it had extended the provisional time for final transfer of assets and liabilities to the successor entities of erstwhile TNEB up to 31st October 2012. The same has been appended as Annexure VII. Through the provisional transfer scheme notified on 2nd January 2012, TANTRANSCO was allocated opening long term loans of Rs. 11,720.29 Crs.

1.27 This Transfer Scheme is also provisional and is subject to revision. The transactions for 7 months i.e. from 1st April 2010 to 30th October, 2010 do not get reflected in the opening balance sheet of the TANTRANSCO as specified in the Transfer Scheme.

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 through notification dated 3rd January 2012 for additional one year i.e. upto 31st October 2012 for final transfer of assets and liabilities to successor entities of erstwhile TNEB.

c) As on the date of filing of this petition, TANGEDCO and TANTRANSCO has 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 approved by GoTN through G.O.Ms(23) dated 8th March 2013, which has been appended as Annexure VIII . TANGEDCO and TANTRANSCO have now sought an extension for another six months i.e. upto 31st October 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.

d) 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.

1.28 Hence, Commission is of the view that once the final transfer scheme is notified by the State Government, the impact due to revision in the opening balance of Fixed Assets, Loan and Equity may have to be revisited and accounted during the tariff determination process of the concerned year.

Unbundling of TNEB with effect from 1st November 2010

1.29 TNEB was unbundled on 1.11.2010. Consequently it started functioning as two separate entities namely TANGEDCO and TANTRANSCO. While TANGEDCO was made responsible for generation and distribution, TANTRANSCO was made responsible for transmission activities within the State.

1.30 The Commission in its Tariff Orders issued on 31st July 2010 as well as on 30th March 2012 had indicated that the accumulated losses upto the date of unbundling will have to be dealt with in accordance with the National Electricity Policy and Tariff Policy. The Commission had also clearly indicated that any losses incurred after 1.11.2010 only are being dealt with in various Tariff Orders subsequent to unbundling.

Brief Note on Tariff Filing and Public Hearing

1.31 The Commission appreciates the concerns expressed by various stake holders both in the written comments submitted by them to the Commission as well as the concerns expressed during the Public Hearings held at Chennai on3rd May 2013, Tiruchirapalli on 8thMay 2013, Madurai on 10thMay 2013 and Coimbatore on 17th May 2013.

1.32 TANTRANSCO has proposed huge capital investment for system strengthening in the second control period and these plans will have to be carried out through a well structured business plan and individual schemes catering to the needof the business plan. All such plans and schemes shall be submitted in accordance with the Terms and Conditions of Tariff Regulations 2005, MYT Tariff Regulations as well as Licensing Conditions issued by the Commission. The submission for approval in this regard so far has been unsatisfactory. The Commission has been addressing the utilities by way of letters as well as by way of directions. The compliance to such letters and directions will have to be taken seriously and must be met without fail.

1.33 Further, list of correspondence received from TANTRANSCO in regard to data gaps and additional information furnished are enclosed in Annexure IX.

1.34 Various suggestions and objections that were raised on TANTRANSCO’s Petition after issuance of the Public Notice both in writing as well as during the Public Hearing, along with TANTRANSCO’s reply and the Commission's view have been detailed in Chapter A2 of this Order.

Applicability of Order

1.35 This Order will come into effect from 21-06-2013. The Intrastate Transmission Tariff and other related charges contained in this order will be valid till 31-03-2014. TANTRANSCO shall file necessary petition in accordance with the Regulations in a timely manner to enable the Commission to pass the next Tariff Order in time.

Layout of the Order

1.36 This Order is organised into six Chapters:

(a) Chapter A1 provides details of the tariff setting process and the approach of the Order;

(b) Chapter A2 provides a brief of the Public Hearing process, including the details of comments of various stakeholders, the Petitioner’s response and views of the Commission thereon;

(c) Chapter A3 provide details/ analysis of the final true up for FY 2010-11, provisional true-up for FY 2011-12 and annual performance review for FY 2012-13;

(d) Chapter A4 provides analysis of the petition for determination of the Aggregate Revenue Requirement for FY 2013-14 to FY 2015-16;

(e) Chapter A5 provides details of determination of Intra-State Transmission Tariff and other related charges

(f) Chapter A6 provides details of the Directives of the Commission for compliance of TANTRANSCO.

1.37 The Order contains the following Annexures, which are an integral part of the Tariff Order.

(a) Annexure I – Copies of letters written to TANTRANSCO directing them to file the Tariff Petition for FY 2013-14

(b) Annexure II – Copy of the admission order

(c) Annexure III – The list of participants at the State Advisory Committee meeting.

(d) Annexure IV – The list of stakeholders who have submitted written objections/suggestions/views regarding the petition in response to the public notice.

(e) Annexure V – The list of participants at each public hearing.

(f) Annexure VI – Copy of the statutory advices given by the Commission sent to the Government of Tamil Nadu.

(g) Annexure VII – Copy of the second provisional transfer scheme as notified by the State Government vide G.O. (Ms.) No.2, Energy (B2) Department, dated 2nd January 2012.

(h) Annexure VIII – Copy of extension order for finalization of transfer scheme upto 30th April 2013 notified by the State Government vide G.O.Ms(23) dated 8th March 2013

(i) Annexure IX –List ofcorrespondence received from TANTRANSCO with regard to data gaps and additional information.

Approach of the order

1.38 Commission in its last order had stated that the Capital Account and the Revenue Account has not been maintained separately in the course of operation of TNEB and an attempt is being made in this order to segregate this to bring financial discipline in the successor entities.

The Commission has adopted the Multi Year Tariff (MYT) approach for tariff determination since its first tariff order in FY 10-11. The first control period of 3 years was upto FY 12-13, during which time the Commission has issued two tariff orders during FY10-11 and FY 12-13. The second control period spanning 3 years starts this year i.e. in FY 2013-14 and is upto FY 15-16.

1.39 The extract from the relevant portion of the TNERC (Terms and Conditions for Determination of Tariff for Intra state Transmission / Distribution of Electricity under MYT Framework) Regulations, 2009 regarding control period is extracted below.

"3). Multi year Tariff framework

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."

1.40 The broad approach adopted in this order is given below:

- The Commission has taken into consideration the second provisional transfer scheme as 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.

- The Commission has referred to the audited accounts of TANTRANSCO for FY 2010-11 (5 months) for truing up the expenses of the utility. The Commission has undertaken a review of the various performance parameters as well as the controllable cost factors. Based on the assessment the Commission have arrived at the allowable ARR and revenue recovered by the utility. Also, Commission for the comparison purposes has arrived at the approved figures for FY 2010-11 (5 months) in its last order on pro-rata basis.

- The same exercise has been undertaken for the provisional true-up for FY 2011-12 based on the provisional accounts and the ARR and revenue recovered for the year have been arrived at.

- For the FY 2012-13, Commission sought actual figures for the year from TANTRANSCO. Based on the information so obtained and based on provisions of the Tariff regulation as well as trend in the approved costs in the previous two years as arrived above, the ARR and revenue recovered have been arrived at.

- For the Second control period between FY14 to FY16 the Commission has extended the rationale adopted for allowing/ disallowing various controllable components of the ARR for the first control period, to project the ARR for the three years and determine tariff for FY14.

A2: STAKEHOLDERS' COMMENTS, TANTRANSCO'S REPLY AND COMMISSION'S VIEW

The following section summarizes the views/ objections/ suggestions given by stakeholders in writing as well as at the public hearings. TANTRANSCO's reply to these views/ objections/ suggestions and the Commission's view on the same are also included.

General Issues

Stakeholder Comments

2.1.1 The information available for a complete analysis is missing, and in appropriate sections of this submission, we have highlighted some of the deficiencies and requested that the Hon'ble Commission call for this information from the licensee as part of its due process in finalizing the Order on the petition

2.1.2 TNERC must appoint a consultant to go into the entire operations and finances of TANTRANSCO to identify the changes and improvements that need to be made to comply with the Electricity Act and various policies and rules made there under.

2.1.3 TNERC must direct that the transfer of Assets and Liabilities to TANGEDCO and TANTRANSCO be completed by the end of June 2013, and the final Profit & Loss Account and Balance Sheet on 31/03/2013 be audited and published by 31st August 2013.

2.1.4 TNERC must direct TANTRANSCO to give a time bound plan to implement various directives given by TNERC over the years. The progress report on the compliance of these directives at the end of each calendar quarter should be publicized.

2.1.5 The Tariff petition submitted by TANTRANSCO contains very brief information on the Financial Restructuring Plan that has been signed by the Government of Tamil Nadu and TNEB with Government of India. The impact of the financial restructuring plan on the tariff is to be spelt out. The said agreement must be publicized.

2.1.6 The Financial Accounting and Cost Accounting Code and systems of TANTRANSCO should be published. Understanding the financial statements of TANTRANSCO is necessary to make meaningful comments on their tariff petitions.

2.1.7 TNERC must not grant a tariff higher than the rate asked for by TANTRANSCO

2.1.8 Request to adopt the same methodology in respect of return on equity, interest on term loan, incentive, interest on working capital, gross fixed assets to arrive at the transmission charges. Since, the Commission has made lot of remarks on these titles regarding the calculation and the Hon'ble APTEL in Appeal No.91 of 2012 and 102 of 2012 has made certain observations for the calculation of transmission charges.

2.1.9 It is not known whether the transmission loss of 4.71% indicated in the TANTRANSCO's petition is in addition to what has been indicated in the TANGEDCO's.

TANTRANSCO's Reply

2.1.10 It is informed that the Financial Restructuring Plan carried out in consultation with the Central and State Government is not related to transmission function and is attributable to distribution function only.

Commission's view

2.1.11 The Commission appreciates the concerns expressed by various stake holders both in the written comments submitted by them to the Commission as well as the concerns expressed during the Public Hearings held at Chennai on 3rd May 2013, Tiruchirapalli on 8th May 2013, Madurai on 10th May 2013 and Coimbatore on 17th May 2013.

Transfer of Assets & Liabilities

2.1.12 The Transfer of Assets & Liabilities was to be completed by 30th April 2013. But TNEB has sought for another 6 months extension from the Govt. The Commission is of the opinion that this has to be completed at the earliest and directs TANTRANSCO to finalize transfer scheme through GoTN at the earliest

FRP

2.1.13 Commission would like to clarify that FRP is not meant for TANTRANSCO

Transmission Tariff

2.1.14 Transmission tariff computation has been dealt in detail in Chapter A5 of this Order.

Transmission Loss

2.1.15 Transmission loss approved is a part of the overall T&D losses.

2.1.16 The revised submission of TANTRANSCO with respect to transmission losses is tabulated below.

Voltage	FY 2010-11	FY 2011-12	FY 2012-13
230 KV	0.84%	0.76%	0.80%
110 KV	1.93%	1.94%	1.90%
66 KV	0.01%	0.00%	0.00%
Total	**2.78%**	**2.70%**	**2.70%**

Compliance to Directives

2.1.17 Commission is taking a serious view on non compliance of directives. In the absence of compliance of directives and absence of data, Commission has made stringent assumptions in this order.

2.1.18 Commission is periodically monitoring the compliance of directives issued and directs TANTRANSCO to submit a quarterly compliance report on the directives issued by the Commission. The Commission, if required, may hold separate hearings / meetings to deal with non-compliance of Directives and issue appropriate orders.

Inflated Asset Base, GFA and Impact on ARR

Stakeholder Comments

2.1.19 Hon'ble Commissoin notified the TNERC (Terms and Conditions of Tariff) Regulations 2005 dated 24th June 2005, which defined the regulatory framework within which all stakeholders have to operate. The licensee has not followed said regulations by not filing petition for a gap for 7 years till 2010. In the absence of compliance to regulatory requirements by the licensee, the Hon'ble TNERC should have initiated suo-moto exercise in line with the regulatory requirements, however this did not happen.

2.1.20 Therefore the licensee as well as the Hon'ble Commission was in violation of the regulatory framework notified by the Commission itself, which has been held to be an untenable position by the Hon'ble ATE in its order on Appeal No 84 of 2006 dated 29th August 2006.

2.1.21 This means that the regulatory scrutiny of utility operations was not done and tariff was not set to ensure recovery of prudent cost, resulting in significant operational losses which according to the accounting statements available are to the tune of Rs. 17414 Crs upto FY 09 alone. This has formed the basis for first transfer scheme.

2.1.22 The losses have led to borrowings for capital expenditure being diverted to cover revenue deficit and debt repayments as recognised by the Hon'ble Commission in its last tariff order. Despite this, these costs were loaded onto customers through tariff in FY13 through the same order dated 30th March 2012.

2.1.23 Capital expenditure in a year has been estimated by the following formula:

Capex for the year = (Closing CWIP – Opening CWIP + Capitalisation) – (Closing reserves – Opening reserves)

2.1.24 Reserves can be increased only in a situation where the utility is making a profit and a portion of the profit is transferred to specific or general reserves. Therefore the adjustment to reserves seen in the balance sheet of TNEB can only have been a revaluation reserve, which clearly implies that there was no corresponding capital expenditure. Further P&L of the corresponding years explicitly states that there was no apportionment to reserves, further validating the assumption. The impact from diversion is as given below:

Parameter	**FY 07**	**FY 08**	**FY 09**
Capex for the year	1604	1932	2403
Capital grants received	319	527	436
Equity infusion	175	490	1171
SD from consumers	406	481	372
Borrowing requirement	704	434	425
Actual capital borrowing	1237	3184	6505
Excess capital borrowing	533	2750	6080
Cumulative Excess	533	3283	9363

2.1.25 Looking at the consolidated balance sheet of the unbundled entities, it is apparent that Rs. 13345 Crs are generic loans, clearly showing there has been no associated capital expenditure. The total deficit shown for the years FY06-FY09 in the P&L of TNEB is Rs. 13831 Crs a figure reasonable close to the diverted funds value.

2.1.26 Hon'ble Commission in its last tariff order, while acknowledging the problem, chose to allow full interest on debt, stating that it has to abide by the values stated in the opening balance sheet, due to provisions of Section 131 (3(b)).

2.1.27 In its order on Appeal No. 4-13-23-25-26-35-54-55 of 2005 dated 26th May 2006, the Hon'ble ATE has dealt with issue of diversion of funds from capital account to revenue account. In its judgement ATE has clearly stated that in any matter that related to tariff, the jusridiction of Regulatory Commission is complete. Relevant portion is given below:

> *128. It seems that the Commission felt that these mistakes cannot be corrected as the State government is insulated from its directions relating to tariff issues. This perception cannot be countenanced in law as otherwise tariff cannot be determined according to the parameters and factors laid down in Section 61 of the Act of 2003. The Commission is required to determine the tariff by seeking guidance from factors which would encourage economical use of the resources and optimum investments and at the same time safeguard the interests of the consumers and recover the cost of electricity in a reasonable manner etc. (see Section 61 particularly 61(c), (d) and (g).*

2.1.28 Further extracts of the same order, which are highly relevant in this instance are quoted below:

> *51. The question is, if the Commission in exercise of its statutory power does not cure and allow the established inequities created by the apportionment of*

the cost of the RSD project to be perpetuated, who will treat the injury inflicted on the consumers. State, as it seems, is impervious to the injustice to the consumers. Healing touch must be applied by the Commission, which is the sole authority, after the coming into force of the Electricity Act of 2003, vested with the jurisdiction to determine the tariff. In case apportionment of the cost of the RSD project is not corrected, the resultant tariff determinations will continue to be stained with illegality and harm the consumers

58. Having held so, we would examine the question whether the State Government independently, directly and by itself, without being reached through the Board, will be bound by the directions of the Commission. The answer lies in Section 61 of the Act of 2003 and Section 28 of the Act of 1998 and other allied provisions. The Appropriate Commission while determining tariff under Section 61 of the Act is required to be guided by the factors and parameters enshrined therein. One of the factors on the basis of which tariff is to be determined is the consumer interest. Sub-clause (d) of Section 61 requires the Commission to safeguard the interest of the consumersand ensure that the recovery of the cost of electricity is effected in a reasonable manner. This was also one of the requirements under Section 28(2)(e) of the Act of 1998. The Commission, therefore, is/was bound to determine fair, prudent and reasonable cost of the RSD project which is to be allocated to the Board, in consonance with the interest of the consumers. At the same time recovery of the cost of electricity is/was to be made in a reasonable manner. The aforesaid provisions of the Act of 2003 and the Act of 1998 are not hedged in with the limitation that in case the State Government or any other authority has allocated an unwarranted cost to the generator or a licensee, it cannot be interfered with, even when such a cost may be imprudent and unjust and not in the interest of the consumers. Otherwisethe cost loaded by the State Government on the Board will have to be allowed by the Commission for the purposes of tariff and the ARR of the Board. In case such a limitation is read, into the aforesaid provisions, the purpose of the Act including Section 61 will be frustrated. Since the Commission has the power to determine the tariff and the ARR of a utility it has all the incidental and ancillary powers to effectuate the purpose for which power is vested in it. Consequently, directions or orders of the Regulatory Commission made for the purpose of determination of tariff and ARR in consonance with the provisions of the Act are binding on all the concerned parties including the State and the Board.

59. Though the Commission was of the confirmed opinion that the State had wrongly allocated 71% cost of the RSD project to the account of the Board, it still felt that it cannot undo the wrong, even when the State of Punjab at one point of time had accepted the position that the allocation of cost of the RSD project does not benefit the consumers and ought not be passed on to them.

> *When the State Government even after realizing the height of injustice meted out to the consumers, did not do what it should have done, the Commission should have determined the prudent cost of the RSD project which could be fairly allocated to the Board. In such circumstances, the Commission ought to have stepped in and activated itself, as it was not powerless to safeguard the interests of the consumers in a matter which in essence is a tariff issue and falls within its jurisdiction. But it appears that the Commission was labouring under an erroneous belief that it had no jurisdiction to interfere with the allocation of the cost of the RSD project, imposed by the Government on the Board.*

2.1.29 Any matter which has an impact on tariff is firmly within the jurisdiction of the Hon'ble Commission, and there can be absolutely no hedge or limitation on this authority of the Hon'ble Commission by the Government of Tamil Nadu

2.1.30 Therefore we request the Hon'ble Commission to rectify the situation created by Order No.2 dated 30th March 2012 as no one should suffer for the mistake of court as quoted in Para 44 of Order on Appeal No 4-13-23-25-26-35-54-55 of 2005 dated 26th May 2006.

2.1.31 Request the Hon'ble Commission to disregard the opening balance sheet values of debt, which we have clearly shown to be excessive and availed solely to fund revenue deficit and conduct an exercise to determine prudent capital debt load that can be allowed for the base year and for the first and second control period. Also request that the Hon'ble Commission conduct a detailed exercise, based on published accounts of TNEB till FY 10, to determine the true extent of mix up of capital & revenue accounts and disallow all borrowings utilised to fund revenue deficits, as it is the responsibility of GoTN to clean up the balance sheets of unbundled utilities through a FRP.

2.1.32 Subsequently interest should be allowed only on debt and allowable capital expenditure in line with the requirements of Regulation 21 of TNERC (Terms and Conditions of Tariff) Regulations 2005, which specifies the capital structure and treatment of variances from recommended capital structure.

2.1.33 It is submitted that the accumulated losses are mostly a result of drastic increase in cost of power, and the absence of a corresponding increase in retail tariff. This is clearly a distribution issue and this debt load should not be loaded on the transmission licensee.

Gross Fixed Assets

2.1.34 There is a difference of the asset value furnished by TANTRANSCO in their earlier petition of November 2011 and that filed in this tariff petition.

2.1.35 The GFA approved by the commission for FY11 is Rs. 9933 Cr. In the current petition filed, TANTRANSCO furnished a GFA of Rs. 12,292 Cr. This difference which is around 20% should not be considered for ARR. Since the base year GFA has been escalalted, GFA for all subsequent years has also been inflated. Therefore GFA for all the years to be reduced by the difference amount. The GFA for FY14 should be Rs. 14379 Cr instead of Rs. 16832 Cr.

Term Loans and Interest on Term Loan

2.1.36 In FY12, the repayments were far in excess than the borrowings and petitioner has not explained the source for meeting the repayments. This needs to be explained with full details. Borrowings are shown at high levels year after year which are far more than the CAPEX programme in the respective years. Interest on loans in excess of GFA should not be allowed in any year.

2.1.37 As per the opening balance sheet for TANTRANSCO under the 2nd Transfer Scheme, Project specific liabilities are Rs. 2118 Crs and Generic Loans amount to Rs. 9602 Crs. The Generic Loans represent the debt taken to fund the revenue deficits. Therefore we submit that the entire portion of Generic Loans have to be discounted in setting transmission tariff. Based on the capitalisation claimed by the utility, additional debt load to finance these assets be considered as 70% of capitalised amount, subject to prudence. Request the Hon'ble Commission to allow interest expense based on the above suggestions.

Return on Equity

2.1.38 Commission has disallowed Return on Equity in order dated 30.03.2012 for the reason that the loans availed by TANTANSCRO were in excess of Gross Fixed Assets and as such, there was no equity funding for GFA and hence no RoE to be allowed.

2.1.39 The value of GFA for year FY11 has been increased without providing any rationale from Rs. 9933 Cr to Rs. 12292 Cr. This difference should not be allowed by the Commission. Considering the numbers approved by Commission for earlier years, the actual GFA for FY14 would be Rs. 14379 Cr assuming the petitioner adds Rs. 2611 Crore during 2012-13. At this level, the outstanding loan is in excess of GFA. The claim of RoE should be disallowed as there is no equity funding for GFA.

2.1.40 Even if the entire addition of asset of Rs.2611 **Cr.** during the FY 2013-14 as stated by TANTRANSCO is assumed to be approved by the Commission the GFA will work out to Rs.11768 Cr. + Rs.2611 Cr.= Rs.14379 Cr. and not Rs.16832 Cr. as projected by TANTRANSCO.

2.1.41 Similarly even if the repayment of Rs.3085 Cr. as projected is Considered with no additional borrowing Over and above Rs.5863 *Cr.,* the GFA is slightly more than the Outstanding loan, I.e, Rs.14379 Cr. — Rs.14088 Cr. = Rs.291 Cr. Therefore, it is practical to assume that there is no equity infusion, because the Sources of equity have not been stated. Hence, the projection of ROE in Table 70 (Page 55) of the petitioner cannot be considered and liable to be rejected.

2.1.42 RoE claimed for FY 11 by TANTRANSCO is Rs. 270 Cr which is for full year, whereas what can be allowed is pro-rated for 5 months, which amounts to Rs. 117 Cr.

2.1.43 Also RoE should be allowed only on the equity addition considered at 30% of the estimated capitalization submitted by the TANTRANSCO.

2.1.44 There is no mention of source of equity infusion and hence projection of ROE for 2013-14, 2014-15 and 2015-16 cannot be considered and should be rejected.

Capital Expenditure

2.1.45 In FY15, the estimated capex is higher than the funds available and sources of financing are not provided. Such high estimated Capex would lead to higher ARR as the intention seems to show surplus of GFA over loans with a view to justify claim of RoE and claim higher depreciation. The petitioner has never been able to implement the capex of this magnitude hence it is submitted that petitioner be asked to submit realistic estimates based on present status.

TANTRANSCO's Reply

GFA and Inflated Asset base

2.1.46 TANTRANSCO would like to inform that the opening equity is as per the 2nd provisional transfer scheme notified by the Government 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.

Depreciation

2.1.47 Depreciation claimed in the present petition is based on the expected capitalization during the control period. The depreciation rates considered for calculation of depreciation is based on the weighted average rate for a particular asset as approved by TNERC in the Tariff Regulations. TANTRANSCO is hence entitled to claim depreciation as stated in the present petition.

Term Loans and Interest on Term Loans

2.1.48 TANTRANSCO informs that the Hon'ble Commission had approved the Opening GFA for the FY 2010-11 as 9473.74 Crs. The GoTN issued the notification for the 2nd transfer scheme. Accordingly, the assets and liability was adopted in the Audited Accounts for the FY 2010-11 of TANTRANSCO. Therefore, based on the actual loans and the interest paid during the year, TANTRANSCO has claimed the interest on loan in the present petition.

Return on Equity

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

2.1.50 TANTRANSCO would like to inform that the opening equity is as per the 2nd provisional transfer scheme notified by the Government 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.

2.1.51 The Hon'ble Commission in its tariff order disallowed Return on Equity on the ground that loan borrowing is more than the capital expenditure incurred. However, TANTRANSCO would like to inform 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 are 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."

2.1.52 TANTRANSCO would like to inform 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".

2.1.53 Also, APTEL order in the case for KPTCL v/s. KERC and Appeal No.189 of 2005-UJVNL Vs UERC have specified

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 on equity.

2.1.54 Hence, TANTRANSCO is entitled for Return on Equity on the opening balance of equity as per the second transfer scheme.

Commission's View

2.1.55 Commission is of the view that issues pertaining to Accumulated losses, Gross Fixed Assets, Interest on Loans and RoE are all inter related, hence all have been dealt with together.

Violation of regulatory framework

2.1.56 Commission is taking all necessary steps to ensure that the ATE judgement in OP No.1 of 2011 is followed.

Accumulated Losses

2.1.57 With regard to the accumulated losses, the Commission in Order No. 3 dated 31-07-2010 and Order No.1 dated 30-03-2012 had extensively discussed the reasons for the accumulated losses of the utility. The gap up to the unbundling of the TNEB on 1-11-2010 is Rs. 17207.30 Crore. The Commission had expressed a view earlier that the accumulated losses up to the date of unbundling will have to be dealt with in accordance with Para 5.4.3 of the National Electricity Policy and Tariff Policy. The provisions of the National Electricity Policy and Tariff Policy envisages that the gap at the time of unbundling will have to be sorted out by financial restructuring and support from the Government rather than passing on the accumulated losses to the successor entities. The intention of the Tariff Policy is to allow the unbundled utilities to start on a clean slate. Accordingly, this Commission left the matter of the accumulated losses up to the date of unbundling for resolution by the Government of Tamil Nadu. Necessary statutory advice on accumulated losses prior to unbundling was given by the Commission to GoTN through letter dated 9th December 2010 and the same is reproduced in Annexure VI of this tariff order.

GFA, Interest on loans and RoE

2.1.58 Allowance of interest expenses as pass through in the tariff draws its force from the State Government's Order No. 100 dated 19.9.2010 regarding transfer scheme of the erstwhile Electricity Board which has a statutory force under Section 131 of the Act. The State Commission has relied upon the details contained in the Transfer Scheme for the purpose of arriving at the transmission charges and has taken a practical view while considering interest expenses.

2.1.59 Disallowance of loans may affect the borrowing capacity of TANTRANSCO. Thus, the State Commission allowed the loans on actual basis in the last tariff order. However, Return on Equity (ROE) has not been allowed since the actual loans borrowed by the TANTRANSCO are more than the capital expenditure amounts. The excess interest allowed is Rs. 186.22 crores while ROE disallowed is Rs. 230.89 crores. The relevant para explaining the Commission's stand on interest expenses and loans is as given below:

3.5.5 The Commission has observed in many places in this Order that there is a mix up between the capital account and the revenue account. Equity as well as capital borrowings have been diverted from time to time to meet the revenue expenses. Equity being the owner's investment, the Commission has taken a view that the return on equity shall not be permitted if equity has been diverted for meeting revenue expenses. Further, borrowings are also more than the investment shown for capital expenditure. This clearly bringsout the fact that capital borrowings have also been diverted for revenue expenditure. This is also recognized by the policy paper which has been published in the Government of Tamil Nadu Website.

3.5.6 The Regulations of the Commission are for normal situations and does not cover a situation which is encountered now. Therefore, the Commission has to take a practical view on this issue. The option available to the Commission is to disallow the interest costs on the entire borrowings in excess of capital works which will be in line with the Regulation but such a move would create a lot of confusion and may also affect the borrowingability of the TANGEDCO / TANTRANSCO. The proposal regarding revaluation of assets in the two Transfer Schemes already issued by the Government of Tamil Nadu may address the balance sheet problems but will not generate additional cash to repay the existing loans which were borrowed. Loans would be carried forward for final settlement. This issue may also be coveredby the two committees constituted by Government of India. viz., Shunglu Committee and Chaturvedi Committee.Shunglu Committee has already submitted its report which is available in the website of Planning Commission. The report of the Chaturvedi Committee is not available in public domain yet. Under these circumstances, Commission is allowing the interest on entire borrowing duly considering the loans shown in the Transfer Schemes and provisionally allows suchinterest, subject to final adjustment when the audited accounts are made available. This is also further subject to the actions taken by the appropriate authorities as well as the TANGEDCO/ TANTRANSCO with regard to *handling of the past liabilities based on the outcome of the above referred two reports and implementation thereof".*

"3.6.2 Regulation 21 of TNERC Tariff Regulations states as under:

"21. Debt-Equity Ratio

For the purpose of determination of tariff, debtequity ratio as on the date of commercial operationof 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."

"3.6.4 The Commission observed that the loanborrowing is more than the capital expenditureincurred by TANTRANSCO. The Commission also observed that TANTRANSCO has submitted equity addition from FY 2010-11 to FY 2012-13. The Commission is of the view that since the loan borrowing is more than the capital expenditure incurred from FY 2010-11 to FY 2012-13; theequity infusion shown by TANTRANSCO has been diverted to revenue accounts and has been deployed for meeting Revenue expenditure. Therefore, the Commission has not allowed any Return on Equity from FY 2010-11 to FY 2012-13".

2.1.60 The Commission is also bound by the Transfer Scheme drawn by the State Government. The Transfer scheme provides that any rights or liabilities stipulated or described in the scheme shall be enforceable not only by or against the Transferor or Transferee but against all parties including third parties also. Clause (b) of sub-section (3) of Section 131 of the Electricity Act, 2003 states that a transaction of any description effected in pursuance of a transfer scheme shall be binding on all persons including third parties and even if such persons or third parties have not consented to it. The relevant extract is as given below:

2.1.61 The relevant extract is given below:

"131. (1) With effect from the date on which a transfer scheme, prepared by the State Government to give effect to the objects and purposes of this Act, is published or such further date as may be stipulated by the State Government (hereafter in this Part referred to as the effective date), any property, interest in property, rights and liabilities which immediately before the effective date belonged to the State Electricity Board (hereafter referred to as the Board)

shall vest in the State Government on such terms as may be agreed between the State Government and the Board.

(2) Any property, interest in property, rights and liabilities vested in the State Government under sub-section (1) shall be re-vested by the State Government in a Government company or in a company or companies, in accordance with the transfer scheme so published along with such other property, interest in property, rights and liabilities of the State Government as may be stipulated in such scheme, on such terms and conditions as may be agreed between the State Government and such company or companies being State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be :

Provided that the transfer value of any assets transferred hereunder shall be determined, as far as may be, based on the revenue potential of such assets at such terms and conditions as may be agreed between the State Government and the State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be.

(3) Notwithstanding anything contained in this section, where,-

(a) the transfer scheme involves the transfer of any property or rights to any person or undertaking not wholly owned by the State Government, the scheme shall give effect to the transfer only for fair value to be paid by the transferee to the State Government;

(b) ***a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it.*** *"* **Emphasis Supplied**

2.1.62 In Appeal No 102 of 2012, concerning the same matter pertaining to allowance of interest costs on loans borrowed, Hon'ble ATE has not accepted the claim of the appellant of challenging the Commission's approach of allowing interest on loans more than the gross block on the basis of the transfer scheme. The relevant extracts are given below:

"31. We find that the transmission tariff of the Tamil Nadu has not been revised since the year 2005-06 and has been revised now after a lapse of 7 years. Similarly, the distribution tariff in the Tamil Nadu has also been revised after a long time and tariff order was issued only after the restructuring of the Electricity Board. The long gap in determination of tariff has resulted in revenue gap and excess borrowings and diversion of capital funds to revenue account. ***Even though the State Commission has deviated from its Regulations, the State Commission has now given a calculation,***

according to which, if the Regulations are followed and Return on Equity is allowed as per the Regulations, it will only result in increase in ARR and tariff and there will not be any reduction in tariff as sought by the Appellant. *The State Commission has also stated that adjustment will be made after finalization of the balance sheet and the restructuring of the loans as per the recommendations of the committees appointed by the Government of India.*

*32. According to the learned counsel for the Appellant, the interest on loan should be allowed as per the Tariff Regulations but the Return on Equity should not be allowed as it was not pressed by the Respondent no. 2. We are unable to accept this contention. Firstly, the Respondent no. 2 had sought Return on Equity as per the Regulations. Secondly, if the interest on loan has to be allowed as per the Regulations then the Return on Equity has also to be allowed as per the Regulations. Even though we feel that the State Commission should have determined interest on loan and Return on Equity as per the Regulations****, in view of the submissions made by the State Commission that allowing ROE and interest on loan as per Regulations will only result in increase in ARR and tariff and that the adjustment will be made after finalization of the balance sheet of the successorcompanies of the Electricity Board viz. Respondent nos. 1 and 2 and the proposed restructuring of loan, no purpose will be served by interfering with the order of the State Commission****.*

33. In view of above, ***we do not want to interfere with the findings of the State Commission regarding the treatment given to the interest on loan in the impugned order****.*

2.1.63 The opening balance of loans as on 1st November 2010 for TANTRANSCO considered in its Petition is based on the provisional transfer scheme notified as on 2nd January 2012. Based on the above judgement of ATE Commission is accepting the opening loans as on 1stNovember 2010 as per provisional transfer scheme.

2.1.64 However, TANTRANSCO has not provided information linking loans borrowed with creation of capital assets. In response to Commission's query, TANTRANSCO has submitted that it has borrowed loans to fund its capital expenditure and also to meet debt obligations of the opening loans allocated to it through provisional transfer scheme.

2.1.65 During the discussions with the utilities it was clarified that though the borrowings for the first seven months have not been reflected in the audited accounts, the utilities are meeting the debt obligations. TANTRANSCO has submitted that the net increase in its loans due to borrowings during the first seven months will be Rs. 1485.71 Crs. Commission has provisionally considered these borrowings to arrive at the revised loan profile and average interest expenses. On finalization of the transfer scheme, the loan profile will be reviewed and any impact on interest on loans due to finalization of transfer scheme will be addressed during the next tariff order.

2.1.66 As regards to repayment of existing loans, Commission has considered the actual repayment schedule submitted by TANTRANSCO as this repayment does not include loans borrowed for funding the revenue expenditure during the control period.

2.1.67 Based on the above, Commission has considered actual borrowings and interest expenses submitted by TANTRANSCO for FY 2010-11 and FY 2011-12.

2.1.68 However for FY 2012-13 Commission has determined actual borrowings and interest expenses based on certain assumptions which are detailed in Chapter A3 and Chapter A4 for the first control period as well as approving the expenses for the second control period.

2.1.69 TANTRANSCO in its Petition has claimed return on equity on total equity base as on 1st November 2010 based on provisional transfer scheme. Commission in its last tariff order has not allowed the return on equity for TANTRANSCO as there was a mix-up between capital account and revenue account. In addition Commission's views while approving return on equity in its last tariff order are as given below:

a. There is a mix up between the capital account and revenue account and equity as well as capital borrowings have been diverted to meet the revenue expenses.

b. The return on equity shall not be permitted if equity has been diverted for meeting revenue expenses.

c. Borrowings are more than the investment shown in capital expenditure which brings out the fact that the borrowings have been diverted for revenue expenditure.

d. The Regulations of the Commission are for normal situations and does not cover a situation which is encountered now. Therefore, the Commission has to take a practical view on this issue. The option available to the Commission is to disallow the interest costs on the entire borrowings in excess of capital works and allow return on equity in line with the its tariff regulations.

e. In view of the above, Commission has not allowed RoE while allowing the interest expenses on total borrowings in its last order.

2.1.70 Accordingly, Commission has carried out an exercise in this Tariff Order to arrive at permissible return on equity. Based on TNEB audited accounts from FY 03, Commission has estimated the excess funds available with utility for funding capital expenditure and whether there was any equity requirement for funding the capital expenditure.

2.1.71 Commission observed that there were significant excess funds available with utility and that source of funds for capital assets are higher than actually required for funding the capital expenditure.

2.1.72 In addition it is observed that the excess funds available during the year are more than the equity infused in that year clearly indicating that equity has not contributed in the creation of capital assets and has been diverted towards revenue account since FY 2003.

2.1.73 Commission is of the view that entire equity base allocated to TANTRANSCO as on 1stNov 2010 has been diverted for funding the revenue expenditure prior to unbundling. Hence, Commission is considering the opening equity base as on 1stNovember 2010 as zero.

2.1.74 For subsequent years, Commission observed that TANTRANSCO is not having a revenue deficit and hence it has not borrowed any loans during FY 2010-11 and FY 2011-12 for funding the revenue expenditure. In view of this Commission is allowing the actual equity inflow for FY 2010-11 and FY 2011-12. For FY 2012-13 Commission has allowed equity inflow of 30% of the proposed capital expenditure.

2.1.75 For the second control period Commission has revised the opening equity as that approved for closing equity of FY 2012-13 in Chapter A3. Commission has taken equity additions during the control period at 30% of the proposed capital expenditure.

2.1.76 The detailed approach and the relevant computations are provided in Chapter 3 and Chapter 4 of this Order.

Transmission Capacity and Calculation of transmission charges

Stakeholder Comments

2.1.77 The installed capacity figure seems to be on lower side. In the previous petition filed in late 2011, the installed capacity indicated was 28299 MW whereas the present petition the same now mentioned as 21984MW. It appears that IPPs who are expected to commission during FY14 have not been considered for capacity workings and Hon'ble Commission is requested to consider the actual capacity available during FY14 for generation. This would bring down the Transmission charges further. The revenue from Bilateral trade and Exchange platform trade needs to be considered and given credit in the ARR while determining the Transmission Charges.

2.1.78 Eliminating the need for RoE, Interest on Working Capital and Incentive claim of the petitioner for all the years the computations made by stakeholder for annual transmission charges and transmission tariff are as given below:

Revised annual transmission charges proposed for FY14

1	Annual Transmission Charges for 2013-14	Rs. Crore	1919
2	Add: Revenue Gap/(Surplus) for FY 2010-11 computed in this petition	Rs. Crore	1
3	Add: Revenue Gap/(Surplus) for FY 201 1-12 computed in this petition	Rs. Crore	2
4	Add: Revenue Gap/(Surplus) for F'Y 2012-13 computed in this petition	Rs. Crore	-1,396
6	TOTAL EXCESS RECOVERIES OF THE PAST	Rs. Crore	-1,393
7	ARR after considering Gaps of Previous years	Rs. Crore	526
8	Total MW Allocation in FY 2013-14	MW	21,984
9	Transmission Tariff (Rs/MW/Day)	Rs/MW/Day	656

2.1.79 Request Hon'ble Commission also to consider STOA capacity as part of installed capacity for the purpose of determining the charges. For FY15 and FY16, recovery corrections may be made while proposing the transmission charges.

2.1.80 Hon'ble ATE in Appeal No. 102 of 2012 dated 4th February 2013 is instructive on methodology to be followed for determining transmission charges. Therefore Hon'ble Commission is required to determine transmission charges on per MW basis on the basis of sum of transmission capacity allotted to all long term open acesss customers of the intra state transmission system, which includes distribution licensee as well.

2.1.81 Judgement of ATE in Appeal No. 91 of 2012 dated 23rd November 2012 states how transmission capacity should be determined.

..... 38. In our opinion, the allotted transmission capacity for TANGEDCO should be the summation of its own net generation capacity connected to TANTRANSCO's transmission system, share in central sector stations, other long term contracted capacity from IPPs connected to the TANTRANSCO's system, etc. Similarly the allotted transmission capacity for the Appellant and other wind energy generators should be their respective installed capacity.

39. Therefore, on this issue we remand the matter to the State Commission with the direction to determine the transmission charges per MW per day charged by TANTRANSCO for use of its transmission network by TANGEDCO and other long *term open access customers after the reorganisation of the Board on the basis of summation of transmission capacity allotted to long term open access customers including TANGEDCO. For the wind energy generators, the allotted capacity shall be the installed capacity of the respective generators. On the other hand the transmission capacity allotted to TANGEDCO would be on the basis of sum of net capacity (Installed Capacity less auxiliary consumption) of own generating stations connected to the transmission system, capacity contracted from IPPs, share in Central Sector Stations, etc. However, the Annual Transmission Charges determined by order No. 2 dated 15.5.2006 will not be reopened.*

2.1.82 In response to this directive TRANSCO in this petition has given its estimate of transmission system loading over the second control period in Table 56 of its petition as 21984 MW, 22447 MW and 23051 MW respectively for FY 14, FY 15 and FY 16.

2.1.83 We request the hon'ble commission to independently verify these capacity claims before accepting the values. Considering that TRANSCO is projecting only 2%-3% capacity growth on a Y-o-Y basis, despite significant capital expenditure proposed, it is assumed that the transmission capacity for FY 14 would have grown only at similar pace from FY 13 and previous years in first control period. Accoridngly the actual transmission capacity would have been 20,475 MW, 20,966 MW and 21469MW for FY 11, FY 12 and FY 13.

2.1.84 However Commission made an error in determining transmission tariff on the basis of system capacity of 13000 MW.

2.1.85 Further as recorded in Order of Hon'ble ATE in Appeal No 102 of 2012 dated 4th February 2013, TRANSCO has been following discriminatory practices in charging transmission tariff to distribution licensee and other open access consumers.

2.1.86 It appears that TRANSCO has been charging all LTOA consumers, other than TANGEDCO on the basis of allotted capacity while the tariff was determined on the basis of system capacity which would have resulted in excess recoveries of all years of control period. For the same reason the gaps claimed for FY 11 & FY 12 are baffling and submit that these cannot be allowed.

2.1.87 Request the Commission to determine the quantum of transmission capacity that was available in the years FY 11-FY 13 as per the methodology specified in regulations and as directed by Hon'ble ATE.

2.1.88 The methodology of billing was to charge LTOA consumers other than distribution licenseeon the basis of tariff and allotted capacity and any shortfall in revenues was then charged to distribution licensee to ensure that TRANSCO recovers its full approved ARR. This has been held by ATE to be a violation of principle of non discriminatory open access. We request Hon'ble Commission to take cognizance of this serious violation of E-Act 2003, and initiate suitable action under Section 142 or 146 against officers of TRANSCO responsible for this violation.

2.1.89 Request to include STOA capacity also as part of installed capacity for the purpose of computation of Transmission charges.

TANTRANSCO's Reply

2.1.90 The capacity taken by TANTRANSCO for calculation of annual transmission charges is in line with the Tariff Regulations specified by Hon'ble TNERC.

2.1.91 TANTRANSCO has considered the calculation of transmission charges as per the APTEL order dated 23rd November 2012 which is in line with the TNERC Tariff Regulations 2005.

2.1.92 The allotted transmission capacity for the control period has been arrived in line with the APTEL Order dated 23rd November 2012 whereby the transmission charges are determined 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.

2.1.93 The tariff charged by TANTRANSCO during FY 2012-13 is based on the Transmission Tariff approved by the Hon'ble Commission in tariff order no. 2 dated 30th March 2012.

Commission's View

Transmission Capacity

2.1.94 In the matter of Appeal No. 91 of 2012 Hon'ble ATE has remanded the matter of determining the transmission charges per MW per day applicable on the basis of the summation of capacity allotted to long term open access customers including TANGEDCO. The relevant extract is as follows:

"48. Summary of findings:-

iii) Therefore, we remand the matter to the State Commission with the direction to determine the transmission charges per MW per day applicable after the reorganisation of the Electricity Board on the basis of the summation of the capacity allotted to all long term open access customers including utilisation by TANGEDCO. However, the Annual Transmission Charges as determined by the State Commission in the order no. 2 dated 15.5.2006 will remain unchanged. 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."

2.1.95 Similar judgements have been passed in the matter of Appeal No. 45 of 2012 dated 31-01-2013 and Appeal No 102 of 2012 dated 4-2-2013. To give effect to the directions of ATE in the aforementioned orders, Commission issued directive vide. TNERC/DD(L)/F. RA 1 / dated 22-02-2013 to TANTRANSCO to submit the necessary information within 15 days, for carrying out the above exercise. The information requested is as follows:

1. Total allotted transmission capacity including transmission capacity allotted to TANGEDCO for the concerned periods.
2. Allotted transmission capacity to various LTOA customers including TANGEDCO.

2(a) Category-wise allotted LTOA transmission capacity to the OA consumers who are availing concessional transmission charges.

3. Revenue from STOA customers.
4. Revenue from captive OA customers who are charged on concessional basis or in energy terms.
5. Break up of concessional charges into transmission charge entitlement of TANTRANSCO, wheeling charge entitlement of TANGEDCO and allocation of T&D loss charge component to TANTRANSCO and TANGEDCO.
6. Revenue from other Businesses; and
7. Net generation of TANGEDCO connected to the Intra-State transmission system, long term contracted capacity from IPPs and share in the central sector station.
8. Any other relevant details as may be considered relevant to be provided by TANTRANSCO for determination of transmission charge.

TANTRANSCO has submitted the allocated transmission capacity for FY 2010-11 to FY 2012-13. The information submitted by TANTRANSCO is hosted on the website and comments were invited and the remand Petition will be processed further.

Employee Expenses

Stakeholder Comments

2.1.96 The true up for FY 11 (final) & FY 12 (provisional) & APR for FY 13 show how wildly inflated the costs claimed by TANTRANSCO and those approved by the Commission were.

Parameter	31-07-2010 Order			30-03-2012 Order			TANTRANSCO Petition		
	FY 11	FY 12	FY 13	FY 11	FY 12	FY 13	FY 11	FY 12	FY 13
Net Expenses (Rs. Cr)	434	466	499	563	586	609	116	296	324

2.1.97 The annualised expenses for FY 11, works out Rs. 278 Crs. With this annualised value used for comparison, the reduction in values from approved values is significant.

2.1.98 Hon'ble Commission must take steps to redress this wrong in this Order. Further increase in employee costs submitted by TANTRANSCO amount to 6% and 13% for Y-o-Y for FY 12 and FY 13, which is higher than the 4% allowed by the Regulations. Hence the costs allowable under employee expenses should be re-estimated based on the regulations.

TANTRANSCO's Reply

2.1.99 TANTRANSCO is functioning as a separate entity from 01.11.2010, the actual expenditure incurred towards the employee expenses are claimed for the FY 2010-11 (5 Months) and FY 2011-12 (Provisional).

Commission's View

2.1.100 Commission took note that there is significant reduction in employee expenses corresponding to those proposed by TANTRANSCO while there is increase in employee costs pertaining to TANGEDCO.

2.1.101 During the discussions with TANTRANSCO officials it was mentioned that in the last petition the employee expenses were submitted based on assumptions due to unavailability of separate accounts for distribution and transmission functions. However, they have clarified that all the employee expenses have now been currently accounted for except for terminal benefits. The Commission has reworked employee expenses on the basis of these submissions and corrections for terminal benefits. Correspondingly the same amount was adjusted in the employee expenses of TANGEDCO.

2.1.102 Commission in accordance with its regulation has escalated the approved employee expenses for FY 2011-12 at 4% on all components except for DA for arriving at the employee expenses for FY 2012-13, though TANTRANSCO has proposed escalations of more than 4% for various components of employee expenses.

Interest on Working Capital

Stakeholder Comments

2.1.103 TANTRANSCO has claimed Interest on Working Capital on a normative basis. No details regarding Working Capital loans have been given. The claim on Interest on Working Capital should be disallowed. The claim is valid only if the expense is actually incurred and since they have not incurred this expense, claim should be disallowed in full.

TANTRANSCO's Reply

2.1.104 Interest on Working Capital is claimed as per norms specified in the TNERC's (Terms and Conditions for the Determination of Tariff) Regulation, 2005.

Commission's View

2.1.105 TANTRANSCO has claimed interest on working capital based on norms specified in the TNERC tariff regulations, 2005.

2.1.106 Unlike in its petition last year, TANTRANSCO has not included interest expenses for short term borrowings in long term loans and claimed interest on working capital separately. Commission is of the view that it is appropriate to approve and segregate the loans based on their purpose and in accordance with its tariff regulations. Hence Commission approves the interest on working capital based on norms as per TNERC Regulations. However Commission has calculated the working capital requirement based on the re-estimated GFA without revaluation reserve.

Incentive

Stakeholder Comments

2.1.107 Incentive claimed by petitioner cannot be verified due to non furnishing of availability factor with associated details there for. Hence the incentive claimed shall be disallowed.

2.1.108 While R and C measures are underway, there is no point in accepting the TANTRANSCO's request for an incentive of 1% of Asset value on availability of lines.

2.1.109 A claim for incentive has to be supported with adequate information on actual number of hours that the system was available for, interruptions, restoration time etc. None of this information has been provided to support the claimed availability. Therefore claim for incentive payments for second control period should be rejected at this juncture.

TANTRANSCO's Reply

2.1.110 It is informed that the system availability of TANTRNSCO during the FY 2010-11 and FY 2011-12 was well above the target system availability of 98% as stated in the TNERC's (Terms and Conditions for the Determination of Tariff) Regulation, 2005. Hence, the same has been expected to be maintained during the second control period also. Hence TANTRANSCO is entitled to claim incentive for the respective years.

Commission's View

2.1.111 For the first control period Commission is accepting the actual transmission availability submitted by TANTRANSCO. For the second control period Commission has provisionally accepted the transmission availability estimated by TANTRANSCO.

2.1.112 However for calculation of incentive, Commission has considered the revised average equity. The incentives approved by the Commission are detailed under respective heads in Chapter 3 and Chapter 4.

Insurance

Stakeholder Comments

2.1.113 TANTRANSCO has claimed amounts in ARR under clause 30 of TNERC(Terms and Conditions of Tariff) Regualtions 2005. However the regulation goes on to say that such amounts have to be maintained in a separate reserve account and can be utilised only to replace assets lost due to accidents, fire, cyclone and other force majeure conditions. This should be allowed only upto the extent of capitalisation estimated, with any variances at true-up stage.

TANTRANSCO's Reply

2.1.114 TANTRANSCO proposes to insure the transmission assets against the damage due to natural calamities from FY 2014-15 onwards.

Commission's View

2.1.115 Commission has re-estimated the insurance after considering the capital cost without revaluation reserve and in accordance with its regulation at 0.5% of the capital costs.

2.1.116 The reserves shall be utilised to replace the assets lost due to accident, fire, flood, cyclone and other force majeure conditions.

Provision for tax

Stakeholder Comments

2.1.117 TRANSCO has claimed provision for tax in FY 16, on the grounds that it may become liable to tax in FY 16. Considering that approximately Rs. 4000 Crs has been assigned as accumulated losses, it is hard to see how this entire loss will be offset against profits in just 2 years. Until there is logic or reason to allow this, request the Hon'ble Commission to deny this unjust claim.

TANTRANSCO's Reply

2.1.118 Tax has been claimed during FY 2015-16 considering that TANTRNASCO will have to pay MAT as per the provisions of the Income Tax Act 1961 from FY 2015-16 onwards.

Commission's View

2.1.119 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.

2.1.120 TANTRANSCO in its Petition has submitted that they may become liable for paying income tax and therefore claiming income tax from FY 2015-16. However, Commission is not allowing this expense in FY 2015-16 and if TANTRANSCO has really incurred this expense in FY 2015-16 then it will be allowed during the true-up exercise.

Capital Expenditure

Stakeholder Comments

2.1.121 Despite maximum commissioning of capacity & lines in FY 11&FY 12, actual capitalisation shown is only Rs. 59 Crs & Rs. 90 Crs, whereas for FY 13, capitalisation shown is Rs. 1842 Crs. The absurdity of capital works and capitalisation is apparent and the same cannot be allowed without adequate clarification & justification. The details are given in the table below:

	FY11		**FY12**		**FY13**	
	Capacity	Capitalization (Crs.)	Capacity	Capitalization (Crs.)	Capacity	Capitalization (Crs.)
Substation						
400KV	-	-	630	-	-	-
230KV	180	16	-	23	300	274
110KV	251	30	232	59	119	95
66KV	-	0	-	-	-	-
Enhancement	857	-	967	-	206	150
Total	1288	46	1829	81	625	520
Lines						
400KV	-	-	16	0	-	845
230KV	55	7	198	-	22	81
110KV	373	6	477	5	360	233
66 KV	-	-	-	-	-	-
Total	**428**	**13**	**691**	**5**	**382**	**1159**
Others	**-**	**-**	**-**	**-**	**-**	**163**
Total		**59**		**86**		**1842**

2.1.122 Request Commission to seek detailed information from TANTRANSCO on actual capital expenditure and capitalisation and provide opportunity for scrutiny of information submitted prior to approval of capital expenditure. In the absence of compliance to this key requirement, all capital expenditure &capitalisaiton has to be disallowed at this stage.

2.1.123 Similarly, the capitalisation claims for second control period also have to be disallowed in the absence of appropriate justification.

2.1.124 However in the light of investment in expanding and strengthening of transmission network in TN, we propose that token capital expenditure & capitalisation of Rs. 1000 Crs per annum maybe allowed for each of the years with corresponding depreciation, interest and ROE allowed subject to prudence check at final true-up.

Commission's View

2.1.125 Commission observed that, despite repeated directions, TANTRANSCO did not submit the capital expenditure and capitalization information to the satisfaction of the Commission.

2.1.126 Keeping in mind the iterations that the capital expenditure and capitalization schedule along with GFA schedule went through, Commission reiterates that the data quality needs to be substantially improved. Commission directs TANTRANSCO to reconcile its accounts with respect to capital expenditure and prepare the scheme wise data as per the formats specified by the Commission. Commission also directs TANTRANSCO to file the progress of the capital expenditure and capitalization on quarterly basis.

2.1.127 The Commission provisionally approves the Capital Expenditure submitted by the petitioner. Commission hereby directs the Transmission licensee to submit all its schemes within 90 days from issuance of the Order along with its cost benefit analysis, based on which the Commission will provide final approval on allowable capital expenditure.

2.1.128 The Commission directs the TANTRANSCO to properly monitor the on-going projects to ensure that all the associated transmission system for evacuation of power from the generating stations which are getting commissioned during the year 2013-14 so that power generated from the generating stations are transmitted up to the Load Centers without any bottle necks. All these arrangements will have to be carried out through a well structured business plan and individual schemes matching with the business plan. All such plans and schemes shall be submitted in accordance with the Terms and Conditions of Tariff Regulations 2005, MYT Tariff Regulations as well as Licensing Conditions issued by the Commission.

Expected revenue from charges

Stakeholder Comments

2.1.129 Even though Hon'ble Commission has set tariffs based on capacity assessed TRANSCO has been levying charges on the basis of allotted capacity to consumers other than distribution license. This shows consumers have been overcharged, which completely violates the principle of non-discriminatory open access and has to be corrected.

2.1.130 Request the Hon'ble Commission to call for invoices raised by TANTRANSCO and cross reference to the information with SLDC on OA capacity allotted to take corrective measures.

2.1.131 Request the excess amounts charged to OA consumers should be refunded to them, through appropriate invoices raised on distribution licensee for capacity allotted for its use. In cases where appropriate invoices have not been raised appropriate concerned officers of Transco be called upon to explain the lapse and suitable action be initiated in absence of sufficient explanation.

2.1.132 TRANSCO has claimed Rs. 524 Crs against the 5 months revenue of Rs. 744 Crs that should have been realised at minimum, however no explanation has been provided for this drop in revenue and similar shortfall is shown for 2011-12 as well. Hence it cannot be admitted without detailed scrutiny.

STOA Charges

2.1.133 Hon'ble Commission had set in its Order dated 15th May 2006, LTOA charges at Rs. 2781/MW/day and charges for short term consumers as 25% of LTOA charges. However in Order dated 30th March 2012, the Hon'ble Commission set LTOA charges as Rs. 6483/MW/day and equated STOA charges to LTOA charges which amounted to 2.33 times increase for LTOA charges and a four fold increase for STOA charges, applicable till then.

2.1.134 Given this scenario, it is hard to understand omission of revenue from STOA charges, reactive energy etc in calculating the net ARR of transmission for FY 2012-13. Assuming that the capacity utilised or quantum of energy would not have changed drastically, revenue from STOA charges should be considered as Rs. 326 Crs pending verification by the Hon'ble Commission and opportunity to comment.

Commission's View

Revenue from LTOA and STOA

2.1.135 In response to Commission's query TANTRANSCO provided a provisional estimate of Rs. 97.65 Crs as open access and scheduling charges collected from STOA in FY 2012-13. The same has been included as part of Other Income and deducted from ARR while computing the Net Annual Revenue Requirement for FY 2012-13.

2.1.136 Regarding the recovery of transmission charges based on allotted capacity for FY 2012-13, APTEL has remanded the matter to the Commission for re-determining the charges payable by all LTOA. Commission has already taken up this issue and a suitable order will be passed separately.

Equating STOA and LTOA Charges

Stakeholder Comments

2.1.137 Under the PoC methodology adopted by the CERC charges are a function of direction, quantum of flow and calculation of charges and is intended as a market mechanism for driving efficient site selection for new generation.

2.1.138 Once the study is conducted there is no reason to discriminate between LTOA and STOA and hence the charges have been equated in CERC's case. TNERC, however has used postage stamp methodology citing lack of information despite the regulations providing for adopting MW-mile approach.

2.1.139 In the context, until relevant regulations are notified or determination of transmission charges is done according to PoC methodology, LTOA and STOA charges should not be equated.

Commission's View

2.1.140 Commission has observed that when STOA consumers were eligible for concessional transmission charges, OA consumers have started to take advantage of this provision by applying for short term open access and then extending it every year instead of applying under long term open access. Also, considering the differential pricing between LTOA and STOA, frequent disputes were raised regarding LTOA and STOA charges, compensation for relinquishing rights etc.

2.1.141 Commission, considering above facts, is not differentiating the transmission charges applicable for LTOA and STOA.

Scheduling and System Operation Charges

Stakeholder Comments

2.1.142 SLDC has still not been ring fenced and the TANTRANSCO is performing functions of SLDC. This is despite TNERC directive to TRANSCO to submit the status of ring fencing of SLDC within 90 days and that SLDC should submit its ARR for regulatory approval. In case of continued non-compliance, we submit that the Hon'ble Commission should exercise its considerable powers and secure compliance.

2.1.143 Considering that TANTRANSCO itself is claiming all costs including those of SLDC, it is hard to understand the logic behind demand for separate system and scheduling charges. The Commission may consider setting transmission charges and scheduling and system operation charges separately provided ARR of SLDC is filed separately and such cost is reduced from cost claimed by TRANSCO.

Commission's View

2.1.144 The revenue from Scheduling and System Operation Charges has been deducted from the Annual Revenue Requirement of TANTRANSCO. The same methodology will continue to be applied until separate orders with regard to ARR and Charges for SLDC are approved by the Commission.

2.1.145 In this Order, Commission has also directed TANTRANSCO for ring fencing of SLDC and filing a separate tariff Petition from next year.

A3: FINAL TRUE-UP FOR FY 2010-11, PROVISIONAL TRUE-UP FOR FY 2011-12 AND ANNUAL PERFORMANCE REVIEW FOR FY 2012-13

3.1 Tamil Nadu Transmission Corporation Limited (TANTRANSCO), in its Petition has sought for Final Truing up of expenditure and revenue for FY 2010-11 and Provisional Truing up for FY 2011-12 based on the actual expenditure and revenue as per the Audited Accounts and Provisional Accounts respectively. It has also sought for the Annual Performance Review for the year FY 2012-13 based on the information furnished by it. In this Section, the Commission has analysed all the elements of revenue and expenses for FY 2010-11, FY 2011-12 and FY 2012-13 and has undertaken the Truing up of expenses and revenue after due prudence check.

3.2 This chapter summarizes the highlights of the petitions filed by TANTRANSCOfor thefinal true-up of FY 2010-11, Provisional true-up of FY 2011-12and Annual Performance Review for FY 2012-13.

Transmission Loss and Energy Balance

Transmission loss

3.3 Commission in its first order on Multi Year Tariff determination dated 31st July 2010 has approved transmission and distribution losses together and has set a loss reduction strategy for reduction of T&D losses.

3.4 In the last tariff order, Commission has accepted the submission of TANTRANSCO and has approved the following transmission losses.

Table 1: Transmission losses approved by the Commission in its last tariff order

Description	2010-11	2011-12	2012-13
230 KV	0.95%	0.95%	0.95%
110 KV	1.5%	1.5%	1.5%

3.5 TANTRANSCO in its Petition has submitted that actual loss in the Intra-State transmission system was 4.71% for FY 2010-11 and provisional is expected to be around 4.25% in FY 2011-12. In line with actual losses, TANTRANSCO has proposed transmission loss of 4.25% for FY 2012-13

3.6 Later TANTRANSCO has revised the transmission losses for FY 2010-11 and FY 2011-12. The revised submission of TANTRANSCO with respect to transmission losses is tabulated below.

Table 2: Revised voltage losses submitted by TANTRANSCO

Voltage	FY 2010-11	FY 2011-12	FY 2012-13
230 KV	0.84%	0.76%	0.80%
110 KV	1.93%	1.94%	1.90%
66 KV	0.01%	0.00%	0.00%
Total	2.78%	2.70%	2.70%

3.7 Commission is of the view that the intra-state transmission losses proposed by TANTRANSCO are lower than those obtainedinother similar states such as Andhra Pradesh, Karnataka, Rajasthan and Maharashtra. Hence, Commission accepts the TANTRANSCO's revised submission of transmission losses as given in Table 2.Also, the length of 66 kV lines in the state is negligible and hence the Commission accepts the loss levels as indicated by TANTRANSCO.

Energy Balance

3.8 TANTRANSCO in its Petition has not provided any details of energy balance in transmission system. In response to the Commission's query, TANTRANSCO has submitted the revised losses and energy balance data in its periphery based on actual losses and sales.

3.9 However, Commission considering the approved sales for TANGEDCO and based on TANGEDCO's submission of wheeling units and HT sales has arrived at the energy balance in the transmission system.

Table 3: Energy balance in the transmission system arrived by the Commission

Parameter	Units	2010-11	2011-12	2012-13
Energy input at Transmission Periphery	**MU**	**28660**	**72471**	**69653**
230 kV Losses approved by the Commission	%	0.84%	0.76%	0.80%
230 kV Losses	MU	241	551	557
Wheeled units - 230 kV	MU	81	211	246
TANGEDCO - 230 kV Sales	MU	426	680	639
Energy input at 110 kV	MU	27912	71029	68211
110 kV Losses approved by the Commission	%	1.94%	1.94%	1.90%
110 kV Losses	MU	541	1378	1296
Wheeled units - 110 kV	MU	406	1057	1230
TANGEDCO - 110 kV Sales	MU	983	2892	2718
Energy Input at Distribution Periphery (including wheeling)	**MU**	**25981**	**65701**	**62967**

3.10 Commission gives the following directions to TANTRANSCO with respect to transmission loss and energy balance

a) To install energy accounting and audit meters as specified in applicable CEA regulations,at all the interface points at distribution periphery, 400 kV, 230 kV and 110 KV voltages

b) To maintain a transparent energy accounting system based on boundary meter readings which will help to arrive at monthly energy losses in the transmission system.

c) Based on the installed interface meters,TANTRANSCO needs to carry out scientific study and arrive at actual transmission losses before filing of next tariff Petition.

d) To file the energy balance in transmission system along with its Tariff Petition.

Fixed Expenses

3.11 In this section expenses related to fixed cost for the first control period (FY 2010-11 to FY 2012-13) will be reviewed and approved by the Commission. The fixed expenses are broadly divided into the following heads:

i. Operation and Maintenance Expenses

ii. Depreciation

iii. Interest on long term loans

iv. Return on Equity

v. Interest on working capital loans

vi. Other debits

vii. Incentives

Operation and Maintenance Expenses

3.12 The operational expenses approved by the Commission in last tariff order and operational expenses claimed by TANTRANSCO in its current Petition are tabulated below:

Table 4: O&M expenses approved by the Commission in last tariff order and as claimed in current Petition - in Rs. Crore

Plant	As per last year tariff order			Current Petition		
	2010-11	2011-12	2012-13	2010-11	2011-12	2012-13
R&M Expenses	9.00	22.50	23.44	1.76	6.71	6.98
Employee Expenses	234.68	585.77	609.20	116.01	296.25	323.75
A&G Expenses	7.98	10.16	11.05	3.06	7.18	7.55
Total	**251.66**	**618.43**	**643.69**	**120.82**	**310.15**	**338.28**

3.13 From the above table it can be observed that O&M expenses have decreased significantly during first control period compared to Commission's approval.

3.14 In response to data gaps and in the discussions held with TANTRANSCO officials, it was clarified that one of the reasons for this variation is due to segregation of accounts.

3.15 It is pertinent to mention that GoTN through G.O.(Ms) No 114 Energy Dept, dated 08-10-2008 have accorded in principle approval for the reorganization of TNEB. Pursuant to this G.O, TANGEDCO and TANTRANSCO were incorporated on 1st December 2009 and started functioning as such with effect from 1st November 2010. TANGEDCO and TANTRANSCO have been maintaining separate accounts from then onwards.

3.16 Prior to this there were no separate accounts for transmission and distribution business and consolidated accounting had to be done. Until last Petition,the O&M expenses were segregated between transmission and distribution heads under some assumptions. Inprevious Petition of TN power utilities, Employee expenses and A&G expenses were bifurcated between distribution and transmission business based on number of employees while R&M expenses have been bifurcated based on GFA.

3.17 However TANTRANSCO and TANGEDCO have clarified that in their current MYT Petition they have submitted the actual expenses based on their audited accounts. Also, TANTRANSCO in its Petition has submitted that it was unbundled from the erstwhile TNEB only on 31st Oct 2010 and it is difficult for it to derive the O&M expenses pertaining to transmission activities for the last 5 years. Hence, it has projected the expenses from FY 2012-13 based on the expenses for the FY 2010-11 and FY 2011-12.

3.18 It is pertinent to mention that in the process of the approval of the expenses the Commission will be guided by following regulations

Regulation – 14 of TNERC Tariff Regulations

“14. Multiyear tariff

(5) *All the uncontrollable costs shall be allowed as pass through in tariff and the uncontrollable costs will include the following:*

(a) Cost of fuel;

(b) Costs on account of inflation;

(c) Taxes and duties; and

(d) Variation in power purchase unit cost from base line level including on account of hydro-thermal mix in case of force majure and adverse natural events like drought

(6) The Operation and Maintenance cost shall be ***controllable cost*** *and be based on escalation indices or other mode determined during determination of tariff for the base year.*

Regulation-25 of TNERC Tariff Regulations:

"25. Operation and Maintenance Expenses

1. *The operation and maintenance expenses shall be derived on the basis of actual operation and maintenance expenses for the past five years previous to current year based on the audited Annual Accounts excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission. The Commission may, if considered necessary engage Consultant / Auditors in the process of prudence check for correctness.*
2. *The average of such normative operation and maintenance expenses after prudence check shall be escalated at the rate of 4% per annum to arrive at operation and maintenance expenses for current year i.e. base year and ensuing year.*
3. *The base operation and maintenance expenses so determined shall be escalated further at the rate of 4% per annum to arrive at permissible operation and maintenance expenses for the relevant years of tariff period.*

…"

3.19 In following paragraphs each component of O&M expenses will be discussed in detail and Commission's approval for the same will be accorded.

Employee Expenses

3.20 TANTRANSCO has filed the actual employee expenses based on audited accounts for FY 2010-11 and provisional accounts for FY 2011-12. It has then projected the employee costs based on the following assumptions:

i. Basic salary and the grade pay have been considered at an escalation of 5% for FY 2013-14 to FY 2014-15 and 10% for FY 2012-13 and FY 2015-16 due to wage revision.
ii. Escalation of DA rate at 15% per annum
iii. Other expenses such as surrender leave, terminal benefits, pension schemes etc at 10%.

3.21 On preliminary scrutiny of employee expenses proposed by TANTRANSCO, it was observed that there is a significant reduction in employee expenses corresponding to TANTRANSCO while there is an increase in employee costs pertaining to TANGEDCO. During the discussions with TANTRANSCO officials, it was mentioned that in the last petition the employee expenses submitted under distribution and transmission petition was based on the certain assumptions due to unavailability of separate accounts. However, they have clarified that all the employee expenses are being currently accounted separately except for terminal benefits. TANTRANSCO has stated that entire pension payments are being made by TANGEDCO on behalf of TNEB and hence in its current audited accounts the terminal benefits pertaining to TANTRANSCO are not reflected.

3.22 This fact was also mentioned in the audited accounts for FY 2011-12 of TANGEDCO under point 9 of "Statement-5: Notes to Accounts" and is reproduced below:

"The pension payments of existing pensioners of erstwhile TNEB are being paid by TANGEDCO since no segregation of pensioner's liability has been finalized in the provisional transfer scheme. The payments of pension to those who have retired from 01.10.2010 to 31.03.2013 are also made by TANGEDCO and out of it the TANTRANSCO's share has not been determined so far. As and when it's ascertained, the company has to claim the payment from TANTRANSCO."

3.23 Hence for regulatory approval process and accounting, Commission in consultation with TANGEDCO and TANTRANSCO officials have bifurcated the terminal benefits based on the employee ratio of 6:1 (TANGEDCO to TANTRANSCO). In this true-up Commission will approve the terminal benefits expenses for TANTRANSCO to the extent of its liability.

Table 5: Re-estimate of terminal benefits of TANGEDCO and TANTRANSCO – Rs. Crore

Parameter	Actual figures as per Audited Accounts		Commissions Re-Estimate – (Based on 6:1 ratio)	
	2010-11	2011-12	2010-11	2011-12
Terminal Benefits - TANGEDCO	601.50	1,591.55	523.97	1,383.09
Terminal Benefits - TANTRANSCO	9.79	22.06	87.33	230.52
Total	**611.29**	**1,613.61**	**611.29**	**1,613.61**

3.24 The employee expenses even after accounting for terminal benefits have marginally decreased compared to Commission's approved expenses for FY 2010-11 and FY 2011-12. Commission has also observed that overtime wages proposed by TANTRANSCO for FY 2011-12 has significantly increased. In response to Commission's query, TANTRANSCO has replied that amountclaimed under overtime wages includes a portion of other expenses which aremisclassified under the head overtime expenses and the actual overtime expenses are Rs. 3.14 Crores.On review of accounts, Commission observed that DA expenses were inadvertently included by TANTRANSCO under overtime expenses.

3.25 Due to the fact that TANTRANSCO has submitted the employee expenses for FY 11 and FY 12 based on the audited and provisional accounts, Commission is accepting the submissions of TANTRANSCO after properly accounting for overtime wages and DA expenses in FY 2011-12.

3.26 Though TANTRANSCO has proposed escalations of more than 4% for various components of employee expenses, Commission in accordance with its regulation has escalated the approved employee expenses for FY 2011-12 at 4% on all components except for DA for arriving at the employee expenses for FY 2012-13. However, as submitted by TANTRANSCO, if due to expected pay revision the employee expenses increase significantly, TANTRANSCO is required to quantify the impact due to pay revision and submit to the Commission during the true-up exercise for FY 2012-13.

3.27 As per the TNERC regulations, only, the increase in costs due to inflation is required to be passed through in tariff. Hence, DA percentage notified by the GoTN is depended on inflation and hence increase in employee costs to the extent of DA variation should be allowed as a pass through in tariff. Therefore, the DA rates as notified by GoTN have been used for estimating the dearness allowance instead of taking an escalation of 4% as per TNERC regulations.

3.28 The employee capitalization for FY 2010-11 and FY 2011-12 is considered as per TANTRANSCO submission. However for FY 2012-13, TANTRANSCO has submitted the employee capitalization of 19.71%, which seems to be on a higher side compared to the historic trend. In view of this discrepancy, Commission has relied on average employee capitalization of 9% based on the historical data.

Table 6: Estimation of average DA rate applicable for FY 2012-13

Year	Eff. Date	Rate of DA	Months	Avg Rate
2012-13	1/1/2012	65%	3	72.25%
	1/7/2012	72%	6	
	1/1/2013	80%	3	

3.29 Based on the above approach and methodology, the employee costs submitted by TANTRANSCOand approved by the Commission is tabulated below:

Table 7: Employee expenses approved for first control period - (Rs. Cr.)

Particulars	2010-11			2011-12			2012-13		
	Last Order	Petition	Commission	Last Order	Petition	Commission	Last Order	Petition	Commission
Basic Salary	97.64	80.42	80.42	243.72	190.94	190.94	253.47	210.04	198.58
Overtime wages	3.88	2.46	2.46	9.69	62.02	3.14	10.07	64.50	3.27
Dearness Allowance	39.18	37.44	37.44	97.78	47.23	106.11	101.69	54.31	143.47
Other Allowances	8.21	6.06	6.06	20.49	14.96	14.96	21.31	15.56	15.56
Bonus &Exgratia	3.33	2.83	2.83	8.32	6.28	6.28	8.65	6.53	6.53
Sub Total	**152.24**	**129.21**	**129.21**	**380.00**	**321.44**	**321.44**	**395.20**	**350.95**	**367.41**
Terminal benefits	92.33	9.79	87.33	230.45	22.79	230.52	239.66	25.07	239.74
Other Expenses	13.89	8.90	8.90	34.67	24.77	24.77	36.05	27.22	25.76
Grand Total	**258.46**	**147.91**	**225.44**	**645.12**	**369.00**	**576.72**	**670.92**	**403.24**	**632.91**
Less: Capitalization	23.78	31.90	31.90	59.35	72.75	72.75	61.72	79.50	56.96
Net Employee Expenses	**234.68**	**116.01**	**193.54**	**585.77**	**296.25**	**503.98**	**609.20**	**323.75**	**575.95**

Repair and Maintenance Expenses

3.30 As already mentioned earlier, Commission has segregated the R&M expenses between distribution and transmission business based on the certain assumptions. During review of current audited accounts, it has been observed that R&M expenses of TANTRANSCO have decreased while R&M expenses of TANGEDCO have increased. It was also confirmed by TANGEDCO during the discussion that no part of R&M expenses on account of TANTRANSCO are being booked in TANGEDCO accounts. Hence, the variation in profile of expenses is only due to proper accounting which will continue in future also.

3.31 Therefore, Commission is accepting the R&M expenses submittedby TANTRANSCO for FY 2010-11 and FY 2011-12 based on the audited and provisional accounts. For FY 2012-13, Commission in accordance with its regulation has taken 4% escalation on the approved R&M expenses for FY 2011-12. TANTRANSCO has proposed 16.62% of R&M expenses to be capitalized in FY 2012-13. Commission is of the view that this percentage is on a higher side and based on the historical trend, Commission has considered 3.30% of R&M expenses to be capitalized in FY 2012-13.

3.32 Based on the above approach, the R&M expenses submitted by TANTRANSCOand approved by the Commission are tabulated below:

Table 8: R&M expenses approved for the first control period (Rs. Cr.)

Particulars	2010-11			2011-12			2012-13		
	Last Order	Petition	Commission	Last Order	Petition	Commission	Last Order	Petition	Commission
Plant & Machinery	3.94	1.98	1.98	9.85	3.73	3.73	10.24	3.88	3.88
Building	0.09	0.03	0.03	0.23	0.08	0.08	0.24	0.09	0.09
Civil Works	0.26	0.07	0.07	0.65	0.26	0.26	0.67	0.27	0.27
Hydraulic work	0.22	-	-	0.54	-	-	0.56	-	-
Lines & Cable network	4.23	1.22	1.22	10.55	3.45	3.45	10.97	3.59	3.59
Vehicles	0.38	0.23	0.23	0.94	0.37	0.37	0.98	0.38	0.38
Furniture & Fixtures	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Office equipments	0.30	0.11	0.11	0.74	0.15	0.15	0.77	0.16	0.16
Grand Total	**9.41**	**3.64**	**3.64**	**23.49**	**8.05**	**8.05**	**24.43**	**8.38**	**8.38**
Less: Capitalization	0.41	1.88	1.88	0.99	1.34	1.34	0.99	1.39	0.28
Net R&M Expenses	**9.00**	**1.76**	**1.76**	**22.50**	**6.71**	**6.71**	**23.44**	**6.98**	**8.10**

Administrative and General Expenses

3.33 Similar to R&M expenses, in its last order Commission has segregated the A&G expenses between distribution and transmission business based on the certain assumptions. However during review of audited accounts it has been observed that A&G expenses of TANTRANSCO have decreased while A&G expenses of TANGEDCO have increased. It was also confirmed by TANGEDCO duringthe discussion that no part of A&G expenses on account of TANTRANSCO are being booked in TANGEDCO accounts. Hence, the variation in profile of expenses is only due to proper accounting which will continue in future also.

3.34 Therefore, Commission is accepting the A&G expenses submitted by TANTRANSCO for FY 2010-11 and FY 2011-12 based on audited and provisional accounts. For FY 2012-13, Commission in accordance with its regulation has taken 4% escalation on the average of approved A&G expenses for FY 2011-12 and FY 2010-11.With regards to A&G expenses capitalized, TANTRANSCO has proposed 58.74% in FY 2012-13. Commission is of the view that this percentage is on a higher side and based on the historical trend, Commission has considered 22.49% for A&G expenses capitalization in FY 2012-13.

3.35 Based on the above approach, the A&G expenses submitted by TANTRANSCO and approved by the Commission are tabulated below:

Table 9: A&G expenses approved for the first control period (Rs. Cr.)

Particulars	2010-11			2011-12			2012-13		
	Last Order	Petition	Commi ssion	Last Order	Petition	Commi ssion	Last Order	Petition	Commi ssion
Gross A&G Expenses	11.92	8.01	8.01	22.14	17.40	17.40	23.03	18.30	19.45
Less: Capitalization	3.95	4.95	4.95	11.98	10.22	10.22	11.98	10.75	4.37
Net A&G Expenses	7.98	3.06	3.06	10.16	7.18	7.18	11.04	7.55	15.07

3.36 The summary of O&M expenses approved for the first control period for TANTRANSCO is tabulated below.

Table 10: O&M expenses approved for the first control period (Rs. Cr)

Parameter	2010-11			2011-12			2012-13		
	LO	Pet	Comm.	LO	Pet	Comm.	LO	Pet	Comm.
R&M expenses	9.00	1.76	1.76	22.50	6.71	6.71	23.44	6.98	8.10
Employee Costs	234.68	116.01	193.54	585.77	296.25	503.98	609.20	323.75	575.95
A&G Expenses	7.98	3.06	3.06	10.16	7.18	7.18	11.04	7.55	15.07
Total	**251.66**	**120.82**	**198.36**	**618.43**	**310.15**	**517.87**	**643.69**	**338.28**	**599.12**

Segregation of accounts

3.37 In terms of the Transfer Scheme notification dated 02nd 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, doesnot get reflected in the opening balance sheet of the TANTRANSCO as specified in the Transfer Scheme.

3.38 TANTRANSCO has filed the Petition in accordance with the provisional transfer scheme and hence the opening GFA as on November 2010 is considered equal to the closing GFA as on March 2010.

3.39 In addition, the opening GFA as on November 2010 includes the revaluation reserve of Rs. 2775.92Crs. The summary of opening GFA as per provisional transfer scheme dated 2nd January 2012 is tabulated below:

Table 11: GFA of TANTRANSCOas on 1st Nov 2010 - based on provisional transfer scheme (Rs. Cr)

Particulars	Transmission
Before Revaluation	9456.43
Revaluation Reserve	2775.92
Including Revaluation	**12232.35**

3.40 During the discussion, TANTRANSCO has informed that revaluation of assets is still going on and the GFA as on Nov 2010 will be finalized only in the final transfer scheme. The GFA in the TANTRANSCO Petition was inclusive of revaluation reserve as per provisional transfer scheme. TANTRANSCOhas also clarified that revaluation reserve will not have any major impact in depreciation calculations as the increase in GFA was majorly due to revaluation of land.

3.41 Revaluation of assets is just a book adjustment that neither requires any fund nor generates additional cash flow. Hence, Commission is of the view that revaluation of assets should not lead to any tariff increase to the consumers and accordingly Commission is considering the GFA without revaluation reserve for the purpose of tariff determination.

Capital Expenditure and capitalization

3.42 Regulation 17 (5) of the Tariff Regulations, 2005 and Regulation 3 (v)of the Tariff Regulation under MYT framework specifies that the licensee shall get the capital investment plan approved by the Commission before filing of ARR and Application for determination of Tariff. However, TANTRANSCO has not complied with this provision.

3.43 TANTRANSCO has filed the capitalization Petition for the first control period together with the Tariff Petition.There were many discrepancies in the capital expenditure and capitalization information filed in the Petition. The capital expenditure filed by TANTRANSCO was without any cost benefit analysis. In addition, TANTRANSCO has also not provided adequate information of sources of funding, broad details and physical quantum for the proposed capital expenditure during the first control period.

3.44 In response to data-gaps and clarifications, TANTRANSCO has provided some information insupport of capital expenditure and capitalization proposed. In order to verify the prudency of capital expenditure, Commission has developed suitable formats and has directed TANTRANSCO to submit the capital expenditure information in those formats. However, utility was able to provide only partial information in the required formats and informed the Commission during discussions that it is not possible for the utility to submit the details of all the schemes due to unavailability of scheme wise data.

3.45 Even after repeated directions, Commission has observed that TANTRANSCO is not submitting the capital expenditure and capitalization information to the satisfaction of the Commission.

3.46 Commission reiterates that the data quality and iteration that went through the capital expenditure and capitalization schedule along with its GFA schedule needed to be substantially improved. **Commission directs TANTRANSCO to reconcile its accounts with respect to capital expenditure and prepare the voltage wise and scheme wise data as per the formats specified by the Commission. Commission also directs TANTRANSCO to file the progress of the capital expenditure and capitalization on quarterly basis.**

3.47 The capital investment plan requires further analysis and explanation from TANTRANSCO before cost proposed by it can be approved. Pending final approval, the Commission approves the Capital Expenditure submitted by the petitioner provisionally.**Commission hereby directs the Transmission licensee to submit all its schemes within 90 days from issuance of the Order along with its cost benefit analysis. In the absence of compliance with this directive Commission may decide the capitalization and capital expenditure based on industry norms and information available.**

3.48 The capital expenditure and capitalization considered in this order is tabulated below. Any variation in capital expenditure and capitalization due to prudence verification based on the data submitted by the TANTRANSCO and finalization of transfer scheme will be addressed during the next tariff order.

Table 12: Capital expenditure provisionally approved by the Commission for the first control period (Rs. Cr.)

Works/Schemes	FY 2010-11	FY 2011-12	FY 2012-13
	5 Months	Entire Year	Entire Year
New Projects			
400 KV Substations	10.78	10.60	104.36
230 KV Substation	34.13	88.88	54.56
110 KV Substation	56.79	187.11	182.65
Power Evacuation/ Link lines			
400 KV Lines	166.31	224.40	437.20
230 KV Lines	47.75	159.12	75.90
110 KV Lines	51.56	188.34	128.61
Other Construction Schemes	34.45	92.02	117.76
Improvement of SS/Lines			
Substations	140.86	227.37	158.61
Lines	107.71	161.36	109.80
Enhancement / Additional Power Transformer	82.86	96.57	80.18
Total Capital Expenditure	**733.19**	**1,435.77**	**1,449.62**

Table 13: Capitalization provisionally approved by the Commission for the first control period (Rs. Cr.)

Works/Schemes	FY 2010-11 (5 months)	FY 2011-12	FY 2012-13
Substations			
230 kV Substation	16.06	22.83	274.26
110 kV Substation	30.24	58.58	95.32
66 kV Substation	0.05		
Power Evacuation/ Link lines			
400 kV Lines		0.11	845.17
230 kV Lines	6.62	0.00	81.16
110 kV Lines	6.08	4.96	232.51
66 kV Lines	0.06		
Other Circles			
Mettur Workshop	0.04		
SSLDC Erode	0.06	0.09	
P&C Coimbatore Circle	0.00	0.01	
Tirnuelveli Wind Circle		3.04	
Other Activities			
Enhancement/Additional Power Transformers			150.00
Improvement of lines			100.00
Capacitor bank			22.90
R-APDRP			40.36
Total	59.22	89.63	1841.67

Depreciation

3.49 In its Petition, TANTRANSCO has submitted the opening gross block for FY 2010-11 (5 months) in line with the provisional transfer scheme notified by the Government of Tamil Nadu vide notification dated 2nd January 2012.

3.50 TANTRANSCO has estimated the depreciation for FY 2010-11 and FY 2011-12 in line with the audited accounts for FY 2010-11 and provisional accounts for FY 2011-12 respectively. It was also submitted that the depreciation rate considered in annual accounts are in line with the TNERC Tariff Regulations.

3.51 Commission has observed that TANTRANSCO has included revaluation reserve in its opening GFA as per provisional transfer scheme and during the discussions TANTRANSCO has submitted to the Commission that the revaluation of assets is still in process and the impact due to revaluation reserve can be addressed on finalization of transfer scheme. It also submitted that there will not be any major change in depreciation due to change in opening GFA as the revaluation reserve majorly corresponds to land. However, Commission is of the view that revaluation of assets should not result in tariff increase. Hence, Commission has not considered the revaluation reserve in the opening GFA while estimating the depreciation.

3.52 In another query raised by the Commission regarding the depreciation rates used, TANTRANSCO has submitted that it has used the weighted average depreciation rate for the particular group of asset, arrived on the basis of depreciation rates those specified in the Tariff Regulation.

3.53 TNERC Tariff Regulations 2005 specifies following guidelines for calculation of depreciation:

24. Depreciation

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 maximumof 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 additionalcapitalisation.*
vi. *Depreciation shall be chargeable from the first year of operation. In case of operation of the asset for partof 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.*

3.54 Commission has calculated depreciation considering the revised opening GFA without revaluation reserve, weighted average depreciation rates and deductions submitted by TANTRANSCO, and capitalization approved by the Commission in this order. The GFA considered for estimation of depreciation is tabulated below:

Table 14: Opening GFA considered for the calculations of Depreciation (Rs. Cr)

Asset	FY 2010-11	FY 2011-12	FY 2012-13
Land and Land Rights	90.96	90.96	90.96
Buildings	316.66	319.41	325.66
Hydraulic Works	2.23	2.24	2.24
Other Civil Works	114.26	116.52	117.84
Plant and Machinery	4,048.76	4,078.86	4,115.34
Lines, Cables Network etc	4,770.59	4,794.63	4,838.55
Vehicles	25.19	25.19	25.21
Furniture and Fixtures	20.77	20.78	20.77
Office Equipment	66.94	66.96	66.97
Capital Expenditure resulting in an asset not belonging to Board	0.06	0.06	0.06
Total	**9,456.43**	**9,515.61**	**9,603.60**

3.55 It was also observed that during FY 2012-13, TANTRANSCO has claimed the depreciation on capitalization of assets during the year. Commission is of the view that TANTRANSCO has claimed this depreciation in accordance with Commission's regulations. However, Commission is consciously not allowing the depreciation on capitalization of assets during the year on pro-rata basis due to following reason:

a) Inspite of repetitive directions, TANTRANSCO has not provided the satisfactory details of capitalization of expenditure during the FY 2012-13. In the absence of this data, Commission is not able to arrive at the depreciation on pro-rata basis.

3.56 Commission has also observed that though TANTRANSCO has shown additions in GFA of vehicles it has not claimed any depreciation. However, Commission has approved the depreciation on vehicles at 18% in accordance with its regulations.

3.57 Based on above submissions, Depreciation approved by the Commission for the first control period is tabulated below.

Table 15: Depreciation approved by the Commission for the first control period (Rs. Cr)

Asset	FY 2010-11		FY 2011-12		FY 2012-13	
	Petition	Commission	Petition	Commission	Petition	Commission
Land and Land Rights	-	-	-	-	-	-
Buildings	2.34	2.34	5.66	5.66	6.93	5.77
Hydraulic Works	0.02	0.02	0.06	0.06	0.06	0.06
Other Civil Works	0.82	0.82	2.00	2.00	2.26	2.03

Asset	FY 2010-11		FY 2011-12		FY 2012-13	
	Petition	Commission	Petition	Commission	Petition	Commission
Plant and Machinery	59.15	59.15	143.01	143.01	157.67	144.29
Lines, Cables Network etc	56.90	56.90	137.24	137.24	151.65	138.50
Vehicles	-	1.89	-	4.53	-	4.54
Furniture and Fixtures	0.48	0.43	1.03	1.03	1.03	1.03
Office Equipment	1.52	1.52	3.64	3.64	3.65	3.64
Total	**121.23**	**123.07**	**292.64**	**297.17**	**323.25**	**299.86**

Interest on long term loans and other financing charges

3.58 In the last tariff order, Commission has approved the total interest expenses corresponding to actual long term and short term loans allocated to TANTRANSCO by provisional transfer schemes and borrowings proposed by TANTRANSCO for the control period.

3.59 In the current Petition, TANTRANSCO has claimed the interest expenses corresponding to only long term loans and has separately claimed the interest on working capital as per norms specified by TNERC in its Tariff Regulations 2005.

3.60 The opening balance of loans as on 1st November 2010 for TANTRANSCO,considered in its Petition is based on the provisional transfer scheme notified as on 2nd January 2012. However, TANTRANSCO has not provided any information on linking loans borrowed with creation of capital assets. In response to Commission's query, TANTRANSCO has submitted that it has borrowed loans to fund its capital expenditure and also to meet debt obligations of the opening loans allocated to it through provisional transfer scheme. TANTRANSCO has submitted the revised loan profile, indicating the break-up of borrowings for capital expenditure and loan repayment.

Table 16: Revised loan profile submitted by TANTRANSCO for the first control period Rs. Cr)

Particulars	2010-11	2011-12	2012-13
<u>Loan Profile</u>			
Op. Balance	11,720	12,453	10,417
Add: Addition for CAPEX	733	1,026	894
Add: Addition for Loan Repayment	347	-	2,190
Less: Loan Repayment	347	3,062	2,190
Closing Balance	12,453	10,417	11,311

3.61 In its last order, Commission had stated that there is a mix up between the capital account and the revenue account. From the revised submissions, it can be observed that TANTRANSCO is not diverting capital loans for funding revenue expenditure for that year. However, TANTRANSCO is borrowing loans for repayment of loans allocated to it through provisional transfer scheme.

3.62 It is pertinent to mention that Commission will be guided by the transfer scheme and hence in this orderCommission is accepting the opening loans allocated to TANTRANSCO through transfer scheme.

Section 131 of Electricity Act 2003: "Vesting of Property of Board in State Government" states as under:

"131. (1) With effect from the date on which a transfer scheme, prepared by the State Government to give effect to the objects and purposes of this Act, is published or such further date as may be stipulated by the State Government (hereafter in this Part referred to as the effective date), any property, interest in property, rights and liabilities which immediately before the effective date belonged to the State Electricity Board (hereafter referred to as the Board) shall vest in the State Government on such terms as may be agreed between the State Government and the Board.

(2) Any property, interest in property, rights and liabilities vested in the State Government under sub-section (1) shall be re-vested by the State Government in a Government company or in a company or companies, in accordance with the transfer scheme so published along with such other property, interest in property, rights and liabilities of the State Government as may be stipulated in such scheme, on such terms and conditions as may be agreed between the State Government and such company or companies being State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be :

Provided that the transfer value of any assets transferred hereunder shall be determined, as far as may be, based on the revenue potential of such assets at such terms and conditions as may be agreed between the State Government and the State Transmission Utility or generating company or transmission licensee or distribution licensee, as the case may be.

(3) Notwithstanding anything contained in this section, where,-

(a) the transfer scheme involves the transfer of any property or rights to any person or undertaking not wholly owned by the State Government, the scheme shall give effect to the transfer only for fair value to be paid by the transferee to the State Government;

(b) ***a transaction of any description is effected in pursuance of a transfer scheme, it shall be binding on all persons including third parties and even if such persons or third parties have not consented to it."*** **Emphasis Supplied**

3.63 The Appellate Tribunal for Electricity (APTEL) in its order on Appeal No 102 of 2012 dated 4th February 2013 has not accepted the claim of the appellant challenging the Commission's approach of allowing interest on loans more than the gross block, according to transfer scheme. Hence, Commission is accepting the opening loans as on November 2010 as per provisional transfer scheme. The relevant extracts of the APTEL order are reproduced below:

"31. We find that the transmission tariff of the Tamil Nadu has not been revised since the year 2005-06 and has been revised now after a lapse of 7 years. Similarly, the distribution tariff in the Tamil Nadu has also been revised after a long time and tariff order was issued only after the restructuring of the Electricity Board. The long gap in determination of tariff has resulted in revenue gap and excess borrowings and diversion of capital funds to revenue account. ***Even though the State Commission has deviated from its Regulations, the State Commission has now given a calculation, according to which, if the Regulations are followed and Return on Equity is allowed as per the Regulations, it will only result in increase in ARR and tariff and there will not be any reduction in tariff as sought by the Appellant.*** *The State Commission has also stated that adjustment will be made after finalization of the balance sheet and the restructuring of the loans as per the recommendations of the committees appointed by the Government of India.*

……………..

33. ***In view of above, we do not want to interfere with the findings of the State Commission regarding the treatment given to the interest on loan in the impugned order."***

3.64 During the discussions with power utilities, it was clarified that though the borrowings for the first seven months have not been reflected in the audited accounts, the utilities are meeting the debt obligations with respect to those borrowings. TANTRANSCO has submitted that the net increase in its loans due to borrowings during the first seven months will be Rs. 1485.71 Crs. Commission has provisionally considered these borrowings to arrive at the revised loan profile and average interest expenses. On finalization of the transfer scheme, the loan profile will be reviewed and any impact on interest on loans due to finalization of transfer scheme will be addressed during the next tariff order.

3.65 As regards to repayment of existing loans, Commission has considered the actual repayment schedule submitted by TANTRANSCO as this repayment does not include loans borrowed for funding the revenue expenditure during the control period.

3.66 Based on the above submissions, Commission has considered theactual borrowings and interest expenses submitted by TANTRANSCO for FY 2010-11 and FY 2011-12. However, for FY 2012-13 Commission has determined interest expenses on long term loans on following assumptions:

i. Revised opening loans as on 1st November 2010 has been arrived considering the net addition during first seven months of FY 2010-11, based on information provided by TANTRANSCO.

ii. The repayment of existing loans is considered as per audited accounts and for future years based on the submission of TANTRANSCO.

iii. The repayment period of new loans borrowed during the control period is assumed to be 10 years

iv. The borrowings required for loan repayment will be estimated after taking into account the depreciation allowed during the year.

v. Loans required for the capital works will be arrived after considering the approved capital expenditure, equity and available grants and consumer contribution.

vi. Average interest rate for FY 11 and FY 12 is estimated based on interest expenses as per audited accounts and revised loan profile considering the borrowings during the first seven months of FY 11.Interest rate for FY 13 is assumed to be at 10.53% i.e. the average interest rate for FY 12.

vii. Interest during construction (IDC) is approved based on capital works in progress.

3.67 The details of borrowings and interest expenses approved by the Commission for the first control period are tabulated below.

Table 17: Revised opening of loans – as on 1stNov 2010 (Rs. Cr.)

Particulars	Value
Opening of loans as on 1stNovember 2010 – As per provisional transfer scheme	11720.29
Net additions in loans during the first seven months of FY 11	1485.71
Revised opening loans as on 1stNovember 2010.	**13206.00**

Table 18: Borrowings approved for funding capital expenditure in FY 2012-13 (Rs. Cr.)

Particulars	2012-13
Capital Expenditure	1449.62
Less: Equity (@ 30%)	434.89
Less: Consumer Contribution	2.60
Less: Grants	0.00
Loans required for funding capital expenditure	**1012.13**

Table 19: Total Borrowings approved in FY 2012-13 (Rs. Cr)

Parameter	FY 2012-13
For Capital Expenditure	1012.13
For repayment of existing loans (As on April 2012)	2050.65
For repayment of new loans	306.99
Depreciation	299.85
New Loans requirement	**3,069.92**

Table 20: Interest on long term loans approved by the Commission for the first control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2010-11	FY 2011-12	FY 2012-13
Opening Loans	11,720.29	12,452.99	10,417.34	13,206.00	13,938.70	11,903.05
Loan Additions during the Year	1,080.14	1,026.78	3,083.99	1,080.14	1,026.78	3,069.92
Repayment during the Year	347.44	3,062.43	2,189.61	347.44	3,062.43	2,357.64
Closing Loans	12,452.99	10,417.34	11,311.72	13,938.70	11,903.05	12,615.32
Average Loans	12,086.64	11,435.16	10,864.53	13,572.35	12,920.87	12,259.19
Interest on Loan	**336.40**	**1,360.23**	**1,252.87**	**336.40**	**1,360.23**	**1,290.57**
Less: IDC	49.85	243.91	225.66	49.85	243.91	275.75
Net Interest on Loans	**286.55**	**1,116.32**	**1,027.20**	**286.55**	**1,116.32**	**1,014.82**

3.68 TANTRANSCO has claimedinterest on GPF, guarantee and commitment charges under other finance charges. Commission is of the view that interest expenses on GPF cannot be allowed, as GPF reserve fundsare not considered for funding of capital expenditure. However, Commission approves other finance charges for guarantee and commitment expense as claimed by TANTRANSCO. The other finance charges approved by the Commission are given below.

Table 21: Other finance charges approved by the Commission (Rs. Cr.)

Parameter	2010-11		2011-12		2012-13	
	Petition	Commission	Petition	Commission	Petition	Commission
Other finance charges	6.05	0.20	23.39	2.58	27.26	4.37

3.69 The overall interest and other finance charges approved by the Commission for the TANTRANSCO during the first control period are given below.

Table 22: Interest and other finance charges approved for the first control period - in Rs. Crore

Parameter	2010-11		2011-12		2012-13	
	Petition	Commission	Petition	Commission	Petition	Commission
Interest on long term loans	286.55	286.55	1116.32	1116.32	1027.20	1014.82
Other finance charges	6.05	0.20	23.39	2.58	27.26	4.37
Total	**292.60**	**286.75**	**1139.71**	**1118.90**	**1054.46**	**1019.19**

Return on Equity

3.70 TANTRANSCO in its Petition has claimed return on equity on total equity base as on 1st November 2010, based on provisional transfer scheme. Commission in its last tariff order has not allowed the return on equity for TANTRANSCO as there was a mix-up between capital account and revenue account and Commission is allowing the interest on borrowings more than the GFA.

3.71 In addition Commission'sview and observations while approving return on equity in its last tariff order are given below:

i. There is a mix up between the capital account and revenue account and equity as well as capital borrowings have been diverted to meet the revenue expenses.
ii. The return on equity shall not be permitted if equity has been diverted for meeting revenue expenses.
iii. Borrowings are more than the investment shown in capital expenditure which brings out the fact that the borrowings have been diverted for revenue expenditure.
iv. The Regulations of the Commission are for normal situations and does not cover a situation which is encountered now. Therefore, the Commission has to take a practical view on this issue. The option available to the Commission is to disallow the interest costs on the entire borrowings in excess of capital works and allow return on equity in line with the its tariff regulations.
v. In view of the above submissions Commission has not allowed RoE while allowing the interest expenses on total borrowings in its last order.

3.72 In order to understand the extent to which the long term loans and equity have been diverted, Commission directed TANTRANSCO to bifurcate the opening loans as on November 2010 into loans borrowed for funding capital projects, repayment of existing loans and funding the revenue expenditure.

3.73 Based on TNEB audited accounts from FY 2002-03, Commission has estimated the excess funds available with utility for funding capital expenditure and whether there was any equity requirement for funding the capital expenditure.

3.74 The Commission has tabulated below the excess funds with utility in the past year based on additions to equity, consumer contribution, long term loans and actual capital expenditure.

Table 23: Comparison of source of funds and actual capital expenditure (Rs. Cr)

Year	Capital Expenditure	Source of funding				Excess Funds
		Consumer Contribution	Equity	Long term loans	Total	
FY 2003	1236	279	25	1621	1925	**689**
FY 2004	1561	408	200	2761	3369	**1808**

Year	Capital Expenditure	Source of funding				Excess Funds
		Consumer Contribution	Equity	Long term loans	Total	
FY 2005	1272	391	85	2043	2519	**1246**
FY 2006	1570	428	25	2134	2587	**1018**
FY 2007	2094	319	175	3075	3569	**1475**
FY 2008	2333	527	490	4836	5853	**3519**
FY 2009	2706	436	1171	8552	10158	**7452**
FY 2010	4182	632	100	9953	10686	**6504**

3.75 From the above table, it can be observed that source of funds for capital assets are higher than actually required for funding the capital expenditure. In addition the fact that the excess fund available during the year is more than the equity infused in that year, clearly indicates that the equity has not contributed in the creation of capital assets and has been diverted towards revenue account since FY 2002-03.

3.76 Based on the above submissions, Commission is of the view that entire equity base allocated to TANTRANSCO as on 1stNov 2010 has been diverted for funding the revenue expenditure prior to unbundling. Hence, Commission is considering the opening equity base as on 1stNov 2010 as zero.

3.77 However for the subsequent years, Commission has observed that TANTRANSCO is not in revenue deficit and hence it has not borrowed any loans during FY 2010-11 and FY 2011-12 for funding the revenue expenditure. In view of this Commission is allowing the actual equity inflow for FY 2010-11, FY 2011-12 and for FY 2012-13 allowed equity inflow of 30% of the proposed capital expenditure.

3.78 On the equity profile arrived, Commission has allowed 14% RoE on average equity for the year in accordance to its regulations. The equity profile and return on equity approved by the Commission is tabulated below.

Table 24: Return on Equity approved by the Commission for the first control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2010-11	FY 2011-12	FY 2012-13
Equity at the beginning	1,927.55	1,927.55	2,334.01		-	406.46
Addition during the year	-	406.46	552.50	-	406.46	434.89
Total Equity	1,927.55	2,334.01	2,886.51	-	406.46	841.35
Average Equity	**1,927.55**	**2,130.78**	**2,610.26**	**-**	**203.23**	**623.91**
Return on Equity	**269.86**	**298.31**	**365.44**	**-**	**28.45**	**87.35**

Interest on Working Capital

3.79 TANTRANSCO has claimed interest on working capital based on norms specified in the TNERC Tariff Regulations, 2005.

3.80 Commission has not approved the interest on working capital in its last order as it has approved interest expenses corresponding to total loans including short term borrowings. However TANTRANSCO has not included interest expenses for short term borrowings in long term loans and claimed interest on working capital separately. Commission is of the view that it is appropriate to segregate the loans based on purpose in accordance with its tariff regulations. Hence, Commission approves the interest on working capital based on its tariff regulations and relevant guidelines are reproduced below:

"26. Working Capital

(d) For Transmission System
(i) Operation and Maintenance expenses for one month
(ii) Maintenance spares @ 1% of the historical cost of the transmission asset escalated at 6% per annum from the date of commencement of operation;
(iii) Receivables equivalent to two months transmission charges calculated on target availability level.

27. Interest on Working Capital
The rate of interest on working capital shall be on normative basis and shall be equivalent to the short term primary lending rate of State Bank of India as on 1st April of the relevant year."

3.81 Commission has observed that TANTRANSCO has estimated the working capital based on norms specified by the Commission.However, TANTRANSCO has taken the GFA (including revaluation reserve) for arriving at working capital requirement for maintenance spares. Commission has re-estimated the interest on working capital considering GFA without revaluation reserve and approved transmission charges.

3.82 Commission has considered the interest rates as submitted by TANTRANSCO as they were in accordance with the regulations. The working capital requirement and interest on working capital approved by the Commission for TANTRANSCO is given below.

Table 25: Interest on working capital approved by the Commission for the first control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2010-11	FY 2011-12	FY 2012-13
O & M expenses	24.16	25.85	28.19	39.67	43.16	49.93
Maintenance Spares	54.27	131.17	149.64	39.40	95.16	96.04
Receivables	209.73	285.05	512.67	209.73	284.51	512.67
Total Working Capital Requirement	288.17	442.06	690.49	288.80	422.82	658.63
Interest on Working Capital	**14.11**	**57.47**	**101.85**	**14.14**	**54.97**	**97.15**

Other Debits

3.83 TANTRANSCO has proposed material costs variance, extra ordinary items and miscellaneous losses written off under this head. For FY 2011-12 and FY 2012-13, TANTRANSCO has proposed extraordinary items of Rs 2.28 Crs and Rs. 2.50 Crs respectively. However, TANTRANSCO has not provided adequate reasons for this expense in its Petition. Hence, Commission is disallowing the extraordinary expenses proposed by TANTRANSCO in other debits.

3.84 Based on the above submissions the other debits approved by the Commission are tabulated below.

Table 26: Other Debits approved by the Commission for the first control period (Rs. Cr)

Parameter	FY 2010-11			FY 2011-12			FY 2012-13		
	Last Order	Petition	Commission	Last Order	Petition	Commission	Last Order	Petition	Commission
Other Debits	0.34	0.02	0.02	0.84	2.08	0.39	0.85	2.29	0.43

Prior Period Expenses

3.85 TANTRANSCO has claimed a prior period expense of Rs. 1.56 Cr in FY 2011-12 based on provisional accounts.In support to its claim TANTRANSCO has submitted that 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. In view of this Commission is provisionally accepting the prior-period expenses for TANTRANSCO for FY 2011-12.

Table 27: Prior period expenses approved by the Commission for the first control period (Rs. Cr.)

Parameter	FY 2010-11			FY 2011-12			FY 2012-13		
	Last Order	Petition	Commission	Last Order	Petition	Commission	Last Order	Petition	Commission
Other Debits	2.66	0	0	0	1.56	1.56	0	0	0

Incentive

3.86 TANTRANSCO has claimed incentive in accordance to TNERC Tariff Regulations 2005, which entitles the transmission licensee for an incentive at 1% of equity for each percentage point of increase in annual availability beyond the target availability i.e. 98%.

"63. Incentive
The Transmission licensee shall be entitled to incentive @ 1% of equity for each percentage point of increase in annual availability beyond the target availability prescribed under regulation 58 (b) in accordance with the following formula.

Incentive = Equity x (Annual Availability achieved - Target availability) / 100

The incentive shall be shared by the long term customers in the ratio of their average allotted capacity."

3.87 In response to the Commission's query, TANTRANSCO has submitted the circle wise transmission availability as certified by SLDC during the control period. In view of this, Commission is accepting the actual transmission availability submitted by TANTRANSCO.

3.88 However for calculation of incentive, Commission has considered the revised average equity determined as per Table 22, for the purpose of estimating the incentive. The incentive approved by the Commission for the first control period is given below.

Table 28: Incentive approved by the Commission for the first control period

Particulars	Petition			Commission		
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2010-11	FY 2011-12	FY 2012-13
AverageEquity (Rs. Cr.)	1,927.55	2,130.78	2,610.26	-	203.23	623.91
Annual Availability achieved	99.34%	99.54%	99.54%	99.34%	99.54%	99.54%
Target Availability	98.00%	98.00%	98.00%	98.00%	98.00%	98.00%
Incentive (Rs. Cr)	**25.86**	**32.85**	**40.24**	**-**	**3.13**	**9.62**

Other income

3.89 The other income claimed by TANTRANSCO includes interest on staff loans, income from investment, interest from banks, income from short term open access, etc. For FY 2010-11 and FY 2011-12, TANTRANSCO has claimed based on audited and provisional accounts respectively.

3.90 TANTRANSCO has submitted that the other income for the year FY 2012-13 was arrived by escalating the values of FY 2011-12. 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%.

3.91 In response to Commission's query TANTRANSCO has provided a provisional estimate of Rs. 97.65 Crs as open access and scheduling charges collected from STOA in FY 2012-13.

3.92 As regards to FY 2010-11 and FY 2011-12, Commission is considering the other income as submitted by TANTRANSCO. However for FY 2012-13, Commission has re-estimated the other income based on revised information submitted by TANTRANSCO. The other income approved by the Commission for the control period is given below.

Table 29: Other income approved by the Commission for the first control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2010-11	FY 2011-12	FY 2012-13	FY 2010-11	FY 2011-12	FY 2012-13
Other income (Including revenue from STOA and scheduling charges)	10.06	35.16	38.34	10.06	35.16	105.48

ARR approved by the Commission for the first control period

3.93 The ARR approved by the Commission during the true-up and performance review exercise for the first control period is tabulated below:

Table 30: ARR approved for the first control period (Rs. Cr.)

Parameter	FY 2010-11			FY 2011-12			FY 2012-13		
	LO	Pet	Comm.	LO	Pet	Comm.	LO	Pet	Comm.
Depreciation	123.83	121.23	123.06	322.86	292.65	297.18	353.61	323.25	299.85
Interest on Loan Capital	538.51	292.60	286.75	1,446.13	1,139.71	1,118.91	1,477.58	1,054.46	1,019.19
Return on Equity	-	269.86	-	-	298.31	28.45	-	365.44	87.35
Operation and maintenance exp	251.66	120.82	198.36	618.43	310.15	517.87	643.69	338.28	599.12
Interest on Working Capital	-	14.11	14.14	-	57.47	54.97	-	101.85	97.15
Other Debits	0.34	0.02	0.02	0.84	2.08	0.39	0.85	2.29	0.43
Income tax	-	-	-	-	-	-	-	-	-
Incentives	-	25.86	-	-	32.85	3.13	-	40.24	9.62
Net Prior Period Expenses	(2.66)	-	-	-	1.56	1.56	-	-	-
Gross ARR	**911.68**	**844.51**	**622.33**	**2,388.26**	**2,134.78**	**2,022.47**	**2,475.73**	**2,225.81**	**2,112.72**
Less: Other Income	12.05	10.06	10.06	29.49	35.16	35.16	30.08	38.34	105.48
Net ARR	**899.63**	**834.45**	**612.17**	**2,358.77**	**2,099.62**	**1,987.31**	**2,445.65**	**2,187.47**	**2,007.24**

Revenue from transmission charges

3.94 TANTRANSCO has submitted to the Commission to approve the revenue based on audited accounts and provisional accounts for FY 2010-11 and FY 2011-12. Commission is accepting the submission of TANTRANSCO for FY 2010-11 and for FY 2011-12, Commission has considered the revenue as per accounts after statutory audit as this is the actual revenue received by the utility during the concerned years.

3.95 However for FY 2012-13, Commission has considered revenue of Rs. 3076Crs approved in its last tariff order. The revenue from transmission charges approved by the Commission for the first control period is tabulated below.

Table 31: Revenue from transmission charges approved for the first control period (Rs. Cr.)

Parameter	FY 2010-11			FY 2011-12			FY 2012-13		
	LO	Pet	Comm.	LO	Pet	Comm.	LO	Pet	Comm.
Revenue from transmission charges	744.10	524.32	524.32	1916.58	1710.00	1707.06	3075.99	3075.99	3075.99

Revenue Gap for the first control period

3.96 On the basis of ARR and revenue approved by the Commission, the Revenue Gap approved by the Commission for the first control period is tabulated below.

Table 32: Revenue gap approved by the Commission (Rs. Cr.)

Particulars	FY 2010-11	FY 2011-12	FY2012-13
Net ARR	612.17	1,987.31	2,007.24
Revenue from Transmission Charges	524.32	1707.06	3075.99
Revenue Gap	**87.95**	**280.25**	**(1,068.75)**

A4: AGGREGATE REVENUE REQUIREMENT FOR THE SECOND CONTROL PERIOD – FY 2013-14 TO FY 2015-16

4.1 Tamil Nadu Transmission Corporation Limited (TANTRANSCO), in its Petition has sought the approval of expenditure for FY 2013-14 to FY 2015-16. This chapter summarizes the highlights of the petitions filed byTANTRANSCOand Commission's approval of the expenditure for the second control period.

Transmission Loss and Energy Balance

4.2 TANTRANSCO in its Petition has submitted that actual loss in the Intra-State transmission system was 4.71% for FY 2010-11 and provisional is expected to be around 4.25% in FY 2011-12. In line with actual losses, TANTRANSCO has proposed transmission loss of 4.25% for the next four year period of FY 2012-13 to FY 2015-16.

4.3 Later,TANTRANSCO has revised the transmission losses estimate for FY 2013-14 and FY 2015-16.The revised submission for the second control period furnished by TANTRANSCO is tabulated below.

Table 33: Revised voltage losses submitted by TANTRANSCO

Voltage	FY 2013-14	FY 2014-15	FY 2015-16
230 KV	0.80%	0.80%	0.80%
110 KV	1.90%	1.90%	1.90%
Total	2.70%	2.70%	2.70%

4.4 Commission is of the view that the intra-state transmission losses proposed by TANTRANSCO are lower than those obtainedin similar other states such as Andhra Pradesh, Karnataka, Rajasthan and Maharashtra. Hence, Commission accepts the TANTRANSCO's revised submission of transmission losses.

4.5 TANTRANSCO in its Petition has not provided any details of energy balance in transmission system for the second control period. In response to Commission's query, though TANTRANSCO has submitted the revised losses but it has not submitted the energy balance data in its periphery for the second control period.

4.6 However, Commission is considering the approved sales for TANGEDCO and based on TANGEDCO's submission of wheeling units and HT sales has arrived at the energy balance in the transmission system.

Table 34: Energy balance in the transmission system arrived by the Commission for the second control period

Parameter	Units	2013-14	2014-15	2015-16
Energy input at Transmission Periphery	**MU**	**79703**	**86175**	**90274**
230 kV Losses approved by the Commission	%	0.80%	0.80%	0.80%
230 kV Losses	MU	638	689	722
Wheeling units - 230 kV	MU	315	318	336
TANGEDCO - 230 kV Sales	MU	721	793	834

Parameter	Units	2013-14	2014-15	2015-16
Energy input at 110 kV	MU	78029	84375	88382
110 kV Losses approved by the Commission	%	1.90%	1.90%	1.90%
110 kV Losses	MU	1483	1603	1679
Wheeling units - 110 kV	MU	1575	1590	1680
TANGEDCO - 110 kV Sales	MU	3067	3373	3546
Energy Input at Distribution Periphery (including wheeling)	**MU**	**71905**	**77808**	**81477**

Fixed Expenses

4.7 In this section expenses related to fixed cost for the second control period (FY 2013-14 to FY 2015-16) will be approved by the Commission.

Operation and Maintenance Expenses

4.8 In the process of the approval of O&M expenses the Commission is guided by following regulations

Regulation-25 of TNERC Tariff Regulations:

"25. Operation and Maintenance Expenses

1. *The operation and maintenance expenses shall be derived on the basis of actual operation and maintenance expenses for the past five years previous to current year based on the audited Annual Accounts excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission. The Commission may, if considered necessary engage Consultant / Auditors in the process of prudence check for correctness.*
2. *The average of such normative operation and maintenance expenses after prudence check shall be escalated at the rate of 4% per annum to arrive at operation and maintenance expenses for current year i.e. base year and ensuing year.*
3. *The base operation and maintenance expenses so determined shall be escalated further at the rate of 4% per annum to arrive at permissible operation and maintenance expenses for the relevant years of tariff period.*

…"

4.9 Considering the fact that power utilities have been unbundled from Nov 1st, 2010 and that TANTRANSCO is currently maintaining separate accounts, Commission is of the view that it is not appropriate to project the expenses for the next control period based on the actual expenses incurred prior to unbundling of power utilities. Hence in this order Commission projects the O&M expenses for next control period based on the provisional accounts for FY 2011-12.

4.10 In following para's each component of O&M expenses will be discussed in detail and Commissions approval for the same will be accorded.

Employee Expenses

4.11 TANTRANSCO has projected the employee expenses for the second control period based on following assumptions and taking the employee expenses based on provisional accounts for FY 2011-12 as base

i. Basic salary and the grade pay have been considered with an escalation of 5% for FY 2013-14 to FY 2014-15 and 10% for FY 2012-13 and FY 2015-16 due to wage revision.
ii. Escalation of DA rate at 15% per annum
iii. Other expenses such as surrender leave, terminal benefits, pension schemes etc at 10%.

4.12 Commission has arrived at the employee expenses for FY 2012-13 during the performance review exercise considering provisional accounts of FY 2011-12 as base. For projecting the employee expenses for the second control period, Commission has considered the employee expenses approved for FY 2012-13 as base.

4.13 Though TANTRANSCO has proposed escalations of more than 4% for various components of employee expenses, Commission in accordance with its regulation has escalated the approved employee expenses for FY 2012-13 at 4% on all components except for DA for arriving at the employee expenses for second control period.

4.14 However, as submitted by TANTRANSCO if due to expected pay revision the employee expenses increase significantly during FY 2015-16, TANTRANSCO is required to quantify the impact due to pay revision and submit to the Commission during the true-up exercise for FY 2015-16.

4.15 Commission is of the view that the escalation of DA rate of 15% proposed by TANTRANSCO is in line with recent increases of DA rate and hence considers the TANTRANSCO submission of 15% for projecting the employee expenses for the second control period.

Table 35: DA rates used for projecting the employee expenses

Parameter	FY 2013	FY 2014	FY 2015	FY 2016
Average DA rates	72.25%	83.09%	95.55%	109.88%

4.16 For the second control period, TANTRANSCO has submitted an employee capitalization of 19.71%, which seems to be on a higher side compared to historic trend. In view of this discrepancy Commission has relied on average employee capitalization of 9% based on historical data.

4.17 Based on the above approach and methodology, the employee costs submitted by TANTRANSCO and approved by the Commission are tabulated below:

Table 36: Employee expenses approved for second control period - (Rs. Cr.)

Particulars	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Basic Salary	220.54	206.52	231.57	214.78	254.72	223.38
Overtime wages	67.08	3.40	69.77	3.53	72.56	3.67
Dearness Allowance	62.46	171.60	71.83	205.23	82.61	245.45
Other Allowances	16.19	16.19	16.83	16.83	17.51	17.51
Bonus &Exgratia	6.79	6.79	7.06	7.06	7.35	7.35
Sub Total	**373.06**	**404.49**	**397.06**	**447.44**	**434.74**	**497.36**
Terminal benefits*	27.58	249.33	30.33	259.30	33.37	269.67
Other Expenses	29.92	26.79	32.89	27.86	36.16	28.97
Grand Total	**430.56**	**680.61**	**460.29**	**734.60**	**504.26**	**796.00**
Less: Capitalization	84.88	61.25	90.74	66.11	99.41	71.64
Net Employee Expenses	**345.68**	**619.35**	**369.54**	**668.49**	**404.85**	**724.36**

**For increase in terminal benefits of TANTRANSCO a corresponding decrease in terminal benefits is provided for TANGEDCO.*

Repair and Maintenance Expenses

4.18 Similar to projection of employee expenses, R&M expenses are estimated based on actual expenses for FY 2011-12. The approved R&M expenses for FY 2012-13 are escalated by 4% in accordance with Commission's regulation for arriving at the gross R&M expenses for the second control period. With regards to R&M expenses capitalized, TANTRANSCO has proposed 16.62% during the second control period. Commission is of the view that this percentage is on a higher side and based on historical trend Commission has considered 3.30% for R&M expenses capitalization during the second control period.

4.19 Based on the above approach, the R&M expenses submitted by TANTRANSCO and approved by the Commission are tabulated below:

Table 37: Approved R&M expenses for the second control period (Rs. Cr.)

Particulars	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Plant & Machinery	4.03	4.03	4.19	4.19	4.36	4.36
Building	0.09	0.09	0.09	0.09	0.10	0.10
Civil Works	0.28	0.28	0.30	0.30	0.31	0.31
Hydraulic work	-	-	-	-	-	-
Lines & Cable network	3.74	3.74	3.89	3.89	4.04	4.04
Vehicles	0.40	0.40	0.41	0.41	0.43	0.43
Furniture & Fixtures	0.00	0.00	0.00	0.00	0.00	0.00
Office equipments	0.17	0.17	0.17	0.17	0.18	0.18
Grand Total	**8.71**	**8.71**	**9.06**	**9.06**	**9.42**	**9.42**
Less: Capitalization	1.45	0.29	1.51	0.30	1.57	0.31
Net R&M Expenses	**7.26**	**8.42**	**7.55**	**8.76**	**7.86**	**9.11**

Administrative and General Expenses

4.20 Similar to projection of employee expenses, A&G expenses are estimated based on actual expenses for FY 2011-12. The approved A&G expenses for FY 2012-13 are escalated by 4% in accordance with Commission‘s regulation for arriving at the gross A&G expenses for the second control period. With regard to A&G expenses capitalized, TANTRANSCO has proposed 58.74% during the second control period. Commission is of the view that this percentage is on a higher side and based on historical trend Commission has considered 22.49% for A&G expenses capitalization during the second control period.

4.21 Based on the above approach, the A&G expenses submitted by TANTRANSCO and approved by the Commission are tabulated below:

Table 38: Approved A&G expenses for the second control period (Rs. Cr.)

Particulars	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Gross A&G Expenses	**19.25**	**20.23**	**20.26**	**21.03**	**21.34**	**21.88**
Less: Capitalization	11.31	4.55	11.91	4.73	12.54	4.92
Net A&G Expenses	**7.94**	**15.68**	**8.36**	**16.30**	**8.80**	**16.96**

4.22 The summary of O&M expenses approved for the second control period for TANTRANSCO is tabulated below.

Table 39: O&M expenses approved by the Commission for the second control period (Rs. Cr.)

Particulars	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
R&M expenses	7.26	8.42	7.55	8.76	7.86	9.11
Employee Costs	345.68	619.35	369.54	668.49	404.85	724.36
A&G Expenses	7.94	15.68	8.36	16.30	8.80	16.96
Total	**360.88**	**643.45**	**385.46**	**693.55**	**421.51**	**750.43**

Capital Expenditure and capitalization

4.23 Regulation 17 (5) of the Tariff Regulations, 2005 and Regulation 3 (v)of the Tariff Regulation under MYT framework specifies that the licensee shall get the capital investment plan approved by the Commission before filing ARR and Application for determination of Tariff. However, TANTRANSCO has not complied with this provision.

4.24 TANTRANSCO has submitted the details of capital expenditure and capitalization for the second control period in the Tariff Petition. In its Petition, TANTRANSCO has proposedmassive capital expenditure in construction of new transmission lines and substations along with augmentation for improving the transmission network availability and to strengthen the overall transmission network. However, TANTRANSCO has provided rationale for such massive capital expenditure in a generic manner. There were many discrepancies in the capital expenditure and capitalization information filed in the Petition. The capital expenditure filed by TANTRANSCO was without any cost benefit analysis. In addition, TANTRANSCO has also not provided adequate information of sources of funding, broad details and physical quantum for the proposed capital expenditure during the second control period.

4.25 In order to verify the prudency of capital expenditure, Commission has developed suitable formats and has directed TANTRANSCO to submit the capital expenditure information in those formats. However, utility was able to provide only partial information in the required formats and informed the Commission during the discussions that it is not possible for the utility to submit the details of all the schemes due to unavailability of scheme wise data.

4.26 Even after repeated directions, Commission has observed that TANTRANSCO is not submitting the capital expenditure and capitalization information to the satisfaction of the Commission.

4.27 **Commission directs TANTRANSCO to reconcile its accounts with respect to capital expenditure and prepare the scheme wise data as per the formats specified by the Commission. Commission also directs TANTRANSCO to file the progress of the capital expenditure and capitalization on quarterly basis.**

4.28 The capital investment plan for second control period requires further analysis and explanation from TANTRANSCO before according approval of cost proposed by TANTRANSCO. Pending final approval, the Commission accepts the Capital Expenditure submitted by the petitioner provisionally.**Commission hereby directs the Transmission licensee to submit all its schemes proposed for the second control period within 90 days from issuance of the Order along with its cost benefit analysis. In the absence ofcompliance to this directive Commission mayapprove the capitalization and capital expenditure based on industry norms and information available.**

4.29 Also, Commission has observed that TANTRANSCO has proposed Rs. 185 Crs of capital expenditure for HT Lines (lower than 110 kV) for FY 2014-15 in its Petition. Commission is of the view that this huge capital expenditure may not be incurred for improvement of HT lines and hence is disallowing this capital expenditure.

4.30 The capital expenditure and capitalization considered in this order is tabulated below. Any variation in capital expenditure and capitalization due to prudence verification based on the data submitted by the TANTRANSCO and finalization of transfer scheme will be addressed during the next tariff order.

Table 40: Capital expenditure as submitted by TANTRANSCO and provisionally approved by the Commission for the second control period (Rs. Cr.)

Works/Schemes	FY 2013-14	FY 2014-15*	FY 2015-16
New Projects			
400 KV Substations	578	1311	309
230 KV Substations	539	493	277
110 KV Substations	208	140	140
Power Evacuation/ Link lines			
400 KV Lines	693	2027	507
230 KV Lines	472	730	231
110 KV Lines	213	176	154
Improvement of SS/Lines			
Substations	66	64	64
Lines	1657	586	723
Enhancement / Additional Power Transformers	100	100	100
Total Capital Expenditure	**4526**	**5627**	**2505**

**Refer to para 4.29*

Table 41: Capitalization provisionally approved by the Commission (Rs. Cr.)

Works/Schemes	FY 2013-14	FY 2014-15	FY 2015-16
New Projects			
400 KV Substations		1671	529
230 KV Substations	194	735	307
110 KV Substations	55	206	140
Power Evacuation/ Link lines			
400 KV Lines		2311	917
230 KV Lines	146	950	256
110 KV Lines	38	279	154
Improvement of SS/Lines			
Substations	24	80	64
Lines	2053	796	559
Enhancement / Additional Power Transformers	100	100	100
Total Capital Expenditure	**2610**	**7128**	**3026**

Depreciation

4.31 In its Petition, TANTRANSCO has submitted the opening gross block for transmission business for FY 2010-11 (5 months) is considered in line with the provisional transfer scheme notified by the Government of Tamil Nadu vide notification dated 2nd January 2012.

4.32 Later in response to Commissions query regarding revaluation reserve, TANTRANSCO and TANGEDCO have given the details of revaluation reserve.Based on the details submitted Commission has revised the opening GFA based on provisional transfer scheme and without considering the revaluation reserve.

4.33 In another query raised by the Commission regarding the depreciation rates used, TANTRANSCO has submitted that it has used the weighted average depreciation rate for the particular group of asset arrived based on depreciation rates as those specified in the tariff regulation.

4.34 TNERC tariff regulations 2005 specifies following guidelines for calculation of depreciation:

24. Depreciation

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.*

4.35 Commission has calculated depreciation considering the revised opening GFA without revaluation reserve, weighted average depreciation rates and deductions submitted by TANTRANSCO, and capitalization approved by the Commission in this order. The GFA considered for estimation of depreciation is tabulated below:

Table 42: Opening GFA considered for the calculations of Depreciation (Rs. Cr)

Asset	FY 2013-14	FY 2014-15	FY 2015-16
Land and Land Rights	90.96	90.96	90.96
Buildings	456.42	641.80	1147.85
Hydraulic Works	2.24	2.24	2.24
Other Civil Works	145.43	184.56	291.36
Plant and Machinery	4878.76	5961.09	8915.59
Lines, Cables Network etc	5757.79	7061.04	10618.58
Vehicles	25.73	26.46	28.46
Furniture and Fixtures	20.75	20.71	20.61
Office Equipment	67.12	67.34	67.93
Capital Expenditure resulting in an asset not belonging to Board	0.06	0.06	0.06
Total	**11445.27**	**14056.27**	**21183.64**

4.36 It was also observed that during the second control period, TANTRANSCO has claimed the depreciation on capitalization of assets during the year. Commission is of the view that TANTRANSCO has claimed this depreciation in accordance with the regulation. However, Commission consciously is not allowing the depreciation on capitalization of assets during the year on pro-rata basis due to following reason:

a) Inspite of repetitive directions, TANTRANSCO has not provided the details of capitalization of expenditure during the second control period. In the absence of this data, Commission is not able to arrive at the depreciation on pro-rata basis.

4.37 Commission has also observed that though TANTRANSCO has shown additions in GFA of vehicles it has not claimed any depreciation. However, Commission has approved the depreciation on vehicles at 18% in accordance with its regulations. Commission has allowed depreciation on pro-rata basis for seven months for vehicles on opening of FY 2010 as the asset will be depreciated to 90% in first seven months.

4.38 Based on the above submissions, Depreciation approved by the Commission for the second control period is tabulated below.

Table 43: Depreciation approved by the Commission for the second control period (Rs. Cr)

Asset	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Land and Land Rights	-	-	-	-	-	-
Buildings	9.73	8.08	15.85	11.37	22.24	20.33
Hydraulic Works	0.06	0.06	0.06	0.06	0.06	0.06
Other Civil Works	2.84	2.50	4.09	3.17	5.40	5.01
Plant and Machinery	190.03	171.06	260.80	209.01	334.58	312.60
Lines, Cables Network etc	183.46	164.81	253.03	202.12	325.56	303.95
Vehicles	0.00	4.63	0.00	4.76	0.00	3.23
Furniture and Fixtures	1.03	1.03	1.03	1.03	1.02	1.02
Office Equipment	3.66	3.65	3.68	3.66	3.70	3.69
Total	**390.81**	**355.82**	**538.54**	**435.18**	**692.56**	**649.89**

Interest on long term loans and other financing charges

4.39 In the last tariff order Commission has approved the total interest expenses corresponding to actual long term and short term loans allocated to TANTRANSCO by provisional transfer schemes and borrowings proposed by TANTRANSCO for the control period. In the current Petition TANTRANSCO has claimed the interest expenses corresponding to only long term loans and separately claimed the interest on working capital as per norms specified by TNERC in its tariff regulations 2005.

4.40 Later, TANTRANSCO has submitted the revised loan profile indicating the break-up of borrowings for capital expenditure and loan repayment in the second control period.

Table 44: Revised loan profile submitted by TANTRANSCO for the second control period Rs. Cr)

Particulars	2013-14	2014-15	2015-16
Loan Profile			
Op. Balance	11,311	14,088	17,618
Add: Addition for CAPEX	3,739	3,671	1,594
Add: Addition for Loan Repayment	2,124	2,593	3,092
Less: Loan Repayment	3,086	2,734	3,626
Closing Balance	14,088	17,618	18,678

4.41 In its last order Commission has stated that there is a mix up between the capital account and the revenue account. From the revised submissions it can be observed that TANTRANSCO is not diverting capital loans for funding revenue expenditure for that year. However, TANTRANSCO is borrowing loans for repayment of loans allocated to it through provisional transfer scheme.

4.42 In Chapter A3, Commission has discussed in detail the approach to be adopted for approving interest on long term loans and finance charges. Commission for the determination of interest expenses on long term loans for the second control period has considered following assumptions:

i. Closing loans as on March 2013 as estimated by the Commission for the first control period have been taken as base.
ii. The repayment schedule of existing loans as on March 2012 submitted by TANTRANSCO is considered
iii. The repayment period of new loans borrowed during the control period is assumed to be 10 years
iv. The borrowings required for loan repayment will be estimated after taking into account the depreciation allowed during the year.
v. Loans required for the capital works will be arrived after considering the approved capital expenditure, equity and available grants and consumer contribution during the control period.
vi. Interest rate for FY 2013-14 to FY 2015-16 is assumed to be at 10.53% i.e. the average interest rate for FY 2011-12.
vii. Interest during construction (IDC) is approved based on capital works in progress.

4.43 The details of borrowings and interest expenses approved by the Commission corresponding to capital expenditure and repayment of loans are given below.

Table 45: Borrowings approved for funding capital expenditure during the second control period (Rs. Cr.)

Particulars	2013-14	2014-15	2015-16
Capital Expenditure	4526.00	5627.00	2505.00
Less: Equity	1357.80	1688.10	751.50
Less: Consumer Contribution	2.60	2.60	2.60
Less: Grants	0.00	0.00	0.00
Loans required for funding capital expenditure	3165.60	3936.30	1750.90

Table 46: Total Borrowings approved for the second control period (Rs. Cr)

Parameter	2013-14	2014-15	2015-16
For Capital Expenditure	3165.60	3936.30	1750.90
For repayment of existing loans (As on April 2012)*	1055.33	705.87	691.53
For repayment of new loans (Borrowings from April 2012)	770.56	1323.62	1669.86
Depreciation	355.82	435.17	649.89
New Loans requirement	**4,635.66**	**5,530.61**	**3,462.39**

**Repayment of existing loans as on April 2012 considered based on TANTRANSCO submission*

Table 47: Interest on long term loans approved by the Commission for the second control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2013-14	FY 2014-15	FY 2015-16	FY 2013-14	FY 2014-15	FY 2015-16
Opening Loans	11,311.72	14,088.15	17,618.21	12,615.32	15,425.10	18,926.22
Loan Additions during the Year	5,862.70	6,264.46	4,686.23	4,635.66	5,530.61	3,462.39
Repayment during the Year	3,086.27	2,734.40	3,625.56	1,825.89	2,029.49	2,361.39
Closing Loans	14,088.15	17,618.21	18,678.87	15,425.10	18,926.22	20,027.22
Average Loans	12,699.94	15,853.18	18,148.54	14,020.21	17,175.66	19,476.72
Interest on Loan	**1,437.00**	**1,707.53**	**1,888.65**	**1,475.96**	**1,808.14**	**2,050.38**
Less: IDC	258.50	306.58	338.97	355.91	377.75	271.37
Net Interest on Loans	**1,178.51**	**1,400.95**	**1,549.68**	**1,120.05**	**1,430.39**	**1,779.01**

4.44 TANTRANSCO has claimed interest on GPF, guarantee and commitment charges under other finance charges. Commission is of the view that interest expenses on GPF as it cannot be allowed as GPF reserve funds are not considered for funding of capital expenditure. However, Commission approves other finance charges for guarantee and commitment expense as claimed by TANTRANSCO. The other finance charges approved by the Commission are given below.

Table 48: Other finance charges approved by the Commission (Rs. Cr.)

Parameter	2013-14		2014-15		2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Other finance charges	29.38	4.20	31.63	3.93	34.26	3.79

4.45 The overall interest and other finance charges approved by the Commission for the TANTRANSCO during the second control period are given below.

Table 49: Interest and other finance charges approved for transmission business during the second control period (Rs. Cr.)

Parameter	2013-14		2014-15		2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Interest on long term loans	1,178.50	1,120.05	1,400.95	1,430.39	1,549.68	1,779.01
Other finance charges	29.40	4.20	31.63	3.93	34.26	3.79
Total	**1,207.90**	**1,124.25**	**1,432.58**	**1,434.32**	**1,583.94**	**1,782.80**

Return on Equity

4.46 TANTRANSCO in its Petition has submitted that it has calculated return on equity for the control period at 14% on the average equity base for the corresponding year.

4.47 Commission in Chapter A3 has discussed in detail its stand on allowing return on equity. In accordance to the stand taken, Commission is allowing return on equity at 14% on the average equity arrived based on revised equity profile.

4.48 For the revised equity profile, Commission has taken the opening equity for April 2013 as that approved for closing equity as on March 2013 in Chapter A3. In addition, Commission has taken equity inflow during the control period at 30% of the proposed capital expenditure.

4.49 Based on the above submissions, the return on equity approved by the Commission for the second control period is given below.

Table 50: Return on Equity approved by the Commission for the second control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2013-14	FY 2014-15	FY 2015-16	FY 2013-14	FY 2014-15	FY 2015-16
Equity at the beginning	2,886.51	3,669.81	5,808.02	841.35	2,199.15	3,887.25
Addition during the year	783.30	2,138.21	907.68	1,357.80	1,688.10	751.50
Closing Equity	3,669.81	5,808.02	6,715.71	2,199.15	3,887.25	4,638.75
Average Equity	**3,278.16**	**4,738.92**	**6,261.86**	**1,520.25**	**3,043.20**	**4,263.00**
Return on Equity	**458.94**	**663.45**	**876.66**	**212.83**	**426.05**	**596.82**

Interest on Working Capital

4.50 TANTRANSCO has claimed interest on working capital based on norms specified in the TNERC tariff regulations, 2005.

4.51 TANTRANSCO has not included interest expenses for short term borrowings in long term loans and claimed interest on working capital separately. Commission is of the view that it is appropriate to approve and segregate the loans based on purpose and in accordance with its tariff regulations. Hence, Commission approves the interest on working capital based on its tariff regulations and relevant guidelines are reproduced below:

"26. Working Capital

(d) For Transmission System

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

27. Interest on Working Capital
The rate of interest on working capital shall be on normative basis and shall be equivalent to the short term primary lending rate of State Bank of India as on 1st April of the relevant year."

4.52 Commission has observed that TANTRANSCO has estimated the working capital requirement based on norms specified by Commission. However, TANTRANSCO has taken the GFA (including revaluation reserve) for arriving at working capital requirement for maintenance spares. Commission has re-estimated the interest on working capital considering GFA without revaluation reserve and approved transmission charges.

4.53 Commission has considered the interest rates of 14.45% (SBI PLR as on April 1, 2013) for calculation of interest on working capital for the control period. The working capital requirement and interest on working capital approved by the Commission for TANTRANSCO is given below.

Table 51: Interest on working capital approved by the Commission for the second control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2013-14	FY 2014-15	FY 2015-16	FY 2013-14	FY 2014-15	FY 2015-16
O & M expenses	30.07	32.12	35.13	53.62	57.80	62.54
Maintenance Spares	176.85	249.69	284.23	114.45	140.56	211.84
Receivables	420.38	548.75	687.87	280.15	518.80	662.75
Total Working Capital Requirement	627.31	830.57	1,007.23	448.22	717.16	937.12
Interest on Working Capital	**92.53**	**122.51**	**148.57**	**64.77**	**103.63**	**135.41**

Other Debits

4.54 TANTRANSCO has proposed material costs variance, extra ordinary items and miscellaneous losses written off under this head. For the second control period TANTRANSCO has estimated the extraordinary expenses at an escalation of 10% on its submission of Rs. 2.50 Crs for FY 2012-13. However, TANTRANSCO has not provided adequate reasons for this expense in its Petition. Hence, Commission is disallowing the extraordinary expenses proposed by TANTRANSCO in other debits.

4.55 Based on the above submissions the other debits approved by the Commission are tabulated below.

Table 52: Other Debits approved by the Commission for the second control period (Rs. Cr)

Parameter	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Other Debits	2.52	0.48	2.77	0.52	3.05	0.58

Incentive

4.56 TANTRANSCO has claimed incentive in accordance to TNERC Tariff Regulations 2005, which entitles the transmission licensee for an incentive at 1% of equity for each percentage point of increase in annual availability beyond the target availability i.e. 98%.

"63. Incentive
The Transmission licensee shall be entitled to incentive @ 1% of equity for each percentage point of increase in annual availability beyond the target availability prescribed under regulation 58 (b) in accordance with the following formula.

Incentive = Equity x (Annual Availability achieved - Target availability) / 100

The incentive shall be shared by the long term customers in the ratio of their average allotted capacity."

4.57 Commission is provisionally accepting the transmission availability estimated by TANTRANSCO for the second control period. **However, Commission directs TANTRANSCO to file the actual transmission availability certified by SLDC on quarterly basis.**

4.58 For calculation of incentive, Commission has considered the revised average equity determined above for the purpose of estimating the incentive. The incentive approved by the Commission for the second control period is given below.

Table 53: Incentive approved by the Commission for the second control period

Particulars	Petition			Commission		
	FY 2013-14	**FY 2014-15**	**FY 2015-16**	**FY 2013-14**	**FY 2014-15**	**FY 2015-16**
Average Equity (Rs. Cr.)	3,278.16	4,738.92	6,261.86	1,520.25	3,043.20	4,263.00
Annual Availability achieved	99.54%	99.54%	99.54%	99.54%	99.54%	99.54%
Target Availability	98.00%	98.00%	98.00%	98.00%	98.00%	98.00%
Incentive (Rs. Cr)	**50.54**	**73.06**	**96.54**	**23.44**	**46.92**	**65.72**

Insurance and Income Tax

4.59 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. In accordance to this regulation, TANTRANSCO has claimed self insurance.

"30. Insurance

The Generating Company and licensee may adopt the practice of Self Insurance and a provision upto 0.5% of the capital cost shall be allowed by the Commission in their revenue requirement. The reserves shall be utilised to replace the assets lost due to accident, fire, flood, cyclone and other force majeure conditions."

4.60 Commission has re-estimated the insurance after considering the capital cost without revaluation reserve and in accordance with its regulation at 0.5% of the capital costs. The self insurance expenses approved by the Commission for the second control period is tabulated below

Table 54: Self insurance expenses approved by the Commission for the second control period (Rs. Cr.)

Parameter	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	**Commission**	**Petition**	**Commission**	**Petition**	**Commission**
Self insurance expenses	-	56.65	119.80	79.01	134.93	101.68

4.61 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.

4.62 TANTRANSCO in its Petition has submitted that may become eligible for claiming income tax from FY 2015-16 after offsetting its profit against accumulated loss. However, Commission is not allowing this expense in FY 2015-16 and if TANTRANSCO has really incurred this expense in FY 2015-16 then it will be allowed during the true-up exercise.

Other income

4.63 The other income claimed by TANTRANSCO includes interest on staff loans, income from investment, interest from banks, income from short term open access, etc. For FY 2010-11 and FY 2011-12, TANTRANSCO has claimed based on audited and provisional accounts respectively.

4.64 TANTRASNCO has submitted that other Income for the second control period is arrived by escalation over the values of FY 2012-13. 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%.

4.65 In response to Commission's query TANTRANSCO has provided a provisional estimate of Rs. 97.65 Crs as open access and scheduling charges collected from STOA in FY 2012-13.

4.66 As regards to income from STOA, Commission has considered the revised submission of TANTRANSCO of Rs. 97.65 Crs. For income from other sources, Commission is accepting the submission of TANTRANSCO. The other income approved by the Commission for the control period is given below.

Table 55: Other income approved by the Commission for the second control period (Rs. Cr.)

Parameter	Petition			Commission		
	FY 2013-14	FY 2014-15	FY 2015-16	FY 2013-14	FY 2014-15	FY 2015-16
Other income (Including revenue from STOA and scheduling charges)	41.83	45.64	49.82	105.91	106.36	106.84

ARR approved by the Commission for the second control period

4.67 Based on the above submissions and analysis, the ARR approved by the Commission for the second control period is tabulated below:

Table 56: ARR approved for the second control period (Rs. Cr.)

Parameter	FY 2013-14		FY 2014-15		FY 2015-16	
	Petition	Commission	Petition	Commission	Petition	Commission
Depreciation	390.80	355.82	538.54	435.17	692.56	649.89
Interest on Loan Capital	1,207.88	1,124.25	1,432.58	1,434.32	1,583.94	1,782.80
Return on Equity	458.94	212.83	663.45	426.05	876.66	596.82
Operation and maintenance exp	360.88	643.45	385.46	693.55	421.51	750.43
Interest on Working Capital	92.53	64.77	122.51	103.63	148.57	135.41
Other Debits	2.52	0.48	2.77	0.52	3.05	0.58
Income tax	-	-	-	-	219.30	-
Incentives	50.54	23.44	73.06	46.92	96.54	65.72
Insurance		56.65	119.80	79.01	134.93	101.68
Gross ARR	**2,564.10**	**2,481.69**	**3,338.16**	**3219.18**	**4,177.05**	**4,083.34**
Less: Other Income	41.83	105.91	45.64	106.36	49.82	106.84
Net ARR	**2,522.27**	**2,375.78**	**3,292.51**	**3112.82**	**4,127.24**	**3976.50**

A5: ESTIMATION OF REVENUE GAP AND TARIFF DETERMINATION FOR FY 2013-14

Revenue to be covered from transmission charges in FY 2013-14

5.1 In the last order Commission has directed TANTRANSCO not to mix up the capital accounts and revenue accounts. Hence, Commission in line with its direction, is treating the revenue account separately. Commission has arrived at the consolidated revenue gapas on March 2013 by considering the approved revenue gap for each year of the first control period in this order and allowing interest expenses at 11%. The consolidated revenue gap arrived at closing of FY 2013 is given below

Table 57: Revenue account for the first control period (Rs. Cr)

Parameter	FY 2010-11	FY 2011-12	FY 2012-13
Opening	0	90.01	381.05
Additions (Revenue gap approved by the Commission)	87.95	280.25	(1,068.75)
Add: Interest Expenses	2.06	10.80	(7.19)
Closing	90.01	381.05	(694.89)
Average	45.01	235.53	(156.92)

**Negative due to excess recovery in FY 2012-13*

5.2 Considering the consolidated revenue gap as on March 2013, Commission has arrived at the revenue to be recovered in FY 2013-14 that is given in table below.

Table 58: Approved revenue to be collected from transmission charges in FY 2013-14 (Rs. Cr.)

Parameter	Value
Revenue requirement for FY 2013-14	2,375.78
Add: Consolidated revenue gap as on March 2013	(694.89)
Revenue to be recovered from transmission charges in FY 2013-14	**1,680.89**

Determination of transmission charges

5.3 TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 provides the guidelines for fixing of transmission charges. As per clause 59(1) of the regulation, the methodology for calculation of transmission charges is given 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:

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

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.

5.4 In this order. Commission is determining the transmission charges applicable to LTOA in accordance with its regulations.

5.5 In view of applicability of this order from June 21, 2013, Commission has determined the charges considering the revenue required to be recovered from June 21, 2013 during FY 2013-14. For this purpose, Commission has estimated the revenue recovered from LTOA upto June 20, 2013 based on tariff of Rs. 6483/MW/Day approved in the last order.

Allotted Transmission Capacity

5.6 As per the APTEL order dated 23rd November 2012 on Appeal No. 91 of 2012, the following procedure has been recommended for arriving at the allotted transmission capacity

"For the wind energy generators, the allotted capacity shall be the installed capacity of the respective generators. On the other hand the transmission capacity allotted to TANGEDCO would be on the basis of sum of net capacity (Installed Capacity less auxiliary consumption) of own generating stations connected to the transmission system, capacity contracted from IPPs, share in Central Sector Stations, etc."

5.7 In accordance to above guidelines, TANTRANSCO has filed the allotted capacity in its Petition. The allotted capacity filed by TANTRANSCO for the second control period in its Petition is given below.

Table 59: Allotted capacity (MW) filed by TANTRANSCO

Source	FY 2013-14	FY 2014-15	FY 2015-16
Own Generation Stations	7,123	7,123	7,727
Central Generating Stations	5,012	5,475	5,475
IPPs	1,106	1,106	1,106
Non Conventional Energy Sources	8,743	8,743	8,743
Total	**21,984**	**22,447**	**23,051**

5.8 Commission, on scrutiny has observed that TANTRANSCO has estimated the allotted capacity including the new plants getting commissioning during the control period. TANTRANSCO has considered this allotted capacity for estimating the transmission charges.

5.9 However, Commission is of the view that this approach may not be appropriate due to following reasons:

a. The new plants being commissioned will not be available for the entire year and hence their allotted capacity cannot be considered for entire year.

b. Also, the Commissioning dates of the new plants have been revised by TANGEDCO based on latest status of progress

c. TANTRANSCO has not considered the availability of power from case-1 and solar

5.10 Based on the above submissions, Commission has considered the following assumptions for arriving at the average allotted capacity for the control period

a. Date of commissioning for new stations has been considered based on the revised submission of TANGEDCO.

b. Average allotted capacity with respect to new generating stations has been arrived considering the CoD.

c. Commission has considered power available from Case-1 and solar bidding based on the submissions of TANGEDCO.

5.11 The details of average allotted capacity considered by the Commission for the new generating stations during the control period are given below.

Table 60: Average allotted capacity estimated by the Commission for new generating stations (MW)

Name of the Plant	Allotted Capacity (MW)	FY 2013-14 (Upto June 20)	FY 2013-14 (after June 20)	FY 2014-15	FY 2015-16
Own Generating Stations					
North Chennai Stage II - Unit I	549	0	470	549	549
North Chennai Stage II - Unit II	549	0	549	549	549
Mettur State III	546	0	546	546	546
Ennore Expansion	604	0	0	0	99
Bhavani Barrage II	10	0	10	10	10
Bhavani Kattalai Barrage II	30	30	30	30	30
Periyar Vaigai I	7	7	7	7	7
CGS					
NTPC - Vallur Unit 1	324	324	324	324	324
NTPC - Vallur Unit 2	324	0	324	324	324
NTPC - Vallur Unit 3	324	0	161	324	324
Kudankulam Unit – I	462	0	280	462	462
Kudankulam Unit – II	463	0	230	463	463
NLC-TS-II Expansion Unit I	105	0	11	105	105
NLC-TS-II Expansion Unit II	105	0	0	52	105
NLC Tuticorin - Unit 1	177	0	20	177	177
NLC Tuticorin - Unit 2	177	0	19	177	177
Other Sources					
Case-1 Bidding	500	0	500	500	417
Cogeneration Plants	45	0	45	45	45
	51	0	42	51	51
	42	0	30	42	42
	45	0	27	45	45
Solar	226	0	47	226	226
Total	**5665**	**361**	**3672**	**5009**	**5078**

5.12 The allotted capacity, arrived by the Commission considering all the sources during the control period is tabulated below.

Table 61: Allotted capacity for the second control period (MW)

Source	FY 2013-14 (Upto June 20)	FY 2013-14 (after June 20)	FY 2014-15	FY 2015-16
TANGEDCO				
Wind (Non REC)	3431	3431	3431	3431
Biomass (Non REC)	5	5	5	5
Cogeneration Concession (Non REC)	639	783	822	822
Other Sources	10725	13816	14774	14834
Sub Total	**14800**	**18035**	**19032**	**19092**
LTOA				
Wind (Non REC)	2927	2927	2927	2927
Biomass (Non REC)	35	35	35	35
Cogeneration Concession (Non REC)	0	0	0	0
Other Sources	148	195	348	348
Sub Total	**3109**	**3156**	**3309**	**3309**
Total				
Wind (Non REC)	6358	6358	6358	6358
Biomass (Non REC)	40	40	40	40
Cogeneration Concession (Non REC)	639	783	822	822
Other Sources	10873	14011	15122	15182
Grand Total	**17909**	**21191**	**22341**	**22401**

LTOA Transmission Charges

5.13 Commission, in this section is determining the LTOA transmission charges based on allocated capacity in accordance with TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005

5.14 Commission reiterates that in view of applicability of this order from June 21, 2013, Commission has determined the charges considering the revenue required to be recovered from June 21, 2013 during FY 2013-14. For this purpose, Commission has estimated the revenue from LTOA upto June 20, 2013 based on tariff of Rs. 6483/MW/Day approved in the last order.

5.15 It is also pertinent to mention that Commission through various orders issued on 31st July 2012 on procurement of power from renewable energy sources has provided a concessional transmission charges. The relevant clauses of the above orders are reproduced below.

Order No 6 of 2012 dated 31st July 2012

"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."

Order No 7 of 2012 dated 31st July 2012

"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 wheelingcharges of conventional power to the bagasse based co-generation plants. Apart from thesecharges, actual line losses as specified in the respective Orders of the Commission and asamended 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, normaltransmission charges, wheeling charges and line losses will apply."

Order No 8 of 2012 dated 31st July 2012

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

8.2.1.7. For generators who are availing Renewable EnergyCertificate (REC), Normal Transmission Charges, Wheeling Charges andLine Losses will apply."

5.16 The provisional estimate of revenue recovered by TANTRANSCO during FY 2013-14 (upto June 20, 2013) calculated by the Commission considering normal and concessional transmission charges is given in below table.

Table 62: Provisional estimate of revenue recovered from LTOA in FY 2013-14 upto June 20

Source	Applicable transmission Charges (Rs./MW/Day)	Allocated Capacity (MW)	No of Days	Revenue from Transmission Charges (Rs. Cr.)
Wind (Non REC)	2593	6358	81	134
Biomass (Non REC)	3242	40	81	1
Cogeneration (Non REC)	3890	639	81	20
Other Sources	6483	10873	81	571
Sub Total		**17909**		**726**

5.17 After considering the provisional estimate of revenue recovered upto June 20, 2013, Commission has arrived at the remaining revenue to be recovered for FY 2013-14. Based on the revised estimate, concessional transmission charges applicable and allotted capacity Commission has arrived at Rs. 1973/MW/Day as the LTOA charges applicable from June 21, 2013 in FY 2013-14. The calculations for arriving at the LTOA charges are given in the table below.

Table 63: LTOA charges approved by the Commission

Parameter	Formula	Value
Revenue to be recovered in FY 2013-14 (Rs. Cr.)	A	1680.89
Revenue Recovered upto June 20 (Rs. Cr.)	B	725.69
Revenue to be recovered from June 21 (Rs. Cr.)	C = A - B	955.21
Allotted Capacity - FY 2013-14 (From June 21)		
Wind (Non REC) – MW	D	6,358
Biomass (Non REC) – MW	E	40
Cogeneration (Non REC) – MW	F	783
Others – MW	G	14,011
No of Days	H	**284**
Transmission Charges /MW/Day	**I = C x 10^7/((Dx40%+Ex50%+Fx60%+G)xH)**	**1973**

5.18 Commission directs TANTRANSCO to bill the LTOA consumers including TANGEDCO considering the approved transmission charges and allotted capacity. TANTRANSCO is also directed to file quarterly reports of month wise revenue collected from LTOA consumers.

5.19 Commission wants to highlight the fact that it has estimated the LTOA charges considering the CoD and allotted capacity submitted by TANGEDCO. Hence, any variation with respect to actual recovery for FY 2013-14 will be subsequently trued up in the next tariff order.

5.20 Commission has also estimated the provisional tariff applicable in FY 2014-15 and FY 2015-16 considering the approved ARR. The detailed calculations for arriving at the Intra-state transmission tariffs for FY 2014-15 and FY 2015-16 are given in the table below.

Table 64: LTOA Charges for FY 2014-15 and FY 2015-16

Parameter	Formula	2014-15	2015-16
Net Revenue Requirement (Rs. Cr)	A	3,112.82	3,976.50
Allotted Capacity			
Wind (Non REC) – MW	B	6,358	6,358
Biomass (Non REC) – MW	C	40	40
Cogeneration (Non REC) – MW	D	822	822
Others – MW	E	15,122	15,182
No of Days	F	365	366
Transmission Charges /MW/Day	**G = A x 10^7/ ((Bx40%+Cx50%+Dx60%+E)xF)**	**4692**	**5957**

5.21 It is pertinent to mention that TN power utilities are in transition stage and the transfer scheme has not yet been finalized. Keeping this in view Commission has approved LTOA charges provisionally for FY 2014-15 and FY 2015-16. Commission directs TANTRANSCO to file revised expenses for FY 2014-15 and FY 2015-16 and the allotted transmission capacity in the next tariff petition along with true-up exercise. Commission after reviewing the expenses will re determine the tariff applicable for LTOA consumers for FY 2014-15 and thereafter for FY 2015-16.

STOA Transmission Charges

5.22 Based on the net revenue requirement approved, the Commission has estimated the STOA charges of Rs 82.21/MW/hr for FY 2013-14 considering 100% of the approved transmission charges applicable to LTOA.

Table 65: STOA Charges approved by the Commission

Description	Formula	2013-14	2014-15	2015-16
Long term Open Access Charges (Rs./MW/day)	A	1,973	4692	5957
Transmission charges payable by Intra-State short-term OA customer and Inter-State OA customers using Intra-State net work (in Rs / MW/hr)	B=(A* 100 %/ 24)	82.21	195.50	248.21

Other Charges

Scheduling and System Operation Charges

5.23 In its last tariff order, Commission has approved Scheduling and System Operating Charges of Rs. 2000 per day for long term as well as short term open access customers.

5.24 TANTRANSCO in its Petition has prayed the 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. TANTRANSCO has submitted that 25% hike in the charges is proposed because TANTRANSCO will incur major cost during the second control period for streamlining the process of scheduling and energy accounting and also to obtain the operational efficiency.

5.25 Commission has directed to submit the status of ring fencing of SLDC and submit a separate Petition for approval of its ARR. Pursuant to this direction SLDC has filed a Petition on 23rd April 2013. However, Commission has not admitted this Petition as it was filed late and the expenses were already included in the TANTRASCO Petition filed on 19th February 2013.

5.26 Since sufficient data for justifying the hike of scheduling and system operation charges has not been provided by TANTRANSCO, Commission is maintaining status quo and is approving scheduling and system operation charges of Rs. 2000/day or part of day.

5.27 Commission again directs TANTRANSCO to file separately the Petition for SLDC charges along with transmission Petition from next year onwards in the time frame specified in the regulation.

Reactive Energy Charges

5.28 TANTRANSCO in line with Commission's last tariff order has prayed to fix the reactive energy charges as 10.50 paise/kVArh for FY 2013-14, which will be escalated at 0.50 paise/kVArh for subsequent years.

5.29 As per regulation 62 (c) of the TNERC's Tariff Regulations 2005, the reactive energy charges would be a variable charge reflecting voltage related drawal of Reactive Power and Reactive Power drawals by beneficiaries are to be priced as follows:-

a) The beneficiary pays for reactive power drawal when voltage at the metering point is below 97%

b) The beneficiary gets paid for reactive power (return) supply when voltage is below 97%

c) The beneficiary gets paid for reactive power drawal when voltage is above 103%

d) The beneficiary pays for reactive power (return) supply when voltage is above 103%

e) The charges for reactive energy shall be as decided by the Commission.

5.30 Clause 6.6 (2) of Indian Electricity Grid Code, 2010 notified on April 28, 2010, provides the charges applicable for reactive energy exchange.

6.6 Reactive Power and Voltage Control

"(2) The charge for VArh shall be at the rate of ***10 paise/kVArh w.e.f. 1.4.2010****, and this will be applicable between the Regional Entity, except Generating Stations, and the regional pool account for VAr interchanges. This rate shall be escalated at* ***0.5paise/kVArh per year thereafte****r, unless otherwise revised by the Commission."*

5.31 Hence in accordance to IEGC, Commission rules that a rate of charge for such reactive energy exchange for the applicable duration (injection or absorption) will be levied/compensated at the rate of 11.50 paise/kVArh for FY 2013-14 escalated at 0.5 paise/kVArh annually in subsequent years, unless otherwise revised by the Commission.

A6: SUMMARY OF DIRECTIVES

6.1 The Commission directs that the

i. TANTRANSCO to file its Tariff Petition on a timely basis every year, as per the TNERC Tariff Regulations.

ii. TANTRANSCO not to mix capital accounts and revenue accounts, hereafter and the same shall be revisited in next tariff determination process.

iii. TANTRANSCO to start maintaining regulatory accounts and file MYT Petition considering regulatory accounts.

iv. TANTRANSCO to submit status of ring fencing of SLDC function within 90 days of issuance of this Order.

v. SLDC to submit its petition separately for approval of its ARR from next year in accordance with TNERC Tariff Regulations

vi. TANTRANSCO to bill the LTOA consumers including TANGEDCO considering the approved transmission charges and allotted capacity as per Tariff Regulation.

vii. TANTRANSCO to file quarterly reports of month wise revenue collected from transmission charges, scheduling and system operation charges and reactive energy charges from LTOA consumers and STOA consumers.

viii. TANTRANSCO to file the actual transmission availability certified by SLDC on quarterly basis.

ix. TANTRANSCO to submit all its schemes related tothe first control period and proposed for the second control period within 90 days from issuance of the Order along with its cost benefit analysis.

x. TANTRANSCO to reconcile its accounts with respect to capital expenditure and prepare the voltage wise scheme wise data as per the formats specified by the Commission.

xi. TANTRANSCO to file the progress of the capital expenditure and capitalization on quarterly basis.

xii. With respect to transmission loss and energy accounting, TANTRANSCO

a) To install appropriate energy meters with communication facilities at all the interface points at distribution periphery, 400 kV, 230 kV and 110 KV voltages

b) To maintain a transparent energy accounting system based on boundary meter readings to arrive at monthly energy losses in the transmission system

c) Based on the installed interface meters to carry out scientific study and arrive at actual transmission losses before filing of next tariff Petition.

d) To file the energy balance in transmission system along with its tariff Petition.

Sd/-
(S. Nagalsamy)
Member

Sd/-
(K. Venugopal)
Member

(By Order of the Commission)

Sd/-
(S. GUNASEKARAN)
SECRETARY
Tamil Nadu Electricity
Regulatory Commission