



# TAMIL NADU ELECTRICITY REGULATORY COMMISSION

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## Determination of Intra-State Transmission Tariff and other related charges

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Order in T.P. No. 2 of 2017 dated 11-08-2017

(effective from 11-08-2017)



**TAMIL NADU ELECTRICITY REGULATORY COMMISSION**

(Constituted under Section 82(1) of Electricity Act, 2003)

(Central Act 36 of 2003)

PRESENT

Thiru. S. Akshayakumar – Chairman

Thiru. G. Rajagopal – Member

Dr. T. Prabhakara Rao - Member

**Order in T.P. No. 2 of 2017 dated 11-08-2017**

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

In exercise of powers conferred by Clause (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 July 20, 2017 and after considering suggestions and objections received from the public during the public hearings held on July 25, 2017, July 28, 2017 and August 2, 2017, 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 August 11, 2017.

Sd/-  
(Dr. T. Prabhakara Rao)  
Member

Sd/-  
(G. Rajagopal)  
Member

Sd/-  
(S. Akshayakumar)  
Chairman

(By Order of the Commission)

Sd/-  
(S. Chinnarajalu)  
Secretary, TNERC

## LIST OF ABBREVIATIONS

A&G	Administration and General Expenses
ABC	Aerial Bunched Cables
AMR	Automatic Meter Reading
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
ATC	Allotted Transmission Capacity
C&AG	Comptroller & Auditor General of India
CAG	Civic Action Group
CAGR	Compounded Annual Growth Rate
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Station
CIP	Capital Investment Plan
CONFET	Consumer Federation Tamil Nadu
COD	Date of Commercial Operation
COS	Cost of Supply
CPP	Captive Power Plant
CPS	Contributory Pension Scheme
CSD	Consumer Security Deposit
CSS	Cross Subsidy Surcharge
CTU	Central Transmission Utility
CWIP	Capital Work in Progress
DA	Dearness Allowance
EA	Electricity Act
EHV	Extra High Voltage
FERV	Foreign Exchange Rate Variation
FRP	Financial Restructuring Plan

FY	Financial Year
GFA	Gross Fixed Assets
G.O.	Government Order
GPF	General Provident Fund
GoI	Government of India
GoTN	Government of Tamil Nadu
HT	High Tension
HUDCO	Housing and Urban Development Corporation
HVDS	High Voltage Distribution System
IDC	Interest During Construction
IEGC	Indian Electricity Grid Code
IPP	Independent Power Producer
IWPA	Indian Wind Power Association
IoWC	Interest on Working Capital
JICA	Japan International Co-operation Agency
kWh	kilo-Watt hour
LIC	Life Insurance Corporation of India
LT	Low Tension
LTOA	Long Term Open Access
LV	Low Voltage
MTOA	Medium Term Open Access
MU	Million Units
MW	Mega-Watt
MYT	Multi-Year Tariff
NABARD	National Bank for Agriculture and Rural Development
O&M	Operation & Maintenance
PFC	Power Finance Corporation Limited

PLF	Plant Load Factor
PoC	Point of Connection
PPA	Power Purchase Agreement
R&M	Repairs & Maintenance
RE	Renewable Energy
REC	Renewable Energy Certificate
RoE	Return on Equity
SBI PLR	State Bank of India Prime Lending Rate
SLDC	State Load Despatch Centre
STOA	Short Term Open Access
STU	State Transmission Utility
T&D	Transmission & Distribution
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Ltd.
TANTRANSCO	Tamil Nadu Transmission Corporation Ltd.
TASMA	Tamil Nadu Spinning Mills Association
TNEB	Tamil Nadu Electricity Board
TNERC	Tamil Nadu Electricity Regulatory Commission
TO	Tariff Order
TP	Tariff Policy
UoM	Unit of Measurement

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# 1 INTRODUCTION

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## 1.1 Preamble

- 1.1.1 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 or Commission) vide G.O.Ms. No.58, Energy (A1) Department, dated March 17, 1999.
- 1.1.2 The Commission issued its first Tariff Order under Section 29 of the Electricity Regulatory Commissions Act, 1998, on 15-03-2003 based on the Petition filed by the erstwhile Tamil Nadu Electricity Board (TNEB) on September 25, 2002.
- 1.1.3 The Electricity Regulatory Commissions Act, 1998 was repealed and the Electricity Act, 2003 (Central Act 36 of 2003) (hereinafter called Act) was enacted with effect from June 10, 2003.
- 1.1.4 The Commission notified the Tamil Nadu Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2005 (herein after called Tariff Regulations) on August 3, 2005 under Section 61 read with Section 181 of the Act.
- 1.1.5 The Commission issued its **first** Order (Order No. 2 of 2006) on Transmission Charges, Wheeling Charges, Cross Subsidy Surcharge (CSS) and Additional surcharge on May 15, 2006, based on the Petition filed by the erstwhile TNEB on September 26, 2005 under Section 42 of the Act.
- 1.1.6 The Commission notified the TNERC (Terms and Conditions for Determination of Tariff for Intra-State Transmission/Distribution of Electricity under MYT Framework) Regulations, 2009 (herein after called MYT Regulations) on March, 2009.
- 1.1.7 Subsequently, TNEB filed an Application for determination of Aggregate Revenue Requirement (ARR) with Tariff for all functions on January 18, 2010, which was admitted by the Commission after initial scrutiny on February 9, 2010. The Commission issued its **second** Retail Tariff Order (Order No. 3 of 2010) on July 31, 2010, in which the Annual Transmission Charges were also determined.
- 1.1.8 The erstwhile TNEB was formed as a statutory body by GoTN on July 1, 1957 under the Electricity (Supply) Act, 1948. TNEB was primarily responsible for generation, transmission, distribution and supply of electricity in the State of Tamil Nadu.

- 1.1.9 GoTN, vide G.O (Ms) No. 114 Energy Department, dated October 8, 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. (hereinafter referred as TANTRANSCO or the Petitioner)) and Tamil Nadu Generation and Distribution Corporation Ltd. (hereinafter referred as TANGEDCO) with the stipulation that the aforementioned Companies shall be fully owned by the Government.
- 1.1.10 TANTRANSCO was incorporated on June 15, 2009 and started functioning as such with effect from November 1, 2010.
- 1.1.11 Subsequent to the filing of Tariff Petition by TANTRANSCO for determination of Intra-State Transmission Tariff for 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 Transmission Tariff and other related charges was passed on March 30, 2012.
- 1.1.12 TANTRANSCO filed its Application before the Commission for determination of Intra-State Transmission Tariff for FY 2013-14. Based on the Petition and after considering views of the State Advisory Committee and the public, the Commission passed the **third** Order on June 20, 2013.
- 1.1.13 Subsequently, in the event of TANTRANSCO not filing the ARR and Tariff Petition for FY 2014-15 before the Commission, the Commission initiated suo-motu proceedings for tariff determination in accordance with Section 64 of the Act. After a thorough review of the available information, the **fourth** Order of the Commission on determination of Intra-State Transmission Tariff and other related Charges was passed on December 11, 2014.
- 1.1.14 TANTRANSCO filed a Petition for true-up for the period from FY 2011-12 to FY 2015-16 and approval of Aggregate Revenue Requirement (ARR) for the Control Period from FY 2016-17 to FY 2018-19 and determination of Intra-State Transmission Tariff for FY 2017-18. After thorough review of the available information, this **fifth** Order of the Commission on determination of Intra-State Transmission Tariff and other related Charges is passed.

## **1.2 The Electricity Act, 2003, Tariff Policy and Regulations**

- 1.2.1 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’, as reproduced below:

**“Section 61. (Tariff regulations):**

*The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-*

- (a) the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;*
- (b) the generation, transmission, distribution and supply of electricity are conducted on commercial principles;*
- (c) the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;*
- (d) safeguarding of consumers’ interest and at the same time, recovery of the cost of electricity in a reasonable manner;*
- (e) the principles rewarding efficiency in performance;*
- (f) multi-year tariff principles;*
- (g) ...*
- (h) ...*
- (i) the National Electricity Policy and tariff policy:”*

1.2.2 Section 62 (1) of the Act enables the Commission to determine the transmission tariff, which stipulates 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;*
  - ... ..”*

1.2.3 Similarly, the objectives stipulated in the Tariff Policy are as under:

**“4.0 Objectives of the Policy**

*The objectives of this tariff policy are to:*

- a. Ensure availability of electricity to consumers at reasonable and competitive rates;*

- b. *Ensure financial viability of the sector and attract investments;*
- c. *Promote transparency, consistency and predictability in regulatory approaches across jurisdictions and minimise perceptions of regulatory risks;*
- d. *Promote competition, efficiency in operations and improvement in quality of supply.”*

1.2.4 The Principles of tariff setting as specified in the Tariff Regulations are reproduced below:

*“4. Tariff setting principles*

*The Commission, while determining the tariff, shall be guided by the following factors:-*

- i. *The guidelines outlined in Section 61 of the Act which reads as:*
  - “The Appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-*
    - a. *the principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;*
    - b. ...
    - c. ...
    - d. ...
    - e. ...
    - f. ...
    - g. ...
    - h. ...
    - i. *the National Electricity Policy and tariff policy:”*
  - ii. *Rationalisation of tariff*
  - iii. *Avoidance of tariff shock to any category while setting the tariff to progressively reflect the cost.*
  - iv. *Consideration of minimum level of support required to make electricity affordable for household of very poor category.*
  - v. *In the process of determining tariff to progressively reflect the cost to serve each category, the Commission may endeavour to see that tariff to any category of consumers does not exceed 150% of the cost of supply and also is not less than 50% of the cost of supply.*

- vi. *Adequate payment security arrangements like Letter of credit shall be ensured to Generating Companies.*
- vii. *The Generating Companies shall be allowed to sell to other buyers without losing their claim on committed capacity charges in case of under recovery of these charges from alternate sales.*
- viii. *For new Generating Stations, a significant part of the capacity shall be made available (as free capacity) to be sold through trading markets and the remaining capacity only shall be contracted through Power Purchase Agreement.*
- ix. *The new Power Purchase Agreement shall have appropriate clauses to ensure that the contracts can be modified to align them with the emerging market structures.*
- x. *The linkage of Power Purchase Agreement terms to loan tenor shall be progressively de-emphasized as the electricity markets and trading arrangements provide alternate avenues to developers for selling their output.”*

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

### **1.3 Tariff Filing**

1.3.1 As per Provisions of Section 64 of the Act, it is incumbent upon the Licensee to make an application to the State Regulatory Commission for determination of Tariff in such a manner as may be determined by Regulations framed by the Commission. Regulation 5 of the Tariff Regulations specifies that the Licensee is required to file the Tariff Petition on or before 30<sup>th</sup> November each year, with the Commission, the relevant extract of which is reproduced below:

*“(1) The Distribution/ Transmission Licensee shall file the Aggregate Revenue Requirement (ARR) on or before 30th November of each year in the format prescribed, containing the details of the expected aggregate revenue that the licensee is permitted to recover at the prevailing tariff and the estimated expenditure.”*

1.3.2 The Petition for approval of ARR for FY 2017-18 should have been filed before November 30, 2016. TANTRANSCO filed a Petition before the Commission in M.P. 32 of 2016, seeking time extension up to January 31, 2017 for filing Tariff Petition, which was granted by the Commission. Subsequently, TANTRANSCO has filed an

application before the Commission on January 30, 2017 for final true-up of ARR for FY 2011-12 to FY 2015-16 based on audited accounts, and Multi Year Tariff Petition for the Control Period from FY 2016-17 to FY 2018-19 along with application for determination of Intra-State Transmission Tariff and other related Charges for FY 2017-18.

- 1.3.3 As regards filing of separate Petition by SLDC, TANTRANSCO submitted that since the ring fencing of SLDC is under progress, it has filed a combined ARR for Transmission Business and SLDC. Further, as directed by the Commission vide Daily Order dated January 31, 2017, a separate ARR Petition for SLDC for FY 2017-18 and FY 2018-19 was filed on May 29, 2017 and was admitted by the Commission as Tariff Petition T.P. No. 3 of 2017.

#### **1.4 Procedure Adopted**

- 1.4.1 Regulation 7 (2) of the Tariff Regulations specifies as under:

*“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.”*

- 1.4.2 The Petition filed by TANTRANSCO was hosted on the website of the Commission as well as TANTRANSCO. The Public Notice, containing the salient details with regard to the Petition, was approved. It was communicated to TANTRANSCO on February 8, 2017, with a direction to arrange publication of the notice in newspapers with wide circulation in the State. The written suggestions/objections/comments from the stakeholders were invited by March 13, 2017 and the timeline was extended till March 31, 2017.
- 1.4.3 TANTRANSCO has published the Public Notice in the following newspapers on February 10, 2017.
- a) Business Standard (English Morning Newspaper)
  - b) Dina Boomi (Tamil Morning Newspaper)
  - c) Trinity Mirror (English Evening Newspaper)
  - d) Makkal Kural (Tamil Evening Newspaper)
- 1.4.4 The Commission has provided sufficient time to the Stakeholders for submission of

written comments and suggestions on the Petition filed by TANTRANSCO.

- 1.4.5 The Petition was placed before the State Advisory Committee on July 20, 2017. The list of Members who attended the State Advisory Committee meeting is placed as **Annexure I** to this Order.
- 1.4.6 The list of stakeholders who have submitted objections/suggestions/views regarding the Petition in response to the Public Notice is placed as **Annexure II** and the issue-wise summary of objections/suggestions/views along with TANTRANSCO's replies and the Commission's ruling on each issue, are included in Chapter 2 of this Order.
- 1.4.7 The Commission conducted the Public Hearing at the following places on the dates noted against each:

Date	Day	Place	Venue
July 25, 2017	Tuesday	Chennai	Vani Mahal, 103, G. N. Chetty Street, T. Nagar, Chennai – 600 0017.
July 28, 2017	Friday	Madurai	Tamil Nadu Chamber of Commerce and Industry, 178-B, Kamarajar Salai, Madurai – 625 009.
August 2, 2017	Wednesday	Coimbatore	S. N. R. College Auditorium, Nava India Bus Stop, Avinashi Road, Coimbatore- 641 006.

- 1.4.8 The list of participants in each public hearing, is placed as **Annexure III** to this Order. The objections/suggestions/views raised by the participants are discussed in Chapter 2.

## 1.5 Transfer Scheme

- 1.5.1 The proposal for Assets Transfer and Employee transfer called as Tamil Nadu Electricity Board (Reorganization and Reforms) Transfer Scheme, 2010 was notified by GoTN vide G.O. (Ms) No.100 Energy (B2) Department dated October 19, 2010 with the effective date of implementation as November 1, 2010. Based on the above notification, TNEB was re-organized with effect from November 1, 2010.
- 1.5.2 As per the Transfer Scheme the Provisional period for transfer of Assets was 1 year and for transfer of employees was 3 years. From November 1, 2010 onwards, all the

employees of the erstwhile TNEB stood transferred to and absorbed in TANGEDCO on a provisional basis and assigned to the services of the relevant transferee, viz., TANTRANSCO and TNEB Ltd., on deputation on “as-is-where-is” basis until further notice for permanent absorption into respective entities.

- 1.5.3 At the time of issue of Suo-Motu Tariff Order dated December 11, 2014, the Transfer Scheme was not finalised. Therefore, the Commission had stated the following regarding the provisional Transfer Scheme:

*“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 V. The Commission has also issued a statutory advice with regard to the establishment of a separate Generating Company and establishment of four Distribution Companies so that the performance of these companies can be improved and efficiently monitored, which will enable proper investments and growth of the individual company. This document is appended as Annexure VI.*

*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.*

*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 TANGEDCO as specified in the Transfer Scheme.”*

- 1.5.4 GoTN vide the Gazette Notification G.O. (Ms) No. 49 dated August 13, 2015, issued the final Transfer Scheme, which is attached as **Annexure-IV** to this Order. The final Transfer scheme states as under:

*“In the Government order first read above, Government have notified*



*the Tamil Nadu Electricity (Re-organisation and Reforms) Transfer Scheme, 2010. The erstwhile Tamil Nadu Electricity Board has been reorganized with effect from 01.11.2010, as per the provisions of the Electricity Act, 2003. In the above transfer scheme, the assets and liabilities were segregated based on the available unaudited balance sheet of erstwhile Tamil Nadu Electricity Board as on 31.03.2009 instead of balance sheet as on 31.10.2010 which was not ready at that time and stated that this shall be provisional for a period of one year from the respective date of transfer as per the clause 9(1) of the said scheme (i.e., upto 31.10.2011).*

*(2) Now, the Chairman and Managing Director, Tamil Nadu Generation and Distribution Corporation Limited has stated that as the audited balance sheet as on 31.10.2010 is ready, it is essential to issue notification for the final amendment to the earlier transfer scheme notified in Government Order 2nd read above for giving effect to the transfer of assets and liabilities to successor entities of erstwhile Tamil Nadu Electricity Board as on 01.11.2010.*

*(3) Amendment to the existing Tamil Nadu Electricity (Reorganisation and Reforms) Transfer Scheme, 2010 notified in G.O.Ms.No.100, dated 19.10.2010, subsequently amended in G.O.(Ms.) No.2, Energy (B2) Department, dated 02.01.2012 by issuing Notification for giving effect to transfer of assets and liabilities to successor entities of erstwhile Tamil Nadu Electricity Board Limited as on 01.11.2010 be issued.*

*(4) The Notification appended to this order will be published in the Tamil Nadu Government Gazette, Extraordinary, dated 13.08.2015.”*

1.5.5 The transfer value of the Fixed Assets forming part of Schedules A, B and C of the respective Transferees have been done at book values, excluding the land, buildings, plant and machineries, lines, cables and network, which are revalued based on the guideline value resulting into Revaluation Reserve of Rs. 7164 Crore for TANTRANSCO.

1.5.6 TANTRANSCO has submitted the impact of the Final Transfer Scheme as under:

- (a) For the Purpose of Return on Equity, Equity Capital of Rs. 1506.15 Crore has been considered as per the final Transfer Scheme.
- (b) Long Term Loan has been considered as Rs. 12695 Crore in line with the notified Balance Sheet and interest has been calculated on actual basis as accrued from November 1, 2010 to March 31, 2011 and the differential treatment between provisional and final Transfer Scheme has been adjusted in FY 2015-16. Some of the generic loans such as bonds, loan from HUDCO, LIC, Tamil Nadu Powerfin and Medium-Term Loan were availed by erstwhile TNEB and have been considered as the long-term loan of TANTRANSCO.

- (c) The allocation of fixed assets and Loans are similar and have been transferred under the Final Transfer scheme resulting in additional burden of the debt obligation on TANTRANSCO.
- (d) The transfer value of the fixed assets is determined based on revenue potentials of the asset and in line with the provisions of the Act.
- (e) The Opening Balance Sheet of TANTRANSCO includes assets and liabilities of SLDC.
- (f) The impact of the final Transfer Scheme has been carried out under prior period items in FY 2015-16.

## **1.6 Unbundling of TNEB**

- 1.6.1 TNEB was unbundled on November 1, 2010. Consequently, it started functioning as two separate entities namely, TANGEDCO and TANTRANSCO. While TANGEDCO was made responsible for Generation and Distribution functions, TANTRANSCO was made responsible for transmission activities within the State.
- 1.6.2 The Commission in its Tariff Orders dated July 31, 2010, March 30, 2012, June 20, 2013 and December 11, 2014 had indicated that the accumulated losses up to 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 November 1, 2010 only are being dealt with in various Tariff Orders subsequent to Unbundling.
- 1.6.3 The approach followed by the Commission to treat the Revenue Gap has been discussed in Chapter 4 of this Order.

## **1.7 Brief Note on Public Hearing**

- 1.7.1 The Commission has noted the various views expressed by stakeholders both in the written comments submitted to the Commission as well as the concerns expressed during the Public Hearing held at Chennai, Madurai and Coimbatore on July 25, 2017, July 28, 2017 and August 2, 2017, respectively.
- 1.7.2 Various suggestions and objections that were raised on the TANTRANSCO's ARR and Tariff Summary after the issuance of the Public Notice, both in writing as well as during the Public Hearing, along with TANTRANSCO's reply and the Commission's

views have been detailed in Chapter 2 of this Order.

## **1.8 Applicability of Order**

1.8.1 This Order will come into effect from August 11, 2017. The Transmission Tariff determined in this Order will be valid until issue of the next Order.

## **1.9 Layout of the Order**

1.9.1 This Order is organized into following Chapters:

- (a) **Chapter 1** provides details of the tariff setting process and the approach of the Order;
- (b) **Chapter 2** provides a brief of the Public Hearing process, including the details of comments of various stakeholders, the Licensee's response and views of the Commission thereon;
- (c) **Chapter 3** provide details/analysis of the final True up for FY 2011-12 to FY 2015-16;
- (d) **Chapter 4** provides analysis of the Petition for determination of the ARR for control Period from FY 2016-17 to FY 2018-19;
- (e) **Chapter 5** provides details of determination of Intra-State Transmission Tariff and other related charges.
- (f) **Chapter 6** provides details of the Directives of the Commission for compliance by TANTRANSCO.

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

- (a) **Annexure I-** The list of participants at the State Advisory Committee
- (b) **Annexure II-** The list of stakeholders who have submitted written objections/ suggestions/ views in response to the Public Notice.
- (c) **Annexure III-** The list of participants at each Public Hearing.
- (d) **Annexure IV-** Copy of the Final Transfer Scheme as notified by the State Government vide G.O. (Ms.) No.49, Energy (B1) Department, dated August 13, 2015.

## **1.10 Approach of the Order**

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

- (a) The Commission has taken into consideration the final Transfer Scheme notified by GoTN vide G.O. (Ms.) No.49, Energy (B1) department, dated August 13, 2015 with amendment in the restructuring of Balance Sheet of TNEB for TANGEDCO and TANTRANSCO.
- (b) The Commission has referred to the Audited Accounts of TANTRANSCO for FY 2011-12 to FY 2015-16 for truing up the expenses in accordance with the Tariff Regulations and MYT Regulations. Based on the prudence check of the expenses and revenue reported in the Audited Accounts of TANTRANSCO, the Commission has arrived at the allowable ARR and revenue recovered by the utility.
- (c) The Commission had undertaken provisional True up of FY 2011-12 to FY 2012-13 and Annual Performance Review of FY 2013-14 in the Suo-Motu Order dated December 11, 2014. Therefore, while undertaking final true up, the Commission has also referred to the approach adopted in the Suo-Motu Order.
- (d) The impact of True-up for FY 2011-12 to FY 2015-16 and provisional true-up for FY 2016-17, in terms of cumulative Revenue Gap/(Surplus), has been taken into account while determining the Transmission Tariff for FY 2017-18.
- (e) The Commission has determined the ARR for FY 2016-17 to FY 2018-19 in accordance with the Tariff Regulations and MYT Regulations, past trends observed after final true up of FY 2011-12 to FY 2015-16 and actual figures for FY 2016-17 provided by TANTRANSCO.
- (f) For the Control Period between FY 2016-17 to FY 2018-19, the Commission has extended the rationale adopted for allowing/disallowing various controllable components of the ARR while truing up for FY 2011-12 to FY 2015-16, to project the ARR for the Control Period and determine tariff for FY 2017-18.
- (g) The Commission has determined the Transmission Tariff for FY 2017-18 based on the methodology adopted in the Suo-Motu Order dated December 11, 2014 and various Judgments of Hon'ble APTEL.
- (h) The separate ARR and SLDC Charges have been determined by the Commission for SLDC for FY 2017-18. Hence, while determining the Transmission tariff for FY 2017-18, the ARR for SLDC has been reduced from the total ARR of TANTRANSCO.

## **2 STAKEHOLDERS' COMMENTS, TANTRANSCO'S REPLY AND COMMISSION'S VIEW**

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### **2.1 Background**

- 2.1.1 The following section summarizes the key views/ objections/ suggestions and requests made by stakeholders on the basis of the Public Notice published by TANTRANSCO on February 10, 2017. These include submissions received in writing as well as submissions received and observations made at the Public Hearings held by the Commission at three venues. The Commission, in order to accommodate maximum responses to the Public Notice had also extended the timeline for submission of written comments from March 13, 2017 till March 31, 2017 based on stakeholder requests to extend the date of submission of comments.
- 2.1.2 In this Section, the Commission has appropriately addressed the specific views/ objections/ suggestions made by stakeholder groups. The general comments also list specific requests made by stakeholders like Citizen Consumer and Civic Action Group (CAG), Consumer Federation Tamil Nadu (CONFET), Indian Wind Power Association (IWPA) and Tamil Nadu Spinning Mills Association (TASMA). All comments received from the stakeholders by the Commission have been provided to TANTRANSCO, soliciting their responses. The responses so received have been included as TANTRANSCO's reply. Therefore, each view has been considered by the Commission and appropriately dealt with in this Order.

### **2.2 Tariff Determination, undue delay in process and matter of non-filing of Tariff Petition**

#### **Stakeholder Comments**

- 2.2.1 Public Hearings should be held as per the Conduct of Business Regulations. Since TANTRANSCO has sought true up for FY 2011-12 to FY 2015-16 and ARR proposed for FY 2017-18 and FY 2018-19, resulting in indirect increase in Tariff that affects the consumers, the Public Hearing has to be held, so that consumers who are unable to submit written comments may express their concerns verbally.
- 2.2.2 The date for submission of comments should be extended until the formal process of Public Hearings is completed or till April 13, 2017.
- 2.2.3 TANTRANSCO has violated the provisions of Clause 5 of the TNERC (Terms and

Conditions for Determination of Tariff) Regulations, 2005 by delaying the submission of ARR and Truing-Up Petitions. Condonation Petition has to be filed by TANTRANSCO for the delays in filing for ARR and Truing-up Petitions. No action has been taken by the Commission on TANTRANSCO for these violations and lapses.

- 2.2.4 The Commission has itself violated the Hon'ble APTEL's directions and provisions under Clause 8.1 (7) of the Tariff Policy, 2006 by not issuing suo-motu Tariff Order every year.
- 2.2.5 The final Order should be issued only after the Public Hearing. Meanwhile, a draft Order may be published.
- 2.2.6 TANTRANSCO should file a separate ARR Petition for determination of SLDC Charges as directed by the Commission in the earlier Order dated December 11, 2014 and in accordance with the TNERC Tariff Regulations, 2005 as amended on April 9, 2014. The following details should be furnished by TANTRANSCO:
  - i. Category-wise SLDC Charges collected by SLDC, for Truing-up
  - ii. Separate ARR details for SLDC for Truing-up as per the Regulations.
- 2.2.7 The accounts of TANTRANSCO should be audited by third party auditors and the regulatory compliance including the compliance of directives should be audited and scrutinized by the Commission before taking up Tariff revision. The true-up should be based on audited figures rather than provisional values submitted by the Utilities. The Commission should issue suitable Regulations and Guidelines which mandate the statutory independent auditor to comment on the compliances applicable to Licensees.
- 2.2.8 The Commission should request the Comptroller & Auditor General of India (C&AG) to annually audit the operations of TANTRANSCO and make it available before the Tariff exercise. The Commission should also direct TANTRANSCO to maintain separate Regulatory Accounts independent of the Accounts maintained by it for compliances with the Companies Act, 2003, Income Tax Act, 1961 and other Regulations. These Regulatory Accounts should be in compliance with the Electricity Act, 2003 and the various directions given under the Act and the subordinate legislations. These Regulatory Accounts should be audited by a Chartered Accountant appointed by the Commission and the Annual Reports should be posted on the websites of the Commission and TANTRANSCO. The Commission may also mandate a reconciliation of the Regulatory Accounts and the other Statutory Accounts.

### **TANTRANSCO's Reply**

- 2.2.9 TANTRANSCO submitted that the Commission shall issue the Order on the Petition taking into account of provisions of the Electricity Act, 2003, Rules/Regulations issued under the Electricity Act, 2003 and directions issued by the Hon'ble APTEL in its Orders.
- 2.2.10 Further, the Commission has already extended the time for submitting comments/suggestions up to March 31, 2017.
- 2.2.11 With reference to the comments on delayed filing of ARR on an annual basis, the Petitioner submitted that the Commission issued Suo-Motu Tariff Order on December 11, 2014 w.e.f December 12, 2014, wherein the Commission under Para 1.35 stated as below:
- “1.35. This order will come into effect from 12th December 2014. The Intrastate Transmission Tariff and other related charges contained in this order will be valid till the issue of the next order”.*
- 2.2.12 The Petitioner further submitted that the ARR for FY 2017-18 should have been filed before November 30, 2016. Since, the collection of actual expenditure incurred towards Transmission Schemes and other relevant details required for arriving at the ARR for FY 2017-18, is a voluminous task, TANTRANSCO filed a Petition before the Commission in M.P. 32 of 2016, seeking time extension for Tariff Petition filing upto January 31, 2017, which was granted by the Commission.
- 2.2.13 As regards filing of separate Petition by SLDC, the Petitioner submitted that since the ring fencing of SLDC is under progress, it has filed a combined ARR. As directed by the Commission vide Daily Order dated January 31, 2017, a separate ARR for SLDC for FY 2017-18 and FY 2018-19 was filed on May 29, 2017 by TANTRANSCO and was admitted by the Commission vide T.P. No. 3 of 2017, on June 13, 2017.
- 2.2.14 TANTRANSCO submitted that it is finalising the Annual Accounts as per the Statutory dead lines and is in the process of complying with the direction of maintaining Regulatory Accounts.

### **Commission's Views**

- 2.2.15 Sufficient time has been provided, as the last date for submission of written comments and suggestions was extended from March 13, 2017 to March 31, 2017 based on the stakeholder requests to extend the date of submission of comments. The Commission

has held the Public Hearing at three locations in the State, and has considered all the comments and suggestions received in writing as well as orally during the Public Hearing, while analysing TANTRANSCO's Petition and issuing this Tariff Order.

2.2.16 As regards the delay in filing the Petition, TANTRANSCO had filed a Petition before the Commission in M.P. 32 of 2016, seeking time extension for Tariff Petition filing upto January 31, 2017, which was granted by the Commission.

2.2.17 TANTRANSCO has filed a separate Petition for SLDC, and the Commission has approved the SLDC Fees and Charges for FY 2017-18 accordingly. The true-up for previous years till FY 2015-16 has been done in a consolidated manner for TANTRANSCO as a whole, as the audited accounts of TANTRANSCO includes the expenses of SLDC. Since, no separate SLDC Charges have been determined by the Commission for FY 2016-17, the true-up of the same shall be undertaken in a consolidated manner for TANTRANSCO and SLDC along with the next Tariff Petition. For FY 2017-18, amount corresponding to approved ARR for SLDC has been reduced from the ARR of TANTRANSCO, while determining the Transmission Tariff.

2.2.18 The true-up for the period from FY 2011-12 to FY 2015-16 has been done based on the duly Audited Accounts submitted by TANTRANSCO. As regards the requirement of filing Regulatory Accounts, TANTRANSCO has submitted that it is in the process of complying with the direction of maintaining Regulatory Accounts. For true-up, the Commission has considered the applicability of the TNERC Tariff Regulations, 2005 and done prudence check on the expenses and revenue available from the Audited Accounts of TANTRANSCO.

## **2.3 Transmission Charges**

### **Stakeholder Comments**

2.3.1 In the Suo-motu Tariff Order for FY 2014-15, the Commission observed that conventional generation is being made to pay a higher Transmission Tariff than what is required and runs contrary to the directives of the Hon'ble APTEL and the provisions of Section 62(3) of the Act, which mandates that the Commission shall not show undue preference to any consumer. Such "cross-subsidy" in Transmission Tariff is nowhere envisaged in the Act itself. If renewable sources are to be given any discount in their Transmission Tariff, the burden should be borne by the Government, rather than passing on the burden to the rest of the consumers who will then be made



to pay Transmission Charges for more than their capacity allocation. This is a direct violation of the Hon'ble APTEL Judgment in Appeal No. 91 of 2012 dated November 23, 2012. TANTRANSCO has not followed the methodology specified by Hon'ble APTEL to propose the LTOA Transmission Charges of Rs. 2903/MW/day for FY 2016-17 and FY 2017-18, which needs to be revised.

- 2.3.2 TANTRANSCO should keep its transmission losses under control to reduce the Transmission Charges levied on the generators and consumers.

### **TANTRANSCO's Reply**

- 2.3.3 TANTRANSCO submitted that the revenue from existing Tariff for FY 2016-17 and FY 2017-18 is arrived at considering the Tariff for wind energy as 40%, Biomass as 50%, Co-generation as 60% and Solar as 30% of the actual Tariff and the same is in line with Section 86 (1) (e) of the Electricity Act, 2003. This has also been highlighted by the Commission while issuing the comprehensive Tariff Order No.s 6, 7, and 8 of 2012 dated July 31, 2012 for wind, bagasse based and biomass based plants, respectively.
- 2.3.4 TANTRANSCO submitted that thus, the concessional Transmission Charges determined through various Orders of the Commission for renewable based generation have been considered in the Petition.

### **Commission's Views**

- 2.3.5 The Commission has determined the per MW per Day Transmission Charges by considering the entire allocated capacity, including the capacity of Wind, Solar, Biomass and Bagasse based generation, based on revised submission of TANTRANSCO. This method is in accordance with the Hon'ble APTEL Judgment dated November 23, 2012 in Appeal No. 91 of 2012.
- 2.3.6 Section 86 (1)(e) of the Act stipulates as under:

*“(1) The State Commission shall discharge the following functions, namely: -*

*...*

*(e) promote co-generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person, and also specify, for purchase of electricity from such sources, a percentage of the total consumption of electricity in the area of a*

*distribution licensee;”*

- 2.3.7 In accordance with Section 86 (1)(e) of the Act, the Commission has retained the Transmission Charges for wind energy as 40%, Biomass as 50%, Co-generation as 60% and Solar as 30% of the approved Transmission Charges.
- 2.3.8 The Commission has considered a Transmission Loss reduction trajectory of 0.1% for every Year of the Control Period, as it is a controllable parameter. However, it is clarified that the Transmission Losses are levied in kind, whereas the Transmission Charges are levied on Rs/MW/day basis, and hence, reduction of Transmission Losses will not reduce the Transmission Charges.

## **2.4 O&M Expenses**

### **Stakeholder Comments**

- 2.4.1 Since FY 2015-16 is considered as the base year for estimating the future expenses, the various expenses considered in the audited accounts from previous financial years for various components including employee expenses should be deducted, before being escalated for future estimates.

### **TANTRANSCO’s Reply**

- 2.4.2 TANTRANSCO submitted that the Prior Period Expenses/Income have not been considered in the ARR estimated for FY 2016-17 to FY 2018-19. The ARR for the Control Period from FY 2016-17 to FY 2018-19 has been arrived at by escalating each head separately. Hence, inclusion of prior period expenses during FY 2015-16 will not have any impact on the estimated expenses for the future years.

### **Commission’s Views**

- 2.4.3 The ARR for each Year of the Control Period from FY 2016-17 to FY 2018-19 has been arrived at by escalating each head separately. Hence, inclusion of prior period income/expenses during FY 2015-16 does not have any impact on the expenses for the Control Period, as the prior period income/expenses have not been approved for the Control Period.

## **2.5 Capital Expenditure**

### **Stakeholder Comments**

- 2.5.1 TANTRANSCO has proposed a very high estimate of Capitalization by considering capitalization of new projects before the date of commissioning, as it is not possible to commission most Capital Expenditure plans for constructing EHV lines within the estimated period mentioned in the Petition. This leads to increase in interest on loan expenses and the ARR.
- 2.5.2 For the period from FY 2011-12 to FY 2015-16, the actual capital expenditure incurred by TANTRANSCO was only 50% of the expenses approved by the Commission. Hence, the Commission should realistically determine the CIP for FY 2016-17 to FY 2018-19 considering the need for such investment and the feasibility of completion of the project within the stipulated time period.
- 2.5.3 TANTRANSCO's proposal increases the Transmission Charges every year, which are very high as compared to other States. The Commission should consider only investments approved in the CIP. The CIP may be approved after getting the comments from the stakeholders.
- 2.5.4 The per km line cost and sub-station costs projected by TANTRANSCO may be compared with the "best practices" costs before approving it.

### **TANTRANSCO's Reply**

- 2.5.5 TANTRANSCO submitted that it has proposed to execute more numbers of new schemes for new sub-stations and associated lines and hence, the capital expenditure has been estimated accordingly. The CIP has already been submitted for FY 2016-17 to FY 2017-18 (*FY 2018-19*) to the Commission for approval prior to the submission of the MYT Petition. TANTRANSCO also submitted that the Net ARR for the control period from FY 2016-17 to FY 2018-19 has been projected based on the actual details for FY 2015-16 and as per the Tariff Regulations of the Commission.

### **Commission's Views**

- 2.5.6 The Petition M.P. No. 10 of 2016 dated April 6, 2016 filed by TANTRANSCO for approval of Capital Investment Plan for FY 2016-17 to FY 2018-19 was hosted on TANTRANSCO's website on January 12, 2017 as per the Daily Order dated December 29, 2016. The stakeholder's comments were invited till January 26, 2017

and sufficient time was provided to Stakeholders for submission of comments on Capital Investment Plan for TANTRANSCO.

- 2.5.7 The Commission has approved the CIP of TANTRANSCO for FY 2016-17 to FY 2018-19 through a separate Order in M.P. No. 10 of 2016, dated July 31, 2017, duly considering the need for such investment, present status of the investment, and the feasibility of completion of the project within the stipulated time period.

## **2.6 Return on Equity**

### **Stakeholder Comments**

- 2.6.1 Return on Equity should be allowed only on the actual equity infused and not based on estimates. Any funds infused as equity and not utilized as capital expenses should not be considered for RoE. Equity component of capital work in progress should not be considered for RoE until the asset is put to beneficial use. Hence, the RoE claimed for FY 2016-17 to FY 2018-19 seems high and the same should be considered realistically.

### **TANTRANSCO's Reply**

- 2.6.2 The Petitioner submitted that the RoE claimed and estimated are on the actual equity infused and are in line with the Regulations.

### **Commission's Views**

- 2.6.3 The Commission has approved the CIP of TANTRANSCO for FY 2016-17 to FY 2018-19 through a separate Order in M.P. No. 10 of 2016 dated July 31, 2017. The funding pattern has been considered separately for each scheme based on funding source proposed by TANTRANSCO, subject to the limit of normative debt:equity of 70:30 in accordance with the Tariff Regulations. The RoE has been allowed on the approved equity addition during each Year, as elaborated in Chapter 4 of this Order.

## **2.7 Depreciation**

### **Stakeholder Comments**

- 2.7.1 Depreciation on account of new projects should be allowed in the ARR only after the

date of commissioning, considering that most of the Capex plans for constructing EHV lines, it may not be possible to commission most Capital Expenditure plans for constructing EHV lines within the estimated period mentioned in the Petition.

### **TANTRANSCO's Reply**

- 2.7.2 The Petitioner submitted that the capitalisation for FY 2016-17 to FY 2018-19 has been estimated considering the trend in capitalisation for the previous years and the status of the new projects. The same has been submitted to the Commission for approval prior to the submission of the MYT Petition.
- 2.7.3 As regards the comment of depreciation on new projects, the Petitioner submitted that the depreciation is arrived at considering the date of commissioning of the projects.

### **Commission's Views**

- 2.7.4 The Commission has approved the CIP of TANTRANSCO for FY 2016-17 to FY 2018-19 through a separate Order in M.P. No. 10 of 2016 dated July 31 2017. The depreciation has been allowed only after the assets are put to use, i.e., after the date of commissioning, as elaborated in Chapter 4 of this Order.

## **2.8 Interest on Loan**

### **Stakeholder Comments**

- 2.8.1 TANTRANSCO has submitted that the interest rates are expected to increase to 11.05% in FY 2017-18 from 10.94% in FY 2016-17, while the interest rates are softening. Hence, interest on loan should be allowed considering the fall in interest rates.

### **TANTRANSCO's Reply**

- 2.8.2 TANTRANSCO submitted that the Capital Expenditure has been estimated based on the CIP submitted to the Commission and the interest amount has also been arrived accordingly. Further, the interest rate has been adopted based on the rate of interest applicable for the existing loans. Also, the kfW and JICA loans availed at lower interest rate have also been considered. The interest rate increase is very meagre and all possible efforts are being taken to reduce the interest rate.

### **Commission's Views**

- 2.8.3 The Commission has approved the CIP of TANTRANSCO for FY 2016-17 to FY 2018-19 through a separate Order in M.P. No. 10 of 2016 dated July 31, 2017. The funding pattern has been considered separately for each scheme based on funding source proposed by TANTRANSCO, subject to the limit of normative debt:equity of 70:30 in accordance with the Tariff Regulations. The interest has been allowed on the approved loan addition during each Year by considering the weighted average rate of interest of the various loans, as elaborated in Chapter 4 of this Order.

## **2.9 Interest on Working Capital**

### **Stakeholder Comments**

- 2.9.1 TANTRANSCO mentioned that it is not incurring any Interest on Working Capital (IoWC) and normative IoWC has been claimed. If the working capital has been financed from internal capital/equity, there is no need to claim IoWC as they have already claimed return on their equity. This claim would mean doubling the expenditure, and hence, should not be considered.

### **TANTRANSCO's Reply**

- 2.9.2 TANTRANSCO submitted that the claim of IoWC is in line with the provisions of the Tariff Regulations and the APTEL Order in Appeal No.111 of 2008 dated May 28, 2009. TANTRANSCO further submitted that RoE and IoWC are two different components for the determination of Tariff under the Regulations.

### **Commission's Views**

- 2.9.3 The Commission has allowed normative IoWC in accordance with the Tariff Regulations. It is clarified that there is no double-accounting of the expenses, as the RoE is allowed only on the approved equity component of the approved capital expenditure and not on other uses of equity, while the IoWC is the cost of funds to meet the working capital requirement, which is to be allowed on normative basis irrespective of whether such IoWC is incurred or not.

## **2.10 Other Income**

### **Stakeholder Comments**

- 2.10.1 The amount of Rs. 2.10 Lakh/MW recovered from wind and other generators towards O&M of substation is not shown as income in the ARR Petition, which needs to be considered before determination of Tariff.

### **TANTRANSCO's Reply**

- 2.10.2 TANTRANSCO submitted that the revenue from collection of O&M Charges from the Wind Generators is already accounted in the Other Income category under the head 'Miscellaneous Receipts'.

### **Commission's Views**

- 2.10.3 The revenue from collection of O&M Charges from the Wind Generators and other Generators is already accounted in the Other Income under the head 'Miscellaneous Receipts', which is used to reduce the ARR and hence, the tariff.

## **2.11 Scheduling and System Operation Charges**

### **Stakeholder Comments**

- 2.11.1 TANTRANSCO has underestimated the Scheduling and System Operation Charges for FY 2016-17 and 2017-18 as Rs. 133.50 Crore and Rs. 146.86 Crore, respectively. The actual revenue from SOC should be much higher than the estimated values.

### **TANTRANSCO's Reply**

- 2.11.2 TANTRANSCO submitted that the revenue from Scheduling and System Operation Charges for FY 2016-17 and FY 2017-18 have been reasonably estimated based on the actual revenue for FY 2015-16. TANTRANSCO further submitted that even though the capacity addition is in the range of 7% and 4% for FY 2016-17 and FY 2017-18, respectively, the increase in Scheduling and System Operation Charges considered are at 10%. Also, any over or under recovery will be considered at the time of True-up of ARR.

### **Commission's Views**

2.11.3 The Commission has approved the ARR for SLDC for FY 2017-18 and FY 2018-19 and SLDC Charges for FY 2017-18 separately, vide Order in T.P. No. 3 of 2017 dated August 11, 2017. The corresponding amount of ARR of SLDC for FY 2017-18 has been reduced from the total ARR of TANTRANSCO, while determining the Transmission Charges for FY 2017-18. Hence, the revenue from SLDC Charges as projected by TANTRANSCO for FY 2017-18 and FY 2018-19 have not been considered, while approving the ARR of TANTRANSCO for these years. Any over or under recovery in SLDC Charges for FY 2017-18 and FY 2018-19 will be considered at the time of True-up of ARR of SLDC.

## **2.12 Allotted Capacity**

### **Stakeholder Comments**

2.12.1 The following transmission capacities, using TANTRANSCO's network and paying Transmission Charges, are not included in the Allotted Capacity statement of SLDC.

- Long Term Power Purchase by TANGEDCO : 3189 MW
- Purchase from CPP : 986 MW
- CPP Wheeling : 2142 MW
- Additional Transmission Capacity to be Commissioned : 3440 MW

### **TANTRANSCO's Reply**

2.12.2 TANTRANSCO submitted that the Allotted Transmission Capacity (ATC) has been arrived for FYs upto 2015-16 based on actuals. The projection for FY 2016-17 to FY 2018-19 has been done taking into the account the projects expected to be commissioned during the respective years. TANTRANSCO further submitted that the capacity furnished in the SLDC statement is based on day to day transactions covering all the long-term and short-term transactions of power transmitted.

### **Commission's Views**

2.12.3 The Commission has determined the per MW per Day Transmission Charges by considering the allocated capacity based on the revised submissions of TANTRANSCO.



## **2.13 Transmission Losses**

### **Stakeholder Comments**

2.13.1 As per SMT Order No. 8 of 2014 dated December 11, 2014, the Commission approved transmission losses of 2.7%. However, TANTRANSCO has again considered more than 4% losses in the present ARR for FY 2016-17 to FY 2018-19. The Commission should direct TANTRANSCO to provide correct data for loss calculation and the same may be presented to the public for approval. The condition of Automatic Meter Reading (AMR) facilities for simultaneous readings for loss determination should be made available for the stakeholders.

### **TANTRANSCO's Reply**

2.13.2 TANTRANSCO submitted that in the loss level of 2.7% as per the SMT Order No. 8 of 2014, dated December 11, 2014, the losses in the LV side of the 110 kV power transformers was not considered. In the present Petition, TANTRANSCO has furnished the loss level including the losses in the LV side of 110 kV power transformers. Hence, there is an increase in the loss level. TANTRANSCO also submitted that AMR facilities are under implementation upto 110 kV voltage level for precise calculation of losses.

### **Commission's Views**

2.13.3 The Commission sought justification for the higher than approved Transmission Loss. TANTRANSCO submitted that the increase in 110 kV losses is due to the inclusion of LV side losses of 110 kV power transformer.

2.13.4 The Commission is of the view that as the input for TANGEDCO is considered at the 33kV level, hence, the transformation losses at 110 kV have to be considered as part of Transmission Losses, and has hence, accepted the Transmission Loss of 4.11% for FY 2015-16 as submitted by TANTRANSCO for projecting the trajectory of Transmission Loss for the Control Period from FY 2016-17 to FY 2018-19.

## **2.14 Harmonics**

### **Stakeholder Comments**

2.14.1 TANTRANSCO should install necessary capacitors in their sub-stations to suppress

harmonics in the system instead of urging HT consumers to control harmonics. Harmonics should be controlled at transmission level instead of distribution level.

#### **TANTRANSCO's Reply**

2.14.2 TANTRANSCO submitted that capacitors are being provided in TANTRANSCO Substations in a phased manner.

#### **Commission's Views**

2.14.3 TANTRANSCO is directed to undertake a proper study of the injection of harmonics at various points of the transmission system, and come up with a proper proposal to address the same, in its next Tariff Petition.

2.14.4 The Commission has approved the capital expenditure sought by TANTRANSCO for installation/replacement of capacitor banks for its substations in the respective CIP Orders in the following Orders:

- i) M.P. No. 54 of 2014, dated June 28, 2016
- ii) M.P. No. 10 of 2016, dated July 31, 2017.

### **3 FINAL TRUE-UP FOR FY 2011-12 TO FY 2015-16**

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#### **3.1 Background**

3.1.1 TANTRANSCO, in its Petition has sought final Truing up of expenditure and revenue for the period from FY 2011-12 to FY 2015-16 based on actual expenditure and revenue as per the Audited Accounts. In this Section, the Commission has analysed all the elements of revenue and expenses for FY 2011-12 to FY 2015-16 and has undertaken the Truing up of expenses and revenue after prudence check.

#### **3.2 Fixed Expenses**

3.2.1 In this Section, fixed expenses for the period from FY 2011-12 to FY 2015-16 have been 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) Interest on working capital loans
- v) Return on Equity
- vi) Other debits
- vii) Incentives

#### **3.3 Operation and Maintenance (O&M) Expenses**

3.3.1 TANTRANSCO submitted the actual O&M expenses for FY 2011-12 to FY 2015-16 based on audited accounts. O&M Expenses consists of three components, viz., Employee expenses, A&G expenses and R&M expenses.

##### ***Employee Expenses***

3.3.2 TANTRANSCO submitted that Employee expenses comprise Basic Salary, Dearness Allowance, Bonuses, Medical expenses reimbursement, Terminal Benefits, etc. The basic reason for deviation in Employee expenses is increase in Terminal Benefits and Dearness Allowance. While analysing the Accounts for FY 2012-13, it was decided to share the total Terminal Benefits in the ratio of 6:1 between TANGEDCO and TANTRANSCO and accordingly 1/7<sup>th</sup> of the total Terminal Benefits was accounted under Employee cost in the accounts of TANTRANSCO.

### *Administrative and General Expenses*

- 3.3.3 TANTRANSCO submitted that actual A&G expenses for FY 2011-12 to FY 2015-16 as per audited accounts, which comprises expenses pertaining to Rent, Telephone and Postage, Printing and Stationary, Electricity and Water Charges, Advertisements Expenses, etc.

### *Repair and Maintenance Expenses*

- 3.3.4 TANTRANSCO submitted that R&M expenses are generally incurred on maintaining the transmission assets in order to ensure uninterrupted operations. The current infrastructure of transmission system is old and the majority of the assets have already completed their useful life. It has been carrying out R&M activities in order to maintain the assets in a more efficient way. Further, R&M expenses are under 1% of GFA, which is much lower than 3.3% of GFA considered by the Commission in its last Suo-motu Tariff Order.
- 3.3.5 The actual O&M Expenses claimed by TANTRANSCO is shown in the following Table:

**Table 3.3-1: O&M Expenses for FY 2011-12 to FY 2015-16 as submitted by TANTRANSCO (Rs. Crore)**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Employee Expenses	360.81	579.89	700.01	830.08	964.99
A&G Expenses	19.62	23.27	26.62	26.34	30.61
R&M Expenses	7.98	7.53	12.55	11.02	13.53
<b>Total</b>	<b>388.41</b>	<b>610.69</b>	<b>739.18</b>	<b>867.44</b>	<b>1,009.13</b>

- 3.3.6 TANTRANSCO submitted that the staff transfer scheme is not yet finalised and employees are working on deputation basis on “As is where is basis”. TANTRANSCO requested the Commission to consider such additional cost post final staff transfer as and when it is finalised.

### **Commission’s View**

- 3.3.7 Regulation 25 of the Tariff Regulations specifies the normative computation of O&M expenses, as reproduced below:

#### ***“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 5.72% 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 5.72% per annum to arrive at permissible operation and maintenance expenses for the relevant years of tariff period.... ..”*

3.3.8 The Commission, in this Order, has approved the normative O&M Expenses, after truing up, as per Regulation 9 of the MYT Regulations. The Commission, in Suomotu Tariff Order dated December 11, 2014 had approved the normative O&M Expenses for FY 2011-12 to FY 2013-14. The same has been considered by the Commission for the purpose of truing up.

3.3.9 For computation of normative Employee Expenses for FY 2014-15 and FY 2015-16, the escalation factor of 5.72% has been applied on normative Employee Expenses for FY 2013-14, except for Dearness Allowance. The Commission has considered Dearness Allowance based on actual DA index applied on the normative Basic Salary for the respective years, in line with the approach adopted in the earlier Tariff Order.

3.3.10 The normative R&M expenses and A&G expenses for FY 2014-15 and FY 2015-16 have been derived by applying the escalation factor of 5.72% on the normative R&M expenses and A&G expenses for FY 2013-14, respectively. The normative O&M expenses approved by the Commission for FY 2011-12 to FY 2015-16 are shown in the following Table:

**Table 3.3-2: Normative O&M Expenses for FY 2011-12 to FY 2015-16 approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12			FY 2012-13		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Employee Expenses	503.98	360.81	503.98	575.95	579.89	575.95
A&G Expenses	7.18	19.62	7.18	15.07	23.27	15.07
R&M Expenses	6.71	7.98	6.71	8.10	7.53	8.10
<b>Total O&amp;M Expenses</b>	<b>517.87</b>	<b>388.41</b>	<b>517.87</b>	<b>599.12</b>	<b>610.69</b>	<b>599.12</b>

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Employee Expenses	632.34	700.01	632.34	709.29	830.08	713.19
A&G Expenses	15.68	26.62	15.68	16.57	26.34	16.57
R&M Expenses	8.42	12.55	8.42	8.91	11.02	8.91
<b>Total O&amp;M Expenses</b>	<b>656.44</b>	<b>739.18</b>	<b>656.44</b>	<b>734.77</b>	<b>867.44</b>	<b>738.67</b>

Particulars	FY 2015-16		
	TO 2013	TANTRANSCO	Approved after true up
Employee Expenses	724.36	964.99	800.51
A&G Expenses	16.96	30.61	17.52
R&M Expenses	9.11	13.53	9.42
<b>Total O&amp;M Expenses</b>	<b>750.43</b>	<b>1,009.13</b>	<b>827.45</b>

### 3.4 Capital Expenditure and Capitalisation

- 3.4.1 Regulation 17(5) of the Tariff Regulations and Regulation 3(v) of the MYT Regulations specify that the Licensee shall get the Capital Investment Plan approved by the Commission before filing of Application for approval of ARR and Tariff. TANTRANSCO submitted that in line with the direction of Hon'ble APTEL Judgment dated October 18, 2014 in Appeal No. 197 of 2013, it has submitted the actual scheme-wise details of asset additions during FY 2013-14 and the application for Capital Investment Plan for FY 2014-15 and FY 2015-16. The Commission had approved the capital expenditure and capitalisation for FY 2014-15 and FY 2015-16. It further submitted that the expenditure incurred in each of the operational circles is on account of regular need based repairs and maintenance works like replacement of worn-out apparatus, damaged equipment, transformers, repairs on account of overhead transmission lines, etc., which are necessary works to be carried out for efficient working of the transmission system.
- 3.4.2 TANTRANSCO submitted that the capitalisation for FY 2011-12 to FY 2015-16 was on account of achieving improvement in tail-end voltage levels, avoidance of system overloading, to provide load relief, to meet out the load growth in particular area, to evacuate power from various sources, and reduction of line losses. TANTRANSCO had spent significant amount of capital expenditure for construction of transmission

lines and sub-stations during this period.

- 3.4.3 TANTRANSCO submitted the actual Capital Expenditure and Capitalisation as shown in the following Table:

**Table 3.4-1: Capital Expenditure and Capitalisation as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Capital Expenditure	1044.60	1412.17	2204.55	3200.04	2133.63
Capitalisation	171.49	430.97	1331.92	3414.11	2065.29

#### **Commission's View**

- 3.4.4 Regulation 17 of the Tariff Regulations and Regulation 3(v) of the MYT Regulations specify that the Licensee shall file a detailed Capital Investment Plan, which shall be approved by the Commission before determining the ARR and Tariff for any year. The Commission vide Order dated June 28, 2016 in M.P. No. 54 of 2014 had approved the Capital Investment Plan for TANTRANSCO for FY 2014-15 and FY 2015-16 based on the directions of Hon'ble APTEL in Appeal No 197 of 2013 as reproduced below:

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

- 3.4.5 The Commission in Suo-motu Tariff Order dated December 11, 2014 has taken cognizance of Hon'ble APTEL Judgment dated October 18, 2014 in Appeal No. 197 of 2013 and directed TANTRANSCO to comply with the same. The Commission in the said Order has stated as under:

*"3.32 The Commission has taken cognisance of the above APTEL directive and shall approve the capital investment plan and account for the shortfall if any in capex and capitalization while determining tariff"*

for FY 2015-16 along with impact of carrying cost.

3.33 The Commission directs TANTRANSCO to comply with the above directive of the Hon'ble Appellate Tribunal.

3.34 In this order for FY 2010-11 to 2013-14, Commission has relied upon the capital expenditure and capitalization as per the audited accounts and annual statement of accounts of TANTRANSCO. The addition to gross fixed assets during a particular year is taken as the capitalization for that year. In public notice, the capex and capitalization for FY 2013-14 was taken as per budgeted estimates. But due to availability of annual statement of accounts post public notice, the same has been considered in this order.

3.35 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 as per the specified format and finalization of transfer scheme will be addressed during the next tariff order.”

3.4.6 In this Order, the Commission has relied upon the capital expenditure and capitalisation for FY 2011-12 to FY 2015-16 based on audited accounts, as shown in the Tables below. The Commission has considered the addition to gross fixed assets during a particular year equivalent to capitalization for that year.

**Table 3.4-2: Capital Expenditure and Capitalisation Approved by the Commission (Rs. Crore)**

Particulars	FY 2011-12			FY 2012-13		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Capital Expenditure	1044.60	1044.60	1044.60	1412.17	1412.17	1412.17
Capitalisation	173.53	171.49	171.49	433.50	430.97	430.97

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Capital Expenditure	2204.55	2204.55	2204.55	2907.43	3200.04	3200.04
Capitalisation	1335.14	1331.92	1331.92	4525.45	3414.11	3414.11

Particulars	FY 2015-16		
	TO 2013	TANTRANSCO	Approved after true up
Capital Expenditure	2505	2133.63	2133.63
Capitalisation	3026	2065.29	2065.29



- 3.4.7 As regards the means of finance for capital expenditure, the Commission has considered the actual grant/consumer contribution as per audited accounts for FY 2011-12 to FY 2015-16. Further, the Commission notes that TANTRANSCO has projected the equity more than 30% of the capital expenditure. The Regulation 21 of Tariff Regulations, 2005 specifies that 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.
- 3.4.8 Accordingly, the Commission has limited the equity amount to 30% of capital expenditure after excluding the grants, and balance amount has been considered as loans and corresponding interest charges have been allowed on the same. The means of finance for capital expenditure approved by the Commission for FY 2011-12 to FY 2015-16 as shown in the following Table:

**Table 3.4-3: Means of finance approved by the Commission after true-up (Rs. Crore)**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Grant/consumer contribution	2.60	44.89	18.07	15.21	31.83
Equity	312.60	410.19	168.97	871.10	254.54
Debt	729.40	957.10	2017.51	2313.72	1847.26
<b>Total Capital Expenditure</b>	<b>1044.60</b>	<b>1412.17</b>	<b>2204.55</b>	<b>3200.04</b>	<b>2133.63</b>

### **3.5 GFA and Depreciation**

- 3.5.1 TANTRANSCO submitted that the GFA considered is based on the final Transfer Scheme without considering any impact of revaluation of assets. However, the depreciation is considered in line with the books of accounts. The depreciation was calculated till FY 2014-15 based on the provisional Transfer Scheme, while, the net impact on depreciation considering the effect from FY 2010-11 onwards has been reflected in FY 2015-16 audited accounts under the head "Prior Period Item" based on the final Transfer Scheme.
- 3.5.2 TANTRANSCO submitted that major capitalisation has been undertaken in the past few years, which has resulted in increase in depreciation as compared to the depreciation approved by the Commission.
- 3.5.3 The depreciation submitted by TANTRANSCO for FY 2011-12 to FY 2015-16 is

shown in the following Table:

**Table 3.5-1: Depreciation as submitted by TANTRANSCO (Rs. Crore)**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Opening GFA	4,472.49	4,643.97	5,074.94	6,406.86	9,820.97
Closing GFA	4,643.97	5,074.94	6,406.86	9,820.97	11,886.26
Depreciation during the year	289.27	299.50	311.27	566.34	487.61
Rate of Depreciation	6.35%	6.16%	5.42%	6.98%	4.49%

### **Commission's View**

- 3.5.4 In terms of the provisional Transfer Scheme notification dated January 2, 2012, GoTN 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 April 1, 2010 to October 30, 2010, does not get reflected in the opening Balance Sheet of the TANTRANSCO as specified in the Transfer Scheme.
- 3.5.5 In view of this, the Commission in the Suo-motu Tariff Order dated December 11, 2014 had considered the opening GFA for FY 2010-11 (for five months) in line with the provisional Transfer Scheme notified by GoTN vide notification dated January 2, 2012. The Commission in the said Order had stated that the impact due to revaluation reserve can be addressed after notification of the Final Transfer Scheme.
- 3.5.6 GoTN vide Notification dated August 13, 2015 has notified the Final Transfer Scheme, indicating the final impact due to revaluation reserve. The total allocation to TANTRANSCO is Rs. 7164 Crore. This revaluation of assets is just book adjustment that neither requires any fund nor generates any additional cash flow. TANTRANSCO had stated earlier that there will not be any major change in depreciation due to change in opening GFA as the revaluation reserve primarily corresponds to land.
- 3.5.7 The Commission sought the details of Opening GFA for FY 2011-12 from TANTRANSCO, without considering the impact due to revaluation reserve. The Commission is of view that the revaluation of assets should not lead to any tariff increase to the consumers. Moreover, depreciation cannot be allowed on revalued assets, and has to be allowed only on the original book value. The Commission is considering the GFA without revaluation reserve for the purpose of truing up. The Commission in Tariff Order dated June 20, 2013 had undertaken the final true-up for

FY 2010-11 and computed the closing GFA for FY 2010-11. The Commission has considered this closing GFA for FY 2010-11 as Opening GFA for FY 2011-12 for computation of depreciation as shown in the following Table:

**Table 3.5-2: Opening GFA for FY 2011-12 considered for Depreciation (Rs. Crore)**

<b>Sl. No.</b>	<b>Particulars</b>	<b>Opening GFA as per Audited Accounts</b>	<b>Opening GFA considered for computation of Depreciation</b>
1	Land & Rights	2,866.88	90.96
2	Building	319.41	319.41
3	Other Civil Works	116.52	116.52
4	Hydraulic Works	2.24	2.24
5	Plant & Machinery	4,078.86	4,078.86
6	Lines & Cable Network	4,794.63	4,794.63
7	Vehicles	25.19	25.19
8	Furniture & Fixtures	20.78	20.78
9	Office Equipment	66.96	66.96
10	Asset not belong to board	0.00	0.06
<b>11</b>	<b>Grand Total</b>	<b>12,291.46</b>	<b>9,515.61</b>

3.5.8 The Commission has calculated depreciation considering the opening GFA for FY 2011-12 as mentioned above, weighted average depreciation rates, and capitalization approved by the Commission for the period from FY 2011-12 to FY 2015-16 in this Order.

3.5.9 Since, the depreciation rate for assets were changed after amendment dated April 9, 2014, the rate prior to amendment has been used to compute depreciation for FY 2011-12 to FY 2013-14 and rate post-amendment has been used to compute depreciation for FY 2014-15 and FY 2015-16. Further, the Commission in SMT Order has approved the Depreciation on Opening GFA for the respective year. In line with the same approach adopted in the previous Orders, the Commission has considered the Depreciation on Opening GFA for FY 2011-12 to FY 2015-16.

3.5.10 The depreciation approved by the Commission is given in the following Table:

**Table 3.5-3: Depreciation approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12			FY 2012-13		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Opening GFA	9,515.43	4,472.49	9,515.61	9688.96	4,643.97	9,685.06
Closing GFA	9,688.96	4,643.97	9,685.06	10122.47	5,074.94	10,114.76
Depreciation during the year	297.17	289.27	297.18	302.45	299.50	302.35

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Opening GFA	10,122.47	5,074.94	10,114.76	11,457.61	6,406.86	11,443.47
Closing GFA	11,457.61	6,406.86	11,443.47	15,983.06	9,820.97	14,855.28
Depreciation during the year	315.62	311.27	315.41	356.20	566.34	591.31

Particulars	FY 2015-16		
	TO 2013	TANTRANSCO	Approved after true up
Opening GFA	21,183.64	9,820.97	14,855.28
Closing GFA	24,209.64	11,886.26	16,920.57
Depreciation during the year	649.89	487.61	768.76

### 3.6 Interest and Finance Charges

- 3.6.1 TANTRANSCO has claimed the Interest expenses corresponding to the loans allocated to the Utilities through the Transfer Scheme. The opening balance of loans as on November 1, 2010, is based on the provisional Transfer Scheme dated January 2, 2012, while the adjustment related to the final Transfer Scheme has been carried out in FY 2015-16. TANTRANSCO submitted that it is meeting the operational/revenue expenses from the Transmission Charges collected from the operation. However, TANTRANSCO is borrowing loans for repayment of loans allocated to it through provisional and final Transfer Scheme whereby it is still finding it difficult to service the debt allocated in the Transfer Scheme. TANTRANSCO submitted that it has followed the approach adopted by the Commission in its earlier Tariff Orders which has also been accepted by Hon'ble APTEL in its Judgment dated February 4, 2013 in Appeal No. 102 of 2012.
- 3.6.2 TANTRANSCO submitted that the interest liability calculated and accrued during the period from FY 2011-12 to FY 2015-16 are on actual basis, which are calculated

based on the loans of erstwhile TNEB and the same is reflected in the books of Accounts. TANTRANSCO has not claimed any interest on GPF for FY 2011-12 to FY 2015-16. TANTRANSCO submitted the interest expenses for FY 2011-12 to FY 2015-16 as shown in the following Table:

**Table 3.6-1: Interest Expenses as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening Loan Balance	11,952.99	9,656.20	8,253.72	8,838.13	10,210.10
Loan additions during the year	526.78	699.43	1,870.58	2,181.87	5,175.19
Repayment during the year	2,823.57	2,101.91	1,286.16	809.90	4,536.90
Closing Loan Balance	9,656.20	8,253.72	8,838.13	10,210.10	10,848.38
Average Loan	10,804.59	8,954.96	8,545.93	9,524.12	10,529.24
Interest on Loan	1,313.94	1,278.11	658.27	845.53	1,256.27
Less: Interest Capitalised	240.95	271.69	223.92	291.35	319.53
Net Interest on Loan	1,072.99	1,006.42	434.35	554.18	936.74
Interest and Finance Charges	2.63	12.96	17.51	18.69	27.56
<b>Total Interest Expenses</b>	<b>1,075.62</b>	<b>1,019.38</b>	<b>451.86</b>	<b>572.87</b>	<b>964.30</b>
Average Interest Rate	12.16%	14.27%	7.70%	8.88%	11.93%

### Commission's View

3.6.3 As regards the interest and finance charges, the Commission in Suo-motu Tariff Order dated December 11, 2014 has stated as under:

*“3.46 In last year Tariff Order, 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. Based on the details of borrowings submitted by TANTRANSCO Commission had provisionally considered the same to arrive at the revised loan profile and average interest expenses. On finalization of the transfer scheme, the loan profile would be reviewed and any impact on interest on loans due to finalization of transfer scheme would be addressed during the next tariff order.*

*3.47 As regards to repayment of existing loans and borrowings, Commission has considered the actuals as per audited and annual statement of accounts for FY 2011-12 to FY 2013-14.*

3.48 Commission has considered the interest expenses for FY 2011-12 and FY 2012-13 as per the audited accounts. However, for FY 2013-14 Commission finds some discrepancies in the interest expense stated in the annual statements of accounts and further clarification is required before accepting the same. Thus, Commission has determined interest expenses on long term loans based on the following approach:

- i. Revised opening loans as on 1<sup>st</sup> 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 accounts.
- iii. The repayment period of new loans borrowed is assumed to be 10 years
- iv. The loan addition during the year is considered as per accounts.
- v. Average interest rate for FY 11, FY 12 and FY 13 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 14 is assumed to be at 12% i.e. the average interest rate for FY 13.
- vi. Interest during construction (IDC) is approved based on capital works in progress.”

3.6.4 For the purpose of truing up, the Commission has adopted the similar approach for approval of Interest and finance charges. The Commission notes that post the notification of final Transfer Scheme, TANTRANSCO has adjusted the impact of final Transfer Scheme in the Audited Accounts for FY 2015-16 with respect to the impact of provisional Transfer Scheme already reflected in the Audited Accounts for earlier years. For computation of interest expenses, the Commission has also considered loan balances as considered in the Audited Accounts based on provisional and final Transfer Scheme.

3.6.5 The Commission has arrived at opening loan as on April 1, 2011 based on provisional Transfer Scheme, as shown in the following Table:

**Table 3.6-2: Opening balance of loan as on April 1, 2011 (Rs. Crore)**

<b>Particulars</b>	<b>FY 2010-11</b>
Opening Loans as on November 1, 2010 - as per provisional Transfer Scheme	11,720.29
Net addition in Loans during first seven months of FY 2010-11	1,485.71
Revised opening Loan as on November 1, 2010	13,206.00
Loan addition after November 1, 2010	1,080.14

Particulars	FY 2010-11
Less: Loan Repayment	347.44
Closing Loan as on March 31, 2011	13,938.70

- 3.6.6 The Commission has considered the addition of loan towards the funding of capital expenditure as discussed in the earlier section of this Order. The repayment of existing loan is considered as per Audited Accounts. The actual weighted average rate of interest has been considered based on the Audited Accounts. Interest during construction (IDC) has been approved as submitted by TANTRANSCO.
- 3.6.7 The Commission notes that the loan addition submitted by TANTRANSCO for FY 2015-16 includes the impact of revaluation of assets. The Commission sought details of actual loan borrowed during the year excluding the impact of revaluation of assets. Based on this, the Commission has considered the loan addition during FY 2015-16 and computed the interest and finance charges.
- 3.6.8 In line with the approach adopted in past Tariff Order, the Commission has not considered the interest on GPF as GPF Reserve Funds are not considered for funding of capital expenditure. Other Finance Charges have been allowed at actuals based on Audited Accounts.
- 3.6.9 The interest expenses approved by the Commission for FY 2011-12 to FY 2015-16 after truing up are shown in the following Table:

**Table 3.6-3: Interest and finance Charges approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening Loan	13,938.70	11,547.34	9,600.18	10,516.11	11,428.62
Addition of Loan during the year	932.22	654.75	2,202.09	2,222.42	1,941.50
Repayment of Loan during the year	3,323.57	2,601.91	1,286.16	1,309.90	3,024.76
Closing Balance	11,547.34	9,600.18	10,516.11	11,428.62	10,345.36
Rate of Interest (%)	11.06%	11.16%	11.27%	11.26%	9.69%
<b>Interest on Loan</b>	<b>1,409.11</b>	<b>1,180.25</b>	<b>1,133.42</b>	<b>1,235.65</b>	<b>1,054.68</b>
Add: Other interest and finance charges	2.63	12.96	17.51	18.69	27.56
Less: IDC	240.95	271.69	223.92	291.35	319.53

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
<b>Total Interest and finance Charges</b>	<b>1,170.79</b>	<b>921.52</b>	<b>927.01</b>	<b>962.99</b>	<b>762.71</b>

### 3.7 Interest on Working Capital

3.7.1 TANTRANSCO submitted that it has not included interest expenses for short-term borrowings in long-term loans and has claimed Interest on Working Capital (IoWC) separately as per norms specified in the Tariff Regulations, in line with the approach adopted by the Commission in past Tariff Orders. Though there is Nil amount as IoWC, TANTRANSCO has employed internal sources to meet the revenue expenditure for working capital and the internal sources also carry cost. Such funds employed elsewhere would have earned interest income. Also, the spares required for day to day operations of Sub-Station and lines are also met through working capital. This approach had also been stipulated in the Hon'ble APTEL Judgment dated May 28, 2009 in Appeal No. 111 of 2008.

3.7.2 The normative IoWC as submitted by TANTRANSCO is shown in the following Table:

**Table 3.7-1: Interest on Working Capital as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
O&M Expenses for One Month	25.23	43.55	51.60	60.81	71.34
Maintenance Spares	49.14	53.55	67.15	102.08	124.76
Receivables	284.51	396.85	460.82	296.01	384.21
Total Working Capital	358.88	493.95	579.57	458.90	580.30
Rate of Interest (%)	13.00%	14.75%	14.45%	14.75%	14.75%
<b>Interest on Working Capital</b>	<b>46.65</b>	<b>72.86</b>	<b>83.75</b>	<b>67.69</b>	<b>85.59</b>

#### Commission's View

3.7.3 Regulations 26 and 27 of the Tariff Regulations specify as under:

*"26 Working Capital*



(d) For Transmission System

Working Capital shall cover:

- (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 short term rate of interest on working capital shall be on normative basis and shall be equivalent to the primary lending rate of State Bank of India as on April 1, of the relevant year.”

3.7.4 The Commission has approved normative IoWC as per the above said Regulations. The Commission has considered the rate of interest equivalent to Prime Lending Rate of State Bank of India as on April 1 for the relevant year.

3.7.5 The IoWC approved by the Commission for FY 2011-12 to FY 2015-16 after true-up is shown in the following Table:

**Table 3.7-2: Interest on Working Capital approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12			FY 2012-13		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
O&M Expenses for one month	43.16	25.23	43.16	49.93	43.55	49.93
Maintenance Spares	95.15	49.14	95.16	96.89	53.55	96.85
Receivables	284.51	284.51	284.51	512.67	396.85	396.85
<b>Total Working Capital</b>	<b>422.82</b>	<b>358.88</b>	<b>422.82</b>	<b>659.48</b>	<b>493.95</b>	<b>543.63</b>
Rate of Interest (%)	13.00%	13.00%	13.00%	14.75%	14.75%	14.75%
<b>IOWC</b>	<b>54.97</b>	<b>46.65</b>	<b>54.97</b>	<b>97.27</b>	<b>72.86</b>	<b>80.19</b>

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
O&M Expenses	54.70	51.60	54.70	61.23	60.81	61.56

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
for one month						
Maintenance Spares	101.22	67.15	101.15	114.58	102.08	114.43
Receivables	269.38	460.82	460.82	379.68	296.01	296.01
<b>Total Working Capital</b>	<b>425.31</b>	<b>579.57</b>	<b>616.68</b>	<b>555.49</b>	<b>458.90</b>	<b>472.00</b>
Rate of Interest (%)	14.45%	14.45%	14.45%	14.45%	14.75%	14.75%
<b>IOWC</b>	<b>61.46</b>	<b>83.75</b>	<b>89.11</b>	<b>80.27</b>	<b>67.69</b>	<b>69.62</b>

Particulars	FY 2015-16		
	TO 2013	TANTRANSCO	Approved after true up
O&M Expenses for one month	62.54	71.34	68.95
Maintenance Spares	211.84	124.76	148.55
Receivables	662.75	384.21	384.21
<b>Total Working Capital</b>	<b>937.12</b>	<b>580.30</b>	<b>601.71</b>
Rate of Interest (%)		14.75%	14.75%
<b>IOWC</b>	<b>135.41</b>	<b>85.59</b>	<b>88.75</b>

### 3.8 Return on Equity

- 3.8.1 TANTRANSCO has computed the Return on Equity (RoE) for FY 2011-12 to FY 2015-16 based on the average equity for the corresponding year at rate of return of 14%, in line with the Tariff Regulations. TANTRANSCO further submitted that the Commission in its Tariff Order disallowed RoE on Opening Equity on the grounds that loan borrowing is more than the capital expenditure incurred. However, TANTRANSCO is entitled for RoE on equity invested every year to carry out future capacity additions. RoE is a surplus generated, which entitles a utility to safeguard itself against any uneven contingencies or a force majeure event in future.
- 3.8.2 TANTRANSCO submitted that it is entitled for RoE on the opening balance of equity as per the second Transfer Scheme as per Hon'ble APTEL Judgment dated August 29, 2006 in Appeal No. 84 of 2006.
- 3.8.3 However, in the Petition, the opening equity for FY 2011-12 has been considered as Nil in line with the Commission's Suo-motu Tariff Order dated December 11, 2014. As the matter is sub-judice before the Hon'ble Supreme Court, TANTRANSCO submitted that it reserves the right to claim RoE as per the Order of the Hon'ble Supreme Court.
- 3.8.4 The RoE submitted by TANTRANSCO for FY 2011-12 to FY 2015-16 is shown in

the following Table:

**Table 3.8-1: Return on Equity as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Opening Equity	-	406.46	913.37	1,082.34	1,953.45
Additions during the year	406.46	506.91	168.97	871.10	254.54
Closing Equity	406.46	913.37	1,082.34	1,953.45	2,207.98
Average Equity	203.23	659.92	997.86	1,517.89	2,080.71
<b>Return on Equity @ 14%</b>	<b>28.45</b>	<b>92.39</b>	<b>139.70</b>	<b>212.51</b>	<b>291.30</b>

### Commission's View

- 3.8.5 The Commission has considered the opening equity for FY 2011-12 as nil in view of its earlier Order and Hon'ble APTEL Judgment and the pending appeal before the Hon'ble Supreme Court.
- 3.8.6 The equity addition for subsequent years has been considered equivalent to actual equity inflow for funding of capital expenditure limited to the amount of 30% of capital expenditure, after excluding the grants/consumer contribution. The Commission has allowed 14% RoE on average equity contribution so determined for the year, in accordance with the Tariff Regulations.
- 3.8.7 The Return on Equity approved by the Commission for FY 2011-12 to FY 2015-16 is shown in the following Table:

**Table 3.8-2: Return on Equity approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12			FY 2012-13		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Opening equity	-	-	-	406.46	406.46	312.60
Addition during the year	406.46	406.46	312.60	506.91	506.91	410.19
Closing Equity	406.46	406.46	312.60	913.37	913.37	722.78
Average Equity	203.23	203.23	156.30	659.92	659.92	517.69
<b>Return on Equity @ 14%</b>	<b>28.45</b>	<b>28.45</b>	<b>21.88</b>	<b>92.39</b>	<b>92.39</b>	<b>72.48</b>

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
Opening equity	913.37	913.37	722.78	1082.34	1,082.34	891.75
Addition during	168.97	168.97	168.97	872.23	871.10	871.10

Particulars	FY 2013-14			FY 2014-15		
	SMT Order	TANTRANSCO	Approved after true up	SMT Order	TANTRANSCO	Approved after true up
the year						
Closing Equity	1,082.34	1,082.34	891.75	1954.57	1,953.45	1,762.86
Average Equity	997.86	997.86	807.27	1518.46	1,517.89	1,327.31
<b>Return on Equity @ 14%</b>	<b>139.70</b>	<b>139.70</b>	<b>113.02</b>	<b>212.58</b>	<b>212.51</b>	<b>185.82</b>

Particulars	FY 2015-16		
	TO 2013	TANTRANSCO	Approved after true up
Opening equity	3887.25	1,953.45	1,762.86
Addition during the year	751.50	254.54	254.54
Closing Equity	4638.75	2,207.98	2,017.39
Average Equity	4263.00	2,080.71	1,890.13
<b>Return on Equity @ 14%</b>	<b>596.82</b>	<b>291.30</b>	<b>264.62</b>

### 3.9 Other Income

3.9.1 TANTRANSCO submitted that the Other Income includes interest on State loans received, income from investment, interest from banks, income from short-term open access consumers in the form of O&M charges collected from Wind Energy Generators and Captive Power Producers, etc. TANTRANSCO submitted the actual Other Income based on audited accounts for FY 2011-12 to FY 2015-16 as shown in the following Table:

**Table 3.9-1: Other Income as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Other Income	37.80	33.85	112.16	160.15	201.84

#### Commission's View

3.9.2 The Commission has accepted the Other Income for FY 2011-12 to FY 2015-16 as per the Audited Accounts, as shown in the Table below:

**Table 3.9-2: Other Income approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Interest on Staff Loans and Advances	0.71	0.76	0.75	1.07	1.82
Delayed Payment Charges from Consumers	-	-	0.03	0.01	-

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Interest on Advances to Suppliers	2.75	-	-	0.00	-
Interest on Banks	-	-	-	0.02	0.03
Income from Trading	6.45	4.61	4.47	1.45	1.81
Income fee collected against Staff Welfare Activities	0.02	0.02	0.01	0.02	0.02
Miscellaneous receipts	27.88	28.47	106.86	157.52	198.13
Recovery from Staff for Transport Fare	-	-	0.03	0.06	0.03
<b>Total</b>	<b>37.80</b>	<b>33.85</b>	<b>112.16</b>	<b>160.15</b>	<b>201.84</b>

### 3.10 Other debits, Extra-ordinary items and Prior Period Expenses

3.10.1 TANTRANSCO submitted the Other Debits, Capitalised Expenses, Extra-Ordinary Items and Prior Period Items incurred for the period from FY 2011-12 to FY 2015-16 as per Audited accounts. The adjustment related to final Transfer Scheme has also been reflected in FY 2015-16 in line with the Accounting Standards. The expenses capitalised are undertaken in line with the company policy. The expenses claimed by TANTRANSCO for FY 2011-12 to FY 2015-16 under these heads are shown in the following Table:

**Table 3.10-1: Other Debits, Extra-ordinary items and Prior Period expenses as submitted by TANTRANSCO (Rs. Crore)**

<b>Particulars</b>	<b>FY 2011-12</b>	<b>FY 2012-13</b>	<b>FY 2013-14</b>	<b>FY 2014-15</b>	<b>FY 2015-16</b>
Other Debits	0.15	6.27	0.04	-	0.49
Prior Period Expenses	3.74	291.95	(171.71)	(11.23)	145.83
Extra-ordinary items	2.32	-	-	-	-
Expenses Capitalised	(85.65)	(88.08)	(119.97)	(137.72)	(153.02)
<b>Grand Total</b>	<b>(79.44)</b>	<b>210.14</b>	<b>(291.64)</b>	<b>(148.95)</b>	<b>(6.69)</b>

#### **Commission's View**

3.10.2 The Commission has not allowed the Other Debits as proposed by TANTRANSCO. These expenses shall be met by the Licensee on its own. The amount claimed under the extra-ordinary items have been allowed by the Commission.

3.10.3 As regards the expenses capitalised, the Commission has already considered these

expenses while approving the O&M expenses.

3.10.4 As regards the prior period expenses, the Commission has analysed the details and justification for Net Prior Period expenses/(income). The Commission has considered the treatment of prior period items based on the treatment allowed to that particular item in the true-up of the year to which the expenses/(income) pertain. The Commission has disallowed the prior period expenses/(income) towards depreciation and interest and finance charges since, the depreciation had not been allowed by the Commission based on audited accounts. The Commission in the past Orders had allowed depreciation and Interest and finance charges based on its own computations. In cases, where the expenses/(income) have been allowed on actuals earlier, then the prior period expenses/(income) have been accepted.

3.10.5 The Prior period expenses/(income) allowed by the Commission for FY 2011-12 to FY 2015-16 are shown in the following Table:

**Table 3.10-2: Prior period expenses/(income) approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12		FY 2012-13		FY 2013-14	
	TANT RANS CO	Approved after truing up	TANT RANS CO	Approved after truing up	TANTR ANSCO	Approved after truing up
<b>Prior Period Income</b>						
Receipts from consumers	0.03	0.03	3.74	3.74	18.31	18.31
Interest Income	1.07	1.07	0.06	0.06	-	-
Excess provision for IT	0.15	-	0.03	-	0.01	-
Excess provision for Depreciation	0.99	-	-	-	-	-
Excess provision for interest & finance charges	1.99	-	9.14	-	2.07	-
Other excess provision	0.76	-	1.53	-	18.30	-
Other income	2.27	2.27	10.16	10.16	212.99	212.99
<b>Total Income</b>	<b>7.26</b>	<b>3.37</b>	<b>24.67</b>	<b>13.97</b>	<b>251.68</b>	<b>231.29</b>
<b>Prior Period Expenses/losses</b>						

Particulars	FY 2011-12		FY 2012-13		FY 2013-14	
	TANT RANS CO	Approved after truing up	TANT RANS CO	Approved after truing up	TANTR ANSCO	Approved after truing up
Operating expenses	-	-	0.00	0.00	0.04	0.04
Material related expenses	-	-	0.00	0.00	0.00	0.00
Employees cost	9.49	-	290.06	-	61.13	-
Depreciation under provided	0.20	-	-	-	-	-
Interest & Finance charges	0.04	-	13.46	-	1.17	-
Other charges	1.27	1.27	13.09	13.09	17.62	-
<b>Total Expenses</b>	<b>11.00</b>	<b>1.27</b>	<b>316.62</b>	<b>13.09</b>	<b>79.97</b>	<b>0.05</b>
<b>Net Prior Period Expenses/(Income)</b>	<b>3.74</b>	<b>(2.10)</b>	<b>291.95</b>	<b>(0.87)</b>	<b>(171.71)</b>	<b>(231.25)</b>

Particulars	FY 2014-15		FY 2015-16	
	TANTRA NSCO	Approved after truing up	TANTRA NSCO	Approved after truing up
<b>Prior Period Income</b>				
Receipts from consumers	2.92	2.92	0.13	0.13
Interest Income	-	-	0.00	0.00
Excess provision for IT	0.03	-	-	-
Excess provision for Depreciation	-	-	807.78	-
Excess provision for interest & finance charges	8.16	-	839.46	-
Other excess provision	10.90	-	186.65	186.65
Other income	24.94	24.94	19.74	19.74
<b>Total Income</b>	<b>46.96</b>	<b>27.87</b>	<b>1853.76</b>	<b>206.52</b>
<b>Prior Period Expenses/losses</b>				
Operating expenses	-	-	-	-
Material related expenses	6.93	-	-	-
Employees cost	24.00	-	5.56	-
Depreciation under provided	.	-	-	-
Interest & Finance charges	0.02	-	1491.28	-
Other charges	4.78	4.78	502.74	97.71

Particulars	FY 2014-15		FY 2015-16	
	TANTRA NSCO	Approved after truing up	TANTRA NSCO	Approved after truing up
<b>Total Expenses</b>	<b>35.73</b>	<b>4.78</b>	<b>1999.59</b>	<b>97.71</b>
<b>Net Prior Period Expenses/(Income)</b>	<b>(11.23)</b>	<b>(23.08)</b>	<b>145.83</b>	<b>(108.81)</b>

### 3.11 Incentive

3.11.1 TANTRANSCO submitted that as per the Tariff Regulations, a Transmission Licensee is entitled for an incentive at 1% of equity for each percentage point of increase in annual availability beyond the target availability of 98%. The incentive computation submitted by TANTRANSCO based on actual availability is shown in the following Table:

**Table 3.11-1: Incentive as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Equity	203.23	659.92	997.86	1517.89	2080.71
Annual Availability Achieved	99.75%	99.76%	99.07%	98.71%	98.85%
Target Availability	98.00%	98.00%	98.00%	98.00%	98.00%
<b>Incentive</b>	<b>3.56</b>	<b>11.61</b>	<b>10.72</b>	<b>10.81</b>	<b>17.63</b>

#### Commission's View

3.11.2 The Commission has computed the incentive in accordance with the Tariff Regulations, 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 of 98%.

3.11.3 The Commission has considered the transmission availability as per the actuals submitted by TANTRANSCO, however, for calculation of incentive, Commission has considered the revised average equity as approved by the Commission in this Order. The incentive approved by the Commission is shown in the following Table:



**Table 3.11-2: Incentive approved by the Commission after true-up (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Equity	156.30	517.69	807.27	1327.31	1890.13
Annual Availability Achieved	99.75%	99.76%	99.07%	98.71%	98.85%
Target Availability	98.00%	98.00%	98.00%	98.00%	98.00%
<b>Incentive</b>	<b>2.74</b>	<b>9.11</b>	<b>8.67</b>	<b>9.46</b>	<b>16.02</b>

### 3.12 Past Revenue Gaps/(Surplus) along with carrying cost

3.12.1 TANTRANSCO has proposed the past Revenue Gaps of Rs. 90.01 Crore for FY 2014-15 pertaining to True-up of FY 2010-11, allowed to be recovered in FY 2014-15.

3.12.2 The Commission in the SMT Order had allowed the past Revenue Gap of Rs. 90.01 Crore pertaining to True-up for FY 2010-11. This Revenue Gap including the carrying cost up to FY 2013-14 had been added in FY 2014-15, along with Revenue Gap of FY 2011-12 onwards. Hence, the carrying cost up to FY 2013-14 on this Revenue Gap of Rs. 90.01 Crore has not been reflected in SMT Order separately. In the present Order, the Revenue Gap/(Surplus) for FY 2011-12 onwards has been considered separately by the Commission. Hence, the Commission has computed the carrying cost on the Revenue Gap of FY 2010-11 up to FY 2013-14, as shown in the following Table and considered the same in ARR of FY 2014-15.

**Table 3.12-1: Past Revenue Gap/(Surplus) as approved by the Commission (Rs. Crore)**

Particulars	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14
Opening Balance	87.95	90.01	99.96	111.12
Add: Carrying Cost	2.06	9.95	11.16	12.52
Net Closing Balance	90.01	99.96	111.12	123.64

3.12.3 Accordingly, the Commission has considered the Revenue Gap of Rs. 123.64 Crore in the ARR for FY 2014-15.

### 3.13 Revenue from Transmission Charges

3.13.1 TANTRANSCO submitted that it has considered the actual revenue received from Transmission Charges for FY 2011-12 to FY 2015-16 as per the Audited Accounts, as shown in the following Table:

**Table 3.13-1: Revenue from Transmission Charges as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
Revenue from Transmission Charges	1,707.06	2,381.10	2,764.95	1,776.07	2,305.24

### Commission's View

3.13.2 The Commission has considered the actual Revenue from Transmission charges as per the Audited Accounts.

### 3.14 Aggregate Revenue Requirement and Revenue Gap

3.14.1 TANTRANSCO submitted the Aggregate Revenue Requirement for the period from FY 2011-12 to FY 2015-16, as shown in the Table below:

**Table 3.14-1: Aggregate Revenue Requirement for FY 2011-12 to FY 2015-16 as submitted by TANTRANSCO (Rs. Crore)**

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	O&M Expenses	388.41	610.69	739.18	867.44	1,009.13
1.1	Employee Expenses	360.81	579.89	700.01	830.08	964.99
1.2	Administration & General Expenses	19.62	23.27	26.62	26.34	30.61
1.3	Repair & Maintenance Expenses	7.98	7.53	12.55	11.02	13.53
2	Other Debits	0.15	6.27	0.04	-	0.49
3	Depreciation	289.27	299.50	311.27	566.34	487.61
4	Net Interest & Finance Charges	1,075.62	1,019.38	451.86	572.87	964.30
5	Interest on working capital	46.65	72.86	83.75	67.69	85.59
6	Other expenses capitalised	(85.65)	(88.08)	(119.97)	(137.72)	(153.02)
7	Extraordinary Items	2.32	-	-	-	-
8	Prior Period Expenses	3.74	291.95	(171.71)	(11.23)	145.83
9	Incentive	3.56	11.61	10.72	10.81	17.63
<b>10</b>	<b>Total Expenditure</b>	<b>1,724.07</b>	<b>2,224.19</b>	<b>1,305.13</b>	<b>1,936.21</b>	<b>2,557.57</b>
11	Return on Equity	28.45	92.39	139.70	212.51	291.30
12	Other Income	37.80	33.85	112.16	160.15	201.84
13	Gap of True-up of FY 2010-11 allowed to be recovered in FY 2014-15	-	-	-	90.01	-
<b>14</b>	<b>Aggregate Revenue Requirement</b>	<b>1,714.73</b>	<b>2,282.73</b>	<b>1,332.67</b>	<b>2,078.57</b>	<b>2,647.03</b>
15	Revenue Recovered	1,707.06	2,381.10	2,764.95	1,776.07	2,305.24
<b>16</b>	<b>Revenue Gap/(Surplus)</b>	<b>7.67</b>	<b>(98.37)</b>	<b>(1,432.28)</b>	<b>302.51</b>	<b>341.79</b>

### Commission's View

3.14.2 The ARR determined by the Commission after final true-up of FY 2011-12 to FY 2015-16 is tabulated below:

**Table 3.14-2: Aggregate Revenue Requirement approved by the Commission after true-up for FY 2011-12 to FY 2015-16 (Rs. Crore)**

Sr. No.	Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16
1	O&M Expenses	517.87	599.12	656.44	738.67	827.45
2	Depreciation	297.18	302.35	315.41	591.31	768.76
3	Interest & Finance Charges	1,170.79	921.52	927.01	962.99	762.71
4	Interest on Working Capital	54.97	80.19	89.11	69.62	88.75
5	Return on Equity	21.88	72.48	113.02	185.82	264.62
6	Other Debits	-	-	-	-	-
7	Incentive	2.74	9.11	8.67	9.46	16.02
<b>8</b>	<b>Total Fixed Costs</b>	<b>2,065.43</b>	<b>1,984.77</b>	<b>2,109.66</b>	<b>2,557.87</b>	<b>2,728.31</b>
9	Less: Other Income	37.80	33.85	112.16	160.15	201.84
10	Add: Prior Period Expenses/ (Income)	(2.10)	(0.87)	(231.25)	(23.08)	(108.81)
11	Add: Extra-Ordinary items	2.32	-	-	-	-
<b>14</b>	<b>Aggregate Revenue Requirement</b>	<b>2,027.84</b>	<b>1,950.05</b>	<b>1,766.25</b>	<b>2,374.64</b>	<b>2,417.66</b>
15	Past Revenue Gaps/ (Surplus) along with carrying cost	-	-	-	123.64	-
<b>16</b>	<b>Net Aggregate Revenue Requirement</b>	<b>2,027.84</b>	<b>1,950.05</b>	<b>1,766.25</b>	<b>2,498.28</b>	<b>2,417.66</b>
17	Revenue from Transmission Charges	1,707.06	2,381.10	2,764.95	1,776.07	2,305.24
<b>18</b>	<b>Revenue Gap/(Surplus)</b>	<b>320.78</b>	<b>(431.05)</b>	<b>(998.69)</b>	<b>722.21</b>	<b>112.42</b>

3.14.3 The Commission has considered the impact of final trueing up for FY 2011-12 to FY 2015-16 in the subsequent section of this Order.

## 4 ARR FOR CONTROL PERIOD FROM FY 2016-17 TO FY 2018-19

### 4.1 Background

4.1.1 TANTRANSCO, in its Petition, sought approval for the ARR for the Control Period from FY 2016-17 to FY 2018-19. This Chapter elaborates the approach adopted by the Commission to approve the various expense heads comprising the ARR for FY 2016-17 to FY 2018-19.

### 4.2 Transmission Loss

4.2.1 TANTRANSCO has not projected any trajectory of Transmission Losses for the Control Period from FY 2016-17 to FY 2018-19. However, in view of the significant capital investments being allowed for TANTRANSCO, there has to be a targeted loss reduction.

4.2.2 TANTRANSCO has submitted the actual Transmission Loss for FY 2015-16 as 4.11%, as against the approved Transmission Loss of 2.70% for FY 2015-16. TANTRANSCO submitted that the higher Transmission Loss was on account of inclusion of LV side losses in 110 kV power transformers.

4.2.3 For projecting the Transmission loss trajectory, the Commission has accepted the opening Loss level as 4.11% in FY 2015-16, and approved annual Loss reduction of 0.1% for FY 2016-17, FY 2017-18, and FY 2018-19.

4.2.4 The Transmission Loss trajectory approved by the Commission for the Control Period from FY 2016-17 to FY 2018-19 is shown in the following Table:

**Table 4.2-1: Transmission Loss trajectory approved by the Commission**

Voltage Level	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19
	Actual	Projected	Projected	Projected
230 kV	0.83%	0.80%	0.77%	0.74%
110 kV	3.28%	3.21%	3.14%	3.07%
<b>Total Transmission Loss</b>	<b>4.11%</b>	<b>4.01%</b>	<b>3.91%</b>	<b>3.81%</b>

### 4.3 Fixed Expenses

4.3.1 In this Section, fixed expenses for the period from FY 2016-17 to FY 2018-19 have

been 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) Interest on working capital loans
- v) Return on Equity
- vi) Other debits
- vii) Incentives

#### **4.4 Operation and Maintenance Expenses**

4.4.1 TANTRANSCO submitted that O&M expenses for FY 2016-17 to FY 2018-19 have been arrived at by considering an escalation of 5.72% over the average actual O&M expenses of the last five years, in accordance with Regulation 25 of the Tariff Regulations and MYT Regulations.

##### ***Employee Expenses***

4.4.2 TANTRANSCO submitted that the employee costs are in the nature of standard costs and TANTRANSCO does not retain much control over the same. TANTRANSCO has taken all reasonable steps to ensure that the employee costs are not high. Further, it has not considered the actual impact of the 7<sup>th</sup> Pay Commission, and will approach the Commission for approval of the same at the time of true-up.

4.4.3 TANTRANSCO added that it has considered DA equivalent to that in FY 2015-16. Any variation will be claimed at the time of true up based on the DA revisions duly declared by GoTN during the respective years.

##### ***Administrative and General Expenses***

4.4.4 TANTRANSCO submitted that it has considered an escalation at 5.72% for projecting A&G expenses for the Control Period in line accordance with the Tariff Regulations.

##### ***Repair and Maintenance (R&M) Expenses***

4.4.5 TANTRANSCO submitted that R&M expenses depend upon the number of

substations and age of the transmission lines. R&M expenses are generally incurred in order to ensure the maintenance of the transmission lines/systems. The major components of R&M expenses are substation equipment and transformer maintenance cost, line maintenance cost, auxiliary consumption charges, substation maintenance (O&M) charges and general civil maintenance of substation infrastructure and buildings. TANTRANSCO has considered an escalation at 5.72% for projecting R&M expenses for the Control Period in accordance with Tariff Regulations.

- 4.4.6 TANTRANSCO added that in the usual course of business and as reflected in the previous Audited Accounts, the revenue expenses that are capitalised include Employee expenses, A&G expenses, R&M expenses, Fabrication charges added to the stock, and other debits. Accordingly, TANTRANSCO has projected the revenue expenditure to be capitalised during FY 2016-17 to FY 2018-19 as shown in the following Table:

**Table 4.4-1: Revenue Expenditure to be capitalised for FY 2016-17 to FY 2018-19 as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Employee Expenses capitalised	83.16	86.19	89.39
A&G Expenses capitalised	4.85	5.13	5.43
R&M Expenses capitalised	3.12	3.30	3.48
<b>Total O&amp;M Expenses capitalised</b>	<b>91.14</b>	<b>94.62</b>	<b>98.30</b>

- 4.4.7 The O&M expenses projected for FY 2016-17 to FY 2018-19 are summarised in the following Table:

**Table 4.4-2: O&M Expenses for FY 2016-17 to FY 2018-19 as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Employee Expenses	823.94	853.94	885.66
A&G Expenses	26.74	28.27	29.88
R&M Expenses	11.13	11.76	12.43
<b>Total O&amp;M Expenses</b>	<b>861.80</b>	<b>893.97</b>	<b>927.98</b>

### Commission's View

- 4.4.8 Regulation 25 of the Tariff Regulations specifies as under:

*“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 5.72% 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 5.72% per annum to arrive at permissible operation and maintenance expenses for the relevant years of tariff period.*

...”

4.4.9 Accordingly, the O&M expenses have been projected based on the average of the actual O&M expenses approved in this Order, for the past five years, i.e., FY 2011-12 to FY 2015-16 and escalated at the rate of 5.72% per annum. The component-wise projection of O&M Expenses is detailed below.

4.4.10 The Commission has projected the Employee expenses, except DA, based on the actual Employee expenses for FY 2011-12 to FY 2015-16 and escalated at the rate of 5.72% per annum. For projection of DA, the Commission has considered 4% escalation on existing DA to arrive at DA of 152% by March 31, 2019. The weighted average DA considered by the Commission for FY 2016-17 to FY 2018-19 is shown in the following Table:

**Table 4.4-3: Dearness Allowance considered by the Commission (Rs. Crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Weighted Avg. Dearness Allowance	131.24%	139.99%	147.99%

4.4.11 In view of the above, the Employee expenses approved by the Commission is shown in the following Table:

**Table 4.4-4: Approved Employee Expenses for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Salary	225.17	238.05	251.66	251.66	266.06	281.28
Dearness Allowance	299.43	299.43	299.43	330.28	372.45	416.26
Other Allowance	17.15	18.13	19.17	19.17	20.27	21.43

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Overtime Wages	5.80	6.13	6.48	6.48	6.85	7.24
Bonus	7.07	7.47	7.90	7.90	8.35	8.83
Leave Travel Assistance	0.03	0.03	0.04	0.04	0.04	0.04
Earned Leave Encashment	26.22	27.72	29.31	29.31	30.98	32.75
Medical Expense Reimbursement	0.39	0.41	0.44	0.44	0.46	0.49
Payment under Workman's Compensation and Gratuity	2.62	2.77	2.93	2.93	3.10	3.28
Contribution to CPS	8.48	8.96	9.48	9.48	10.02	10.59
Staff Welfare Expenses	0.32	0.33	0.35	0.35	0.37	0.40
Terminal benefits	231.26	244.49	258.47	258.47	273.26	288.89
<b>Grand Total</b>	<b>823.94</b>	<b>853.94</b>	<b>885.66</b>	<b>916.52</b>	<b>992.21</b>	<b>1,071.47</b>

4.4.12 The Commission has projected the A&G Expenses based on the actual A&G expenses for FY 2011-12 to FY 2015-16 and escalation rate of 5.72% per annum, in accordance with the Tariff Regulations. The A&G Expenses submitted by TANTRANSCO and approved by the Commission for FY 2016-17 to FY 2018-19 are shown in the following Table:

**Table 4.4-5: Approved A&G Expenses for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
A&G Expenses	26.74	28.27	29.88	29.89	31.59	33.40

4.4.13 The Commission has projected the R&M expenses based on the actual R&M expenses for FY 2011-12 to FY 2015-16 and escalation rate of 5.72% per annum, in accordance with the Tariff Regulations. The R&M Expenses submitted by TANTRANSCO and approved by the Commission for FY 2016-17 to FY 2018-19 are shown in the following Table:



**Table 4.4-6: Approved R&M Expenses for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Total R&M Cost	11.13	11.76	12.43	12.43	13.15	13.90

4.4.14 The Commission has considered the O&M expenses capitalised in the same proportion of Gross O&M expenses as proposed by TANTRANSCO. In view of the above, O&M Expenses submitted by TANTRANSCO and approved by the Commission in the following Table:

**Table 4.4-7: Approved O&M Expenses for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Employee Expenses	823.94	853.94	885.66	916.52	992.21	1071.47
A&G Expenses	26.74	28.27	29.88	29.89	31.59	33.40
R&M Expenses	11.13	11.76	12.43	12.43	13.15	13.90
<b>Total O&amp;M Expenses</b>	<b>861.80</b>	<b>893.97</b>	<b>927.98</b>	<b>958.84</b>	<b>1036.96</b>	<b>1118.77</b>
<i>Less: O&amp;M Expenses capitalised</i>	(91.14)	(94.62)	(98.30)	(101.42)	(109.57)	(118.11)
<b>Net O&amp;M Expenses</b>	<b>770.67</b>	<b>799.35</b>	<b>829.68</b>	<b>857.42</b>	<b>927.39</b>	<b>1000.67</b>

## 4.5 Capital expenditure and Capitalisation

4.5.1 TANTRANSCO submitted that Regulation 17 (5) of the Tariff Regulations and Regulation 3(v) of the MYT Regulations specifies that the Licensee shall get the CIP approved by the Commission before filing of Petition for approval of ARR and Tariff. Accordingly, TANTRANSCO submitted M.P. No. 10 of 2016 for approval of CIP from FY 2016-17 to FY 2018-19. TANTRANSCO has planned to incur the capital expenditure on various projects considering the growth in demand within the State and the need of evacuation system for upcoming renewable and thermal power plants.

4.5.2 TANTRANSCO has considered the funding of the capital expenditure as 10% equity and 90% loan. The loan from JICA and KfW are through State Government and therefore, it has been considered under State Government Loan.

**Table 4.5-1: Capital Expenditure and Capitalisation and its funding for FY 2016-17 to FY 2018-19 as submitted by TANTRANSCO (Rs. Crore)**

Particulars	FY 2016-17	FY 2017-18	FY 2018-19
Capital Expenditure	2823.40	2926.00	3945.00
Capitalisation	2382.88	2997.21	3829.16
<b>Funding of Capitalisation</b>			
GoI Grant for KfW loan funded project	326.70	-	-
Equity	205.62	299.72	382.92
Debt	1850.56	2697.49	3446.24
<b>Funded by:</b>			
JICA loan	500.00	728.00	376.00
KfW loan	258.21	246.00	-
NABARD	80.00	113.00	-
Power Finance Corporation Bond, Rural Electrification Corporation Bond, Bank Term loan, etc.	1012.35	1610.49	3070.24

#### Commission's View

- 4.5.3 With respect to the CIP submitted by TANTRANSCO for FY 2016-17 to FY 2018-19, the Commission has approved the Capital Expenditure and Capitalisation for FY 2016-17 to FY 2018-19 vide Order dated July 31, 2017 in M.P. No. 10 of 2016. Accordingly, the Commission has considered the capital expenditure and capitalisation for FY 2016-17 to FY 2018-19 as shown in the following Table:

**Table 4.5-2: Approved Capital Expenditure and Capitalisation for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Capital Expenditure	2823.40	2926.00	3945.00	2707.99	2721.69	3943.31
Capitalisation	2382.88	2997.21	3829.16	1483.51	3262.34	3643.15

- 4.5.4 The Commission has considered above said Capital expenditure towards different schemes proposed by TANTRANSCO. The Commission observed that TANTRANSCO would not be able to submit the scheme-wise capital expenditure and capitalisation for past period. However, considering the approval of scheme-wise Capital expenditure for FY 2016-17 to FY 2018-19, the Commission directs TANTRANSCO to submit the year-wise actual scheme-wise capital expenditure

incurred along with detailed justification for delay, if any, at the time of approval of actual capital expenditure and capitalisation, for transmission schemes commencing during the Control Period from April 1, 2016.

- 4.5.5 The Commission directs TANTRANSCO to maintain the record for the scheme-wise actual capital expenditure incurred and actual capitalisation done separately for the schemes commencing after April, 2016, which shall be submitted to the Commission at the time of next Tariff Petition. The Commission shall approve the actual Capital expenditure and actual capitalisation based on such information, subject to prudence check.
- 4.5.6 As regards the funding of capital expenditure, the Commission has analysed the scheme-wise funding of capital expenditure from grant, equity, and debt, while approving the CIP. Accordingly, the funding of capital expenditure for FY 2016-17 to FY 2018-19 has been approved as shown in the following Table:

**Table 4.5-3: Approved Funding of Capital Expenditure for FY 2016-17 to FY 2018-19 (Rs. Crore)**

<b>Particulars</b>	<b>FY 2016-17</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>
Grant	27.20	124.00	180.00
Equity	414.30	420.97	654.33
Debt	2,266.49	2,176.72	3,108.98
<b>Total Capital Expenditure</b>	<b>2,707.99</b>	<b>2,721.69</b>	<b>3,943.31</b>

- 4.5.7 Further, the Commission directs the Petitioner to submit the actual source-wise funding for each transmission scheme approved in this Order along with the next Tariff Petition. The Commission shall approve the actual funding of capital expenditure and capitalisation, after prudence check.

#### **4.6 Gross Fixed Assets and Depreciation**

- 4.6.1 TANTRANSCO submitted that it has computed the depreciation on opening balance of GFA. The depreciation rates have been considered in accordance with the Tariff Regulations. The Depreciation projected by TANTRANSCO for FY 2016-17 to FY 2018-19 is shown in the following Table:

**Table 4.6-1: Depreciation for FY 2016-17 to FY 2018-19 as submitted by TANTRANSCO (Rs. Crore)**

<b>Particulars</b>	<b>FY 2016-17</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>
Opening GFA	11,886.26	14,269.14	17,266.34
Closing GFA	14,269.14	17,266.34	21,095.49
Depreciation during the year	598.18	718.10	868.93
Avg. Rate of depreciation	4.57%	4.55%	4.53%

### **Commission's View**

4.6.2 As regards Depreciation, the Tariff Regulations specifies as under:

*“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 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”*

4.6.3 The Commission has considered the Opening GFA for FY 2016-17 equivalent to closing GFA of FY 2015-16 as approved in this Order. The addition of GFA during the year is considered equivalent to capitalisation approved in this Order. For computation of depreciation, the Commission has considered the asset class-wise rate of depreciation as specified in the Tariff Regulations. The Commission in SMT Order has approved the Depreciation on Opening GFA for the respective year. In line with

the same approach adopted in the previous Orders, the Commission has considered the Depreciation on Opening GFA for FY 2016-17 to FY 2018-19.

4.6.4 The depreciation approved by the Commission for FY 2016-17 to FY 2018-19 is shown in the following Table:

**Table 4.6-2: Approved Depreciation for FY 2016-17 to FY 2018-19 (Rs. Crore)**

<b>Particulars</b>	<b>FY 2016-17</b>	<b>FY 2017-18</b>	<b>FY 2018-19</b>
Opening GFA	16,920.57	18,404.08	21,666.41
Addition of GFA	1,483.51	3,262.34	3,643.15
Closing GFA	18,404.08	21,666.41	25,309.56
Depreciation during the year	873.08	947.74	1,111.92

## **4.7 Interest Expenses**

4.7.1 TANTRANSCO submitted that the Interest expenses have been calculated considering the loans allocated to TANTRANSCO at the time of unbundling of erstwhile TNEB and based on the notified Final Transfer Scheme. TANTRANSCO has to service such debt and repay debt along with interest. For determination of Interest expenses, TANTRANSCO has considered the following approach:

- a) Closing loan of FY 2015-16 as per the Audited Accounts has been considered as the base.
- b) Repayment and interest obligation of existing loan is considered as per projection.
- c) 90% of the capitalisation has been considered as debt funded by Power Finance Corporation Ltd./Rural Electrification Corporation Ltd. loan /Bonds/Bank Term Loan, etc., at interest rate of 11.25% for FY 2016-17 and 10% from FY 2017-18 onwards, NABARD at interest rate of 10.75% and JICA/kfW loan at 8.19% included in State Government loan, and impact of Foreign Exchange rate Variation (FERV) has been considered in line with FY 2015-16 rate.
- d) Moratorium period of 3 years has been considered for new loans.
- e) IDC has been considered in the same ratio as in FY 2015-16.
- f) Finance Charges have been considered with 10% escalation for the next 3 years considering FY 2015-16 as base.
- g) Interest on General Provident Fund (GPF) has not been considered in accordance with the Commission's observations in the previous Order.

### Commission's View

4.7.2 For computation of Interest and Finance Charges, the Commission has adopted the following approach:

- a) The closing loan balance of FY 2015-16 approved in this Order has been considered as opening loan balance for FY 2016-17.
- b) The addition of loan during the year and the loan repayment of existing loan has been considered as per the approach considered in True-up.
- c) The loan period for new loan has been considered as 10 years with moratorium period of 3 years.
- d) Rate of interest has been considered as submitted by TANTRANSCO, however, the actual rate of interest shall be considered at the time of true-up for the respective year.
- e) Other Interest and Finance Charges have been considered at FY 2015-16 level, as approved by the Commission in this Order.
- f) IDC has been computed based on the opening and closing balance of Capital Work in Progress (CWIP).

4.7.3 The Interest and Finance charges as submitted by TANTRANSCO and approved by the Commission for FY 2016-17 to FY 2018-19 are shown in the following Table:

**Table 4.7-1: Approved Interest Expenses for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Opening Loan	10,848.38	11,697.18	13,054.37	10,345.36	10,737.01	10,625.69
Loan addition during the year	1,850.56	2,697.49	3,446.24	1,393.41	1,228.99	1,997.06
Repayment during the year	1,001.77	1,340.30	1,202.92	1,001.77	1,340.30	1,202.92
Closing balance	11,697.18	13,054.37	15,297.69	10,737.01	10,625.69	11,419.84
Rate of Interest	10.94%	11.05%	10.69%	10.94%	11.05%	10.69%
Interest on loan	1,232.69	1,367.07	1,515.66	1,152.69	1,179.90	1,178.52
Less: Interest capitalised	311.79	339.94	366.68	550.02	593.39	561.48
Interest and Finance Charges	30.31	30.31	36.68	27.56	27.56	27.56
<b>Total</b>	<b>951.22</b>	<b>1,057.44</b>	<b>1,185.66</b>	<b>630.23</b>	<b>614.08</b>	<b>644.61</b>

## 4.8 Interest on Working Capital (IoWC)

4.8.1 TANTRANSCO submitted that it has computed the IoWC on normative basis. The revenue for two months has been considered based on expected revenue from existing tariff for FY 2016-17 and based on total ARR to be recovered for FY 2017-18 and FY 2018-19. The rate of interest has been considered as Short-Term Prime Lending Rate of State Bank of India as on date on which the application for determination of tariff has been filed.

### Commission's View

4.8.2 Regulation 25 of the Tariff Regulations specifies as under:

*“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 short term rate of interest on working capital shall be on normative basis and shall be equivalent to the primary lending rate of State Bank of India as on 1st April of the relevant year.”*

4.8.3 The Commission has computed the normative IoWC in accordance with the Tariff Regulations. The Commission has considered rate of interest of 14.05% equivalent to State Bank of India Prime Lending Rate as on date of Petition filed by TANTRANSCO.

4.8.4 The IoWC as submitted by TANTRANSCO and approved by the Commission for FY 2016-17 to FY 2018-19 is shown in the following Table:

**Table 4.8-1: Approved IoWC for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
O&M Expenses	64.22	66.61	69.14	71.45	77.28	83.39
Maintenance Spares	149.82	181.23	221.31	169.21	184.04	216.66
Receivables	348.22	454.68	506.40	380.49	470.34	523.01
Total Working Capital requirement	562.26	702.52	796.86	621.14	731.66	823.06
Rate of Interest (%)	14.05%	14.05%	14.05%	14.05%	14.05%	14.05%
<b>Interest on Working Capital</b>	<b>79.00</b>	<b>98.70</b>	<b>111.96</b>	<b>87.27</b>	<b>102.80</b>	<b>115.64</b>

#### 4.9 Return on Equity

4.9.1 TANTRANSCO submitted that it has computed RoE on the basis of average equity, considering the infusion of equity at 10% of the total capitalised amount of the respective year, in accordance with the Tariff Regulations. The rate of return has been considered as 14%.

##### Commission's View

4.9.2 The Commission has considered the opening equity for FY 2016-17 equivalent to closing equity for FY 2015-16 as approved by the Commission in this Order. The equity addition during the year has been considered as approved in this Order. The Commission has computed the RoE at 14% on average equity during the year.

4.9.3 The RoE submitted by TANTRANSCO and approved by the Commission for FY 2016-17 to FY 2018-19 is shown in the following Table:

**Table 4.9-1: Approved Return on Equity for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Opening Equity	2,207.98	2,413.60	2,713.32	2,017.39	2,431.69	2,852.66
Additions during the year	205.62	299.72	382.92	414.30	420.97	654.33
Closing equity	2,413.60	2,713.32	3,096.24	2,431.69	2,852.66	3,506.99



Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Average equity	2,310.79	2,563.46	2,904.78	2,224.54	2,642.18	3,179.83
<b>Return on Equity at 14%</b>	<b>323.51</b>	<b>358.88</b>	<b>406.67</b>	<b>311.44</b>	<b>369.90</b>	<b>445.18</b>

#### 4.10 Other debits and prior period items

4.10.1 TANTRANSCO submitted that Other Debits and prior period items has not been considered in estimated ARR and the same will be considered at time of true-up for respective year in the next tariff Petition.

##### Commission's View

4.10.2 The Commission has not considered any amount pertaining to Other Debits and Prior Period items.

#### 4.11 Incentive

4.11.1 The Hon'ble APTEL, in its Judgment dated October 18, 2014 in Appeal No. 197 of 2013, ruled as under:

*“The incentive is to be determined post facto after annual availability achieved is computed after the completion of the Financial year”.*

4.11.2 Accordingly, TANTRANSCO has not claimed any incentive for FY 2016-17 to FY 2018-19.

##### Commission's View

4.11.3 In view of the Hon'ble APTEL Judgment dated October 18, 2014, the Commission has not considered the Incentive on account of annual transmission availability. The same shall be considered at the time of true-up of the respective years, when the actual Transmission Availability would be made available in the Tariff Petition.

## 4.12 Insurance

4.12.1 TANTRANSCO submitted that since, the provision for self-insurance has been removed from FY 2014-15 as per the amended Tariff Regulations dated April 9, 2014, the same has not been claimed.

### Commission's View

4.12.2 The self-insurance has been removed under the amended Tariff Regulations dated April 9, 2014 and the same has to be met through the allowed O&M Expenses. Hence, the Commission has not considered any claim towards self-insurance for FY 2016-17 to FY 2018-19.

## 4.13 Other Income

4.13.1 TANTRANSCO submitted that it has filed the Petition for approval of Transmission Charges under Point of Connection (PoC) regime for connecting the neighbouring States before the CERC for the following five lines owned by it and considered as deemed inter-State lines:

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

4.13.2 CERC has issued an Order dated September 28, 2015 approving the tariff from FY 2011-12 to FY 2013-14 for the five inter-State lines owned by it. TANTRANSCO has considered the revenue of FY 2013-14 at the same level for FY 2014-15 to FY 2018-19. The revenue from five inter-State lines has been considered in Other Income, and the Income earned from FY 2011-12 to FY 2016-17 is shown in the following Table:

**Table 4.13-1: Impact of CERC Order for five Inter-State Transmission Lines (Rs. Crore)**

Sr. No.	Particulars	Amount
1	For FY 2011-12 limited to 5 months	6.61
2	For FY 2012-13	11.66
3	For FY 2013-14	12.16

Sr. No.	Particulars	Amount
4	For FY 2014-15 (as per FY 2013-14)	12.16
5	For FY 2015-16 (as per FY 2013-14)	12.16
6	For FY 2016-17 (as per FY 2013-14)	12.16
<b>7</b>	<b>Total income considered in FY 2016-17</b>	<b>66.93</b>
8	For FY 2017-18 (as per FY 2013-14)	12.16
9	For FY 2018-19 (as per FY 2013-14)	12.16
<b>10</b>	<b>Total Charges to be recovered from Inter-State Consumers</b>	<b>91.26</b>

4.13.3 Apart from Income from inter-State Transmission lines, the Other Income comprises interest on staff loans, income from investment, income from trading, interest from banks, income from short term open access, etc., which have been considered based on past trends.

#### Commission's View

4.13.4 For the projection of Other Income for the period from FY 2016-17 to FY 2018-19, the Commission has accepted the submission of TANTRANSCO. However, the Commission has not considered the projection towards income from SLDC charges for FY 2017-18 and FY 2018-19 as the ARR for SLDC has been separately determined by the Commission for these years.

4.13.5 The Other Income submitted by TANTRANSCO and approved by the Commission is shown in the following Table:

**Table 4.13-2: Approved Other Income for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Particulars	Petition			Approved by the Commission		
	FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
Other Income	309.66	304.41	364.48	309.66	139.88	179.96

#### 4.14 Aggregate Revenue Requirement

4.14.1 Based on the above component-wise submission made by TANTRANSCO and approval by the Commission, the ARR for FY 2016-17 to FY 2018-19 is summarised in the following Table:

**Table 4.14-1: Approved ARR for FY 2016-17 to FY 2018-19 (Rs. Crore)**

Sr. No.	Particulars	Petition			Approved by the Commission		
		FY 2016-17	FY 2017-18	FY 2018-19	FY 2016-17	FY 2017-18	FY 2018-19
1	O&M Expenses	770.67	799.35	829.68	857.42	927.39	1,000.67
1.1	<i>Employee Expenses</i>	823.94	853.94	885.66	916.52	992.21	1,071.47
1.2	<i>R&amp;M Expenses</i>	11.13	11.76	12.43	12.43	13.15	13.90
1.3	<i>A&amp;G Expenses</i>	26.74	28.27	29.88	29.89	31.59	33.40
1.4	<i>Less: O&amp;M Expenses capitalised</i>	(91.14)	(94.62)	(98.30)	(101.42)	(109.57)	(118.11)
2	Depreciation	598.18	718.10	868.93	873.08	947.74	1,111.92
3	Interest and Finance Charges	1263.01	1,397.38	1,552.34	1,180.26	1,207.46	1,206.09
4	Interest expenses capitalised	(311.79)	(339.94)	(366.68)	(550.02)	(593.39)	(561.48)
5	Interest on Working Capital	79.00	98.70	111.96	87.27	102.80	115.64
6	Return on Equity	323.51	358.88	406.67	311.44	369.90	445.18
7	Less: Other Income	309.66	304.41	364.48	309.66	139.88	179.96
<b>8</b>	<b>Aggregate Revenue Requirement</b>	<b>2412.92</b>	<b>2,728.07</b>	<b>3,038.42</b>	<b>2,449.78</b>	<b>2,822.03</b>	<b>3,138.04</b>

## 5 DETERMINATION OF REVENUE GAP/(SURPLUS) AND TARIFF DETERMINATION FOR FY 2017-18

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### 5.1 Background

5.1.1 This Chapter deals with computation of the cumulative Revenue Gap/(Surplus) for recovery through Transmission Charges and determination of Transmission Tariff for FY 2017-18.

### 5.2 Cumulative Revenue Gap/(Surplus)

5.2.1 As elaborated in Chapter 3 of this Order, the Commission has undertaken the final True-up for FY 2011-12 to FY 2015-16 and computed the Revenue Gap/(Surplus) to be recovered through tariff. The Commission has arrived at the cumulative Revenue Gap/(Surplus) by the end of March 2017 by considering the approved Revenue Gap/(Surplus) for each year from FY 2011-12 to FY 2015-16 with interest expenses (carrying cost) at actual weighted average rate of interest.

5.2.2 Since, FY 2016-17 is already over, TANTRANSCO has been billing Long Term Open Access users including TANGEDCO for FY 2016-17 as per tariff approved by the Commission in the Suo-motu Tariff Order dated December 11, 2014. In the present Order, the Commission has determined the tariff prospectively for FY 2017-18, after including the impact of provisional Revenue Gap/(Surplus) of FY 2016-17.

5.2.3 The approved provisional Revenue Gap/(Surplus) for FY 2016-17 is shown in the following Table:

**Table 5.2-1: Revenue Gap/(surplus) for FY 2016-17 as approved by the Commission (Rs. Crore)**

Sr. No.	Particulars	FY 2016-17
1	Aggregate Revenue Requirement	2,449.78
2	Less: Revenue from Transmission Charges	2,282.91
3	Revenue Gap/(Surplus) for the year	166.87

5.2.4 Thus, there is an under-recovery of ARR for FY 2016-17, as the revenue of TANTRANSCO is lower than the ARR approved in this Order. Hence, the

Commission has considered estimated Revenue Gap for FY 2016-17, for computation of cumulative Revenue Gap/(surplus) by the end of March 2017, as shown in the following Table:

**Table 5.2-2: Cumulative Revenue Gap/(Surplus) approved by the Commission (Rs. Crore)**

Particulars	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15	FY 2015-16	FY 2016-17
Opening Balance	0	338.52	(78.80)	(1,142.64)	(508.44)	(439.83)
Addition of Revenue Gap/(Surplus) during the year	320.78	(431.05)	(998.69)	722.21	112.42	166.87
Add: Interest expenses	17.74	13.73	(65.15)	(88.01)	(43.81)	(38.97)
<b>Closing Gap/(Surplus)</b>	<b>338.52</b>	<b>(78.80)</b>	<b>(1,142.64)</b>	<b>(508.44)</b>	<b>(439.83)</b>	<b>(311.93)</b>

- 5.2.5 The Commission has computed the Revenue Surplus of **Rs. 311.93 Crore** by the end of March 2017. This cumulative Revenue Gap/(Surplus) is required to be considered for recovery/(refund) through tariff in FY 2017-18.
- 5.2.6 The Commission has considered the recovery/(refund) of cumulative Revenue Gap/(Surplus) at the end of March 2017, in FY 2017-18 only.
- 5.2.7 TANTRANSCO has reduced the Revenue from Scheduling and Operating Charges and Revenue from Reactive Energy Charges for FY 2017-18. The Commission has not considered the same, as the ARR and Tariff for SLDC has been determined separately for FY 2017-18.
- 5.2.8 Stand-alone ARR determined for FY 2017-18 is inclusive of both functions, viz., Transmission Licensee and SLDC. Moreover, the Commission vide Order in T.P. No. 3 of 2017 dated August 11, 2017 has determined the ARR and Tariff for SLDC separately for FY 2017-18. Hence, ARR for SLDC approved by the Commission for FY 2017-18 has been reduced from Stand-alone ARR for FY 2017-18 to arrive at net recoverable amount from the Transmission Charges. The Commission has determined the Revenue Requirement to be recovered through Transmission Charges in FY 2017-18, as shown in the following Table:

**Table 5.2-3: Revenue to be recovered in FY 2017-18 as approved by the Commission (Rs. Crore)**

Sr. No.	Particulars	TANTRANSCO	Approved by the Commission
1	Stand-alone ARR for FY 2017-18	2,728.07	2,822.03
2	Less: ARR for SLDC for FY 2017-18 approved by the Commission in Order in T.P. No. 3 of 2017 dated August 11, 2017.	-	39.21
3	Add: Past Revenue Gap/(Surplus)	(555.07)	(311.93)
4	Less: Revenue from Scheduling and Operating Charges	146.93	-
5	Less: Revenue from Reactive Energy Charges	17.60	-
<b>6</b>	<b>Revenue to be recovered from Transmission Charges in FY 2017-18</b>	<b>2,008.47</b>	<b>2,470.88</b>

### 5.3 Determination of Transmission Charges

5.3.1 Regulation 59(1) of the Tariff Regulations specifies the methodology for calculation of Transmission Charges as reproduced 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:*

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

*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.”*

5.3.2 TANTRANSCO has proposed the Transmission Charges for FY 2017-18 as shown in the Table below:

**Table 5.3-1: Transmission Charges for FY 2017-18 as proposed by TANTRANSCO**

Sr. No.	Particulars	UoM	FY 2017-18
1	Net Revenue Requirement	Rs. Crore	2,008.47
	Allotted Capacity		
2	Wind (non-REC)	MW	7,293.56
3	Bio-mass (non-REC)	MW	218.00
4	Co-generation (non-REC)	MW	659.00
5	Solar (non-REC)	MW	1,553.00
6	Other Sources	MW	15,068.46
7	Grand Total	MW	24,792.20
8	Number of Days	No.	365
9	Transmission Charges	Rs. /MW/Day	2,902.83
10	Transmission Tariff for Short Term Open Access	Rs./MW/Hr	120.95

5.3.3 The Commission in the present Order has determined the Transmission charges applicable to Long-Term Open Access consumers in accordance with the above said Regulation, as elaborated below.

#### **Allotted Transmission Capacity**

5.3.4 TANTRANSCO, in its Petition, submitted the allotted transmission capacity, considering the addition of new capacity. However, the Commission notes that TANTRANSCO has not considered the allotted capacity against Power Purchase Agreement (PPA) of 3330 MW through Long Term Procurement under Competitive Bidding route. Further, TANTRANSCO has revised Allotted Transmission Capacity



and submitted to the Commission as shown in the following Table:

**Table 5.3-2: Revised Allotted Transmission Capacity for FY 2017-18 as submitted by TANTRANSCO (MW)**

Sr. No.	Particulars	Allotted Capacity (MW)
1	Wind (Non-REC)	7,319
2	Bio mass (Non-REC)	218
3	Co-generation (Non-REC)	659
4	Solar (Non-REC)	1,529
5	TANGEDCO Own	6,987
6	IPP	814
7	CGS	6,156
8	CPP	74
9	Wind (REC)	844
10	Bio Mass (REC)	12
11	Solar (REC)	25
12	State Owned Co gen	155
13	Power Purchase through bidding	3,330
<b>14</b>	<b>Grand Total</b>	<b>28,122</b>

5.3.5 As against the submission of TANTRANSCO, the allotted transmission capacity considered by the Commission for FY 2017-18 is shown in the following Table:

**Table 5.3-3: Approved Allotted Transmission Capacity for FY 2017-18 (MW)**

Sr. No.	Particulars	Allotted Capacity for TANGEDCO (MW)	Allotted Capacity for LTOA (MW)	Total Allotted Capacity (MW)
1	Wind (Non-REC)	2,188	5,130	7,319
2	Bio-mass (Non-REC)	218	-	218
3	Co-generation (Non-REC)	659	-	659
4	Solar (Non-REC)	1,529	-	1,529
5	Own Thermal Stations	6,987	-	6,987
6	IPP	814	-	814
7	CGS	6,156	-	6,156
8	CPP	74	-	74
9	Wind (REC)	432	412	844
10	Bio-mass (REC)	2	10	12
11	Solar (REC)	-	25	25
12	State Own Co-generation	155	-	155
13	Long Term Power Purchase through Bidding	3,330	-	3,330

Sr. No.	Particulars	Allotted Capacity for TANGEDCO (MW)	Allotted Capacity for LTOA (MW)	Total Allotted Capacity (MW)
14	Grand Total	22,545	5,577	28,122

### LTOA Transmission Charges

- 5.3.6 The Commission has determined the LTOA Transmission Charges based on allocated capacity in accordance with the Tariff Regulations.
- 5.3.7 The Commission through various Orders issued on March 28, 2016 and March 31, 2016 on procurement of power from Renewable Energy (RE) sources has provided concessional Transmission Charges, with the view to promote RE sources in accordance with Section 86(1)(e) of the Electricity Act, 2003. The relevant extracts of the above Orders are reproduced below:

#### Order No. 3 of 2016 dated March 31, 2016

##### ***“10.1. Open Access charges and Line Losses***

*10.1.1 Transmission, wheeling and Scheduling & system operation charges are generally regulated by the Commission’s Tariff regulations, Grid Connectivity & Open access regulations and Commission’s order on open access charges issued from time to time. However, as a promotional measure, under sections 61 and 86(1) (e) of the Act, the Commission decides to adopt 40% in each of the transmission, wheeling and scheduling and system operation 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 issued from time to time.”(emphasis added)*

#### Order No. 4 of 2016 dated March 31, 2016

*“12.1.4. With regard to scheduling and system operation charges, the Commission decides to adopt 60% of the applicable conventional power charges. Apart from these charges, actual line losses in kind as specified in the respective Order of the Commission and as amended from time to time are also deductible in kind for the captive use and third party sale. For generators who are availing Renewable Energy Certificate (REC), normal transmission charges, wheeling charges, Scheduling and System operation charges and line losses will apply. (emphasis added)*

## Order No. 5 of 2016 dated March 31, 2016

### *“8.2.1.1 Transmission & wheeling charges and line losses*

*The Commission in its Order No.8 of 2012 dated 31-07-2012 has adopted as a promotional measure under section 86 (1) (e) of the Electricity Act 2003, 50% of the transmission charges and 50% of the wheeling charges of conventional power to the Non-conventional energy sources power.*

*Stakeholders' Comments:*

*TANGEDCO concurs with the views of the Commission.*

*Commission's View:*

*It is proposed to continue the existing norms for this control period also. (emphasis added)”*

## Order No. 2 of 2017 dated March 28, 2017

*“12.1.1 .... .. However, as a promotional measure, under sections 61(h) and 86(1) (e) of the Act, the Commission decides to adopt 30% in each of the transmission, wheeling, scheduling and system operation charges to solar power on the respective charges specified in the relevant orders issued by the Commission from time to time.” (emphasis added)*

- 5.3.8 The Commission, in the Suo-motu Tariff Order dated December 11, 2014 had determined the LTOA Transmission Charges of Rs. 2,903 per MW per day, considering the Allotted Transmission Capacity.
- 5.3.9 The Commission has determined the LTOA Transmission Charges for FY 2017-18 based on the approved Revenue Requirement and the Allotted Transmission Capacity for FY 2017-18, as shown in the following Table:

**Table 5.3-4: Approved LTOA Transmission Charges for FY 2017-18**

Sr. No.	Particulars	UoM	Formula	FY 2017-18
1	Net Revenue Requirement	Rs. Crore	A	2,470.88
	Allotted Capacity			
2	Wind (Non-REC)	MW	B	7,319
3	Bio-mass (Non-REC)	MW	C	218
4	Co-generation (Non-REC)	MW	D	659
5	Solar (Non-REC)	MW	E	1,529

Sr. No.	Particulars	UoM	Formula	FY 2017-18
6	Other Sources	MW	F	18,398
7	<b>Grand Total</b>	<b>MW</b>	<b>G</b>	<b>28,122</b>
8	<b>Number of Days</b>	<b>No.</b>	<b>H</b>	<b>365</b>
9	<b>Transmission Charges</b>	<b>Rs. /MW/Day</b>	$I=(A \times 10^7)/$ $((40\% \times B + 50\% \times C + 60$ $\% \times D + 30\% \times E + F) \times H)$	<b>3,037.30</b>

5.3.10 TANTRANSCO shall bill the LTOA consumers including TANGEDCO considering the approved Transmission Charges for FY 2017-18 and allotted capacity. In line with the previous directives, TANTRANSCO is also directed to file quarterly reports of month-wise revenue collected from LTOA consumers.

5.3.11 The Commission has estimated the LTOA charges considering the CoD and allotted capacity as submitted by TANTRANSCO. Hence, any variation with respect to actual recovery for FY 2017-18 will be subsequently tried up in the next Tariff Order.

#### **Short-Term Transmission Charges**

5.3.12 Based on the net Revenue Requirement to be recovered in FY 2017-18, the Commission has determined the Short-Term Open Access Charges for FY 2017-18, considering 100% of the approved Transmission Charges applicable to LTOA, as shown in the following Table:

**Table 5.3-5: Approved STOA Transmission Charges for FY 2017-18**

Sr. No.	Particulars	UoM	Formula	FY 2017-18
1	LTOA Transmission Charges	Rs./MW/Day	A	3,037.30
2	STOA Transmission Charges	Rs./MW/Hr	$B=(A \times 100\%)/24$	126.55

5.3.13 The above-determined STOA Transmission Charges are payable by intra-State Short-Term Open Access consumers and inter-State Open Access consumers using the intra-State Transmission network.

## Other Charges

### Scheduling and System Operating Charges

5.3.14 The Commission, in the Suo-motu Tariff Order dated December 11, 2014, had directed the TANTRANSCO to file a separate Petition for determination of SLDC Charges. Accordingly, TANTRANSCO has filed a separate Petition in T.P. No. 3 of 2017 dated May 29, 2017 and admitted by the Commission on June 13, 2017. The SLDC Charges have been determined separately vide Order in T.P. No. 3 of 2017 dated August 11, 2017.

### Reactive Energy Charges

5.3.15 As per Regulation 62(c) of the Tariff Regulations, the Reactive Energy Charge is a variable charge reflecting voltage related drawal of Reactive Power, and Reactive Power drawal by beneficiaries is 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.

5.3.16 Regulation 6.6 (2) of the Indian Electricity Grid Code, 2010 notified on April 28, 2010, provides the charges applicable for reactive energy exchange as under:

#### ***“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 thereafter, unless otherwise revised by the Commission.”*

5.3.17 Hence, in accordance with IEGC, the Commission rules that Reactive Energy exchange for the applicable duration (injection or absorption) will be levied/compensated at the rate of 13.50 paise/kVARh for FY 2017-18 escalated at 0.5

paise/kVArh annually in subsequent years, unless otherwise revised by the Commission.

#### **5.4 Summary of Directives**

5.4.1 The Commission directs TANTRANSCO to

- i) submit the year-wise actual capital expenditure incurred along with detailed justification for delay, if any, at the time of approval of actual capital expenditure and capitalisation, for transmission schemes commencing during the Control Period from April 1, 2016.
- ii) maintain the record for the scheme-wise actual capital expenditure incurred and actual scheme-wise capitalisation done separately for the schemes commencing after April, 2016, which shall be submitted to the Commission at the time of next Tariff Petition.
- iii) submit the actual source-wise funding for each transmission scheme approved in this Order along with the next Tariff Petition.

**Sd/-**  
**(Dr. T. Prabhakara Rao)**  
**Member**

**Sd/-**  
**(G. Rajagopal)**  
**Member**

**Sd/-**  
**(S. Akshayakumar)**  
**Chairman**

**(By Order of the Commission)**

**Sd/-**  
**(S. Chinnarajalu)**  
**Secretary, TNERC**

## ANNEXURES

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### Annexure I- The list of participants at the State Advisory Committee

#### Members Present:

- (1) Thiru. S. Akshaya Kumar, Chairman, TNERC
- (2) Thiru. G. Rajagopal, Member, TNERC
- (3) Dr. T. Prabhakara Rao, Member, TNERC
- (4) Dr. M. Saikumar, CMD, TNEB Ltd. & TANGEDCO Ltd. and Chairman, TANTRANSCO Ltd.
- (5) Thiru Vikram Kapur, Principal Secretary to Govt., Energy Department (Represented by Tmt. N. Sumathi, Deputy Secretary to Govt., Energy Department, GoTN)
- (6) Thiru. N.K. Gupta, Chief Electrical Engineer, Southern Railways
- (7) Dr. A.S. Kandasamy, Member, SAC
- (8) Dr. G. Uma, Professor and Head, Dept. of Electrical and Electronics Engg., Anna University, Member, SAC
- (9) Thiru. K. Alagu, Vice-President, Tamil Nadu Chamber of Commerce and Industry, Member, SAC
- (10) Dr. K. Selvaraj, Member, SAC
- (11) Thiru. C. Babu, President, Tamil Nadu Small & Tiny Industries Association (TANSTIA), Member, SAC
- (12) Thiru. M.R. Krishnan, Deputy Director, Consumers Association of India, Member, SAC
- (13) Thiru. K.Kathirmathiyon, Secretary, Coimbatore Consumer Cause Member, SAC
- (14) Thiru. P. Ravichandran, Chairman, CII (Tamil Nadu) (Represented by Thiru. K.P. Gopal, Convenor, MSME Confederation of Indian Industry (CII), Tamil Nadu

**Annexure II- The list of stakeholders who have submitted written objections/  
suggestions/ views in response to the Public Notice.**

**List of stakeholders who have submitted written objections/Suggestions in response to  
Public Notice**

<b>Sl. No</b>	<b>Name and Address</b>
1	Consumer Federation of Tamilnadu (CONFET), No.72, Duraisamy Nagar, Cuddalore – 607 001.
2	M/s Cauvery Power Generation Chennai Pvt. Ltd., No.5, Ranganthan Garden, Anna Nagar, Chennai – 600 040.
3	Thiru. S. Narayanaswamy, Member (Generation) Retd., TANGEDCO, Ramana Shree, Old No.12, New No.10/1, Anandan Street, T-Nagar, Chennai – 600 017.
4	Federation of Consumer Organisations – Tamil Nadu & Pondicherry (FEDCOT), No.9, Kullappirai Street, Tirunelveli Town – 627 006.
5	Indian Wind Power Association, Door No. E, 6th Floor, Tower-1, Sakthi Towers, No.766, Anna Salai, Chennai – 600 002.
6	Thiru P.Selvaraj, 124, R.S.Road, Erode – 638 006.
7	M/s Kamachi Industries Ltd., ABC Trade Centre, 3rd Floor, (inside Devi Theatre Complex), Old No.50, New No.39, Anna Salai, Chennai – 600 002.
8	M/s Tulsyan NEC Ltd. Apex Plaza, 1st Floor, No.3, Nungambakkam High Road, Chennai – 600 034.
9	Citizen consumer and civic Action Group (CAG), 9/5, Second Street, Padmanabha Nagar, Adyar, Chennai – 600 020.
10	Tamil Nadu Spinning Mills Association (TASMA), No.2, Karur Road, Modern Nagar, Dindigul – 624 001.
11	Orient Green Power Company Limited, Sigapi Achi Building 4th Floor, 18/3, Rukminilakshmi pathi Road, Egmore, Chennai – 600 008.
12	Thiru.P. Muthusamy, muthusamy palanisamy <muthusamy14@yahoo.com.
13	Thiru. M.R. Krishnan, “M.R.Krishnan” <concert.mrk@gmail.com.



**List of stakeholders who have submitted written objections/Suggestions in Public hearing held at Madurai :**

<b>Sl. No.</b>	<b>Name and Address</b>
1	Sai Regency Power Corporation Pvt. Ltd., 2nd Floor, Crown Court, No.128, Cathedral Road, Chennai-600 086.

**List of stakeholders who have submitted written objections/Suggestions in Public hearing held at Coimbatore :**

<b>Sl. No.</b>	<b>Name and Address</b>
1	Thiru K. Ilango, Secretary, Tamil Nadu Electricity Consumers' Association, 1st Floor, SIEMA Building, 8/4, Race Course, Coimbatore-641 018.

**Annexure III- The list of participants at each Public Hearing.**

**List of participants in the Public Hearing held at Chennai :**

<b>Sl. No.</b>	<b>Name and Address of the speakers</b>
1	Dr. A.C. Mohan, Secretary, Federation of Tamil Nadu Rice Mills owners & Dealers Association, No.491, GNT Road, Balaji Nagar, Puzhal , Chennai 61.
2	Thiru. V.S. Kumaran, 5-2/4, Lapoliare Street, Soorakkalpattu, Cuddalore 607 001 (Tamil Nadu Consumer Organisation)
3	Thiru. Thooyamurthy, Association of Transparency & Anti corruption, No.2, Alwar Nagar 1st Street, Ullagaram, Chennai 61
4	Thiru. C. Selvaraj, Federation of Anti Corruption Teams India, No.2, Vyasar Street, North Usman Road, T.Nagar, Chennai 17
5	Thiru. S. Nagalsamy, 15A, P.T. Rajan Salai, K.K. Nagar, Chennai 78.
6	Thiru. R. Sivakumar, Siva Sundar Consultant, Plot No.4 & 4A, Kiruba Nagar,(Via) Moorthy Nagar, Kathivedu, Chennai 66.
7	Thiru. D. Rajendran, Secretary, Vandimedu House Owner Association, 56, Virattikuppam Pattai, Vandimedu, Villupuram 605 602.
8	Thiru. K.N. Gunasekaran, No.3/34, Sothupakkam Salai, Red Hills, Chennai 92
9	Thiru. K. Kalyanasundaram, General Secretary, Tamil Nadu Electricity Board (Engineers Union), No.29, Lal Bahadur Shastri Street, Lakshmi Nagar, Madhuravoyal , Chennai 95.
10	Thiru. V. Ramarao, Peoples Awareness Association, Nanganallur, Chennai 61.
11	Thiru. D. Eswaramoorthy, General Manager, Tulsian point, Apex plaza 6th Floor, No.3, Nungambakkam High Road, Chennai - 34.
12	Thiru. S. Gandhi, Power Engineers Society of Tamil Nadu, 45, Balaguru Garden, Peelamedu, Coimbatore 04.
13	Thiru. A. Ponnambalam, Orient Green Power Company Ltd., Egmore, Chennai 8
14	Thiru. Shakeel Ahmed, Assistant Manager - BD, IEX (Indian Energy Exchange), 4th Floor, Plot No.7, TDI Centre, District Centre, Jasola, New Delhi 110 025.
15	Thiru.V. Ravichandran, Founder Chairman, Citizens Guardians, New No.1, Old No:2, Bank of India Colony, Near 8th Avenue, Ashok Nagar, Chennai – 83
16	Thiru.B. Sivagami Sundaram, F3- Aiswaryam Apartments, Saravana Bhava Nagar, 3rd Cross Street, Mudichur Road, Chennai – 63
17	Thiru.G.V. Nandha Kumar, 39, Subbiah Nagar, Iyyappanthangal, Chennai – 56
18	Thiru.S. Ragunathan, No.57, 2nd Cross Street, Brindhavan Nagar,

<b>Sl. No.</b>	<b>Name and Address of the speakers</b>
	Valasaravakkam, Chennai -87
19	Thiru.Anbu , The Pensioners Association
20	Thiru. T.R. Srinivasan, Old No.16/2 New No.41/2, Srinivasan Iyyar Street, West Mambalam, Chennai 33
21	Thiru.K.Vishnu Mohan Rao, Citizen consumer and civic Action Group, 9/5, 2nd Street, Padmanabha Nagar, Adyar, Chennai – 600 020.

**List of participants in the Public Hearing held at Madurai :**

<b>Sl. No.</b>	<b>Name and Address of the speakers</b>
1.	Thiru.,R.Kathiresan, State Chairman, Tamil Nadu Fish Farmers Welfare Association, No. 32 Sunnampukara Street, Orathanadu, Thanjavur – 614625.
2.	Thiru. Maanal Paramasivam, Joint Secretary, Tamil Nadu Fish Farmers Welfare Association, Oranthanadu, Pudur, Thanjavur.
3.	Thiru. Dinesh Singh, Executive Member, Tamil Nadu Rice Mill Owners Association, Madurai.
4.	Thiru.M.Gunasekar, Proprietor, MSG Modern Rice Mill, MSG Agencies, 82 Koogaiyur Road, Chinnasalem - 606 201.
5.	Thiru.M.Rajendran, Sri Saravana Hitech Agro Foods, Chinnasalem, Villupuram District.
6.	Thiru. S.K.R. Ramesh, President, Madurai Screen Printers Association, Madurai.
7.	Thiru. Pichaiah (Fish Farmer), Kallidaikurichi, Tirunelveli District – 627 416.
8.	Thiru. R. Kumaresan, (Retd. Chief Engineer),Proprietor, Ranga Blue Metals, Thendral Nagar, Theni.
9.	Thiru. Jayaprakash, May-17 Movement, 45/C, New Ramnad Road, Thangavel Thevar Compound, Madurai – 9.
10.	Thiru. Sivakumar, May – 17 Movement, 3479 TNHB Mela Anuppanadi, Madurai – 9.
11.	Thiru. Karthik Babu, Madurai Spinners Association, Kapalur, Madurai – 8.
12.	Thiru. A.K. Ramesh, Secretary, Cluster Development, 159/5, 2 Renganayaki Ammal Street, Kamarajar Salai, Madurai – 9.
13.	Thiru. T.K. Chandra Mohan, No. 14, CSB Lane, Old Kuyavarpalayam Road, Madurai – 9.

**List of participants in the Public Hearing held at Coimbatore :**

<b>S. No.</b>	<b>Name &amp; address of the Speakers</b>
1	Thiru. S. Ravikumar, Coimbatore & Tirupur District Micro and cottage Entrepreneur Association, (COTMA), Coimbatore 641 006.
2	Thiru. P. Balasubrananiam, Powerloom Association, Avinashi, Tirupur District
3	Thiru. D. Balasundaram, Ex. President, Indian Chamber of commerce & Industry, Coimbatore 641 018.
4	Thiru. K. Elango, Secretary, Tamil Nadu Electricity Consumers Association, (TECA), Coimbatore 641 018.
5	Thiru. K. Kasturirangaiyan, Chairman, Indian Wind Power Association, Coimbatore 641 018.
6	Thiru. T.S.B. Selvam, Erode District Rice Mill Owners' Association, Elumathur, Erode 638 104.
7	Thiru. M. Ramasamy, President, Tirupur Rice Mill Owner Association, 165, Chenimalai Road, Coimbatore.
8	Dr. K. Selvaraj, Secretary General, The Southern India Mills Association, 41, Race Course, Coimbatore 641 018.
9	Thiru. S.K. Rangarajan, President, The South India Spinners Association, Flat No.103, A Block, 1st Floor, Raheja Avinashi Road, Coimbatore 641 018.
10	Thiru. S.P. Velliangiri, 120 D, Pioneer mill Road, Peelamedu, Coimbatore 641 004.
11	Thiru. M. Krishnasamy, Maniakaran Palayam, Ex- Councillor, Coimbatore.
12	Thiru. A. Manickam, President, TamilNadu Small Power and Manufacture Association, 130/38, Mettu Street, Amapet, Salem-636003.
13	Thiru. V. Sundaram, President, Coimbatore District Small Scale Industrial Association ,(CODISSIA) Hozur Road, Coimbatore-18.
14	Thiru. K. Kamaraj, Kaveri Power Trading Private Limited, The Lords, Ekkatuthangal, Chennai-32.
15	Thiru. P.P. Subramanian, P.P. Associates, Electrical Engineers & Contractors, 1st Floor, 33, Kalidass Road, Ram Nagar, Coimbatore - 641 009.
16	Thiru. A.D. Thirumoorthy, Consultant, 603, Pioneer Apartment, Coimbatore – 18
17	Dr. Manokaran, Cheif Engineer (Retired), 360 A, 1st Street, Gandhipuram, Coimbatore - 12.
18.	Thiru. Maniraj, Coimbatore Pumpset Manufacturers Association,

<b>S. No.</b>	<b>Name &amp; address of the Speakers</b>
	(COPMA), Coimbatore 641 006
19	Thiru. K.C.M. Duraisamy, President, Tirupur Palladam Taluk Rice Mill Owners' Association, Tirupur - 641 604.
20	Thiru. K. Eswaran, Sivabharathi Sintex India Private Ltd. Kurumbapalayam (Post), Coimbatore - 107.
21	Thiru. M. Murugan, Chief Executive Officer, MV Power Consultants & Engineers (P) Ltd., Old No.38/6A, New No.14, I st Floor, M.V. Power Complex, Alandhur Road, Saidapet, Chennai - 15.
22	Thiru. R. Selvam, C/o Selvam Textiles, 1/99, Old Post Office Road, Kangayampalayam - 641 401.
23	Thiru. C. Krishnasamy, Electrical Supervisor, Central Prison, Coimbatore - 18.
24	Thiru. S. Rama Subbu, Chief Electrical Distribution Engineer, Southern Railway, Chennai - 02.
25	Thiru. Arulmozhi, Secretary, Open End Spinning Mill Association, 67, CR Complex, Avinashi Road, Opposite SITRA, Civil Aerodrome Post, Coimbatore.
26	Thiru. N. Selvaraj, No.24, Nehru Avenue, Maniakaran Palayam, Coimbatore- 06.
27	Thiru. N. Logu, Secretary, Coimbatore Consumer Voice, Opposite Medical College, Avinashi Road, Coimbatore - 14.
28	Thiru. K. Natarajan, 11-Mookambigai Nagar, 1st Street, Ganapathy, Coimbatore-06.
29	Thiru. N. Sundarajan, Ex- Assistant Engineer, TNEB No.232, Nethaji Road, Pappanayakanpalayam, Coimbatore-37.
30	Thiru. V. Arunachalam, Kovai Solar Power (P) Ltd, Kovai Tower, 2nd Floor, No.44, Dr. Balasundaram Road, Coimbatore - 641 018.
31	Thiru. M. Murugesan, General Secretary, Power Engineers Society of TamilNadu (PESOT), 74, Swarnambika Layout, Coimbatore-09.
32	Thiru. S. Nedunchezhiyan, Thiruvalluvar Illam, No.21, S.K.C. Road, Erode-01.
33	Thiru. Era. Velusamy, President, Tirupur District Job Work Power loom weavers Association, 2/391, Udumalai Road, P. Vadugapalayam, Palladam - 641 664.
34	Thiru. S. Sanjay Kondass, Managing Director, Kondass Automation Pvt. Ltd., 5B, Sri Alamelu Nagar, Kamaraj Road, Coimbatore-641 015.
35	Thiru. K.A. Mohammed Anoo, 10/11, Kasthuri Layout, Kalavai, Kuniyamuthur, Coimbatore - 641 008. .

<b>S. No.</b>	<b>Name &amp; address of the Speakers</b>
36	Thiru. K. Natrayan, 210/16, Udumalpet Road, Near Kumar weigh Bridge, Pollachi, Coimbatore.
37	Thiru. R. Balasubramanian, General Secretary, Federation of Consumer Organisation, Tamilnadu & Puducherry - FECOT. Nava Bhavan Buildings, Brough Road, Erode - 638 001.
38	Thiru. C.M. Jayaraman, Citizens Voice, Coimbatore.
39	Thiru. R. Shantha Kumar, Member, Code Review Panel of TANGEDCO, No.81, West Venkatasamy Road, R.S. Puram, Coimbatore - 02.
40	Thiru. A. Ramachandran, 3/8, Cheran Residency, Karumathanpatti, Coimbatore-641 668.
41	Thiru. R. Govindharajan, General Secretary, TNEB Engineer's Union, K.K. Nagar, Chennai-78.

**Annexure IV- Copy of the Final Transfer Scheme as notified by the State Government  
vide G.O. (Ms.) No.49, Energy (B1) Department, dated August 13, 2015.**



## **ABSTRACT**

Reorganization of the Tamil Nadu Electricity Board as per the provisions of the Electricity Act, 2003 – Tamil Nadu Electricity (Re-organization and Reforms) Transfer Scheme 2010- Published in Tamil Nadu Government Gazette Extra-Ordinary Part-II – Section 2 dated 19.10.10 – Amendments – Orders -Issued.

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### **Energy (B1) Department**

G.O. Ms.No.49

Dated 13.08.2015

THIRUVALLUVAR AANDU 2046  
AADI 28

Read:

- 1) G.O.Ms.No.100, Energy (B2) Department, dated 19.10.2010
- 2) G.O.Ms.No.2, Energy (B2) Department, dated 2.1.2012
- 3) From the Chairman and Managing Director, Tamil Nadu Generation and Distribution Corporation Limited, Letter No.SE/PLG/EE/GP/AEE4/F.Transfer Scheme /D.275/2014, dated 5.11.2014.

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### **ORDER:-**

In the Government order first read above, Government have notified the Tamil Nadu Electricity (Re-organisation and Reforms) Transfer Scheme, 2010. The erstwhile Tamil Nadu Electricity Board has been reorganized with effect from 01.11.2010, as per the provisions of the Electricity Act, 2003. In the above transfer scheme, the assets and liabilities were segregated based on the available unaudited balance sheet of erstwhile Tamil Nadu Electricity Board as on 31.03.2009 instead of balance sheet as on 31.10.2010 which was not ready at that time and stated that this shall be provisional for a period of one year from the respective date of transfer as per the clause 9(1) of the said scheme (i.e., upto 31.10.2011).

(2) Now, the Chairman and Managing Director, Tamil Nadu Generation and Distribution Corporation Limited has stated that as the audited balance sheet as on 31.10.2010 is ready, it is essential to issue notification for the final amendment to the earlier transfer scheme notified in Government Order 2<sup>nd</sup> read above for giving effect to the transfer of assets and liabilities to successor entities of erstwhile Tamil Nadu Electricity Board as on 01.11.2010.

(3) Amendment to the existing Tamil Nadu Electricity (Reorganisation and Reforms) Transfer Scheme, 2010 notified in G.O.Ms.No.100, dated 19.10.2010,



subsequently amended in G.O.(Ms.) No.2, Energy (B2) Department, dated 02.01.2012 by issuing Notification for giving effect to transfer of assets and liabilities to successor entities of erstwhile Tamil Nadu Electricity Board Limited as on 01.11.2010 be issued.

(4) The Notification appended to this order will be published in the Tamil Nadu Government Gazette, Extraordinary, dated 13.08.2015

//By Order of the Governor//

RAJESH LAKHONI  
SECRETARY TO GOVERNMENT.

To

The Works Manager, Government Central Press,  
Chennai -79 (w.e)

(With a request to publish the Notification in the Tamil Nadu Government Gazette  
Extraordinary, dated 13.08.2015

The CMD, Tamil Nadu Generation and Distribution Corporation Limited,  
Chennai -2(w.e)

The Secretary, Tamil Nadu Generation and Distribution Corporation Limited,  
Chennai -2(w.e)

The Secretary,

TNERC, Chennai -8(w.e)

The CE (Planning),

Tamil Nadu Generation and Distribution Corporation Limited ,  
Chennai -2

Copy to

The Secretary to Government of India,  
Ministry of Power,

Government of India, New Delhi-1(w.e)

The Chief Minister's Office, Chennai -108(w.e)

The Senior P.A to Minister,

(E,P&E), Chennai -9 (w.e)

The Law Department, Chennai -9

The Director,

National Informatics Centre,

Secretariat Network Centre,

Chennai-9

(for hosting in the tn.gov.in website)

SF/SC

//Forwarded by Order//

SECTION OFFICER

## APPENDIX.

### NOTIFICATION.

In exercise of the powers conferred by sections 131 and 133 of the Electricity Act, 2003 (Central Act 36 of 2003), read with sub-clause (3) of clause 12 of the Tamil Nadu Electricity (Reorganisation and Reforms) Transfer Scheme, 2010, the Governor of Tamil Nadu hereby makes the following amendments to the said Scheme :-

2. The amendments hereby made shall be deemed to have come into force on and from the 1<sup>st</sup> day of November 2010.

### AMENDMENTS.

In the said Scheme, in clause 5 :-

(1) In sub-clause (9), for the expression “The transfer value of the Fixed Assets forming part of Schedules A, B and C of the respective Transferees have been done at book values excluding the land and turbine machinery of gas based power plant which was revalued based on the guideline value resulting into Revaluation Reserve of Rs.8355.32 Crores”, the expression “The transfer value of the Fixed Assets forming part of Schedules A, B and C of the respective Transferees have been done at book values excluding the land, buildings, plant and machineries, lines, cables and network, which are revalued based on the guideline value resulting into Revaluation Reserve of Rs.51,441.00 Crores” shall be substituted;

(2) after sub-clause (9), the following sub-clause shall be added, namely :-  
“(10) The function-wise Account Rendering Units/Circle offices shall be as set out in Schedule-D.”;

(3) in the Appendix,-

(a) in Schedule-A, in Part-II Generation and Distribution Undertakings, for the entries under the heading “Aggregate Assets and Liabilities vested in Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO)”, the following entries shall be substituted, namely:-

<b>"OPENING BALANCE SHEET OF TANGEDCO AS ON 1st NOVEMBER 2010</b>							
<b>LIABILITIES</b>		<b>Rs. In Crores</b>		<b>ASSETS</b>		<b>Rs. In Crores</b>	
<b><u>SOURCES OF FUNDS</u></b>				<b><u>APPLICATION OF FUNDS</u></b>			
<b><u>SHAREHOLDERS FUND</u></b>				<b><u>FIXED ASSETS</u></b>			
<i>Equity Share Capital TNEB Limited</i>		2,290.72		<i>Gross Fixed Assets</i>		45,601.98	
				<i>Less: Accumulated Depreciation</i>		-	
<b><u>RESERVES AND RESERVE FUNDS</u></b>				<b><i>Net Fixed Assets</i></b>		<b>45,601.98</b>	
<i>1% Property Insurance Reserves</i>		590.31		<b><i>Capital Works in Progress</i></b>		<b>5,070.79</b>	
<i>Material cost variance reserves</i>		48.45					
<i>Hydro Balancing Fund</i>		1,171.46		<b>INVESTMENTS</b>		<b>684.32</b>	
<i>Consumer Contributions, Grants &amp; Subsidies</i>		2,522.12					
<i>Revaluation Reserves of Depreciable Assets</i>		12,265.99		<b>ASSETS NOT IN USE</b>		<b>2.68</b>	
<b>TOTAL SHAREHOLDERS FUND</b>		<b>18,889.06</b>		<b>DEFERRED COST</b>		<b>1.31</b>	
<b><u>LOAN FUNDS</u></b>				<b><u>CURRENT ASSETS, LOANS AND ADVANCES</u></b>			
<i>Rural Electrification Corporation (REC)</i>		4,281.67		<i>Stock</i>		887.92	
<i>Power Finance Corporation (PFC)</i>		4,074.03		<i>Net Receivables against Supply of Power</i>		4,296.93	
<i>PFC (Asian Development Bank)</i>		6.82		<i>Cash and Bank Balances</i>		440.11	
<i>Tamil Nadu Power Finance Corporation (TNPFC)</i>		2,615.30		<i>Loans and Advances</i>		604.35	
<i>NABARD</i>		52.58		<i>Sundry Receivables</i>		504.90	
<i>Medium Term Loans</i>		7,811.01		<b>TOTAL CURRENT ASSETS, LOANS AND ADVANCES</b>		<b>6,734.21</b>	
<i>APDRP / RAPDRP Loan</i>		418.65					
<i>RGGVY</i>		27.05		<b>SUBSIDY RECEIVABLE FROM GoTN</b>		<b>87.79</b>	
<i>PMGY</i>		20.54					
<b>TOTAL CAPITAL LIABILITIES</b>		<b>19,307.65</b>		<b><u>LESS: CURRENT LIABILITIES AND PROVISIONS</u></b>			
<b>BORROWINGS FOR WORKING CAPITAL</b>		<b>6,106.80</b>		<i>Security Deposits from Consumers</i>		4,228.93	
				<i>Other Fuel Related Liabilities, unpaid coal bills and Liabilities</i>		671.05	
				<i>Liability for Purchase of Power</i>		2,963.82	
				<i>Staff Related Liabilities, Provision and Contribution from Staff</i>		1,427.29	
				<i>Other Current Liabilities</i>		4,588.48	
				<b>TOTAL CURRENT LIABILITIES</b>		<b>13,879.57</b>	
				<b>NET CURRENT ASSETS</b>		<b>(7,057.56)</b>	
<b>TOTAL LIABILITIES</b>		<b>44,303.51</b>		<b>TOTAL ASSETS</b>		<b>44,303.51</b>	

**Note:-**

1. The transfer value of the fixed assets are determined based on revenue potentials.
2. The transfer value of the Land is determined based on the guideline value as on 31<sup>st</sup> October 2010.

3. The values of Buildings, Plant & Machineries and Lines & Cables Network are valued based on the report provided by the Chartered Engineer and Government Registered Valuer.
  4. Notwithstanding the transfer, the guarantees provided to the lenders of the Board, by the State Government, shall be deemed to be guarantees provided on behalf of the TANGEDCO in respect of the loans allocated, until fully discharged.
  5. The Contingent liabilities to the extent they are recognized and are associated with or related to Generation and Distribution activities or to the undertakings or assets shall be discharged by TANGEDCO.
  6. The shares to the extent of the value of the share capital mentioned above shall be issued by the TANGEDCO in favour of TNEB Limited at par". ;
- (b) in Schedule-B, in Part-II Transmission Undertaking, for the entries under the heading "Aggregate Assets and Liabilities vested in Tamil Nadu Transmission Corporation Limited (TANTRANSCO)", the following entries shall be substituted, namely:-

<b>“OPENING BALANCE SHEET OF TANTRANSCO AS ON 1st NOVEMBER 2010</b>					
<b>LIABILITIES</b>		<b>Rs. In Crores</b>		<b>ASSETS</b>	
				<b>Rs. In Crores</b>	
<b><u>SOURCES OF FUNDS</u></b>				<b><u>APPLICATION OF FUNDS</u></b>	
<b><u>SHAREHOLDERS FUND</u></b>				<b><u>FIXED ASSETS</u></b>	
<i>Equity Share Capital – TNEB Limited</i>		1,506.15		<i>Gross Fixed Assets</i>	23,035.92
				<i>Less: Accumulated Depreciation</i>	-
<b><u>RESERVES AND RESERVE FUNDS</u></b>				<b><i>Net Fixed Assets</i></b>	
<i>1% Property Insurance Reserves</i>	11.26			<b><i>Capital Works in Progress</i></b>	<b>1,481.11</b>
<i>Material cost variance reserves</i>	12.82				<b>24,517.02</b>
<i>Consumer Contributions, Grants &amp; Subsidies</i>	1,040.73			<b><u>CURRENT ASSETS, LOANS AND ADVANCES</u></b>	
<i>Revaluation Reserves of Depreciable Assets</i>	7,163.58	8,228.39		<i>Stock</i>	102.00
				<i>Cash and Bank Balances</i>	12.29
<b>TOTAL SHAREHOLDERS FUND</b>		<b>9,734.54</b>		<i>Loan and Advances</i>	19.40
				<i>Sundry Receivables</i>	12.69
<b><u>LOAN FUNDS</u></b>				<b>TOTAL CURRENT ASSETS, LOANS AND ADVANCES</b>	
<i>Rural Electrification Corporation (REC)</i>	1,448.87				<b>146.37</b>
<i>Power Finance Corporation (PFC)</i>	662.35			<b><u>LESS: CURRENT LIABILITIES AND PROVISIONS</u></b>	
<i>Tamil Nadu Power Finance Corporation (TNPFC)</i>	3,180.57			<i>Staff Related Liabilities, Provision and Contribution from Staff</i>	150.82
<i>Medium Term Loans</i>	1,952.75			<i>Other Current Liabilities</i>	556.50
<i>TNEB Bonds</i>	2,860.66			<b>TOTAL CURRENT LIABILITIES</b>	
<i>Life Insurance Corporation (LIC)</i>	880.87				<b>707.33</b>
<i>HUDCO</i>	1,708.75			<b>NET CURRENT ASSETS</b>	
<b>TOTAL CAPITAL LIABILITIES</b>	<b>12,694.83</b>				<b>(560.95)</b>
<b>BORROWINGS FOR WORKING CAPITAL</b>	<b>1,526.70</b>	<b>14,221.53</b>			
<b>TOTAL LIABILITIES</b>		<b>23,956.07</b>		<b>TOTAL ASSETS</b>	<b>23,956.07</b>

**Note:-**

1. The transfer value of the fixed assets are determined based on revenue potentials.
2. The transfer value of the Land is determined based on the guideline value as on 31<sup>st</sup> October 2010.
3. The values of Buildings, Plant & Machineries and Lines are valued based on the report provided by the Chartered Engineer and Government Registered Valuer.
4. The Opening Balance Sheet of TANTRANSCO also includes the assets and liabilities of SLDC.
5. Notwithstanding the transfer, the guarantees provided to the lenders of the Board, by the State Government, shall be deemed to be guarantees provided on behalf of the TANTRANSCO in respect of the loans allocated, until fully discharged.
6. The Contingent liabilities to the extent they are recognized and are

associated with or related to Transmission activities or to the undertakings or assets shall be discharged by TANTRANSCO.

7. The shares to the extent of the value of the share capital mentioned above shall be issued by the TANTRANSCO in favour of TNEB Limited at par.”;
- (c) in Schedule-C, in Part-II-Holding Undertaking, for the entries under the heading “Aggregate Assets and Liabilities vested in TNEB Limited”, the following entries shall be substituted, namely:-

<b>“OPENING BALANCE SHEET OF TNEB LIMITED AS ON 1ST NOVEMBER 2010</b>					
<b>LIABILITIES</b>	<b>Rs. In Crores</b>		<b>ASSETS</b>	<b>Rs. In Crores</b>	
<b><u>SOURCES OF FUNDS</u></b>			<b><u>APPLICATION OF FUNDS</u></b>		
<b><u>SHAREHOLDERS FUND</u></b>			<b><u>FIXED ASSETS</u></b>		
<i>Equity Share Capital – Government of Tamil Nadu</i>		3,806.02	<i>Gross Fixed Assets</i>	496.93	
			<i>Less: Accumulated Depreciation</i>	-	
<b><u>RESERVES AND RESERVE FUNDS</u></b>			<b><i>Net Fixed Assets</i></b>	<b>496.93</b>	<b>496.93</b>
<i>Revaluation Reserves of Depreciable Assets</i>	487.79	487.79			
			<b><u>INVESTMENT IN SUBSIDIARY COMPANIES</u></b>		3,796.88
<b>TOTAL SHAREHOLDERS FUND</b>		<b>4,293.81</b>			
			<b><u>CURRENT ASSETS, LOANS AND ADVANCES</u></b>		
			<i>Cash and Bank Balances</i>	108.47	
			<b>TOTAL CURRENT ASSETS, LOANS AND ADVANCES</b>	<b>108.47</b>	
			<b><u>LESS: CURRENT LIABILITIES AND PROVISIONS</u></b>		
			<i>Staff Related Liabilities, Provision and Contribution from Staff</i>	108.47	
			<b>TOTAL CURRENT LIABILITIES</b>	<b>108.47</b>	
			<b>NET CURRENT ASSETS</b>		-
<b>TOTAL LIABILITIES</b>		<b>4,293.81</b>	<b>TOTAL ASSETS</b>		<b>4,293.81</b>

**Note:-**

1. The value of the buildings are determined based on PWD Schedule Rates for Construction based on notification issued for the FY 2010-11.
2. The shares to the extent of the value of the share capital mentioned above shall be issued by the TNEB Limited in favour of State Government at

par”;

(d) after “Schedule-C”, the following Schedule shall be added, namely:-

**“SCHEDULE - D**

**List of Function-wise Accounts Rendering Units / Circle Offices**

<b><u>TANGEDCO</u></b>		<b><u>TANTRANSCO</u></b>
<b><u>GENERATION</u></b>	<b><u>DISTRIBUTION</u></b>	<b><u>TRANSMISSION</u></b>
<b><u>THERMAL GENERATING STATIONS</u></b>	CHNNAI EDC/CENTRAL	GENERAL CONSTRUCTION CIRCLE/COIMBATORE
ENNORE TPS	CHENNAI EDC/NORTH	GENERAL CONSTRUCTION CIRCLE/MADRAS
METTUR TPS	CHENNAI EDC/SOUTH	GENERAL CONSTRUCTION CIRCLE/MADURAI
NORTH CHENNAI TPS	CHENNAI EDC/WEST	GENERAL CONSTRUCTION CIRCLE/SALEM
TUTICORIN TPS	CHENGALPATTU EDC	GENERAL CONSTRUCTION CIRCLE/TRICHY
	COIMBATORE EDC/ METRO	PROTECTION AND COMMUNICATION CIRCLE/COIMBATORE
<b><u>GAS BASED GENERATING STATIONS</u></b>	COIMBATORE EDC /NORTH	PROTECTION AND COMMUNICATION CIRCLE/MADURAI
BASIN BRIDGE GTPS	COIMBATORE EDC /SOUTH	OPERATION CIRCLE /COIMBATORE
KUTTALAM GTPS	CUDDALORE EDC	OPERATION CIRCLE / <b>KORATTUR</b>

<b><u>TANGEDCO</u></b>		<b><u>TANTRANSCO</u></b>
<b><u>GENERATION</u></b>	<b><u>DISTRIBUTION</u></b>	<b><u>TRANSMISSION</u></b>
THIRUMAKOTTAI GTPS	DHARMAPURI EDC	OPERATION CIRCLE /MADURAI
VAZHUDUR GTPS	DINDIGUL EDC	OPERATION CIRCLE /SALEM
	ERODE EDC	OPERATION CIRCLE /SRIPERUMPUDUR
<b><u>HYDEL GENERATING CIRCLES</u></b>	GOPI EDC	OPERATION CIRCLE /TIRUNELVELI
GENERATION/ERODE	KANCHEEPURAM EDC	OPERATION CIRCLE /TRICHY
GENERATION/KADAMPARAI	KANYAKUMARI EDC	OPERATION CIRCLE /TRUVALLAM
GENERATION/KUNDAH	KARUR EDC	OPERATION CIRCLE /VILLUPURAM
GENERATION/TIRUNELVELI	MADURAI EDC/METRO	SLDC/ERODE
	MADURAI EDC	WEDC - UDUMALPET
<b><u>WIND GENERATING CIRCLES</u></b>	METTUR EDC	WEDC -TIRUNELVELI
WEDC - UDUMALPET	NAGAPATTINAM EDC	
WEDC –TIRUNELVELI	NAMAKKAL EDC	<b><u>HEAD OFFICE</u></b>
	NILGIRIS EDC	CENTRAL PAYMENT
<b><u>HEAD OFFICE</u></b>	PERAMBALORE EDC	CASH
COAL	PUDUKOTTAI EDC	FUNDS
RESOURCES	RAMNAD EDC	RESOURCES
	SALEM EDC	
<b><u>PROJECT</u></b>	SIVAGANGAI EDC	
L.M.H.E.P / BHAVANI	THANJAVUR EDC	
CIVIL MAINTENANCE/ MADURAI	THENI EDC	



<b><u>TANGEDCO</u></b>		<b><u>TANTRANSCO</u></b>
<b><u>GENERATION</u></b>	<b><u>DISTRIBUTION</u></b>	<b><u>TRANSMISSION</u></b>
CIVIL MAINTENANCE/ EMERALD	THIRUPPUR EDC	
METTUR THERMAL POWER PROJECT (MTPP)	TIRUNELVELI EDC	
	TIRUPATTUR EDC	
	TIRUVANNAMALAI EDC	
	TRICHY EDC / METRO	
	TUTICORIN EDC	
	UDUMALPET EDC	
	VELLORE EDC	
	VILLUPURAM EDC	
	VIRUDHUNAGAR EDC	
	<b><u>HEAD OFFICE</u></b>	
	CENTRAL PAYMENT	
	BALANCE SHEET	
	CASH	
	FUNDS	
	COST	
	RESOURCES	
	<b><u>OTHERS</u></b>	
	METTUR WORKSHOP CIRCLE	
	CHENNAI DEVELOPMENT CIRCLE	

RAJESH LAKHONI,  
SECRETARY TO GOVERNMENT.

//TRUE COPY//

SECTION OFFICER