



# TAMIL NADU ELECTRICITY REGULATORY COMMISSION

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Approval of True-Up for  
FY 2021-22 for TANGEDCO

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**Order dated 28<sup>th</sup> March 2024 on M.P. No. 10 of 2023**



**TAMIL NADU ELECTRICITY REGULATORY COMMISSION**

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

(Central Act 36 of 2003)

PRESENT : **Thiru.M.Chandrasekar** – **Chairman**  
**Thiru.K. Venkatesan** – **Member**  
**Thiru.B.Mohan** – **Member (Legal)**

**Order dated 28<sup>th</sup> March 2024 on M.P. No. 10 of 2023**

**In the matter of: Approval of True-Up for the FY 2021-22 for TANGEDCO**

In exercise of powers conferred by 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 suggestions and objections received from the public, as per sub-section (3) of Section 64 of the said Act, the Tamil Nadu Electricity Regulatory Commission hereby passes this Order for Approval of True-Up for the FY 2021-22 for TANGEDCO.

Sd/-  
(B.Mohan)  
**Member (Legal)**

Sd/-  
(K.Venkatesan)  
**Member**

Sd/-  
(M.Chandrasekar)  
**Chairman**

(By Order of the Commission)

(Dr. C.Veeramani)  
Secretary

**LIST OF ABBREVIATIONS**

A&G	Administration and General
ABC	Aerial Bunched Cables
ABR	Average Billing Rate
APR	Annual Performance Review
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
CAGR	Compounded Annual Growth Rate
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Station
COS	Cost of Supply
CPP	Captive Power Plant
CSD	Consumer Security Deposit
CWIP	Capital Work in Progress
DA	Dearness Allowance
EA	Electricity Act
ED	Electricity Duty
FRP	Financial Restructuring Plan
FY	Financial Year
GFA	Gross Fixed Assets
G.O.	Government Order
GPF	General Provident Fund
GoTN	Government of Tamil Nadu
HT	High Tension
HVDS	High Voltage Distribution System
IGAAP	Indian Generally Accepted Accounting Principles

Ind AS	Indian Accounting Standards
kWh	kilo-Watt hour
LT	Low Tension
LTOA	Long Term Open Access
MTOA	Medium Term Open Access
MU	Million Units
MW	Mega-Watt
MYT	Multi-Year Tariff
NTI	Non-Tariff Income
O&M	Operation & Maintenance
PF	Power Factor
PLF	Plant Load Factor
R&M	Repair & Maintenance
RoE	Return on Equity
SLDC	State Load Despatch Centre
STOA	Short Term Open Access
T&D	Transmission & Distribution
TANGEDCO	Tamil Nadu Generation and Distribution Corporation Ltd.
TANTRANSCO	Tamil Nadu Transmission Corporation Ltd.
TNEB	Tamil Nadu Electricity Board
TNERC	Tamil Nadu Electricity Regulatory Commission
ToD	Time of Day
TP	Tariff Policy

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# 1 INTRODUCTION

## 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 referred as “the EA, 2003” or “the 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 TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005) 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 February 11, 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 on July 31, 2010 (Order No. 3 of 2010).
- 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. (TANTANSCO) and Tamil Nadu Generation and Distribution Corporation Ltd. (hereinafter referred as TANGEDCO or the Petitioner) with the stipulation that the aforementioned Companies shall be fully owned by the Government.

## **1.2 THE ELECTRICITY ACT, 2003, TARIFF POLICY AND REGULATIONS**

1.2.1 Section 61 of the Electricity Act, 2003 (herein after referred as the Electricity Act, 2003 or the Act) stipulates the guiding principles for determination of Tariff by the Commission and mandates that the Tariff should ‘progressively reflect cost of supply of electricity’, ‘reduce cross-subsidy’, ‘safeguard consumer interest’ and ‘recover the cost of electricity in a reasonable manner’.

***“Section-62 (1):***

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

*a. supply of electricity by a generating company to a distribution licensee: ...;*

*b. transmission of electricity;*

*c. wheeling of electricity;*

*d. retail sale of electricity.*

*...”*

1.2.2 TNERC notified its TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 specify the factors that will guide the Commission in determination of Tariff, the relevant extract of which is 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 ...*

*“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;*

... ..

*(ii) Rationalisation of tariff*

... ..”

1.2.3 The Tariff Policy notified by Govt. of India on January 28, 2016, specifies the following objectives:

*“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 minimize perceptions of regulatory risks;*
- (d) Promote competition, efficiency in operations and improvement in quality of supply;*
- (e) Promote generation of electricity from Renewable sources;*
- (f) Promote Hydroelectric Power generation including Pumped Storage Projects (PSP) to provide adequate peaking reserves, reliable grid operation and integration of variable renewable energy sources;*

- (g) Evolve a dynamic and robust electricity infrastructure for better consumer services;*
- (h) Facilitate supply of adequate and uninterrupted power to all categories of consumers;*
- (i) Ensure creation of adequate capacity including reserves in generation, transmission and distribution in advance, for reliability of supply of electricity to consumers.”*

### **1.3 HISTORY OF TARIFF FILING**

- 1.3.1 TANGEDCO was incorporated on December 1, 2009 and started functioning as such with effect from November 1, 2010.
- 1.3.2 Subsequent to the filing of Tariff Petitions by TANGEDCO for determination of retail supply tariff for FY 2012-13, the Commission scrutinized and reviewed the same. After a thorough review, the third Order (Order. No. 1 of 2012) of the Commission on Retail Supply Tariff, Wheeling Charges and other related charges was passed on March 30, 2012.
- 1.3.3 TANGEDCO filed the Tariff Petition for determination of tariff for Generation and Distribution for FY 2013-14, which was scrutinized and reviewed by the Commission. Based on this Petition and after considering views of the State Advisory Committee and the public, the Commission passed the fourth Order on June 20, 2013.
- 1.3.4 TANGEDCO did not file the ARR and Tariff Petition for FY 2014-15 before the Commission. In the absence of Tariff Petition, the Commission initiated a suo-motu proceeding for determination of tariff in accordance with Section 64 of EA 2003. After thorough review of the available information, the Commission passed the fifth Order on December 11, 2014.
- 1.3.5 In 2017, TANGEDCO has filed the Petition for final truing up of FY 2011-12 to FY 2015-16, determination of Multi Year ARR for FY 2016-17 to FY 2018-19 and determination of Retail Tariff for FY 2017-18. The petition was scrutinized and reviewed, and the Commission passed the sixth Order on August 11, 2017.
- 1.3.6 In 2022, based on the filings of TANGEDCO, Commission approved True-Up for the period from FY 2016-17 to FY 2020-21 and Annual Performance Review for the FY 2021-22; Approval of Aggregate Revenue Requirement for the period from FY 2022-23 to FY 2026-27 and Determination of Tariff for Generation and Distribution for FY 2022-23 to FY 2026-27.

1.3.7 As the order in 2022 contained only Annual Performance Review for the FY 2021-22, and as the accounts for the FY 2021-22 were subsequently finalized, TANGEDCO filed a petition before the Commission for final True-Up of FY 2021-22. The current order is prepared consequent to such petition.

## **1.4 FILING OF PRESENT PETITION**

1.4.1 On 31<sup>st</sup> March, 2023 TANGEDCO had filed True-Up for FY 2021-22 and the same was admitted as MP No. 10 of 2023. In the petition, in Para No. 2.1.6, TANGEDCO had mentioned that the True-Up submitted was only on provisional basis and it would submit the final True-Up as per Ind AS after finalization of accounts.

1.4.2 The Commission vide hearing dated 25.07.2023 and 10.10.2023 of M.P. No. 10 of 2023, directed TANGEDCO to file revised details after obtaining Audit Report.

1.4.3 Meanwhile TANGEDCO has adopted Ind AS standard for their accounts, based on which accounts for FY 2021-22 were revised. Thereafter, an additional affidavit was filed by TANGEDCO, to provide information relating to detailed that were changed on account of Ind AS adoption, in January 2024.

1.4.4 TANGEDCO has stated that it has prepared the revised financial statement as per Ind AS and in compliance to the directives of the Commission. TANGEDCO has also stated that information in the additional affidavit refers only to the extent of change in financial statement on account of adoption of Ind AS and reflects the revised claim as per Ind AS.

1.4.5 The Commission had reviewed the data available thoroughly, and have review comments received from the public, regarding the Petition filed by TANGEDCO. After undertaking due process, the Commission hereby passes this order on True-Up of ARR for FY 2021-22 for TANGEDCO.

1.4.6 It may be noted that TANGEDCO has also sought to revise some of the figures for FY 2020-21, claiming restatement of accounts for FY 2020-21 on account of Ind AS conversion. However, the Commission has refrained from entertaining the same, as the True-Up for FY 2020-21 was already finalized in the Tariff Order No.7 of 2022.

## **1.5 PROCEDURE ADOPTED**

1.5.1 TANGEDCO has published the copy of the Petition and Additional Affidavit on their websites, inviting comments from stakeholders on 11<sup>th</sup> April 2023 and 24<sup>th</sup> January 2024.

1.5.2 The Commission has provided sufficient time to Stakeholders for submission of written comments and suggestions on the Petition filed by TANGEDCO.

- 1.5.3 In Commission's Daily Order dated 25<sup>th</sup> July 2023, Commission directed TANGEDCO to file revised details based on comments from some of the objectors.
- 1.5.4 In Commission's Daily Order dated 10<sup>th</sup> October 2023, the Commission directed TANGEDCO to furnish all details sought for by the objectors to clear their misgivings on the True-Up exercise. Commission also directed TANGEDCO to file revised details after obtaining Audit Report.
- 1.5.5 In Commission's Daily Order dated 24<sup>th</sup> January 2024, the Commission directed TANGEDCO to host the additional affidavit which was filed by the TANGEDCO on 10<sup>th</sup> January 2024 and to seek comments from the stakeholders with time limit of 15 days.
- 1.5.6 In Commission's Daily Order dated 20<sup>th</sup> February 2024, an additional affidavit was filed by TANGEDCO setting out the comments of stakeholders and replies of TANGEDCO thereto. Arguments of all sides were heard including comments of some of the objectors. Commission observed that the final order would be passed after taking into consideration all objections / submissions made by the stakeholders and the replies filed by TANGEDCO thereto.
- 1.5.7 The summary of objections / suggestions / views along with TANGEDCO's Replies and the Commission's ruling on each issue, are included in Annexure-II.

## **1.6 Ind AS CONVERSION**

- 1.6.1 It may be noted that when transfer scheme for TANGEDCO and TANTRANSCO were finalized in 2015, the Commission in its subsequent orders had decided to ignore the revaluation of assets, as the process of revaluation pertains only to book entry and has no material significance in regulatory process. Using the logic, the Commission has previously considered only book values, after removing the impact of revaluation, while undertaking True-Up.
- 1.6.2 Presently, a similar question arises with the impact of various revaluation and adjustments undertaken by TANGEDCO in its accounts, for the conversion from IGAAP to Ind AS. While the Commission is fully mindful of the need for standardization, book level revaluation on assets which were already being financed by consumers of the state cannot be used to load additional burden on the consumers.
- 1.6.3 It may also be noted that a substantial number of adverse opinions from the independent auditors are present in the audited accounts of TANGEDCO for FY 2022-23. Therefore, the Commission has considered the re-stated Ind AS values only in a partial manner. Further explanation on deviating from Ind AS values is provided in detail in the relevant sections of Chapter 2.

## **1.7 APPLICABILITY OF ORDER**

1.7.1 This Order will come into effect on and from the date of issue.

## **1.8 LAYOUT OF THE ORDER**

1.8.1 This Order is organized into following Chapters:

- a. **Chapter 1** provides introduction, process and the approach of the Order;
- b. **Chapter 2** provide details / analysis of the True-Up of ARR of TANGEDCO for the FY 2021-22;
- c. **Chapter 3** provide a list of directives issued by the Commission to TANGEDCO.

1.8.2 The Order contains Annexure also, which form part of the Order.

## **1.9 APPROACH OF THE ORDER**

1.9.1 The Commission has referred to the Audited Accounts of TANGEDCO for truing up the expenses for the FY 2021-22 in accordance with the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 and MYT Regulations. Based on the prudent check of the expenses and revenue reported in the Audited Accounts of TANGEDCO, the Commission has arrived at the allowable ARR and revenue recovered by the utility.

1.9.2 The Commission has considered the re-stated Ind AS values only in a partial manner. Further explanation on deviating from Ind AS values is provided in detail in the relevant sections of Chapter 2.

1.9.3 It may be noted that TANGEDCO has also sought to revise some of the figures for FY 2020-21, claiming restatement of accounts for FY 2020-21 on account of Ind AS conversion. However, the Commission has refrained from entertaining the same, as the True-Up for FY 2020-21 was already finalized in the Tariff Order No.7 of 2022.

## 2 FINAL TRUE UP FOR THE FY 2021-22

### 2.1 BACKGROUND

- 2.1.1 TANGEDCO, in its Petition, has sought final truing up of expenditure and revenue for the FY 2021-22 based on the 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 2021-22, and has undertaken the truing up of expenses and revenue after due prudent check.
- 2.1.2 A comparison of the actual expenditure incurred as per accounts of TANGEDCO and expenditure approved by the Commission in this Order are shown in the Tables under relevant sections discussed herein.

### 2.2 ENERGY SALES

- 2.2.1 TANGEDCO has submitted that the category-wise sales for the FY 2021-22 are provided in the petition as per Audited Accounts of the respective years. TANGEDCO has clarified that sales are excluding the wheeling units.

#### Commission's Views

- 2.2.2 The Commission has approved the actual sales for the FY 2021-22, as submitted by TANGEDCO, for all categories except Agriculture.
- 2.2.3 **Agriculture Category (LT IV)**- In Suo-Motu Order dated December 11, 2014, the Commission had stated the following:

*Agricultural category (LT IV): In its reply to data gaps identified by the Commission, TANGEDCO submitted the revised details of Agricultural consumption for FY 2012-13. The Commission observed that there was a significant downward revision in the number of agricultural service connections submitted in comparison to data in Form F-2 (Sales) of the petition. The revised agricultural load in HP at the end of the year had only increased marginally. However TANGEDCO increased its estimate of agricultural consumption by 1,382 MUs, i.e. from 9,707 MUs to 11,089 MUs.*

*The Commission re-estimated the agricultural consumption based on the average capacity of pumpset in the middle of the year as calculated below. The data on actual additional connections given as well as corresponding increase in load as submitted by TANGEDCO in its reply to data gaps has been considered. It has been assumed by the Commission that 50% of the connections and corresponding capacity would get added in the first half of the year. The average consumption in kWh/ HP has been capped at the level as it stood for FY 2016-17*



*based on the 5% sample study data submitted last year at 923 units. Based on the above assumptions the agricultural consumption for the year FY 2012-13 has been estimated as 10,206 MUs by the Commission.*

*Based on the average consumption per HP/ Annum as per the 5% sample data for FY 2012-13, TANGEDCO has estimated the annual consumption as 11,089 MUs. The Commission has calculated the average hours of daily supply to agricultural consumers based on this data. It was noticed that the average hours of daily supply for FY 2012-13 worked out to be higher than that of FY 2016-17. The Commission opines that this situation is improbable given the facts that the year 2012-13 saw higher shortage of power as compared to the previous year as well as that 2012-13 was a drought year. Given that additional connection to the tune of 15,539 were given in the State during the year, it is evident that the 5% sample data for FY 2012-13 cannot be considered for estimating annual consumption. Hence the Commission did not take into consideration the 5% sample study data submitted for FY 2012-13.”*

- 2.2.4 The Commission has estimated the Agriculture category sales for the FY 2021-22 in line with the above approach, considering average of 16,636,906 HP of agricultural load as submitted by TANGEDCO (considering connections regularized in the year also in closing balance), and benchmark consumption of 923 kWh per HP per annum.
- 2.2.5 The total sales for the FY 2021-22 as submitted by TANGEDCO and as approved by the Commission is shown in the Table below:

**Table 2-1: Total Sales for the FY 2021-22 as approved by the Commission (MU)**

Category of Consumer	Tariff Category	FY 2021-22		
		Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>HIGH TENSION</b>				
HT Industries	IA	12,562	12,562	12,562
Railway Traction	IB	1,038	1,038	1,038
Govt. Educational Institutions, Hospitals, Water supply etc.	IIA	1,548	1,548	1,548
Private Educational Institutions, Cinema Theatres & Studios	IIB	224	224	224
HT Commercial and all Categories not covered in other HT categories	III	1,703	1,703	1,703
Lift Irrigation and Cooperative Societies	IV	45	45	45
Temporary Supply	V	37	37	37
Supply to Puducherry		-	-	-
Sales to Other States (SWAP)		-	-	-
<b>Total HT</b>		<b>17,157</b>	<b>17,158</b>	<b>17,158</b>
<b>LOW TENSION</b>				
Domestic, Handloom, etc.	IA	30,771	30,257	30,257
Huts in Village panchayats, TAHDCO etc.	IB	434	390	390
Bulk Supply	IC	10	10	10
Public Lighting and Public Water Supply & Sewerage	IIA	2,375	2,383	2,383
Govt. Educational Institutions., Hospitals, Water supply etc.	IIB (1)	152	152	152
Private Educational Institutions, Cinema theatre & Studios	IIB (2)	160	157	157
Actual place of public worship, Mutts and Religious Institutions	IIC	121	119	119
Cottage and Tiny Industries	IIIA (1)	320	318	318
Power loom	IIIA (2)	932	912	912
All Industries not covered under LT Tariff IIIA(1) & IIIA(2)	IIIB	7,692	7,550	7,550
Agriculture and Govt. seed farm etc.	IV	16,456	15,430	15,356
Commercial and all categories not covered under IA, IB, IC, IIA, II B1, II B2, II C IIIA 1, III A2, IIIB and IV	V	7,033	6,955	6,955
Temp. supply (a) Lighting and combined installations, (b) Lavish illuminations, construction	VI	254	285	285
<b>Total LT</b>		<b>66,710</b>	<b>64,918</b>	<b>64,844</b>
<b>Grand Total</b>		<b>83,867</b>	<b>82,076</b>	<b>82,002</b>

## 2.3 ENERGY AVAILABILITY

2.3.1 TANGEDCO meets its energy requirements from its own generating stations, purchases from central generating stations, IPPs and other sources.

2.3.2 TANGEDCO has submitted its audited accounts for FY 2021-22.

2.3.3 Based on the information available from the audited accounts, the Commission in this Section has analysed the performance of TANGEDCO's own generating stations. The source wise availability of energy has been discussed first for TANGEDCO's own generating stations and then for other sources which includes Central Generating Stations, IPPs, Renewable sources etc.

### A. Own Generation

2.3.4 Based on Plant Load Factor (PLF) and Auxiliary Consumption discussed subsequently in this Order, the net generation from own stations for the FY 2021-22 as submitted by TANGEDCO is shown in the Table below:

**Table 2-2: Energy availability from own stations as submitted by TANGEDCO (MU)**

Sl. No.	Station	FY 2021-22
1	Tuticorin TPS	4,524
2	Mettur TPS I	4,387
3	North Chennai TPS	3,001
4	North Chennai Stage II TPS	4,128
5	Mettur TPS II	2,554
	<b>Total Thermal</b>	<b>18,594</b>
1	Tirumakottai GTPS	117
2	Kuttalam GTPS	327
3	Basin Bridge GTPS	0
4	Valathur GTPS	878
	<b>Total Gas</b>	<b>1,322</b>
	Hydro	<b>5,493</b>
	Wind	0
	<b>Grand Total</b>	<b>25,409</b>

### Commission's Views

2.3.5 Energy availability from generating stations is dependent on operational parameters, viz., PLF and Auxiliary consumption. For the purpose of truing up, to estimate energy availability from own generating stations, the Commission has approved TANGEDCO's submission after considering normative technical parameters, as shown in the Table below. The Commission has also considered 3 MU of availability from wind power plant

after comparing against the technical performance parameters submitted by TANGEDCO:

**Table 2-3: Energy Availability from own generating stations approved by the Commission after True-Up for the FY 2021-22 (MU)**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
1	Tuticorin TPS	4,539	4,524	4,536
2	Mettur TPS I	4,388	4,387	4,387
3	North Chennai TPS	3,071	3,001	3,068
4	North Chennai Stage II TPS	4,196	4,128	4,128
5	Mettur TPS II	2,570	2,554	2,554
	<b>Total Thermal</b>	<b>18,764</b>	<b>18,594</b>	<b>18,674</b>
1	Tirumakottai GTPS	146	117	146
2	Kuttalam GTPS	340	327	340
3	Basin Bridge GTPS	6	0	0
4	Valathur GTPS	886	878	886
	<b>Total Gas</b>	<b>1,378</b>	<b>1,322</b>	<b>1,372</b>
	Hydro	<b>5,057</b>	<b>5,493</b>	5,471
	Wind	<b>4</b>	0	3
	<b>Total</b>	<b>25,204</b>	<b>25,409</b>	<b>25,520</b>

## B. Power Purchase from Other Sources

2.3.6 TANGEDCO submitted the power purchase from outside/other sources for the FY 2021-22 after excluding wheeling units, as shown in the following Table:

**Table 2-4: Energy availability from Other Sources as submitted by TANGEDCO (MU)**

Source	FY 2021-22
CGS	37,005
IPPs	1,477
Captive & Nonconventional sources	11,105
Other sources (Trading/Bilateral etc.)	23,200
<b>Total</b>	<b>72,787</b>

### Commission's Views

2.3.7 The Commission has verified the details of power purchase from other sources from the audited accounts of respective years. For the purpose of truing up, the Commission has approved total energy availability from other sources as submitted by TANGEDCO, as shown in the Table below:

**Table 2-5: Energy availability from Other sources approved by the Commission after True-Up (MU)**

Source	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
CGS	37,053	37,005	37,005
IPPs	1,568	1,477	1,477
Captive & Non-conventional sources	10,120	11,105	11,105
Other sources (Trading/Bilateral etc.)	23,343	23,200	23,200
<b>Total</b>	<b>72,084</b>	<b>72,787</b>	<b>72,787</b>

### C. Summary of total energy availability

2.3.8 Based on the approval given above, the summary of total energy available to TANGEDCO during FY 2021-22 is shown in the Table below:

**Table 2-6: Total Energy availability for TANGEDCO approved by the Commission after True-Up (MU)**

Source	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Own Generation	25,204	25,409	25,520
CGS	37,053	37,005	37,005
IPPs	1,568	1,477	1,477
Captive & Non-conventional sources	10,120	11,105	11,105
Other sources (Trading / Bilateral etc.)	23,343	23,200	23,200
<b>Total</b>	<b>97,288</b>	<b>98,196</b>	<b>98,307</b>

## 2.4 ENERGY BALANCE AND DISTRIBUTION LOSSES

2.4.1 TANGEDCO submitted the Energy Balance statement for the FY 2021-22 excluding wheeling units, as shown in the following Table:

**Table 2-7: Energy Balance as submitted by TANGEDCO (MU)**

Description	FY 2021-22
LT Sales (MU)	64,918
HT Sales (up to 33 KV) (MU)	13,427
Sales to consumers below 33 KV (MU)	78,346
Additional power to Kadamparai (MU)	-
Distribution Loss (%)	11.84%
Distribution Loss (MU)	10,517
<b>Energy input at Distribution periphery (MU)</b>	<b>88,863</b>
Sales above 33 KV (MU)	3,730

Description	FY 2021-22
Transmission Losses (%)	3.77%
<b>Energy required at State boundary (MU)</b>	<b>96,221</b>
PGCIL Losses (MU)	2,065
<b>Total Power Required (MU)</b>	<b>98,286</b>

#### Commission's Views

- 2.4.2 For FY 2021-22, the transmission and distribution losses have been separately approved by the Commission in previous Tariff Order in 2022. The same is now taken for calculation of energy balance.
- 2.4.3 Further, the Commission has noted that even though 250 MU is consumed in Kadamparai for pump mode operations, the same is not considered by TANGEDCO in energy balance. TANGEDCO has also clarified that the entire generation from the plant is included in the energy availability and generation. Considering the same, an additional power of 250 MU is approved for pumping in Kadamparai PSP in energy balance.
- 2.4.4 Considering the above, and submission of TANGEDCO, the following energy balance has been arrived at.

**Table 2-8: Energy Balance approved by the Commission after True-Up for the FY 2021-22 (MU)**

Description	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
LT Sales (MU)	66,710	64,918	64,844
HT Sales (up to 33 KV) (MU)	14,904	13,427	13,427
Sales to consumers below 33 KV (MU)	81,614	78,346	78,271
Additional power to Kadamparai (MU)		-	250
Distribution Loss (%)	11.50%	11.84%	11.50%
Distribution Loss (MU)	10,605	10,517	10,171
<b>Energy input at Distribution periphery (MU)</b>	92,219	<b>88,863</b>	88,442
Sales above 33 KV (MU)	2,253	3,730	3,980
Transmission Losses (%)	3.81%	3.77%	3.81%
<b>Energy required at State boundary (MU)</b>	98,214	<b>96,221</b>	96,083
PGCIL Losses (MU)	1,721	2,065	2,065
<b>Total Power Required (MU)</b>	99,935	<b>98,286</b>	98,149

2.4.5 Based on the power purchase and availability approved above, the Power Purchase quantum allowed by the Commission after True-Up for the FY 2021-22, is shown in the Table below:

**Table 2-9: Power Purchase Quantum allowed after True-Up for the FY 2021-22(MU)**

Sl. No.	Description	Legend	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
1	<b>Total Power Purchase Requirement</b>	<b>A</b>	97,288	98,196	98,149
2	Energy Purchased from own sources	B.1	25,204	25,409	25,520
3	Energy Purchased from CGS	B.2	37,053	37,005	37,005
4	Energy Purchase from renewable sources	B.3	10,120	11,105	11,105
5	Energy purchase from IPP	B.4	1,568	1,477	1,477
6	Energy purchase from Trader/Exchange	B.5	23,343	23,200	23,200
7	<b>Total Power Purchase/availability as given by TANGEDCO</b>	<b>B*</b>	97,288	98,196	98,307
8	<b>Excess Purchase/availability</b>	<b>C = B-A</b>	0	0	158

\*B= B1+B2+B3+B4+B5

## 2.5 FIXED EXPENSES

2.5.1 TANGEDCO submitted that it has considered the Fixed Cost for its Generating Stations and Distribution function on the basis of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 and Audited Accounts for FY 2021-22.

2.5.2 The Fixed Costs are categorized under the following heads:

- i. Operation and Maintenance Expenses
- ii. Depreciation
- iii. Interest and Finance Charges
- iv. Return on Equity
- v. Interest on Working Capital
- vi. Other Debits
- vii. Operating Charges and Extra-ordinary Items
- viii. Prior Period Items
- ix. Non- Tariff Income and Other Income

## 2.6 OPERATION & MAINTENANCE EXPENSES

- 2.6.1 The Operation and Maintenance expense includes actual expenses incurred by TANGEDCO towards Employee Expenses, Administrative and General Expenses (A&G) and Repair and Maintenance Expenses (R&M).
- 2.6.2 TANGEDCO submitted that the O&M expenses claimed in the True-Up for Generation and Distribution function for the FY 2021-22 are based on Audited Accounts for the respective years, after excluding O&M costs incurred towards TANGEDCO's wind farms and upcoming thermal power plants.
- 2.6.3 TANGEDCO requested the Commission to allow the Audited O&M expenses incurred by the Generation and Distribution function for the FY 2021-22.
- 2.6.4 TANGEDCO has submitted that there is an increase in employee expenses, mainly on account of wage revisions, inflations, etc. which are beyond the control of TANGEDCO. TANGEDCO has also submitted that they have tried to minimize R&M expenses in spite of the substantial age of most assets.
- 2.6.5 The plant-wise actual O&M expenses as submitted by TANGEDCO are shown in the Table below:

**Table 2-10: O&M Expenses as submitted by TANGEDCO (Rs. Crore)**

Sl.No	Power Station	FY 2021-22
1	Tuticorin TPS	241
2	Mettur TPS I	243
3	North Chennai TPS	142
4	NCTPS Stage II	108
5	Mettur TPS II	25
6	Tirumakottai GTPS	14
7	Kuttalam GTPS	7
8	Basin Bridge GTPS	14
9	Valuthur GTPS	137
10	Erode HEP	147
11	Kadamparai HEP	43
12	Kundah HEP	57
13	Tirunelveli HEP	70
<b>14</b>	<b>Total Generation</b>	<b>1,248</b>
<b>15</b>	<b>Distribution</b>	<b>8,708</b>
	<b>Total TANGEDCO</b>	<b>9,956</b>



## Commission's Views

### A. Employee Expenses

- 2.6.6 In accordance with the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, employee expenses except DA have been escalated at 5.72% to arrive at employee expenses of each year.
- 2.6.7 As per the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, only the increase in costs due to inflation is required to be passed through in tariff. DA percentage notified by the GoTN is dependent on inflation and hence, increase in employee costs to the extent of DA variation has been allowed as a pass through in tariff. Therefore, the DA rates notified by GoTN have been used for estimating the DA instead of taking an escalation of 5.72% as per the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

### B. Repair and Maintenance (R&M) Expenses

- 2.6.8 For approving R&M expenses, the Commission has adopted the same approach as specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, by considering escalation of 5.72% Y-o-Y.

### C. Administrative and General (A&G) Expenses

- 2.6.9 For approving R&M expenses, the Commission has adopted the same approach as specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, by considering escalation of 5.72% Y-o-Y.
- 2.6.10 The O&M expenses approved by the Commission after True-Up for the FY 2021-22 is shown in the Tables below:

**Table 2-11: O&M expenses approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Description	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Tuticorin TPS	362	241	296
Mettur TPS I	292	243	262
North Chennai TPS	264	142	225
NCTPS Stage II	156	108	69
Mettur TPS II	259	25	3
Tirumakottai GTPS	15	14	14
Kuttalam GTPS	25	7	5
Basin Bridge GTPS	13	14	11
Valuthur GTPS	27	137	20
Erode HEP	90	147	68
Kadamparai HEP	48	43	36

Description	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Kundah HEP	82	57	61
Tirunelveli HEP	74	70	57
<b>Grand Total Generation</b>	<b>1,708</b>	<b>1,248</b>	<b>1,126</b>
<b>Distribution</b>	<b>8,937</b>	<b>8,708</b>	<b>9,187</b>
<b>Generation plus Distribution</b>	<b>10,645</b>	<b>9,956</b>	<b>10,312</b>

2.6.11 TANGEDCO has claimed expenses under the head of Operating Charges, the details of which have been shown subsequently. As TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 do not allow any separate expenses over and above the specified expenses; the Commission has not allowed Operating Charges as sought by TANGEDCO.

## 2.7 CAPITAL EXPENDITURE AND CAPITALIZATION

2.7.1 TANGEDCO submitted that the expenditure incurred in each power station is on account of regular works like replacement of worn-out machinery, damaged equipment, transformers, boilers, generators, stators, auxiliary equipment, etc., which are necessary works to be carried out for effective and efficient working of the power station.

2.7.2 The expenditure incurred for the Distribution function during the respective years is on account of regular works carried out, which were necessary for efficient working of the distribution system. The works carried out for the distribution function are mainly on account of addition of LT and HT lines, distribution transformers, services rendered during the respective years, and works carried out under RGGVY/RAPDRP/IPDS schemes.

2.7.3 TANGEDCO further submitted that the additional capitalization during the respective years is in line with Regulation 19 of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, which have been incurred for efficient and successful operation of the Generating Stations and Distribution Network.

**Table 2-12: CAPEX and Capitalization submitted by TANGEDCO (Rs. crore)**

	FY 2021-22	
	Capital Expenditure	Capitalization
Total Generation	796	200
Total Distribution	1,440	488
<b>Total TANGEDCO</b>	<b>2,237</b>	<b>688</b>

## Commission's Views

- 2.7.4 Considering that the CAPEX and capitalization refers to actual expenditure incurred, the Commission approves the same as below.

**Table 2-13: CAPEX and Capitalization approved by ERC (Rs. crore)**

	FY 2021-22	
	Capital Expenditure	Capitalization
Total Generation	796	200
Total Distribution	1,440	488
<b>Total TANGEDCO</b>	<b>2,237</b>	<b>688</b>

## 2.8 DEPRECIATION

- 2.8.1 TANGEDCO submitted that for working out depreciation, the opening GFA for each of the generating stations and for distribution business for FY 2021-22 is considered same as the closing GFA for FY 2020-21.
- 2.8.2 The asset additions during the year have been considered as per audited figures during the respective period. The closing GFA for FY 2021-22 has been arrived by adding the asset capitalised and by deducting the asset de-capitalised, if any, during the respective year.
- 2.8.3 The actual depreciation for generating and distribution function of TANGEDCO as per Ind AS is Rs. 3876.92 Crore for FY 2020-21 and Rs. 3,810.16 for FY 2021-22. TANGEDCO submitted that aforesaid depreciation is due to the reinstatement of fair value in line with Ind AS Accounting. The depreciation has been computed on the opening GFA of respective years in line with the Regulation 24 of the TNERC Tariff Regulations.
- 2.8.4 The actual generating station-wise depreciation for the FY 2021-22 as submitted by TANGEDCO is shown in the Table below:

**Table 2-14: Depreciation as submitted by TANGEDCO (Rs. Crore)**

Sl. No.	Power Station	FY 2021-22
1	Tuticorin TPS	90
2	Mettur TPS I	26
3	North Chennai TPS	78
4	NCTPS Stage II	236
5	Mettur TPS II	564
6	Tirumakottai GTPS	14
7	Kuttalam GTPS	22
8	Basin Bridge GTPS	-
9	Valuthur GTPS	59
10	Erode HEP	87

Sl. No.	Power Station	FY 2021-22
11	Kadamparai HEP	14
12	Tirunelveli HEP	42
13	Kundah HEP	37
<b>14</b>	<b>Total Generation</b>	<b>1,268</b>
<b>15</b>	<b>Distribution</b>	<b>2,542</b>
	<b>Total TANGEDCO</b>	<b>3,810</b>

### Commission's Views

- 2.8.5 The Commission is constrained from merely going by the restated asset values as provided in Ind AS accounts of TANGEDCO due to a variety of reasons.
- 2.8.6 To start with, mere book adjustment of values cannot be used to create additional liabilities for the consumers, whose money was used to create those assets. This has been the practice of the Commission in the past also, where asset revaluation during Transfer Scheme of 2015 was also not considered.
- 2.8.7 In addition, it may be noted that even the Independent Auditors of TANGEDCO has provided Adverse Opinion on substantial aspects related to asset accounting and revaluation. Excerpts from the observations are provided below:

*Adverse Opinion of Independent Auditors as recorded in Annual Report (emphasis added)*

*"In our opinion and to best of our information und according to the explanations given to us, because of the of the matters discussed in the Basis of Adverse Opinion section of our report, the aforesaid standalone financial statements do not give the information required by the Companies Act, 2013 ("the Act") in the manner so required and do not give a true and fair view in conformity with accounting principles generally accepted in India including Indian Accounting A S") specified under section 133 of the Act, of the state of affairs of the Company as at March 31, 2022 and its loss (including other comprehensive income), its cash flows and the changes in equity for the year ended on that date.*

..

*Basis for Adverse Opinion:*

*Property, Plant and Equipment (PPE)*

*1. In respect of the fair valuation exercise of PPE, carried out as on the date of transition to Ind AS i.e., 1st April 2019 and having an impact on the opening balance of PPE as on 1st April 2021, we observed the following:*

- a) In general, with regard to quantity, date of capitalisation and the useful life of PPE as certified by the management, the maintenance o/ sufficient supporting documents to corroborate the details as stated above requires strengthening.*
- b) Further, in the absence of sufficient supporting document we are **unable to***

***confirm whether physical, technical, and economic obsolescence have been factored in the valuation of PPE.***

*c) In respect of most of the lands, title deeds are not registered in the name of the Company. In addition, sufficient supporting documents for rate adopted for valuing lands have not been made available. Further, documents provided for land area measurement do not correspond with the measurement considered for the purpose of valuation. In the absence of adequate information, we are unable to quantify the impact of the above on the valuation of land.*

*d) In respect of building and other civil works, sufficient supporting documents to confirm the built-up area were not made available.*

....

*2. In respect of additions to PPE during the Financial year 2021—22, we observed the following:*

*a) In respect of additions to the value of Plant and Machinery and other assets during the year, cost adopted for value of materials issued upto 31<sup>st</sup> March 2021, ie., prior to the date of implementation of ERP is **at standard Cost and not at actual cost which is not in accordance with Ind AS 16.** Further in respect of some account rendering units, the value of additions to plant and machinery is the **work Order sanctioned amount which is only an estimated value which is also not in accordance with Ind AS 16.***

...

*c) We are **unable to comment on whether physical verification of PPE has been conducted** during the year since no reports were made available to us for our verification.*

*d) The **Company has not conducted any impairment assessment of its PPE** including co-generation facilities located at sugar mills and other financial assets.*

*e) Balance of PPEs as at the yearend appears as credit balance in the books of various account rendering units which is neither explained nor corrected.*

...

*3. **The balance as per PPE Register maintained in SAP has not been reconciled with the balance as per books of account.** In the absence of such reconciliation, we are unable to comment on the completeness and accuracy of the PPE balance.*

*4. Several work orders have been capitalised during the year ended 31<sup>st</sup> March 2022 and forming part of PPE Whereas such completed work orders have been considered as part of PPE at the time of transition to Ind AS. Consequently, the PPE balance in respect of these work orders, to the extent already capitalized may be overstated. **The consequential impact on the PPE and Statement of***

*profit and Loss is unascertainable due to non-availability of proper information and explanation.”*

- 2.8.8 The above is only select excerpts from the observations of the Auditors. The Auditors continue to go on with detailing further observations relating to asset costs, depreciation etc.
- 2.8.9 Considering these factors, the Commission has decided to go by the original closing GFA of FY 2020-21 as approved in previous tariff order for the opening GFA of FY 2021-22, instead of going by the revalued asset base.
- 2.8.10 While approving the depreciation for the FY 2021-22 the opening GFA (excluding land) for each generating station for FY 2021-22 has been considered same as the closing GFA for FY 2020-21 as approved in the previous tariff order. Depreciation rates have also been adopted from the same order.

**Table 2-15: Depreciation approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Description	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Tuticorin TPS	151	90	78
Mettur TPS I	84	26	32
North Chennai TPS	155	78	67
NCTPS Stage II	276	236	353
Mettur TPS II	388	564	465
Tirumakottai GTPS	29	14	15
Kuttalam GTPS	35	22	25
Basin Bridge GTPS	34	-	-
Valuthur GTPS	40	59	30
Erode HEP	183	87	137
Kadamparai HEP	28	14	15
Kundah HEP	64	37	28
Tirunelveli HEP	46	42	37
<b>Total Generation</b>	<b>1,512</b>	<b>1,268</b>	<b>1,282</b>
<b>Distribution</b>	<b>1,457</b>	<b>2,542</b>	<b>1,413</b>
<b>Total TANGEDCO</b>	<b>2,968</b>	<b>3,810</b>	<b>2,880</b>

## 2.9 INTEREST ON LOAN AND OTHER FINANCING CHARGES

2.9.1 TANGEDCO submitted that the loan from Financial Institutions as shown in the books of accounts is not linked with any particular generating plant or the CAPEX schemes, as the erstwhile TNEB used to have a basket of loans, which was used to meet the total capital expenditure of erstwhile TNEB. Hence, it is difficult to identify the debt / interest and equity of the generating plant or distribution function separately.

**Table 2-16: Interest and Finance charges as submitted by TANGEDCO (Rs. Crore)**

Sl.	Description	FY 2021-22
1	Tuticorin TPS	709
2	Mettur TPS I	395
3	North Chennai TPS	744
4	NCTPS Stage II	360
5	Mettur TPS II	388
6	Tirumakottai GTPS	158
7	Kuttalam GTPS	138
8	Basin Bridge GTPS	303
9	Valuthur GTPS	222
10	Erode HEP	348
11	Kadamparai HEP	138
12	Kundah HEP	353
13	Tirunelveli HEP	209
<b>14</b>	<b>Total Generation</b>	<b>4,465</b>
<b>15</b>	<b>Distribution</b>	<b>3,950</b>
	<b>Total TANGEDCO</b>	<b>8,415</b>

### Commission's Views

#### A. Interest on Loan

2.9.2 The Commission has adopted a new methodology for estimation of interest cost in its APR of FY 2021-22 in its previous tariff order. As per the methodology, loans are considered to be linked to GFA and GFA addition, from FY 2020-21. As Commission does not approve any Return on Equity to TANGEDCO due to historical issues related to non-segregation of capital and revenue borrowing and potential diversion of equity to fund revenue expenditure, GFA and GFA additions are assumed to be funded entirely with loans, for the purpose of estimation of interest expenses.

2.9.3 The interest expenses determined as per the methodology are provided below.

**Table 2-17: Loan and Interest Expenses approved by the Commission (Rs. crore)**

Description	FY 2021-22
Opening GFA	67,099
Loan %	100%
Opening Loan	67,099
GFA Addition	688
Loan Addition <sup>#</sup>	27,483 <sup>#</sup>
Loan Repayment	2,880
Closing Loan	91,702
Average Loan	<b>79,400</b>
Interest on loan	<b>7,694</b>
Interest on Loan (%)	9.69%
Other finance charges	357
Interest on consumer security deposit	541
<b>Total interest and finance charges</b>	<b>8,592</b>

*# This is inclusive of the loans raised under Liquidity Infusion package announced by GoI under Atma Nirbhar Bharath Scheme.*

2.9.4 As there is no proper station wise loan portfolio, the above determined interest is allocated among the stations in the ratio of interest estimated by TANGEDCO.

**Table 2-18: Break up of Interest Expenses approved by the Commission after True-Up for the FY 2021-22 (Rs. Crore)**

Power Station	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Tuticorin TPS	680	709	723
Mettur TPS I	406	395	403
North Chennai TPS	727	744	760
NCTPS Stage II	479	388	396
Mettur TPS II	396	360	367
Tirumakottai GTPS	162	158	161
Kuttalam GTPS	141	138	141
Basin Bridge GTPS	304	303	309
Valuthur GTPS	229	222	227
Erode HEP	352	348	355
Kadamparai HEP	142	138	141
Kundah HEP	336	353	361
Tirunelveli HEP	214	209	213



Power Station	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>Total Generation</b>	<b>4,568</b>	<b>4,465</b>	<b>4,558</b>
<b>Total Distribution</b>	<b>4,192</b>	3,950	4,033
<b>Total TANGEDCO</b>	<b>8,759</b>	<b>8,415</b>	<b>8,592</b>

## B. Other Finance Charges

2.9.5 TANGEDCO has clarified that all other finance charges have already been included as part of interest charges and the same has been considered by the Commission in the previous sub-section.

## 2.10 RETURN ON EQUITY

2.10.1 TANGEDCO submitted that it has considered rate of return on equity at 14% based on the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 and RoE has been calculated on the average equity balance of each generating station and distribution function.

2.10.2 TANGEDCO further submitted that the Commission in its last Tariff Order disallowed RoE on the grounds that loan borrowing is more than the capital expenditure incurred. TANGEDCO submitted that the Utility is entitled for RoE on the amount invested every year to carry out future capacity additions, in accordance with Regulation 21 of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 reproduced below:

*“21. Debt-Equity Ratio*

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

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

2.10.3 TANGEDCO also submitted that the cost of equity is always higher than the cost of finance and depriving TANGEDCO of RoE of 14% is resulting in additional cost burden on the cash starved Utility.

2.10.4 TANGEDCO submitted that it has claimed RoE based on the opening balance of actual equity reflected in the Audited Accounts of FY 2021-22 and requested that RoE may be allowed on the grounds that actual equity is being infused in the TANGEDCO system

during that respective year. RoE claimed by TANGEDCO in truing up for the FY 2021-22 has been shown in the Table below:

**Table 2-19: Return on Equity as claimed by TANGEDCO (Rs. Crore)**

Sl. No.	Description	FY 2021-22
1	Tuticorin TPS	50
2	Mettur TPS I	32
3	North Chennai TPS	64
4	NCTPS Stage II	122
5	Mettur TPS II	62
6	Tirumakottai GTPS	12
7	Kuttalam GTPS	13
8	Basin Bridge GTPS	41
9	Valuthur GTPS	24
10	Erode HEP	56
11	Kadamparai HEP	13
12	Kundah HEP	39
13	Tirunelveli HEP	19
<b>14</b>	<b>Total Generation</b>	<b>548</b>
<b>15</b>	<b>Distribution</b>	<b>729</b>
	<b>Total TANGEDCO</b>	<b>1,277</b>

### Commission's Views

2.10.5 In the Suo-Motu Order dated December 11, 2014, the Commission has stated the following reason for disallowing RoE to TANGEDCO:

*“3.106 In last year order Commission has not considered the equity requirement while approving the funding requirement of capital expenditure. This stand was taken because Commission is of the view that TANGEDCO is mixing the revenue account with capital account and the equity approved may be again diverted to revenue account. This can also be observed from TANGEDCO audited accounts wherein the actual borrowings for FY 11 and FY 12 are significantly higher than capital expenditure. TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 also allow the Commission for approving the equity below the norms of 30% requirement. The relevant extracts of the regulation are reproduced below:*

#### *“21. Debt-Equity Ratio*

*For the purpose of determination of tariff, debt-equity ratio as on the date of commercial operation of Generating Station and transmission projects, sub-station, distribution lines or capacity expanded after the notification of these Regulations shall be 70:30. Where equity employed is more than*

*30% the amount of equity shall be limited to 30% and the balance amount shall be considered as loans, advanced at the weighted average rate of interest and for weighted average tenor of the long term debt component of the investment”*

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

*3.107 Based on the above submissions, Commission has not allowed any return on equity due to the following reasons:*

*i. Commission has approved interest on total outstanding loans as on November 2010*

*ii. Based on available sources of funding, equity has been diverted towards revenue account from FY 2003 and hence the addition in equity base as per audited accounts is on account of funding the revenue expenditure and not for creation of capital assets.*

*iii. Loans approved for funding the capital expenditure for generating stations and distribution business during the control period are without considering the equity*

*3.108 The Commission continues to take the same stand and is not allowing any return on equity for the current tariff order also.”*

2.10.6 The Suo-Motu Order of the Commission was challenged by Tamil Nadu Electricity Consumers Association (TECA) before the Hon’ble APTEL in Appeal No. 62 and 63 of 2015. The Hon’ble APTEL in its Judgment dated March 2, 2016, upheld the Suo-Motu Order in its entirety.

*“15. The present Appeals, being Appeal Nos. 62 of 2015 and 63 of 2015, are hereby dismissed and **the impugned suo-motu tariff orders, being SMT Order Nos. 8 of 2014 and 9 of 2014, each dated 11.12.2014, passed by the Tamil Nadu Electricity Regulatory Commission, are hereby upheld. There shall be no order as to costs.**”*

2.10.7 As the Suo-Motu Order of the Commission has not been further appealed before any higher authority, it has attained finality. The same approach has also been adopted in the previous tariff order in 2022.

2.10.8 Hence, the Commission has adopted the same approach while approving RoE as adopted in the earlier Orders. No RoE has been approved in the truing up for the FY 2021-22.

## 2.11 INTEREST ON WORKING CAPITAL (IOWC)

2.11.1 TANGEDCO has submitted that it has claimed normative IoWC as specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. However, in accordance with the past Tariff Order, the Security Deposit amount has been excluded from the working capital requirement of Distribution for computation of IoWC, though the same is not specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

2.11.2 The IoWC claimed by TANGEDCO is shown in the Table below:

**Table 2-20: Interest on Working Capital as submitted by TANGEDCO (Rs. Crore)**

Sl. No.	Description	FY 2021-22
1	Tuticorin TPS	105
2	Mettur TPS I	87
3	North Chennai TPS	70
4	NCTPS Stage II	93
5	Mettur TPS II	75
6	Tirumakottai GTPS	7
7	Kuttalam GTPS	8
8	Basin Bridge GTPS	8
9	Valuthur GTPS	11
10	Erode HEP	20
11	Kadamparai HEP	3
12	Kundah HEP	12
13	Tirunelveli HEP	9
<b>14</b>	<b>Total Generation</b>	<b>508</b>
<b>15</b>	<b>Distribution</b>	<b>38</b>
	<b>Total TANGEDCO</b>	<b>546</b>

### Commission's Views

2.11.3 The Commission has approved the IoWC separately for generation and distribution function of TANGEDCO in accordance with Regulation 26 of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 as reproduced below, and after deducting the amount of consumer security deposit from the working capital requirement, in line with the approach adopted in the suo-motu Order.

*“26. Working Capital*

*(1).....*

*(2) Till such a formula is evolved, the norms for Working Capital shall be as below:*

*(a) For Coal based / Lignite fired Generating Stations*

- i. Cost of coal or lignite for one and half month for pit head generating stations and two months for non pit head generating stations corresponding to the target availability;*
- ii. Cost of secondary fuel oil for two months corresponding to the target availability;*
- iii. Operation and Maintenance expenses for one month;*
- iv. Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and*
- v. Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on target availability.*

*(b) For Gas Turbine / combined cycle Generating Stations*

- i. Fuel cost for one month corresponding to the target availability duly taking into account the mode of operation of the Generating Station on gas fuel and liquid fuel;*
- ii. Liquid fuel stock for half month;*
- iii. Operation and Maintenance expenses for one month;*
- iv. Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and*
- v. Receivables equivalent to two months of fixed and variable charges for sale of electricity calculated on target availability.*

*(c) For Hydro Power Generating Stations*

*The working Capital shall cover:*

- i. Operation and Maintenance expenses for one month;*
- ii. Maintenance spares @ 1% of the historical cost escalated @ 6% per annum from the date of commercial operation; and*
- iii. Receivables equivalent to two months of fixed charges for sale of electricity, calculated on normative capacity index.*

.....

*(e) For Distribution System*

- i. Operation and Maintenance expenses for one month*
- ii. Maintenance spares for two months based on annual requirement considered at 1% of the gross fixed cost at the beginning of the year.*
- iii. Receivable equivalent to sixty days consumption charges.”*

2.11.4 Further, as it is difficult to estimate the historical cost of assets for the generation function, the Commission has approved maintenance spares at 1% of opening GFA for

respective years. The assets have been segregated between generation and distribution function based on the GFA details submitted by TANGEDCO. The interest rate for approving IoWC has been considered as specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, i.e., Prime Lending Rate of State Bank of India as on April 1<sup>st</sup> of the respective year.

2.11.5 The normative IoWC for Distribution function works out to be negative and has hence, been considered as zero for most years.

2.11.6 Interest rate has been taken as 12.15%.

2.11.7 IoWC approved by the Commission after True-Up from FY 2021-22 has been shown in the Tables below:

**Table 2-21: Interest on Working Capital approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Description	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Tuticorin TPS	99	105	96
Mettur TPS I	62	87	53
North Chennai TPS	72	70	49
NCTPS Stage II	72	93	44
Mettur TPS II	93	75	64
Tirumakottai GTPS	6	7	7
Kuttalam GTPS	11	8	7
Basin Bridge GTPS	10	8	8
Valuthur GTPS	12	11	11
Erode HEP	18	20	17
Kadamparai HEP	6	3	5
Kundah HEP	12	12	12
Tirunelveli HEP	9	9	8
<b>Total Generation</b>	<b>482</b>	<b>508</b>	<b>381</b>
<b>Distribution</b>	<b>-</b>	<b>38</b>	<b>-</b>
<b>Total TANGEDCO</b>	<b>482</b>	<b>546</b>	<b>381</b>

## 2.12 OTHER DEBITS

2.12.1 TANGEDCO submitted that Other Debits incurred during FY 2021-22 are related to the relevant revenue expenditure discussed in the above sections and hence may be allowed entirely.

**Table 2-22: Other Debits as submitted by TANGEDCO (Rs. Crore)**

Description	FY 2021-22
Total Other Debits	25

**Commission's Views**

2.12.2 The above expenses are either relating to provision for bad and doubtful debts or come under O&M expenses. During the relevant period, there is no regulatory provision for recovering expenses related to bad and doubtful expenses from the tariff. Further, remaining expenses are already accounted as part of O&M expenses. Therefore, the Commission does not approve any expense under this head for the True-Up period.

**2.13 OPERATING CHARGES AND EXTRA-ORDINARY ITEMS**

2.13.1 TANGEDCO submitted that in order to run a generating station effectively and efficiently, certain costs are incurred, which are not covered under any of the fixed cost components specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005. These costs are minimal but necessary in order to run a plant at its optimum level and hence, TANGEDCO is entitled to recover such cost through its ARR. These costs include other fuel related costs, cost of water and lubricants and consumables for thermal and gas generating stations. For hydro generating stations, these costs are relating to station supplies and cost of water for Hydel power.

2.13.2 TANGEDCO submitted that it has categorized such costs under the head Operating Charges. The Operating Charges and extra-ordinary items as submitted by TANGEDCO are shown in the Table below:

**Table 2-23: Operating Charges and Extra-ordinary Items as submitted by TANGEDCO (Rs. crore)**

Description	FY 2021-22
Total Operating Charges	471

**Commission's Views**

2.13.3 It is clarified that the Operating Charges and Extra-Ordinary Items claimed by TANGEDCO separately are actually a part of the normative O&M expenses and have been considered there, as discussed earlier in this Chapter. Hence, the Operating Charges and Extra-Ordinary Items have not been allowed separately.

**2.14 PRIOR PERIOD ITEMS**

2.14.1 TANGEDCO submitted that the prior period items are mainly on account of payments made relating to power purchase, revision in tariff payments and fuel price adjustment to

Central Generating Stations. It also includes employee cost, interest and other administrative expenses relating to prior period.

2.14.2 TANGEDCO submitted that under Ind AS there is no concept of prior period income or expenses. Any change in relation to previous years arising out of changes in accounting policies, correction of error or reclassification or crystallisation of contingent liability is adjusted by restating the comparative year number or if the adjustment relates to years that are before the comparative provided, opening balances of assets, liabilities and equity are restated for such effect. Hence, on transition to Ind AS, TANGEDCO audited statement for FY 2021-22 has made the adjustment for prior period items in FY 2020-21 and the effect of the same has been provided in FY 2020-21 in the respective heads.

**Table 2-24: Prior period items, submitted by TANGEDCO for the FY 2021-22 (Rs. crore)**

Description	FY 2021-22
Prior period items	0

### Commission's Views

2.14.3 Based on the submissions provided by TANGEDCO regarding the applicability of these expenses, the Commission have approved prior period items as below.

**Table 2-25: Prior period items, approved by ERC for the FY 2021-22 (Rs. crore)**

Description	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Prior period items	0	0	0

## 2.15 OTHER INCOME AND NON-TARIFF INCOME

2.15.1 TANGEDCO submitted that Other Income mainly comprises interest on staff loans and advances, income from investments, income from trading, rebate on power purchase bills, interest on staff welfare, and gain on sale of fixed asset. Other Income for the FY 2021-22 as submitted by TANGEDCO is shown in the Table below:

**Table 2-26: Other Income as submitted by TANGEDCO (Rs. Crore)**

Sl. No.	Description	FY 2021-22
1	Tuticorin TPS	32
2	Mettur TPS I	66
3	North Chennai TPS	23
4	NCTPS Stage II	10
5	Mettur TPS II	53
6	Tirumakottai GTPS	0



Sl. No.	Description	FY 2021-22
7	Kuttalam GTPS	-
8	Basin Bridge GTPS	0
9	Valuthur GTPS	0
10	Erode HEP	3
11	Kadamparai HEP	-2
12	Kundah HEP	1
13	Tirunelveli HEP	8
<b>14</b>	<b>Total Generation</b>	<b>194</b>
<b>15</b>	<b>Distribution</b>	<b>781</b>
	<b>Total TANGEDCO</b>	<b>975</b>

2.15.2 TANGEDCO submitted that Non-Tariff Income pertains only to distribution business. Non-Tariff Income as submitted by TANGEDCO is shown in the Table below:

**Table 2-27: Non-Tariff income as submitted by TANGEDCO (Rs. Crore)**

Sl. No.	Description	FY 2021-22
1	Meter Rent/Service Line Rentals	37
2	Recoveries of Theft of Power/Malpractices	71
3	Wheeling Charge Recoveries	211
4	Miscellaneous Charges collected from Consumers	804
5	Cross Subsidy Surcharge	565
6	Additional Surcharge	253
<b>7</b>	<b>Total</b>	<b>1,942</b>

### Commission's Views

2.15.3 The Commission has approved the Other Income and Non-Tariff Income after comparing with audited accounts and after prudent check.

2.15.4 The Commission has reviewed the Non-Tariff income claimed by TANGEDCO and compared the same against audited accounts. The following observations emerge from the same.

2.15.4.1 As per TANGEDCO's filing, revenue from sale of power inclusive of subsidy is 45,953 INR crore, whereas as per audited accounts, revenue from sale of power is 47,892 INR crore. The difference between these two is considered in the Non-tariff revenue.

2.15.4.2 As per audited accounts, the non-tariff income is 2,383 INR crore. However, this includes 1,527 INR crore of contribution received from consumers for service line and other assets, which has historically not been considered as part of revenue. However,

due to Ind-AS requirement, this seem to have been considered as part of revenue. Therefore this amount is excluded from calculation of “non-tariff income”. However, an equivalent amount will be deducted from closing GFA of FY 2021-22, impact of which will be visible in depreciation for FY 2022-23, as the Commission approves depreciation based on the opening GFA.

2.15.4.3 Considering these, the Commission has considered the following Non-Tariff income:

**Table 2-28: Non-tariff income approved by ERC after True-Up for the FY 2021-22**

Description	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Meter Rent / Service line Rentals	33	37	37
Recoveries of Theft of Power / Malpractices	83	71	67
Wheeling Charges Recoveries	265	211	242
Miscellaneous Charges collected from Consumers	1,220	804	1,633
Cross Subsidy Surcharge	130	565	565
Additional Surcharge from open Access Consumers		253	253
<b>Total Non Tariff Income</b>	<b>1,731</b>	<b>1,942</b>	<b>2,796</b>

2.15.5 Summary of approved “Other Income” and “Non Tariff Income” are provided below.

**Table 2-29: Other Income and Non-Tariff Income approved by the Commission after True-Up for the FY 2021-22 (Rs. Crore)**

Sl. No.	Description	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
1	Other income	1,863	975	1,197
2	Non-tariff income	1,731	1,942	2,796

## 2.16 SUMMARY OF FIXED CHARGES

2.16.1 The summary of fixed cost for the FY 2021-22 as submitted by TANGEDCO is shown in the Tables below:

**Table 2-30: Fixed Cost summary submitted by TANGEDCO (Rs. Crore)**

Sl. No.	Description	FY 2021-22
1	Tuticorin TPS	1,162

Sl. No.	Description	FY 2021-22
2	Mettur TPS I	717
3	North Chennai TPS	1,075
4	NCTPS Stage II	1,162
5	Mettur TPS II	808
6	Tirumakottai GTPS	206
7	Kuttalam GTPS	188
8	Basin Bridge GTPS	365
9	Valuthur GTPS	453
10	Erode HEP	655
11	Kadamparai HEP	212
12	Kundah HEP	503
13	Tirunelveli HEP	335
<b>14</b>	<b>Total Generation</b>	<b>8,163</b>
<b>15</b>	<b>Distribution</b>	<b>15,993</b>
	<b>Total TANGEDCO</b>	<b>24,156</b>

### Commission's Views

#### A. Distribution Function

2.16.2 Based on the expenses and income approved after truing up as elaborated in the above Sections, the summary of approved Fixed Cost for TANGEDCO's Distribution function is shown in the Tables below.

**Table 2-31: Fixed Cost summary approved by Commission for Distribution function after True-Up for the FY 2021-22 (Rs. Crore)**

Description	FY 2021-22		
	Approved earlier in APR	Proposed by TANGEDCO	Approved by the Commission
O&M expenses	8,937	8,708	9,187
Depreciation	1,457	2,542	1,413
Interest and finance charges	5,892	3,950	4,033
Interest on working capital	-	38	-
Return on equity	-	729	-
Other debits	-	25	-
Operating charges	-	471	-
Prior Period Credits / Charges	-	-	-
<b>Gross Aggregate Revenue</b>	<b>16,286</b>	<b>16,463</b>	<b>14,633</b>

Description	FY 2021-22		
	Approved earlier in APR	Proposed by TANGEDCO	Approved by the Commission
<b>Requirement</b>			
Less: Other income	1,756	781	932
Less: Non-tariff income	1,731	1,942	2,722
<b>Net Aggregate Revenue Requirement</b>	<b>12,800</b>	<b>13,741</b>	<b>10,979</b>

## B. Generation Function (Capacity Charges)

2.16.3 As per Regulation 36 of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, fixed components of generation function comprise:

### **“36. Components of Tariff**

- 1) *The tariff for sale of power by the Generating Companies shall be of two part namely the Fixed Charges (recovery of annual capacity charges) and variable (energy) charges.*
- 2) *The Fixed (annual capacity) charges shall consist of the following elements:*
  - (a) *Interest on Loan Capital*
  - (b) *Depreciation*
  - (c) *Return on Equity;*
  - (d) *Operation and Maintenance expenses; and*
  - (e) *Interest on Working Capital:*
- 3) *The energy (variable) charges shall cover fuel cost.”*

2.16.4 The recovery of capacity charges are governed by Regulation 42 of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 which states as under:

### *“42. Recovery of Capacity Charges*

1. *Full capacity charges (Fixed Charges) shall be recoverable at target availability specified in clause (1) of Regulation 37.*
2. *Recovery of capacity charges below the level of target availability will be on pro rata basis. At zero availability, no capacity charges shall be payable....*
3. *.....”*

2.16.5 The above capacity charges as determined by the Commission are to be recovered when TANGEDCO is able to meet the target in terms of norms set by the Commission. The

norms specified for recovery of fixed charges as specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 are reproduced below:

4.

*“37. Norms of Operation*

*The norms of operation for the Thermal Generating Stations shall be as under:*

*(i) Target availability for recovery of full capacity (fixed) charges*

*(a) All Thermal Generating stations in Tamil Nadu except Ennore Thermal Power Generating Station 80%*

*(b) Ennore Thermal Power Generating Station (Till Renovation and Modernization works in all units are completed) 50%*

*(c) In respect of Generating Stations of ..... As per PPA*

*Independent Power Producers*

*(d) New Thermal Stations 80%”*

2.16.6 The Commission has considered the station-wise availability for the FY 2021-22 as submitted by TANGEDCO.

**Table 2-32: PAF considered by the Commission**

<b>Description</b>	<b>FY 2021-22</b>
Tuticorin TPS	74.67%
Mettur TPS I	84.44%
North Chennai TPS	82.25%
NCTPS Stage II	83.36%
Mettur TPS II	69.28%
Tirumakottai GTPS	89.28%
Kuttalam GTPS	74.68%
Basin Bridge GTPS	93.81%
Valuthur GTPS	78.59%

2.16.7 Therefore, based on component-wise approval given in the above Section and actual PAF, fixed cost / capacity charges for generating stations approved for the FY 2021-22 are shown in the Tables below.

**Table 2-33: Fixed Charges approved by the Commission for Generation function after True-Up (Rs. Crore)**

Generating Station	FY 2021-22	
	Total Fixed Cost	Fixed Cost allowed to be recovered
Tuticorin TPS	1,149	1,072
Mettur TPS I	661	661
North Chennai TPS	1,069	1,069
NCTPS Stage II	790	790
Mettur TPS II	886	767
Tirumakottai GTPS	198	198
Kuttalam GTPS	178	166
Basin Bridge GTPS	328	328
Valuthur GTPS	287	282
Erode HEP	573	573
Kadamparai HEP	199	199
Kundah HEP	461	461
Tirunelveli HEP	304	304
<b>Total Generation</b>	<b>7,082</b>	<b>6,870</b>

## 2.17 VARIABLE COST FOR OWN GENERATING STATIONS

### Operational Performance Parameters

2.17.1 TANGEDCO submitted the comparison of actual operational performance parameters of generation function like PAF, Plant Load Factor (PLF), Station Heat Rate (SHR), Auxiliary Consumption (AC), Specific Oil Consumption (SOC), etc., achieved during FY 2021-22, in order to derive variable cost of own generation.

2.17.2 TANGEDCO submitted that the actual operating parameters achieved during the respective years are dependent of the condition of the machine during the respective years, which is a function of the following factors:

- i. Operation and Maintenance carried out in the plant since commissioning
- ii. Degradation due to ageing
- iii. Water chemistry
- iv. Conditions of the auxiliaries
- v. Overloading and partial loading of machines
- vi. Number of Start/Stops
- vii. Temperature and pressure stress the Machines have been subjected to
- viii. Automation of C&I
- ix. Condenser Vacuum.

2.17.3 TANGEDCO submitted various justifications for the deviations between the actual operating parameters and the operating parameters approved by the Commission.

2.17.4 a) Ageing

Frequent tube failures occur due to erosion in the old machines, which may be caused by poor quality of coal and other constraints. Heat transfer gets affected due to various reasons and the SHR increases. AC and SOC increase due to low load/partial load operation because of some technical constraints. Due to many other reasons like vibrations, eccentricity and high bearing temperature, the auxiliary of respective plants fails and causes deterioration in performance parameters. The older machines are affected by such reasons and hence, their performance is poorer as compared to the normative values.

2.17.5 b) Design Constraints

The operational performance parameters for generating stations specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 are based on the norms specified in CERC TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005, which in turn is based on design specifications of NTPC Power Plants. Most of the NTPC power plants have 500 MW Units which enable NTPC to achieve the target performance parameters specified in the Regulations.

2.17.6 On the other hand, most of the existing plants of TANGEDCO have 110 MW to 210 MW Units. As the Units are older and smaller in size, it is very difficult to achieve the target performance parameters specified in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

2.17.7 c) Operational Constraints

There has been a significant amount of backing down in the recent past years. Due to this the generating stations of TANGEDCO were unable to achieve the Target PLF as specified in TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

2.17.8 The actual PLF of all thermal generating station of TANGEDCO were below the Target PLF over the last 3 years which is mainly on account of backing down instructions received from SLDC/System. However, based on deemed PLF (arrived after considered backing down units), most of the generating stations were available at a level above the normative. Further, it is to be submitted that the backing down instructions from SLDC/System are beyond the control of TANGEDCO. It is therefore requested to consider the actual PLF achieved by TANGEDCO plants over the respective period.

2.17.9 With the increase in frequency of backing down, number of start and stop operation also increases proportionately, which not only result in abnormally higher the consumption of fuels but also affect the operational efficiency of plants.

- 2.17.10 Further, even under the backed down mode, there are certain auxiliaries which are required to run at part load as well as full load, this leads to higher auxiliary consumption for the reduced generation or no generation for which no variable cost is being recovered from the beneficiaries.
- 2.17.11 The efficiency of boiler as well as turbine deteriorates with the decrease in loading of the plant, thus results in higher SHR leading to overall inefficiency.
- 2.17.12 Backing down not only affects the operation life of plants, but also increases the repair and maintenance expenses.
- 2.17.13 Apart from above, many of TANGEDCO plants utilises domestic coal which has high ash content and low GCV. This causes abrasion of boiler and affects operational performance of TANGEDCO plants.

## 2.18 PLANT LOAD FACTOR (PLF)

- 2.18.1 TANGEDCO submitted that the PLF of its power plants has been in line with the norms approved by the Commission, after considering reserve shutdowns also, as shown in the Table below:

**Table 2-34: PLF as submitted by TANGEDCO**

Sl. No.	Station	FY 2021-22
<b>A</b>	<b>Thermal</b>	
1	Tuticorin TPS	54%
2	Mettur TPS	65%
3	North Chennai TPS	61%
4	North Chennai TPS Stage II	43%
5	Mettur TPS II	53%
<b>B</b>	<b>Gas</b>	
1	Tirumakottai GTPS	16%
2	Kuttalam GTPS	41%
3	Basin Bridge GTPS	1%
4	Valathur GTPS	58%
<b>C</b>	<b>Hydro</b>	
1	Erode HEP	25%
2	Kadamparai HEP	16%
3	Kundah HEP	29%
4	Tirunelveli HEP	30%



## Commission's Views

2.18.2 The Commission has analysed the submissions made by TANGEDCO. The Commission has approved the actual PLF values as submitted by TANGEDCO, as shown in the Table below:

**Table 2-35: PLF approved by the Commission after True-Up for the FY 2021-22**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>A</b>	<b>Thermal</b>			
1	Tuticorin TPS	54%	54%	54%
2	Mettur TPS	65%	65%	65%
3	North Chennai TPS	61%	61%	61%
4	North Chennai TPS Stage II	43%	43%	43%
5	Mettur TPS II	53%	53%	53%
<b>B</b>	<b>Gas</b>			
1	Tirumakottai GTPS	16%	16%	16%
2	Kuttalam GTPS	41%	41%	41%
3	Basin Bridge GTPS	1%	1%	1%
4	Valathur GTPS	58%	58%	58%
<b>C</b>	<b>Hydro</b>			
1	Erode HEP	25%	25%	25%
2	Kadamparai HEP	16%	16%	16%
3	Kundah HEP	31%	29%	29%
4	Tirunelveli HEP	35%	30%	30%

## 2.19 AUXILIARY CONSUMPTION

2.19.1 TANGEDCO submitted the approved auxiliary consumption and actual achieved by its generating stations in FY 2021-22 as shown in the Table below.

**Table 2-36: Auxiliary Consumption as submitted by TANGEDCO**

Sl. No.	Station	FY 2021-22
<b>A</b>	<b>Thermal</b>	
1	Tuticorin TPS	8.83%
2	Mettur TPS	8.53%

Sl. No.	Station	FY 2021-22
3	North Chennai TPS	10.61%
4	North Chennai TPS Stage II	8.52%
5	Mettur TPS II	7.60%
<b>B</b>	<b>Gas</b>	
1	Tirumakottai GTPS	24.54%
2	Kuttalam GTPS	9.76%
3	Basin Bridge GTPS	0.99%
4	Valathur GTPS	6.88%
<b>C</b>	<b>Hydro</b>	
1	Erode HEP	1.30%
2	Kadamparai HEP	0.35%
3	Kundah HEP	0.31%
4	Tirunelveli HEP	0.64%

### Commission's Views

2.19.2 The Commission has considered the normative Auxiliary Consumption, after adjusting for PLF based relaxation provided in the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

**Table 2-37: Auxiliary Consumption approved by the Commission after True-Up for the FY 2021-22**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>A</b>	<b>Thermal</b>			
1	Tuticorin TPS	8.50%	8.83%	8.59%
2	Mettur TPS	8.50%	8.53%	8.53%
3	North Chennai TPS	8.50%	10.61%	8.59%
4	North Chennai TPS Stage II	7.00%	8.52%	8.52%
5	Mettur TPS II	7.00%	7.60%	7.60%
<b>B</b>	<b>Gas</b>			
1	Tirumakottai GTPS	6.00%	24.54%	6.06%
2	Kuttalam GTPS	6.00%	9.76%	6.06%
3	Basin Bridge GTPS	0.99%	0.99%	0.99%

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
4	Valathur GTPS	6.00%	6.88%	6.06%
<b>C</b>	<b>Hydro</b>			
1	Erode HEP	0.50%	1.30%	0.50%
2	Kadamparai HEP	0.50%	0.35%	0.35%
3	Kundah HEP	0.50%	0.31%	0.31%
4	Tirunelveli HEP	0.50%	0.64%	0.50%

## 2.20 STATION HEAT RATE (SHR)

2.20.1 TANGEDCO requested the Commission to approve actual SHR for its generating stations considering various justifications, especially relating to loading. The station-wise SHR as submitted by TANGEDCO is shown in the Table below:

**Table 2-38: SHR as submitted by TANGEDCO (kCal/kWh)**

Sl. No.	Station	FY 2021-22
<b>A</b>	<b>Thermal</b>	
1	Tuticorin TPS	2,814
2	Mettur TPS	2,484
3	North Chennai TPS	2,740
4	North Chennai TPS Stage II	2,541
5	Mettur TPS II	2,661
<b>B</b>	<b>Gas</b>	
1	Tirumakottai GTPS	4,348
2	Kuttalam GTPS	2,745
3	Basin Bridge GTPS	4,399
4	Valathur GTPS	2,114

### Commission's Views

2.20.2 Regulation 37(iii) of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 specifies the norms for SHR. Commission has considered SHR as per norms, after adjusting for SHR relaxation in line with PLF, as allowed under TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005.

2.20.3 In addition, for gas power plants, considering vintage and backing down, Commission has approved relaxed values. While such relaxation is allowed as per the Tariff

Regulations, the Regulations also do not specify a clear methodology for the same. Considering the same, Commission has considered SHR as per SHR allowed by similar vintage power plants by CERC in its Tariff Regulations.

**Table 2-39: SHR approved by the Commission after True-Up for the FY 2021-22 (kCal/kWh)**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>A</b>	<b>Thermal</b>			
1	Tuticorin TPS	2,600	2,814	2,600
2	Mettur TPS	2,600	2,484	2,484
3	North Chennai TPS	2,537	2,740	2,537
4	North Chennai TPS Stage II	2,597	2,541	2,541
5	Mettur TPS II	2,597	2,661	2,434
<b>B</b>	<b>Gas</b>			
1	Tirumakottai GTPS	1,850	4,348	2,600
2	Kuttalam GTPS	1,850	2,745	2,600
3	Basin Bridge GTPS	4,399	4,399	4,399
4	Valathur GTPS	1,850	2,114	2,114

## 2.21 SPECIFIC OIL CONSUMPTION (SOC)

2.21.1 TANGEDCO submitted that the SOC has been calculated in terms of percentage of total calorific requirement of the power generating Unit and it has relation with the size of the generating Unit. For the lower size Units, the SOC remains higher as compared to larger size power generating Units, because certain amount of SOC remains fixed irrespective of the size of the generating Unit. The station-wise SOC as submitted by TANGEDCO is shown in the Table below:

**Table 2-40: SOC as submitted by TANGEDCO (ml/kWh)**

Sl. No.	Station	FY 2021-22
1	Tuticorin TPS	1.85
2	Mettur TPS	0.69
3	North Chennai TPS	1.72
4	North Chennai TPS Stage II	0.675
5	Mettur TPS II	0.611

## Commission's Views

2.21.2 Regulation 37(iv) of the TNERC (Terms and Conditions for Determination of Tariff) Regulations, 2005 specifies the normative SOC for TANGEDCO's generating plants. In previous orders, the Commission had considered revised SOC norms based on the performance of the generating Stations. The Commission has approved SOC for the FY 2021-22 in accordance with the norms considered in the previous Tariff Order, as shown in the Table below:

**Table 2-41: SOC as approved by the Commission (ml/kWh)**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
1	Tuticorin TPS	1.67	1.85	1.67
2	Mettur TPS	0.69	0.69	0.69
3	North Chennai TPS	1.79	1.72	1.79
4	North Chennai TPS Stage II	1.10	0.675	1.10
5	Mettur TPS II	0.88	0.611	0.88

## 2.22 FUEL RELATED PARAMETERS

2.22.1 TANGEDCO submitted that the Gross Calorific Value (GCV) of coal has been in line with the norms approved by the Commission in the last Tariff Order.

### Commission's Views

2.22.2 The Commission has considered the GCV of coal and gas, as shown in the Table below:

**Table 2-42: GCV approved by the Commission after True-Up for the FY 2021-22 (kcal/kg) (kcal/SCM)**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>A</b>	<b>Thermal</b>			
1	Tuticorin TPS	3,124	3,124	3,124
2	Mettur TPS	3,162	3,085	3,085
3	North Chennai TPS	3,253	3,045	3,045
4	North Chennai TPS Stage II	3,228	3,110	3,110
5	Mettur TPS II	3,203	3,097	3,097
<b>B</b>	<b>Gas</b>		-	-
1	Tirumakottai GTPS	10,538	10,568	10,568
2	Kuttalam GTPS	10,417	10,422	10,422
3	Basin Bridge GTPS	10,572	10,572	10,572
4	Valathur GTP	9,719	9,697	9,697

## 2.23 PRICE OF PRIMARY FUEL

2.23.1 TANGEDCO submitted the actual primary fuel prices for the FY 2021-22.

### Commission's Views

2.23.2 The Commission has approved the actual primary fuel prices for the FY 2021-22 as shown in the table below:

**Table 2-43: Price of primary fuel as approved by the Commission (Rs./MT or Rs./SCM)**

Sl. No.	Station	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>A</b>	<b>Thermal</b>			
1	Tuticorin TPS	3,900	3,736	3,736
2	Mettur TPS	5,000	4,475	4,475
3	North Chennai TPS	3,800	3,531	3,531
4	North Chennai TPS Stage II	3,800	3,519	3,519
5	Mettur TPS II	5,000	4,529	4,529
<b>B</b>	<b>Gas</b>			
1	Tirumakottai GTPS	9	9	9
2	Kuttalam GTPS	9	9	9
3	Basin Bridge GTPS	54 (INR crores)	35,462	35,462
4	Valathur GTPS	9	8	8

## 2.24 COMPUTATION OF ENERGY CHARGES

2.24.1 TANGEDCO submitted that based on the actual operating parameters and fuel related parameters recorded during FY 2021-22, it has arrived at plant-wise variable cost of generation.

### Commission's Views

2.24.2 The Commission has approved the plant-wise variable cost on the basis of operational parameters and fuel related parameters approved as elaborated in the Sections above. The approved Variable Cost of Generation and Energy Charges for Thermal and Gas stations after True-Up for the FY 2021-22 is shown in the Tables below.

**Table 2-44: Variable Cost of Generation approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Own Generating Station	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>Thermal</b>			
Tuticorin TPS	1,634	1,734	1,601
Mettur TPS	2,000	1,742	1,742
North Chennai TPS	1,022	1,060	1,016
North Chennai TPS Stage II	1,407	1,312	1,321
Mettur TPS II	1,150	1,083	995
<b>Gas</b>			-
Tirumakottai GTPS	24	56	34
Kuttalam GTPS	60	90	85
Basin Bridge GTPS	54	0	0
Valuthur GTPS	153	175	175
<b>Total</b>	<b>7,505</b>	<b>7,252</b>	<b>6,969</b>

**Table 2-45: Energy charge approved by the Commission after True-Up for the FY 2021-22(Rs./kWh)**

Own Generating Station	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>Thermal</b>			
Tuticorin TPS	3.60	3.83	3.53
Mettur TPS	4.56	3.97	3.97
North Chennai TPS	3.33	3.51	3.31
North Chennai TPS Stage II	3.35	3.18	3.20
Mettur TPS II	4.48	4.24	3.90
<b>Gas</b>			
Tirumakottai GTPS	1.64	4.81	2.31
Kuttalam GTPS	1.77	2.76	2.51
Basin Bridge GTPS	86.08	86.08	86.08
Valuthur GTPS	1.73	1.99	1.97

2.24.3 There seems to be a clear need for further modifications in TNERC Tariff Regulations to properly compensate for deteriorated technical norms for TANGEDCO power plants considering their vintage, and their being used as a balancing source for the overall power generation, especially to integrate more renewable energy. The Commission plans to undertake a revision of the Regulations in a separate process.

## 2.25 POWER PURCHASE FROM OTHER SOURCES FOR THE FY 2021-22

- 2.25.1 TANGEDCO submitted that the power purchase cost available in IGAAP Audited Accounts is inclusive of Wheeling Charges and Wheeling adjustments. However, while considering the power purchase quantum and cost in the petition, Wheeling Charges and Wheeling adjustments have been excluded, in line with the approach adopted by the Commission's in its previous Tariff Orders.
- 2.25.2 TANGEDCO further submitted that there are power purchase costs which were part of Prior Period Items, however, under Ind AS there is no concept of prior period income or expenses. Any change in relation to previous years arising out of changes in accounting policies, correction of error or reclassification or crystallisation of contingent liability is adjusted by restating the comparative year number. The revised power purchase cost under Ind AS was done to reflect the revised power Purchase cost.
- 2.25.3 TANGEDCO provided the following power purchase details.

**Table 2-46: Power purchase expenses submitted by TANGEDCO**

Sl. No.	Source of Power Purchase	Revised Ind AS	
		Units in MU	Total Cost in Rs Crores
<b>A</b>	<b>Central Generating Stations</b>		
	New Neyveli TS	3,821.68	1,550.50
	Neyveli TS-II Stage I	2,734.44	936.42
	Neyveli TS-II Expansion		
	Neyveli TS-I Expansion	1,591.99	538.62
	Neyveli Expansion Unit II	955.49	471.84
	NTPL JV with NLC	1,720.16	1,082.55
	NTPC SR (Ramagundam I & II)	3,221.60	1,163.67
	NTPC SR -III (Ramagundam III)	968.26	316.03
	Simhadri Stage II -Unit III	1,209.04	577.73
	NTPC_TNEB JV Vallur	6,044.14	3,534.81
	Talcher	3,508.33	887.73
	Madras APS	628.03	172.61
	Kaiga APS	1,676.53	599.35
	Kudankulam	7,779.16	3,186.85
	NTPC ER (FARAKKA STPS)	229.80	80.76
	Kudgi Unit I	905.22	737.92
	NTPC/Barh-1	2.56	1.24
	NTPC/Barh-2	4.37	2.08
	NTPC/KBUN	3.86	1.98
	<b>Total CGS</b>	<b>37,004.65</b>	<b>15,842.71</b>



Sl. No.	Source of Power Purchase	Revised Ind AS	
		Units in MU	Total Cost in Rs Crores
<b>B</b>	<b>IPPS</b>		
	SEPC	-	-
	Pillaiperumalnallur	-4.87	370.00
	TAQA (STCMS)	1,415.28	758.59
	LANCO Power (Aban co)	-	-
	PIONEER Power co. (Penna)	66.32	12.52
	<b>Total IPPs</b>	<b>1,476.72</b>	<b>1,141.11</b>
<b>C</b>	<b>Renewables</b>		
	Windmill	3,538.10	787.58
	Co-generation	347.07	175.87
	Biomass	2.10	1.36
	Captive generation	15.18	2.94
	Solar	7,202.73	2,496.41
	<b>Total Renewables</b>	<b>11,105.19</b>	<b>3,464.16</b>
<b>D</b>	<b>Short Term and Others</b>		
	UI Power	54.78	258.64
	Traders-MTOA	722.27	51.87
	Traders-LTOA	14,388.37	6,888.10
	Traders -STOA	1,727.62	638.43
	Power Exchanges	6,329.93	4,096.74
	Swap	-22.65	352.21
	<b>Total Short Term and Others</b>	<b>23,200.31</b>	<b>12,285.98</b>
<b>E</b>	<b>Transmission Charges</b>		
	TANTRANSCO charges	-	2,441.50
	PGCIL & POSOCO	-	4,116.29
	<b>Total Transmission Charges</b>		<b>6,557.79</b>
<b>F</b>	<b>STOA Charges</b>		<b>73.48</b>
	<b>Total (A+B+C+D+E+F)</b>	<b>72,786.87</b>	<b>39,365.23</b>

### Commission's Views

- 2.25.4 For truing up purposes, the Commission has considered the actual power purchase as submitted by TANGEDCO. However, power purchase has been restricted to the energy requirement approved by the Commission corresponding to the approved Transmission Loss and Distribution Loss levels, as elaborated in an earlier Section.
- 2.25.5 TANTRANSCO and PGCIL charges have been considered separately in the overall ARR, and approved as per amount submitted by TANGEDCO.
- 2.25.6 The summary of Power Purchase approved by the Commission after truing up for the FY 2021-22 is shown in the Tables below:

**Table 2-47: Summary of Power Purchase approved by the Commission after True-Up for the FY 2021-22**

Sl. No.	Source of Power Purchase	FY 2021-22					
		Units in MU	VC Rs/kwh	Total Variable Cost Rs. Crores	Total Fixed Cost Rs. Crores	Total Cost Rs Crores (5+6)	Cost Rs./kwh
<b>A</b>	<b>Central Generating Stations</b>						
1	New Neyveli TS	3,822	2.19	838	712	1,551	4.06
2	Neyveli TS-II Stage I	2,734	2.66	727	210	936	3.42
4	Neyveli TS-I Expansion	1,592	2.42	386	153	539	3.38
5	Neyveli Expansion Unit II	955	2.56	245	227	472	4.94
6	NTPL JV with NLC	1,720	3.21	552	531	1,083	5.25
7	NTPC SR (RamagundamI,II)	3,222	2.80	903	261	1,164	3.61
8	NTPC SR -III (Ramagundam)	968	2.54	246	70	316	3.26
9	Simhadri Stage II -Unit III	1,209	2.90	351	227	578	4.78
11	NTPC_TNEB JV Vallur Unit 1	6,044	3.37	2,035	1,500	3,535	5.54
12	NTPC_TNEB JV Vallur Unit 2	-	-	-		-	-
13	Talcher	3,508	1.78	623	265	888	2.53
14	Madras APS	628	2.52	173	-	173	2.52
15	Kaiga APS	1,677	3.57	599	-	599	3.57
16	Kudankulam	7,779	4.10	3,187	-	3,187	4.10
19	NTPC ER (FARAKKA STPS)	230	2.55	59	22	81	3.51
20	Kudgi Unit I	905	3.93	356	382	738	8.15
25	NTPC/Barh-1	3	2.65	1	1	1	4.85
26	NTPC/Barh-2	4	3.02	1	1	2	4.75
27	NTPC/KBUN	4	2.66	1	1	2	5.14

Sl. No.	Source of Power Purchase	FY 2021-22					
		Units in MU	VC Rs/kwh	Total Variable Cost Rs. Crores	Total Fixed Cost Rs. Crores	Total Cost Rs Crores (5+6)	Cost Rs./kwh
28	-						
	<b>Total CGS</b>	<b>37,005</b>		<b>11,266</b>	<b>4,197</b>	<b>15,843</b>	<b>4.18</b>
<b>B</b>	<b>IPPS</b>						
29	SEPC	-	-	-	-	-	-
30	Pillaiperumalnallur	-5	0	-	370	370	-
31	TAQA (STCMS)	1,415	3.42	484	274	759	5.20
32	LANCO Power (Aban co)	-	-	-	-	-	-
33	PIONEER Power co. (Penna)	66	1.15	8	5	13	1.89
<b>C</b>	<b>Renewables</b>					-	
34	Windmill	3,538	2.97	788	-	788	2.97
35	Co-generation	347	3.27	113	62	176	5.07
36	Cogeneration new	-	-	-	-	-	-
37	Biomass	2	5.08	1	0	1	6.47
38	Captive generation	15	1.94	3	-	3	1.94
39	Solar	7,203	4.72	2,496	-	2,496	4.72
40	Co-Gen in Co-op Sugar Mills	-	-	-	-	-	-
41	UI Power	55	-	259	-	259	-
42	Traders-MTOA	722	0.39	28	24	52	0.72
43	Traders-LTOA	14,388	2.60	3,739	3,149	6,888	4.79
44	Traders -STOA	1,728	3.70	638	-	638	3.70
45	CPP_Traders	-	-	-	-	-	-
46	Power Exchanges	6,330	6.47	4,097	-	4,097	6.47
50	PGCIL Reactive	-	-	-	-	-	-
48	Swap	-23	-	352	-	352	-
49	<i>Less: Additional power purchase due to additional T&amp;D losses</i>	-158	-	-	-	-71	4.51

Sl. No.	Source of Power Purchase	FY 2021-22					
		Units in MU	VC Rs/kwh	Total Variable Cost Rs. Crores	Total Fixed Cost Rs. Crores	Total Cost Rs Crores (5+6)	Cost Rs./kwh
50	STOA Charges	-	-	-	73	73	-
	<b>Total</b>	<b>72,629</b>	<b>3.34</b>	<b>24,272</b>	<b>8,155</b>	<b>32,736</b>	<b>4.51</b>

## 2.26 SUMMARY OF ARR FOR THE FY 2021-22

2.26.1 Based on the component-wise approval as elaborated in the above Sections, the summary of Aggregate Revenue Requirement for TANGEDCO as whole for the FY 2021-22 as approved in earlier Orders, as submitted by TANGEDCO and as approved after final True-Up are shown in the Tables below:

**Table 2-48: Summary of ARR approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Description	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
Power Purchase Cost	34,387	32,807	32,736
TANTRANSCO, PGCIL & SLDC charges	6,581	6,558	6,558
Generation cost (Own Generation Plants)	15,667	15,562	14,051
Return on Equity	-	729	-
Interest and finance charges	4,192	3,950	4,033
Depreciation	1,457	2,542	1,413
Interest on Working Capital	-	38	-
Operation and Maintenance Expenses	8,937	8,708	9,187
Other Debits	-	25	-
Operating charges	-	471	-
Prior Period Credits / Charges	-	-	-

Description	FY 2021-22		
	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>Total Revenue Requirement</b>	<b>71,220</b>	<b>71,390</b>	<b>67,978</b>

## 2.27 REVENUE FROM SALE OF POWER

2.27.1 TANGEDCO submitted that revenue from sale of power as relevant for the True-Up period.

### Commission's view

2.27.2 The Commission has considered the revenue from sales as given in the Audited Accounts for the FY 2021-22. However, as revenue in the Audited Accounts consist of revenue from wheeling units also, the same has been deducted from the total revenue, whereas TANGEDCO has reduced the wheeling revenue from the category-wise revenue. Further, as sales to Puducherry have been disallowed by the Commission, corresponding revenue has also not been considered.

2.27.3 The revenue from sales approved for the FY 2021-22 is shown in the Table below:

**Table 2-49: Revenue from Sales approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Sl. No.	Consumer Category	Tariff	Approved after True-Up
<b>I</b>	<b>High Tension Supply</b>		
1	Registered factories, Textiles, Tea Estate, Software Industries etc.	IA	11,040
2	Railway Traction	IB	806
3	Govt. Educational Institutions, Govt. Hospitals, Water supply etc.	IIA	1,167
4	Private Educational Institutions	IIB	200
5	Commercial and all categories not covered in other HT categories	III	1,897
6	Lift Irrigation and Co-operative Soc. for Agriculture	IV	29
7	HT Temporary Supply for construction & other purpose		49
8	Supply to Pondicherry plus Other States		-
9	<b>Sub Total HT (A)</b>		<b>15,188</b>
<b>II</b>	<b>Low Tension Supply</b>		
10	Domestic, Hand Loom etc.	IA	10,405

Sl. No.	Consumer Category	Tariff	Approved after True-Up
11	Huts in Village panchayats, TAHDCO etc.	IB	170
12	LT Bulk supply for railway, defence colonies etc.	IC	5
13	Public Lighting and Public Water Supply & Sewerage	IIA	1,705
14	Government and aided Educational Instn., Government Hospitals etc.	IIB (1)	108
15	Private Educational Institutions	IIB (2)	138
16	Actual Place of Public Worships, Mutts and Religious institutions	II C	92
17	Cottage and Tiny Industries	IIIA (1)	164
18	Power loom etc.	IIIA (2)	567
19	Industries not covered under L.T. Tariff IIIA (1), IIIA(2) incl. IT	IIIB	5,129
20	Agriculture and Govt. seed farm etc.	IV	5,126
21	Commercial and all categories not covered in other LT categories	V	6,433
22	Temp. supply other than Domestic and Lavish illuminations	VI	725
	<b>Sub Total LT (B)</b>		<b>30,765</b>
	<b>Total HT and LT {A+B} (C)</b>		<b>45,953</b>

\*Revenue is including Government Tariff subsidy, but excluding Wheeling/Network charges and grants

# As per TANGEDCO's filing, revenue is 45,953 INR crore, whereas as per audited accounts, revenue is 47,892 INR crore. The difference between these two is considered in the Non-tariff revenue.

## 2.28 REVENUE GAP / (SURPLUS) FOR THE FY 2021-22

2.28.1 Based on the approved Aggregate Revenue Requirement and Revenue from sales, and after considering subsidy received from GoTN for the FY 2021-22, the Revenue Gap/(Surplus) approved by the Commission is shown in the Tables below.

2.28.2 The impact of additional Government subsidy is not considered, to avoid TANGEDCO's benefits on account of such support getting clawed back. This is in line with approach adopted in past years for amounts received on account of FRP / UDAY schemes.

**Table 2-50: Revenue Gap/(Surplus) approved by the Commission after True-Up for the FY 2021-22(Rs. Crore)**

Description	Approved earlier in APR	TANGEDCO filing	Approved after True-Up
<b>Total Revenue Requirement</b>	71,220	71,390	67,978
Less: (i) Tariff Revenue	46,803	45,953	45,953

(ii) Non-tariff revenue	1,731	1,942	2,722
(iii) Other income	1,756	781	1,197
(iv) Other Govt Subsidy	-	6,719	-
<b>Revenue Gap/(Surplus)</b>	<b>20,931</b>	<b>16,794</b>	<b>18,106</b>

2.28.3 The treatment of this deficit is explained further in the following sections.

## 2.29 TREATMENT OF REVENUE GAP

2.29.1 The GoTN vide G.O. (Ms) NO. 38 dt. 18.08.2021 has agreed to take over 100% losses of TANGEDCO from FY 2021-22 onwards under GSDP norms of Gol (Annexure I). As per the norms and also under UDAY scheme, losses have been taken by GoTN in an year-wise manner.

**Table 2-51: Cash loss funding provided by Govt. of Tamil Nadu**

Year	Book Loss	Loss taken during	Amount in INR crores (% of loss)
FY 2016-17	4,349	FY 2017-18	217 (5%)
FY 2017-18	7,761	FY 2018-19	776 (10%)
FY 2018-19	12,623	FY 2019-20	3156 (25%)
FY 2019-20	11,965	FY 2020-21	5982 <sup>#</sup> (50%)
FY 2020-21	13,407	FY 2021-22	6703 <sup>#</sup> (50%)
FY 2021-22	11,955	FY 2022-23	11955 (100%)
FY 2022-23	10,868	FY 2023-24	17117 (75% of gross loss)

# - Actual receipt during FY 2020-21 is Rs.5217 Cr. and FY 2021-22 is Rs.7108 Cr.

2.29.2 TANGEDCO has submitted that considering the commitment from Govt. of TN for loss funding, loss funding for FY 2021-22 and FY 2022-23 may be adjusted against any ARR gap instead of creating any new Regulatory Asset.

2.29.3 Considering the submission of TANGEDCO, the Commission concurs with the strategy proposed by TANGEDCO, and hereby directs TANGEDCO to work with Govt. of Tamil Nadu to ensure that the revenue gap for the FY 2021-22 be adjusted against loss funding from Govt. of Tamil Nadu, which may include additional loss funding beyond those committed also, if required.

2.29.4 Therefore, the revenue gap for FY 2021-22 as identified in this order is not considered as part of any new Regulatory Asset.

## 2.30 TREATMENT OF CUMULATIVE REVENUE GAP

2.30.1 The revised revenue gap till FY 2022-23 is summarised below, considering the revised gap approved for FY 2022, and loss funding received from Govt. of Tamil Nadu in respective years.

**Table 2-52: Cumulative revenue gap, inclusive of carrying cost**

Description	FY 2016-17 (True-Up)	FY 2017-18 (True-Up)	FY 2018-19 (True-Up)	FY 2019-20 (True-Up)	FY 2020-21 (True-Up)	FY 2021-22 (True-Up)
Opening Balance	10,433	12,420	22,131	36,429	52,844	72,002
Addition of Revenue Gap/(Surplus)	898	8,406	12,579	15,580	18,971	18,106
Amount Received from Govt. of Tamil Nadu towards loss funding	-	217	776	3,156	5,217	7,108
<b>Closing Balance</b>	<b>11,330</b>	<b>20,609</b>	<b>33,934</b>	<b>48,853</b>	<b>66,597</b>	<b>83,000</b>
Interest Rate	10.01%	9.22%	8.90%	9.36%	9.05%	9.69%
Carrying Cost	1,089	1,523	2,495	3,991	5,405	7,510
Closing Balance	12,420	22,131	36,429	52,844	72,002	90,510
To be adjusted against the loss funding received from the GoTN in the year 2022-23	-	-	-	-	-	10,998
<b>Net Closing Balance</b>	<b>12,420</b>	<b>22,131</b>	<b>36,429</b>	<b>52,844</b>	<b>72,002</b>	<b>79,512</b>

2.30.2 It may be noted that TANGEDCO has already received loss funding from Govt. of Tamil Nadu as indicated in Table 2-51 under various arrangements viz., UDAY, RDSS, GSDP, etc.

2.30.3 As per Electricity (Amendment) Rules, 2024 dated 10<sup>th</sup> January 2024, there are limits on carrying forward with old regulatory revenue gaps.

*“23. Gap between approved Annual Revenue Requirement and estimated annual revenue from approved tariff.– The tariff shall be cost reflective and there shall not be any gap between approved Annual Revenue Requirement and estimated annual revenue from approved tariff except under natural calamity conditions:*

*Provided that such gap, created if any, shall not be more than three percent of the approved Annual Revenue Requirement:*

*Provided further that such gap along with the carrying costs at the base rate of Late Payment Surcharge as specified in the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022, as amended from*



*time to time shall be liquidated in maximum three numbers of equal yearly instalments from the next financial year:*

*Provided also that any gap between approved Annual Revenue Requirement and estimated annual revenue from approved tariff existing on the date of notification of these rules, along with the carrying costs at the base rate of Late Payment Surcharge as specified in the Electricity (Late Payment Surcharge and Related Matters) Rules, 2022, as amended from time to time shall be liquidated in maximum seven numbers of equal yearly instalments starting from the next financial year.”*

- 2.30.4 As per the above rules, the past accumulated revenue gaps shall have to be liquidated in maximum of seven years, through equal instalments.
- 2.30.5 **Considering the same, it is hereby directed that TANGEDCO shall seek approval of GoTN to get the cumulative revenue gap till FY 2021-22 liquidated through available Government resources, funds, including any schemes.**

### **3 DIRECTIVES TO TANGEDCO**

- 3.1.1 In the interest of the power sector at large, and especially considering the interests of the consumers of the State and long term viability of TANGEDCO, the Commission hereby issues the following directives:
- 3.1.1.1 The periodical GST and E Tax commitment shall be paid in time without giving scope for interest payment.
- 3.1.1.2 The cost of power purchase contributing as a major share of revenue expenditure shall be controlled by shifting non-solar peak hour loads to solar hours. In the direction of power purchase optimization, TANGEDCO shall further make prudent analysis with SLDC and take all possible measures to balance load pattern among solar and non-solar hours. In events of excess generation with lower demand, power shall be sold in open market following merit order principle to augment revenue and offset the power purchase cost to the extent possible, in the process.
- 3.1.1.3 In order to shift the peak hour loads of non solar hours to solar hours and flatten the load curve, all consumers particularly the agricultural consumers shall be sensitized by state wide Demand Response program to shift their usage of electricity from non solar hours to solar hours, as already directed by the Commission.
- 3.1.1.4 Capacitors shall be installed in all agricultural services that would contribute to substantial load relief to the grid and in turn reduce the commitment of power purchase, reduce line losses and also improve the voltage profile.
- 3.1.1.5 As further measure, Distributed generation shall be accelerated by leveraging the potential of solar power by following the simplified procedure and directions already issued by the Commission pursuant to the revised guidelines issued by the Government.
- 3.1.1.6 The progress of ongoing 500MW Kundah pumped storage plant and necessary initial measures for the 12 Nos. pumped storage plants as approved in G.O No.106 dated 13.12.23 shall be speeded up.
- 3.1.1.7 The number of sample service connections earmarked for assessing agricultural consumption shall be increased to 15% circle wise, for better accuracy of state wide assessment and ensure uniformity in all related accounts such as subsidy claim, sale of energy, loss assessment etc., It shall be ensured that the sample service connections are chosen judiciously covering the water potential areas, meters are maintained in healthy condition in all sample services and assessment is carried out regularly in all the services, making the quarterly accounting mechanism well in place for accurate assessment.
- 3.1.1.8 Asset Register with classification of various categories of assets shall be maintained with allied geo-tagging as mandated in the Commission's DSOP Regulation as amended.

3.1.1.9 The adverse opinion of the independent auditors as recorded in the Annual Report shall be attended. All short comings and lack of sufficient documents pointed out in the Report shall be set right in a time bound manner.

## 4 ANNEXURES

### 4.1 ANNEXURE I – G.O.(MS).NO.38: TAKE OVER OF 100% FINANCIAL LOSSES OF TANGEDCO



#### ABSTRACT

Energy Department - Release of Tranche II under Liquidity Infusion Scheme - Taking over of 100% of financial losses of TANGEDCO of the current year by the Government in the next year from FY 2021-22 onwards, Timely payment of electricity bills by Government Departments, Companies, Bodies, Urban Local Bodies and Panchyat Raj Institutions and Installation of prepaid / smart prepaid meters in State Government Departments, Companies Bodies, Urban Local Bodies and PRIs, etc. - Orders issued.

#### ENERGY (C2) DEPARTMENT

**G.O.(Ms).No.38**

**Dated : 18.08.2021**

திருவள்ளூர் ஆண்டு 2052

பிலவ வருடம், ஆணி-2

**Read :-**

From the Chairman cum Managing Director, Tamil Nadu Generation and Distribution Corporation Limited, Letter No.29873/DFC/Res/A34/A341/2020, dated 17.05.2021.

#### ORDER :

In the letter read above, the Chairman cum Managing Director, Tamil Nadu Generation and Distribution Corporation Limited has requested the Government to issue Orders for taking over of 100% of financial losses of Tamil Nadu Generation and Distribution Corporation Limited of the current year by the Government during the next year, from FY 2021-22 onwards, for release of Tranche-II funds under "Liquidity Infusion Scheme" and for timely payment of electricity bills by Government departments, Government Companies, Bodies, Urban Local Bodies and Panchayat Raj Institutions, etc., and directing Tamil Nadu Generation and Distribution Corporation Limited to arrange for fixing of prepaid / smart prepaid meters in State Government Departments, Government Companies, Bodies and Urban Local Bodies Panchayat Raj Institutions etc., by FY 2023-2024 as directed by the Ministry of Power, Government of India for considering the claim submitted by TANGEDCO for Tranche-II funds under "Liquidity Infusion Scheme" to REC & PFC.

2. The Government have examined the above proposal of Chairman-cum-Managing Director, Tamil Nadu Generation and Distribution Corporation Limited as directed by the Ministry of Power, Government of India for considering the claim submitted by Tamil Nadu Generation and Distribution Corporation Limited for Tranche-II release of funds under "Liquidity Infusion Scheme" to REC & PFC and decided to accept the same and accordingly issue the following orders:-

2

- Government of Tamil Nadu undertakes to take over 100% of financial losses of Tamil Nadu Generation and Distribution Corporation Limited of the current year during the next year from FY 2021-22 onwards.
- Government of Tamil Nadu undertakes to ensure timely payment of electricity bills by Government departments, Government Companies, Bodies, Urban Local Bodies and Panchayat Raj Institutions, etc.,
- Government directs Tamil Nadu Generation and Distribution Corporation Limited to arrange for fixing of prepaid / smart pre-paid meters in State Government Departments, Government Companies, Bodies, Urban Local Bodies and Panchayat Raj Institutions etc., by FY 2023-2024.

4. This order issues with the concurrence of the Finance Department vide its U.O. No.2610/FS(P)/PWD-II/21, dated 18.8.2021.

**(BY ORDER OF THE GOVERNOR)**

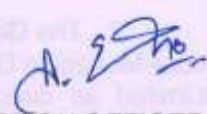
**DHARMENDRA PRATAP YADAV  
PRINCIPAL SECRETARY TO GOVERNMENT**

To  
The Chairman and Managing Director, Tamil Nadu Generation and Distribution Corporation Limited, Chennai - 2.  
M/s.REC Limited, New Delhi.  
M/s.Power Finance Corporation Limited, New Delhi.  
The Director (Finance), Tamil Nadu Generation and Distribution Corporation Limited, Chennai-2.  
The Chief Financial Controller (General), Tamil Nadu Generation and Distribution Corporation Limited, Chennai-2.  
The Chief Electrical Inspector to Government, Guindy, Chennai- 32.  
The Principal Accountant General, Chennai-18.  
The Accountant General, Chennai-18. (By Name).

**Copy to:**

The Chief Minister's Office, Chennai-9.  
The Senior P.A. to Minister (Finance and HRM), Chennai-9.  
The Senior P.A. to Minister (E,P&E), Chennai-9.  
The Finance (L&A Cell / PW-II / BPE) Department, Chennai-9.  
The Municipal Administration & Water Supply Department, Chennai-9.  
The Rural Development & Panchayat Raj Department, Chennai-9.  
Energy (OP) Department, Chennai-9.  
SF/SCs.

**// Forwarded / By Order //**

  
**SECTION OFFICER**

## 4.2 ANNEXURE II - STAKEHOLDERS' COMMENTS, TANGEDCO'S REPLY AND COMMISSION'S VIEW

### 1. Thiru.S.Gandhi

Comments	Reply of TANGEDCO
<p>Any move by the Hon'ble Commission to invoke MYT based on the tariff order dated 09/09/2022 which failed to account cross subsidy surcharges is totally unjustified constraining us to seek other remedies.</p>	<p>The verification of CGP status and consequent levy of Cross Subsidy surcharge for the captive use is being dealt separately as per the orders of the Hon'ble APTEL and Hon'ble TNERC.</p>
<p><u>Banking charges:</u> The quantum of banked energy is not furnished in the report. Tangedco in its reply to us dated 2/9/2022 that banked energy on 2021 as 2,100 m.u. Taking the same data for the year 2021-22, the banking charges as in kind must be 294 m.u. This revenue has not been accounted either as energy or as value of energy. Power factor charges; This collection is not furnished and added to revenue.</p>	<p>In respect of captive wind energy generators, whenever the current month generation exceeds current month consumption, the excess of current month generation shall be kept in the banking account maintained for each WEG after deducting the banking charges as determined by the Hon'ble TNERC from time to time (at present 14%). Whereas, the name "Banking" refers stocking of electricity, but in real scenario, it is not commercially viable, hence, whenever unutilised portion of current month generation kept in banking, it is actually sold to various categories of TANGEDCO's consumers simultaneously and booked as revenue from sale of power from those category of consumers in the billing month itself. The Banking Charges earlier collected in value (in Rs.) are accounted as revenue of TANGEDCO, but in the case of banking charges deducted in kind, from the unutilised current month generated units, reduces the consideration payable for power purchase of unutilised energy from the wind captive generators only. The total wind energy injected into TANGEDCO's grid is accounted (after T&amp;D Loss), partially in captive adjustment against consumption in the respective tariff at the user end, partially purchased at the end of the year as unutilised portion and the banking charges in units is availed and sold by TANGEDCO. Therefore, the energy accounting considers all the wind energy including banking charges in kind in the input energy.</p>

	<p>Hence, from the above, the contention of stakeholder that revenue from banking chargers in kind has not accounted either as energy or as value of energy is not correct.</p>
<p>Tangedco had not paid back 3,527 cr. of Electricity Tax collected to Government from FY 2019 to FY 2022. Then these tax amount had been spent by Tangedco in the previous years. What is the details. There is enough room to suspect misappropriation too. The claim of Tangedco is not bonafide.</p>	<p><u>Electricity Tax:</u> TANGEDCO is a mere collection agent, collecting Electricity Tax on behalf of the Government of Tamil Nadu regulated as per the Tax on Consumption or Sale of Electricity Tax 2003. The Tax thus collected is either being remitted into the Treasury or converted into equity, Grants or Loans or kept with TANGEDCO as E.Tax payable to Govt. of Tamilnadu. Further TANGEDCO is liable to pay penal interest on the Outstanding E.tax payable to GoTN at the rate of 12% p.a. Further, TANGEDCO is also liable for collecting 1% of E tax and the collection of Etax as on 31.03.2022 is rs.2527.13 Crs is yet to be paid to GOTN. Letter has been addressed either to convert into equity or adjust against state Govt dues payable.</p>
<p>We have raised the areas of incurring losses in Wire Business through our various letters both to the Hon'ble Commission and Tangedco. We list them hereunder again for ready reference to justify our claim: 1. Unlawful permission of open access to ineligible consumers.</p>	<p>Allowing of open access to the consumers with a load of 1 MW and above in line with Sec.42(2) of Electricity Act, 2003, the Division Bench of the Hon'ble High Court of Madras on 19.08.2021 in W.A.No.3163/2019, W.A.No.3254/2019 &amp; W.A.No.3255/2019 has directed the TNERC to proceed with the matter for deciding the policy directive issued by the Government, the Hon'ble Commission took up the case T.A.No.1 of 2019 for hearing. The draft notification was web hosted on 16.03.2022 for inviting objections/ suggestions to amend Clause 9(6) of the TNERC Grid Connectivity and Intra State Open Access Regulations, 2014, the comments/suggestions were furnished on 09.05.2022. At present the Open Access is being allowed to all EHT/HT consumers within their contracted demand in accordance with the TNERC Grid Connectivity and Intra State Open Access Regulations, 2014.</p>
<p>The cross subsidy &amp; additional surcharges. It is stated the third party wheeled energy as 3660 &amp; 3664 m.u for the year</p>	<p>It is confirmed that the applicable cross subsidy &amp; additional surcharge has been collected for the adjusted units from open access consumers. <u>HT Net Energy Adjustment Details:</u></p>

2020- 21 and 202 -22 respectively. But the Audited Annual statement of Tangedco for the year 202-22 states in the page 222 as follows: Third Party Wheeling Adjustment 2020-21 8130 m.u 2021- 22 7437 m.u. (copy enclosed) Nearly 50% of third party wheeled energy were let free from collection of above statutory charges. The Hon'ble Commission may let know the common consumers of the facts of non collected statutory charges, due for the support poor and marginalized.	<table border="1"> <thead> <tr> <th>2020-21</th> <th>Wind</th> <th>Solar</th> <th>Exchange</th> <th>*Others</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Captive</td> <td>7975.93</td> <td>537.00</td> <td></td> <td>4241.00</td> <td>12753.93</td> </tr> <tr> <td>Third Party</td> <td>306.26</td> <td>148.72</td> <td>2856.37</td> <td>327.00</td> <td>3638.35</td> </tr> <tr> <td>Total Adjustment</td> <td>8282.19</td> <td>685.72</td> <td>2856.37</td> <td>4568.00</td> <td>16392.28</td> </tr> </tbody> </table>	2020-21	Wind	Solar	Exchange	*Others	Total	Captive	7975.93	537.00		4241.00	12753.93	Third Party	306.26	148.72	2856.37	327.00	3638.35	Total Adjustment	8282.19	685.72	2856.37	4568.00	16392.28								
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<p>Payments to M/s. PPN. The aforesaid reply is appearing as wrong. The RTI report says that the payments were made during August 2021 to Feb. 2022 as 327 crore and the details were according to Cheque no war. (copy enclosed) How this amount can go without accounting? Where from this amount is paid? That leads to doubt about the entire accounts.</p>	<p>In respect of M/s. PPN, the payment made during the financial year 2021-22 is Rs. 319,78,00,000/- after deducting TDS of Rs. 22,00,000/-. In this regard, it is informed that the payment made during the financial year 2021-22 is related to Prior Period claim and not related to FY 2021-22.</p>																																



<p>The Hon'ble commission may ensure the reliability of the statement of tangedco as True-Up report.</p>	
<p><b>Views of the Commission:</b></p> <p>The comments of the stakeholder and the reply made by the Licensee have been scrutinized and dealt with appropriately in the relevant chapter.</p> <p>TANGEDCO shall carryout necessary classification of cross subsidy surcharge categories to tally the corresponding quantum of adjusted units without giving room for remarks on variation.</p> <p>The issue of open access is sub-judice.</p> <p>The issue of Electricity Tax collected not paid back to Government raised by the stakeholder does not pertain to this True-Up petition. However, the collection of Electricity Tax by TANGEDCO as a collecting agent to the Government shall be accounted under a separate account code and shown in the Revenue Receipts.</p>	

**2. M/s IWPA**

<b>Comments</b>	<b>Reply of TANGEDCO</b>
<p>Table 34 (ARR of TANGEDCO for FY 2021-22) of the True-Up petition clearly shows that in its tariff order dated 09-09-2022, the amounts approved by the Commission are higher than the actual expenses incurred by TANGEDCO for the year 2021-22 in respect of the following tariff parameters.</p> <ol style="list-style-type: none"> <li>1. Transmission and SLDC charges</li> <li>2. Interest on loan capital</li> <li>3. O&amp;M Expenses</li> </ol> <p>This excess cost would have resulted in increased Tariff to the consumers, stakeholders. In our comments dated</p>	<p>In True-Up petition, the actual expenditure incurred as per audited accounts only submitted in the petition.</p> <p>Actual expenditure incurred in respect of Transmission and SLDC charges, Interest on loan capital and O&amp;M Expenses are submitted in the petition. The ARR of FY 2021-22 is increased as compared with APR (provisional data) filed during Tariff petition. Hence, the redetermination of wheeling charges does not arise.</p>

<p>24.8.2022, we requested the Commission to restrict those parameters reasonably for the reasons explained in our comments. Kindly take appropriate action in the True-Up petition and revise the ARR on the basis of the expenses to be approved for 2021-22 and re-determine the wheeling charges and tariff.</p>	
<p>As would be recalled, IWPA has in the past, requested the Hon'ble Commission to have a thorough and independent "Prudent Check" of the data furnished by TANGEDCO as required by the Act and Tariff policy in the present context of poorest and the most inefficient performance of TANGEDCO as reported in the Ministry of Power's (MoP) Annual Integrated Rating &amp; Ranking for Power Distribution Utilities (April 2023). This is also very relevant in the context of more than 78 adverse remarks passed by the Statutory Independent Auditors appointed by the C&amp;AG in their Annual Accounts Report of the TANGEDCO for the year 2021-22.</p>	<ol style="list-style-type: none"> <li>1. TANGEDCO had been adopting the accounting policies as conventionally followed as per Electricity (Supply) Annual Accounts Rules, 1985 (“<b>1985 Accounts Rules</b>”).</li> <li>2. It is pertinent that the said Rules continued to apply even after enactment of the Electricity Act, 2003, by virtue of the repeal and savings provision contained Section 185(2)(d) thereof.</li> <li>3. The comments of the statutory auditor were solely in the context of migration to the Indian Accounting Standards being pending.</li> <li>4. There was no adverse comment on the veracity or the genuineness of the accounts stated by TANGEDCO in its balance sheets.</li> <li>5. The accounts stated by TANGEDCO are true and correct, and have been audited by the C&amp;AG every year.</li> <li>6. The financial position of TANGEDCO has weakened due to the gap between the cost of supply and the ARR recovered through tariff.</li> <li>7. TANGEDCO has got good scores in the fields of power purchase costs, AT&amp;C losses reduction, satisfying RPO regulations, etc., The highest wind RE power capacity is managed in Tamil Nadu. The line loss and</li> </ol>

	<p>ATC and losses are very low as compared with other states in India.</p> <p>8. The billing efficiency and collection efficiency of TANGEDCO are around 88% and 99.5% respectively and amongst the best performing States in India.</p>
<p><b>Views of the Commission:</b></p> <p>The comments of the stakeholder and the reply made by the Licensee have been noted and dealt with appropriately in the relevant chapter.</p> <p>The Licensee shall address all comments made by the statutory auditors in a time bound manner and avoid such discrepancies in future.</p>	

### 3. Thiru.A.Jeevanandham

<b>Comments</b>	<b>Reply of TANGEDCO</b>
<p>In the filed Revised ARR petition in Table16, Revenue at Existing Tariff furnished as ₹45,952.56Cr. Comparing with Rev Financial statement (INDAs) Year 21-22 Page 192 , Table 25 , Sale of power + Subsidy together works out ₹ 47,892.37 Cr. <b>Difference of ₹1,939.81Cr. amount seen.</b></p> <p>Moreover in the petition total revenue furnished ₹55,393.71Cr. while in the account statement Revenue from operations furnished as ₹56,994.48Cr. <b>Difference amount ₹1600.77Cr. seen.</b></p>	<p>The difference of Rs.1939.81 crores is other charges collected towards Excess demand, PF penalty, Cross Subsidy Surcharge, Additional surcharge, etc. They are furnished in other income, in ARR format.</p> <p>The Rs.1600.77 crore is related to receipts from consumer towards DCW works, development charges, Agriculture (Tatkal scheme).</p>
<p>Quote the Tariff Order of the Commission, for calculating estimating Interest Rate for generating stations for finding Tariff. First up all its not commission Calculation, Commission approved the methodology followed by the TANGEDCO in the filed Tariff petition. Moreover, it is the estimated amount not actual amount. In the True-Up what is actual and factual shall be brought</p>	<p><u>Methodology for calculation of Interest on Loan for Generating Stations</u></p> <p>(i) TANGEDCO maintains plant/station wise GFA (Gross Fixed Asset)</p> <p>(ii) The generic loans alone are apportioned based on the GFA ratio.</p> <p>(iii) There is no new plant commissioning during FY 2021-22. Hence</p>

into the petition. But in the Additional Affidavit filed

ARR FY21-22 only Distribution finance charges ₹ 3,950.29Cr only mentioned.

TANGEDCO overall debt, Generation wing Debt nowhere mentioned in the ARR. From the forms provided in the Annexure of Generation wing ARR Formats total Generation Interest worked out as ₹ 4464.53Cr.

This is purely calculated value based on assumptions. Not at all anywhere mentioned in Revised Financial statement (IndAS)21-22.

In that overall TANGEDCO Finance charges are mentioned as ₹ 10,923.25 Cr. Generation interest are put inside Fixed cost of Generation expenses. While tallying Interest expenses, Generation Interest + Distribution Interest + interest on working capital (GEN)+IWC (DISTN) worked out in Additional Affidavit ARR 21-22 i.e. ₹4464.53Cr+₹3,950.29Cr+₹531.26+₹55.03 =₹9001.11Cr only. Hence balance interest amount **₹1,922.14Cr** left out in the ARR.

Kindly clarify following

i) Nowhere in the Generation ARR format actual fixed cost of the plant at the time of commissioning, year of commissioning are not mentioned. Without this particulars how come Depreciation and ROE worked out?, and also actual balance loan exists for the Generating plant not at all furnished in the ARR, without which how interest rates quoted for Generation ₹4464.53Cr is correct? I kindly request that furnish actual Loan remaining for the generating stations and actual interest paid for that alone should be booked in ARR.

ii) Left out Interest amount **₹1,922.14Cr** ie difference between account statement & ARR in the

depreciation and Return on Equity are calculated based on carried over opening balance of loan and duly including during the year additions and deductions only.

(iv) The Tariff Regulation allows interest on loan capital for the 70% capex incurred and 30% of the capex is treated as equity. The 100% interest expenses could not be claimed as per the Regulation in force. For the remaining 30% of capex which is treated as equity. Return on Equity of 14% is claimed (Rs.1276.56 crores).

<p>revised petition. Where it will be booked?</p>																																																																																					
<p>In the Additional Affidavit Table 3 ,Power Purchase cost for 20-21 , Items C Renewables Total cost ₹ Crores, Petition Filed &amp; Ind AS columns both the entries same but total amount varies ,</p> <table border="1"> <thead> <tr> <th>C</th> <th>Renewables</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Windmill</td> <td>3,731.00</td> <td>1,383</td> <td>3,731.00</td> <td>1,383.04</td> <td></td> </tr> <tr> <td>Solar</td> <td>6,115.00</td> <td>2,267</td> <td>6,115.00</td> <td>2,266.77</td> <td></td> </tr> <tr> <td>Co-generation</td> <td>283.45</td> <td>135.70</td> <td>283.45</td> <td>135.69</td> <td></td> </tr> <tr> <td>Biomass</td> <td>2.99</td> <td>1.74</td> <td>2.99</td> <td>1.74</td> <td></td> </tr> <tr> <td>Captive generation</td> <td>16.03</td> <td>3.29</td> <td>16.03</td> <td>3.29</td> <td></td> </tr> <tr> <td><b>Total Renewables</b></td> <td><b>10,148.47</b></td> <td><b>3,790.54</b></td> <td><b>10,148.47</b></td> <td><b>4,492.24</b></td> <td></td> </tr> </tbody> </table>	C	Renewables					Windmill	3,731.00	1,383	3,731.00	1,383.04		Solar	6,115.00	2,267	6,115.00	2,266.77		Co-generation	283.45	135.70	283.45	135.69		Biomass	2.99	1.74	2.99	1.74		Captive generation	16.03	3.29	16.03	3.29		<b>Total Renewables</b>	<b>10,148.47</b>	<b>3,790.54</b>	<b>10,148.47</b>	<b>4,492.24</b>		<p>The revised table as follows:</p> <table border="1"> <thead> <tr> <th>C</th> <th>Renewables</th> <th></th> <th></th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Windmill</td> <td>3,731.00</td> <td>1,383</td> <td>3,731.00</td> <td>1,575.06</td> <td></td> </tr> <tr> <td>Solar</td> <td>6,115.00</td> <td>2,267</td> <td>6,115.00</td> <td>2,776.45</td> <td></td> </tr> <tr> <td>Co-generation</td> <td>283.45</td> <td>135.70</td> <td>283.45</td> <td>135.70</td> <td></td> </tr> <tr> <td>Biomass</td> <td>2.99</td> <td>1.74</td> <td>2.99</td> <td>1.74</td> <td></td> </tr> <tr> <td>Captive generation</td> <td>16.03</td> <td>3.29</td> <td>16.03</td> <td>3.29</td> <td></td> </tr> <tr> <td><b>Total</b></td> <td><b>10,148.47</b></td> <td><b>3,790.54</b></td> <td><b>10,148.47</b></td> <td><b>4,492.24</b></td> <td></td> </tr> </tbody> </table>	C	Renewables					Windmill	3,731.00	1,383	3,731.00	1,575.06		Solar	6,115.00	2,267	6,115.00	2,776.45		Co-generation	283.45	135.70	283.45	135.70		Biomass	2.99	1.74	2.99	1.74		Captive generation	16.03	3.29	16.03	3.29		<b>Total</b>	<b>10,148.47</b>	<b>3,790.54</b>	<b>10,148.47</b>	<b>4,492.24</b>	
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<p><b>Views of the Commission:</b></p> <p>The comments of the stakeholder and the reply with data given by the Licensee have been scrutinized and dealt with appropriately in the relevant chapter.</p> <p>The Commission allows Interest on Loans based on the Gross Fixed Asset (GFA) of the respective functions (Generation &amp; Distribution).</p>																																																																																					

#### 4. Thiru.Kirubakaran

Comments	Reply of TANGEDCO
<p>Missing TANTRANSCO substation consumption</p> <p>The number of TANTRANSCO substations is 1949 prescribed in your web. The energy charges and other charges approximately 161.63 Crores shall be collected from TANTRANSCO. (1949 SS x 50000 units per</p>	<p>All the consumptions in the TANTRANSCO substations are metered and assigned with service connection number. The regular assessment are being taken and brought as revenue from sale of power in TANGEDCO books, initially. The value of power consumed in Transco related sub-stations are transferred</p>

<p>year x Rs.8 per unit = Rs.77.96 Crores and demand charges 1949 x 90 KVA x Rs.350 per KVA x 12 months = 73.67 Crores and other Charges 10 Crores approximately totally 161.63 Crores). However the collection are adjustment details are not available in the page No. 46 to 48 of True- Up of FY 2021-22 sales and revenue from sale of power.</p> <p>Hence the following details are requested</p> <ol style="list-style-type: none"> <li>1. No of TANTRANSCO Substations (400KV, 230KV, 110KV, 66KV and others).</li> <li>2. Total auxiliary consumption of TANTRANSCO substations.</li> <li>3. Billing details such as Energy Charges, Demand and other Charges and total bill amount for the financial year 04/2021 to 03/2022.</li> <li>4. Collection details from the TANTRANSCO.</li> </ol>	<p>as receivable from TANTRANSCO as book adjustment, which will be offset among the other receivables/payables between TANGEDCO &amp; TANTRANSCO.</p>
<p><b>Views of the Commission:</b></p> <p>The comments of the stakeholder and the reply made by the Licensee have been noted and dealt with appropriately in the relevant chapter.</p> <p>The revenue on consumption of energy by sub-stations are included in Sale of Power.</p>	

**5. Thiru.V.Murugan**

Comments	Reply of TANGEDCO
<p>மின்மாற்றிகள் வாங்கும் போது நிர்ணயிக்கப்பட்ட விலையை விட அதிகப்படியாக பணம் கொடுத்து வாங்கி அதன் தரத்தை முறையாக பரிசீலனை செய்யாது 100 KVA'S பதில் 55 KVA அளவு வரை குறைத்த திறன் எனத் தெரிவித்து வாரிய அலுவலர்கள் அதைக் கண்டுகொள்ளாமல், வழங்கிய கம்பெனி மீது எந்த நடவடிக்கை எடுக்காமலும்,</p>	<p>"தமிழ்நாடு டெண்டர் வெளிப்படைத்தன்மைசட்டம் மற்றும் மிதிக்கலின்படி TANGEDCO வின் தகுதிவாய்ந்த அதிகாரியிடமிருந்து ஒப்புதல் மற்றும் ஏற்றுக்கொள்ளப்பட்ட பிறகு விநியோக மின்மாற்றிகள் நியாயமான விலையில் வாங்கப்படுகின்றன. மின்மாற்றிகளின் தரம் உற்பத்தியாளரின் வளாகத்தில்தொடர்புடைய IS இல் பரிந்துரைக்கப்பட்டபடி சோதனைகளை நடத்துவதன்மூலம் உறுதிசெய்யப்படுகிறது. மேலும் அவை TANGEDCO வின் பொறியாளர்களால் களத்தில் சோதிக்கப்பட்டு அளவிடப்படுகின்றன. ஒப்பந்தக்காலம் முடிவடைந்தபின் இக்குறைபாடு கவனத்திற்கு கொண்டுவரப்பட்டதால்,</p>

<p>மீண்டும் அதிகப்படியான மின்மாற்றிக்கு அதே கம்பெனியில் வாங்க நேரிட்டது என்ன நியாயம் ?</p>	<p>முழுமையானவிசாரணையைமுடித்தபிறகு மேற்கண்ட நிறுவனம் மீது நடவடிக்கை எடுப்பதற்கு முடிவு செய்யப்படும். மேலும், சமீபத்திய டெண்டர்களில் இந்நிறுவனம் முழுமையாக தகுதி பெற்றிருந்தாலும், கொள்முதல் ஆணைகள் நிறுவனத்திற்கு கொடுக்கப்படவில்லை."</p>
<p>2021-22 ஆம் ஆண்டிற்கான கணக்குத் தணிக்கை செய்யப்பட்டு அறிக்கையும் பெறப்பட்டுள்ள நிலையில் 2020-21 ஆம் ஆண்டிற்கான கணக்கை மீண்டும் மாற்றிமைக்க முயற்சிக்கும் தாங்கள் கணக்கியல் துறையில் ஒரு புதுமையை புகுத்துகிறீர்கள் அதனால் இனி வரும் காலமும் முறையான கணக்கு பாரமரிக்க மாட்டீர்கள் என்பதற்கு இது சான்றாகிறது.</p> <p>இறுதியாக நீங்கள் குறிப்பிட்டுள்ள தணிக்கை செய்யப்பட்ட வருடாந்திரக் கணக்கின் அடிப்படையில் உண்மைத் தன்மை மனு தயாரிக்கப்பட்டுள்ளது என்ற கூற்று உங்கள் கடிதத்தின் உச்சக் கட்டம். 2021-22 ஆம் ஆண்டிற்கான தணிக்கை அறிக்கையினை நீங்கள் படித்துப் பார்க்கவில்லை</p>	<p>TANGEDCO, Ind AS விதிகளுக்கு இணங்குவதற்கான உறுதிப்பாட்டுடன், வாரியத்தின் முடிவின் அடிப்படையில், நிறுவனங்கள் சட்டம் 2013ன் u/s131 இன்படி நிதிநிலை அறிக்கைகளை தாமத முன்வந்து திருத்துவதற்காக மாண்புமிகு NCLT க்கு முன் விண்ணப்பித்தது. TANGEDCO வின் மனுவின் தகுதிகளைக் கருத்தில் கொண்டு, சட்டப்பூர்வ தணிக்கையாளர்கள், நிறுவனங்களின் பதிவாளர் மற்றும் வருமானவரித்துறை ஆகியோர்களுடன் ப ல விசாரணைகள் மேற்கொள்ளப்பட்டது. TANGEDCO மூலம்செய்தித்தாள்களில் பொது அறிவிப்பை வெளியிடப்பட்டு, 2020-21 ஆம் நிதியாண்டிற்கான கணக்குகளைத் திருத்துவது குறித்து அனைத்து பங்குதாரர்களிடமிருந்தும் கருத்து கேட்கப்பட்டது. இந்தசெயல் முறைகள் அனைத்தும் கம்பெனிகள் சட்டவிதிகளில் குறிப்பிடப்பட்டுள்ளதுபடி, TANGEDCOவால் கடைபிடிக்கப்பட்டது. மாண்புமிகு NCLTயும் TANGEDCO மனுவை அனுமதித்துள்ளது. இதேபோல், TANGEDCOவால் ஏற்கனவேவெளியிடப்பட்ட FY 2021-22 இன்நிதிநிலை அறிக்கைகளுக்கு, FY 2020-21 இன் திருத்தம் காரணமாக அதன் தாக்கத்தை 2021-22 நிதியாண்டின் கணக்கு இருப்பில் கொண்டுவந்து, கணக்குகளைத் திருத்தவேண்டிய அவசியம் உள்ளது. எனவே 2021-22 ஆம் ஆண்டில் பதிவு செய்யப்பட்ட</p>

<p>என்பது தங்கள் கடிதம் மூலம் நன்கு தெரிகிறது. மேலும் தணிக்கை அறிக்கையினை வெளியிடுவதில் தன்மையுடன் ஏன் வெளியிடவில்லை? என்பதன் விளக்கம் தணிக்கை அறிக்கையிலேயே அடங்கியுள்ளது.</p> <p>கம்பெனி சட்டப் பிரிவு 147 ன் படி தன்னை பாதுகாத்துக் கொள்வதற்கான உண்மையான அறிக்கையினை தணிக்கையாளர் வெளியிட்டுள்ளார். அதைப் படித்தால், கம்பெனி சட்டப்படி நீங்கள், உங்களைச் சார்ந்தவர்கள் கம்பெனி இயக்குனர்கள் அனைவரும் செயல்படாத நிலையில் மேற்குறிப்பிட்ட பிரிவு 147 ன் கீழ் குற்றவியல் நடவடிக்கை தொடர்வதற்கு உங்களது கடிதம் உறுதுணையாகவுள்ளது என்பது தெளிவாகத் தெரிகிறது.</p>	<p>பரிவர்த்தனைகளில் Ind AS தரநிலைப்படி மாற்ற,, TANGEDCO தாமாக முன்வந்து திருத்தத்திற்கானமனுவைத் மாண்பமை NCLT யின் முன் தாக்கல் செய்தது. மேலும் 2021-22 நிதியாண்டுக்கான கணக்குகளைத் திருத்துவதற்கு மாண்பமை NCLTயும் அனுமதித்துள்ளது. NCLT இன் உத்தரவுகளுக்குப்பிறகு, கணக்குமறுசீரமைப்புமேற்கொள்ளப்பட்டு, சட்டப்பூர்வ தணிக்கையாளர்கள் திருத்தப்பட்டதணிக்கை அறிக்கையைவழங்கினர். மற்றும் தற்போது, மத்தியதணிக்கைக்குழுவினால் ஆய்வுசெய்யப்பட்டுவருகிறது.. வாரியம் 2021-22 ஆம் ஆண்டு நிதிநிலை அறிக்கையை தொகுக்கப்பட்டு, 2021-22 ஆம்ஆண்டு அறிக்கைகளை வழங்கப்பட்டதும், மாண்பமை NCLT ஆணைகளின் அடிப்படையில் தான்நிதிநிலை அறிக்கை தயார் செய்ப்பட்டது என்பது உண்மை ஆகும். மேலும் ஆண்டு அறிக்கை வெளியிடுவதில் தன்மையுடன் தான் தயார் செய்யப்பட்டுள்ளது.</p>
<p><b>Views of the Commission:</b></p> <p>The comments of the stakeholder and the reply made by the Licensee have been noted and dealt with appropriately in the relevant chapter.</p> <p>The remarks not related to this petition in particular have not been taken by the Commission in this order.</p> <p>The TANGEDCO has revised the Statement of Account for the financial years 2020-21 and</p>	



2021-22 after obtaining necessary orders from Hon'ble NCLT, a Quasi-judiciary body. The Commission has taken note of it.

**6. Thiru.S.NeelakantaPillai**

<b><u>Comments</u></b>	<b><u>Reply of TANGEDCO</u></b>
<p>EnergyBalanceStatementforFY2021-22.Item2.PGCILLosses.</p> <ul style="list-style-type: none"> <li>• Why such losses were not brought under the head of Transmission losses?</li> <li>• What is the breakup of PGCIL losses</li> <li>• Justification of PGCIL Losses has not been furnished in the petition.</li> <li>• What are the break-up value of energy transmitted through interstate transmission lines and intrastate transmission lines?</li> <li>• Within the State how much energy was transmitted through intrastate transmission lines pertaining to TANTRANSCO networks and Private dedicated transmission networks.</li> <li>• Any standard limitation of PGCIL Losses has been fixed and whether the quantum of energy for FY 2021-22 ie 2065.47 MUs accounted against losses is within the safe limit or exceeded the standard level.</li> </ul>	<p>Under the head Intra state, Transmission losses are shown separately</p> <p>Breakup for 2065.47 MU:</p> <ul style="list-style-type: none"> <li>• CGS - 1145.257 MU</li> <li>• LTOA - 492.807 MU</li> <li>• MTOA - 18.823 MU</li> <li>• STOA - 91.745 MU</li> <li>• Exchange - 316.844 MU</li> </ul> <p>Any power drawn from ISTS network, this losses accounted based on the Sharing Regulations notified by CERC,</p> <p>As per Resource Statement given by Grid operation wing which is including wheeling unit the total availability for 2021-22 is 117251 MUs. Based on this Resource MU the energy transmitted through interstate transmission &amp; intra state lines is 57703 MU. Energy transmitted through intra state transmission lines alone is 59548 MU.</p> <p>No standard limitation is fixed for PGCIL i.e. ISTS losses. Every week all over India the ISTS losses is being calculated by NLDC based on the Sharing of Inter-State Transmission charges and losses Regulations. The actual losses is calculated based on the energy meter available in injection and drawal point all over India. Therefore, the safe limit or exceeded the standard level does not arise.</p> <p>The percentage of PGCIL losses is not a fixed value all the time. The percentage will change every week based on the previous week actual data obtained from injection and drawal point and calculated as per the Sharing of inter-state transmission charges and losses</p>

<p>• Companies Act 2013, section 134 (2) says, "The auditors' report shall be attached to every financial statement". ஆனால், இதுபோன்று ஆடிட்டரிப்போர்ட்டு வும் financial statement உடன் இணைக்கப்படவில்லை.</p>	<p>Regulation by NLDC. Only the Abstract of Financial Statements was uploaded in the website and thus Auditor's report were not attached. However the entire full set of Financial Statement of FY 2021-22 is filed with the Registrar of Companies which can be accessed by any Stakeholder.</p>
<p>Whether the statutory auditors has been appointed by the Comptroller and Account General of India under section 139(5) of the Companies Act 2013. If yes furnish the details about the auditors who engaged this audit and furnish also the report of the audit done. If not, furnish the reason for not engage CAG.</p>	<p>The Statutory Auditors appointed by the C&amp;AG vide Lr.No.CA.V/ COY/ TAMIL NADU, TNGDCL(5)/ 685 DT.24.08.2021 has detailed below. 1. M/s. Khicha &amp; Prabhu Kesavan 2. M/s. Thiyagarajan &amp; Co., 3. M/s. M. Thomas &amp; Co., 4. M/s. R. Gopal Rao &amp; Co.,</p>
<p>The Audited Annual Report for FY 2021-22 has already been submitted to the TNERC, said by the CFC / Regulatory Cell / TANGEDCO during a visit on 06.05.2023. If it so, who or which committee set up for this purpose in the Commission has reviewed this annual report, whether they have clarified any of the issues among the most of the data are unmatched between Petition MP No.10 of 2023 and annual report for FY 2021-22.</p>	<p>The True-Up petition has been filed by the competent authority approved by TANGEDCO as mentioned in Form-2. There are 72 number of account rendering units in TANGEDCO. The accounts are audited at various levels by internal audit/ statutory audit/ AG audit. The audited accounts are placed and approved by the Board and AGM. The adopted accounts filed with ROC as per rules and Regulations in force. The True-Up petition is prepared based on AG certified audited accounts and technical data received periodically from HOD. The work of preparation and filing is under purview of Regulatory Cell of TANGEDCO. On need basis the support of consultants is also obtained on approval by competent authority. Therefore there is no violation of rules/Regulations in preparation of petition. The HoDs are addressed for obtaining base data used in the preparation of accounts. All those back up workings are not accommodated in the ARR prescribed formats. Hence there is no disparity in data submitted in True-</p>

	<p>Up petition.</p> <p>The accounts of Tamil Nadu Power Generation and Distribution Corporation are to be changed from the year 2020-21 with the Indian Accounting Standards.</p>												
<p>IPPS in the table above, there is a difference in cost Rs. 379.18 Crs, which seems to be the payment has been made to PPN but it was not disclosed, why?</p>	<p>The payment made to M/s PPN is not related to the FY 2021-22. Hence the same is accounted in the prior period expenses.</p>												
	<p>As per section 139(5) of the Companies Act 2013, the Statutory Auditor firms are being appointed by C&amp;AG every year for any Public Sector Under-taking. Considering the huge volume of the transaction carried out by the TANGEDCO there are five external audit firms, who have been allocated with certain circles for conducting the audit. One of the CA firm out of five firms will be assigned with the audit of consolidation of accounts and audit report. TANGEDCO was formed as on 01.11.2010 under the Company Acts 1956, duly bifurcated from erstwhile (Tamilnadu Electricity Board). The Annual Accounts were prepared under the Electricity Supply Annual Accounts Rules 1985. The resignation of the one audit firm was among the five firms appointed by the C&amp;AG, indicated three major reasons viz.:</p> <p>Since the appointment of the auditors has been revised by the C&amp;AG, subsequent to the resignation of the firm M/s M.Kuppusamy PSG &amp; Co., and only such revised audit firms were filed with ROC as auditors of TANGEDCO.</p>												
<p>T&amp;D losses and PGCIL loss are fraudulent figures in order to showcase the reduced revenue from sale of power. It is proved from the documents of energy audit conducted by a enabled energy auditor M/s A-Z Energy Engineers Private Limited appointed by the TANGEDCO. They</p>	<p>1. As per the Mandatory Annual Energy Audit report of TANGEDCO Energy Data for the FY 2020-21 , the T&amp;D loss and AT&amp;C loss values furnished by Ms.A-Z Energy Engineers Pvt. Ltd.</p> <table border="1"> <thead> <tr> <th rowspan="2">S.No</th> <th rowspan="2">Description</th> <th colspan="2">Values</th> <th rowspan="2">Remarks</th> </tr> <tr> <th>Units</th> <th>Loss in %</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>	S.No	Description	Values		Remarks	Units	Loss in %					
S.No	Description			Values			Remarks						
		Units	Loss in %										

<p>said the distribution loss for the FY 2020-21 is only 6959 MUs instead of TNERC approved figure for FY 2020-21 is 10605 MUs. The difference is 3646 MUs, its cost about in several thousand crores. Where is a justification?</p>	1	T&D Loss	10998.36	10.89	Pg. Nos. 6, 9, 10, 25, 28, 53 and 67 of Audit report TANGEDCO furnished by M/s.A-Z Energy Engineers Pvt. Ltd
<p><b>Variations on Fixed Assets between IGAAP &amp; Ind AS:</b></p>	<p>2. In the audit report furnished by M/s. A-Z Energy Engineers Pvi. Ltd, the TD loss value in the “Form - details of input infrastructure ® under the head” Loss estimation for DISCOMS" is 10998.36 MU only .</p> <p>3. Bureau of Energy Efficiency (BEE) in the notification dated 6<sup>th</sup> October 2021 has given a set of forms which have to submitted along with the audit report of the respective financial year . TANGEDCO has entered the energy details for the FY 2020-2021 as per the format furnished by BEE. The value of 6939 MUs is due to the entry of intra state transmission loss units of 4039 MU in the inter state transmission loss cell in the “Form - details of input infrastructure” under the head “Loss estimation for DISCOMs” of BEE. The same has been revised.</p> <p>TANGEDCO has implemented Ind AS compliant financial statements as mandated by the Companies Act provisions and also as permitted by Hon’ble NCLT based on Voluntary Revision petition filed by the company. The Property, plant and Equipment (PPE) aspects are covered under Ind AS provisions no.16 and as such, the fixed assets balances under IGAAP as on 01.04.2019 were fair valued duly obtaining data from the field engineers viz., nature of assets, life expected, life served, market value, replacement cost, etc. and with the support of certified valuer.</p> <p>Further, reclassification of assets of Buildings, Hydraulic works, certain civil works, Lines &amp; Cables, etc are undertaken based on the nature of assets and thus, there will be increase / decrease among class of</p>				

	<p>assets in the financial statements. In the ERP scenario, few class of assets are also reclassified among Plant &amp; machinery and Lines, Cables Network., which also resulted to variations between IGAAP balances and Ind AS balances. The Voluminous nature of transactions were carried out with meticulous review by different levels of management and also audited by the Statutory Auditors and AG auditors. The comments of such auditors are also need to be attended in the ensuing years based on the veracity of the observations, for further refinement of financial statements of the company.</p> <p>It is also to be noted that excess / short of fixed assets balances due to Fair Valuation exercise were adjusted against retained earnings as per Ind AS provisions only, which is adjusted against accumulated losses in TANGEDCO financials.</p> <p>The query on “maintaining two separate reconciliation for IGAAP and Ind AS for capitalisation purpose and comments as violation of Act” by the stakeholders is not reasonable, since the Ind AS framework is implemented only by revision of accounts prepared under IGAAP duly obtaining orders of Hon’ble NCLT specifically. The stakeholders need to be sensitized on the changed scenario and to adopt only the revised accounts instead of IGAAP accounts.</p> <p>Since the company is an integrated utility having Generation and Distribution together, financial statements are compiled as one accounts though exclusive books of accounts maintained for each circles of Generation nature, Project, Distribution functions, etc. The operating segment wise profit and loss account is shown in Note 46 of Annual Report.</p>
<p><b>Views of the Commission:</b> The comments of the stakeholder and the reply made by the Licensee have been noted and dealt with appropriately in the relevant chapter.</p>	

**7. Thiru.C.Selvaraj**

	<b>Reply of TANGEDCO</b>
<p>பலஅனல்மின் திட்டப்பணிகள் காலதாமசு படுத்தியதில் அதற்குரிய L.iquidated damage வசூல் செய்யப்படாதது எதனால் என்று தெளிவு படுத்தப்படவில்லை.</p>	<p>மேட்டூர் II , மற்றும்வடசென்னை II ஆகியவற்றின் LD கணக்கியல் பொதுபணிக்குழு (PUC) யிடம்இருப்பதால் அதன் முடிவின்படி இறுதிசெய்யப்படும்.</p>
<p>தளவாடச்சாமான்கள் உபகரணங்கள் போன்றவை சந்தை விலையைவிட அதிகவிலைக்கு வாங்கப்பட்டுவருகிறது. வாங்கப்படும் உபகரணங்களின் தரத்தையும் பரிசீலிப்பதில்லை. விநியோக மின்மாற்றி தரக்குறைவாக இருந்தாலும் குறைந்த பளுத்திறன் உடையதாக இருந்தாலும் அதனை அப்படியே ஏற்றுக்கொண்டு வாரிய நிதி விரையம் செய்யப்பட்டுவருகின்றது. 22 kA /100kA திறன்உள்ள விநியோகமின்மாற்றிகோளமின்சாரவாரியத்தில்ரூ.2.37 லட்சத்தில் வாங்கப்பட்டிருக்கும்போதுவாரியம் ஆகஸ்ட் 2022இல்ரூ.4.73 லட்சத்தில்வாங்கியிருக்கிறது.</p>	<p>"தமிழ்நாடு டெண்டர் வெளிப்படைத்தன்மை சட்டம் மற்றும் விதிகளின் படி தமிழ்நாடு மின்உற்பத்தி மற்றும் பகிர்மான கழகத்தில் தகுதி வாய்ந்த அதிகாரியிடமிருந்து ஒப்புதல் மற்றும் ஏற்றுக் கொள்ளப்பட்டபிறகு விநியோக மின்மாற்றிகள் நியாயமான விலையில் வாங்கப்படுகின்றன. மின்மாற்றிகளின் தரம் உற்பத்தியாளரின் வளாகத்தில் தொடர்புடைய IS இல் பரிந்துரைக்கப்பட்டபடி சோதனைகளை நடத்துவதன்மூலம் உறுதி செய்யப்படுகிறது. மேலும் அவை தமிழ்நாடு மின்உற்பத்தி மற்றும் பகிர்மான கழகத்தின் பொறியாளர்களால் களத்தில் சோதிக்கப்பட்டு அளவிடப்படுகின்றன. ஒப்பந்தக்காலம் முடிவடைந்தபின் இக்குறைபாடுகவனத்திற்கு கொண்டு வரப்பட்டதால், முழுமையான விசாரணையை முடித்தபிறகு மேற்கண்டநிறுவனம் மீது நடவடிக்கை எடுப்பதற்கு முடிவுசெய்யப்படும். மேலும், சமீபத்திய டெண்டர்களில் நிறுவனம் முழுமையாக தகுதி பெற்றிருந்தாலும், கொள்முதல் ஆணைகள் நிறுவனத்திற்கு கொடுக்கப்படவில்லை. M/s. KSEBஆல்வாங்கப்படாத 100KVA/22KV விகிதமான மின்மாற்றியை பங்குதாரரால் ஒப்பிடப்பட்டது. M/s. KSEBஆல் கொள்முதல்ஆணைமூலம்சமீபத்தில்வாங்கப்பட்ட 100KVA/11KV விகிதமின்மாற்றிகளின் விலையுடன்தமிழ்நாடுமின்உற்பத்திமற்றும் பகிர்மானகழகத்தால்இறுதிசெய்யப்பட்டுகொள்முதல் ஆணைமூலம்வாங்கப்பட்ட 100KVA/11KV விகிதமின்மாற்றிகளின் ஒப்பிடும்போது, பின்வரும் சிறந்த</p>

	<p>தொழில்நுட்ப அளவுருக்கள் மற்றும் வடிவமைப்பு மாற்றங்கள் காரணமாகும்.</p> <p>1. தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகத்தின் மின்கடத்தி செம்பு (copper) கம்பிசுருள், KSEB இன் மின்கடத்தி அலுமினியம் (aluminium) கம்பிசுருள்.</p> <p>2. தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகத்தின் மின்மாற்றியின் மொத்த எடை 890Kgs, KSEB இன் மொத்த எடை 760Kgs.</p> <p>3. தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகத்தின் மின்மாற்றியின் ஆயுட்காலம் அதிகமாக உள்ளது, KSEB இன் மின்மாற்றியின் ஆயுட்காலம் குறைவாக உள்ளது.</p> <p>4. தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகத்தின் மின்மாற்றியை பழுதுபார்ப்பது எளிதானது மற்றும் சிக்கனமானது.</p> <p>5. தமிழ்நாடு மின் உற்பத்தி மற்றும் பகிர்மான கழகத்தின் விநியோக மின்மாற்றிகளின் பழுதுவிகிதம் செம்பு (copper) சுருள் அறிமுகப்படுத்தப்பட்ட பிறகு குறைந்து வருகிறது."</p>
<p>The revenue leakage because of the inertness coupled with generosity of the Accounts wing personnel is another matter of concern. In Chennai south circle alone nearly Rs. 84 lakhs (S.C.Nos. 252-579-1129 and 211-007-141) could not be collected in two service connections because of failure to comply with the limitation, which was discovered in the year 2013, but informed the consumers in the year 2022 and 2019.</p>	<p>In the Service Connection No: 252-579-1129, the TANGEDCO/Audit Branch has raised an objection for an amount of Rs.24,98,953/- for average Shortfall for the Period 01/2009 to 03/2013, the slip was raised in the services connection no: 252-579-1129. Due to Non-Payment of CC Arrears of Rs.24,98,953/- in the services connection no: 252-579-1129 in the name of M/s V.JESURMAKILI, the amount was raised in the another SC No.252-579-1126 in the name of M/s V.JESURAJAKILI on 03.04.2023. The said service also disconnected from 07.06.2023 due to non payment.</p> <p>Notice was served to the consumer and the consumer objected to pay and filed a petition in CGRF on 24.09.2023. The CGRF issued an order on 09.01.2024 to collect the Shortfall amount of Rs. 24,98,953/- Due to Account Closure the slip amount for an amount of Rs.24,98,953/- plus BPSC plus CC pending from 09/2014 to 05/2015 for an amount of Rs.2,14,385/- plus BPSC included and raised to an amount of Rs, 69,10,350/-. Necessary steps are being taken to collect the CC arrears as per CGRF order.</p>

	<p>The SC.NO.211-007-141 (LM3B) in the name of the S.K.Muniyandi, an additional load of 37KW over and above in the existing 71KW totaling 108KW with MF 40 was effected on 23.03.2007 without updating in the consumer ledger. The software error, the MF has been changed from 40 to 30 during 07/2008 and while meter change during 03/2013 the MF was again corrected to 40. For which the CC Arrears shortfall was raised due to wrong adoption of MF recorded as 30 instead of 40 for the period 07/2008 to 02/2013 for an amount of Rs.14,34,174/-.</p> <p>As per the Chief Financial Controller Lr.No.CFC/FC/R/D.NO./DT.11.10.2011, there is no necessity to cancel the CC arrears since the CC arrears levied from 07/2008 to 03/2013 is based on the actual consumption consumed in the SC.No.09211007141.</p> <p>Hence, the Petitioner is directed to pay the CC arrears amount of Rs.14,34,174/- due to TANGEDCO. If the petitioner opts for installment, the same may be given as per the rules in force. With this direction the petition is disposed off.</p> <p>If the petitioner is not satisfied with this order, he has the right to file an appeal before the OMBUDSMAN. In the Electricity Ombudsman Regulations 2004 the consumer was requested to deposit 25% of the amount as ordered by CGRF in order to register his appeal petition.</p> <p>As per the direction of Electricity Ombudsman the consumer has paid 25% of the amount Rs.3,58,544/- (paid on 13.04.2022, Receipt No.CHS211AR1Q1452) from the total amount of CC arrears Rs.14,34,174/-.</p> <p>Individual appeal of Ombudsman and the Ombudsman ordered to refund the 25% above amount to the consumer. As per the order of Ombudsman, Legal opinion made and the legal opinion also guide to refund to the consumer. So the refund of payment to the consumer vide Cheque No.267844 dt.20.02.2023. Further it is informed that necessary action is being taken to prefer appeal before Hon'ble High court of Madras in consultation with legal cell/Counsel</p>
<p>In the circumstances mentioned above, it is just and necessary to furnish true and real explanations to all the defects, deficiencies,</p>	<p>The stakeholders comments on the management reply for the audit comments that “the mentality and the behavioural attitude of the TANGEDCO officials” are condemnable, as replies to the stakeholders comments</p>



<p>irregularities, frauds and inconsistencies listed out in both the reports of the Statutory Auditors and accordingly, it is insisted to supply correct and factual explanations to all the queries, so as to fulfill your statutory obligation towards the stakeholders.</p>	<p>are furnished 2 times already and now one more time final reply given. Sincere attempt is made to furnish the replies to the comments related to the True-Up petition.</p>
<p>Non disclosure and lie on the part of the Petitioner is apparent in the matter of Compliance of Pollution Act under Annexure C of the audit report. It was informed to the Auditors that there was no violation of any Pollution Control Act. But the factual condition is otherwise. The Petitioner had made payment of penalty to the Pollution Control Board for its violation in respect of NCTPS.</p> <p>The Petitioner had paid an amount of Rs. 21 crores to the TNPCB at three instances on 10-06-2020 and 27-12-2021.</p> <p>The CE/TTPS has been served with a show cause notice for creating pollution through fly ash.</p>	<p><b><u>TTPS:</u></b> Show cause issued by TNPCB vide Proceeding No.T2/TNPCB/F.0042/SCN/TTN/A/2023,Dated 01.12.23. Reply to the show cause notice issued by TNPCB has been sent on 20.01.24 as follows. <b><u>TNPCB remarks:-</u></b> The Unit has caused environmental damage by not operating the APC measures efficiently and causes Air pollution for the period from 13.04.23 to 05.10.23.</p> <p><b><u>Reply of TANGEDCO:-</u></b> MoEF&amp; CC vide its notification dated.05.09.22 had issued the time line for compliance of New Environmental Norms for Thermal Power Plants. TTPS comes under “Category B”. As per notification, Time line to achieve the specified norms for parameter other than SO2 emission is 31.12.23 for TTPS.</p> <p>Sincere efforts are being taken by TTPS to fulfill the compliances of TNPCB Norms. Hence TANGEDCO requested that TTPS may kindly be relieved from imposing environmental compensation for the above said period.</p> <p><b><u>NCTPS-I:</u></b> The Environment compensation which were imposed and paid on 10.06.2020 and 27.12.2021 is for the violations made during the previous period.(i.e) prior to the Financial Year 2021-2022. Subsequent to that no violation is made and all the TNPCB regulations are being adhered.</p>
<p>In the meantime, I have come across an order issued by the</p>	<p>On obtaining order from Hon’ble NCLT, TANGEDCO revised its accounts of FY 2020-21 and FY 2021-22 duly audited by both statutory auditors, AG auditors and</p>

<p>National Company Law Tribunal, Division Bench 1, Chennai in CP.77/Che/2022. This order was passed by the Tribunal on 12.1.2023 permitting the TANGEDCO to revise the Account Statement pertaining to the years 2020 &amp; 2021. It is not known whether the TANGEDCO has revised the Account Statement, as it is not published any where, including uploading of the Revised Statement in the website of the TANGEDCO.</p>	<p>certified by C&amp;AG, New Delhi published in TANGEDCO website on 20.01.2024.</p>																																																						
<p>Because of the above deliberate lapses and irregularities, the TANGEDCO is put under abnormal Financial stress leading to near Bankruptcy.</p> <p>The following lapses and irregularities, among others, needs dueconsideration.</p> <p>a) Not fixing of Energy Meters in Agricultural and Hut Services in contravention to the Rules from the year 2006. Even new services are not fixed with meters- <b>no proper line loss and energy accounting</b></p>	<p>At present Agricultural and Hut service connections are being provided with free supply and no CC charges are levied to Agricultural and Hut Service connections even though the meters are fixed in the Agriculture and Hut service connections. For calculation of AT&amp;C losses sample meters are fixed in the Agriculture and Hut service connections. At present meters are provided to Hut and Agricultural services at the time of effecting new services.</p>																																																						
<p>c) The Tangedco has filed <b>fraudulent account details</b> in the True-Up Petition towards the payment made to energy charges to the <b>PPN</b> during the years 2020 and 2021.</p> <p><u>2020-21 2021-22</u></p> <p><u>Rs.In crores</u></p> <table border="1"> <tr> <td>As per RTI reply dt.28-03-2022</td> <td>133.2</td> <td>270</td> </tr> <tr> <td>As per Petition</td> <td>267.8</td> <td>00</td> </tr> </table> <p>d) There is a double entry in the RTI reply under sl. No.</p>	As per RTI reply dt.28-03-2022	133.2	270	As per Petition	267.8	00	<p>The reply to RTI is revised as follows:</p> <table border="1"> <thead> <tr> <th>Sl No</th> <th>Cheque No</th> <th>Cheque Date</th> <th>Amount in Rupees</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>978567</td> <td>15.07.2020</td> <td>30,00,00,000/-</td> </tr> <tr> <td>2</td> <td>978677</td> <td>05.08.2020</td> <td>21,67,88,824/-</td> </tr> <tr> <td>3</td> <td>978942</td> <td>05.10.2020</td> <td>25,00,00,000/-</td> </tr> <tr> <td>4</td> <td>979021</td> <td>12.11.2020</td> <td>26,42,86,733/-</td> </tr> <tr> <td>5</td> <td>979040</td> <td>24.11.2020</td> <td>1,87,500/-</td> </tr> <tr> <td>6</td> <td>979066</td> <td>07.12.2020</td> <td>2,02,658/-</td> </tr> <tr> <td>7</td> <td>979112</td> <td>30.12.2020</td> <td>30,00,00,000/-</td> </tr> <tr> <td>8</td> <td>979167</td> <td>29.01.2021</td> <td>2,25,000/-</td> </tr> <tr> <td>9</td> <td>979504</td> <td>11.08.2021</td> <td>75,00,00,000/-</td> </tr> <tr> <td>10</td> <td>979508</td> <td>12.08.2021</td> <td>75,00,00,000/-</td> </tr> <tr> <td>11</td> <td>979655</td> <td>02.11.2021</td> <td>69,93,00,000/-</td> </tr> </tbody> </table>	Sl No	Cheque No	Cheque Date	Amount in Rupees	1	978567	15.07.2020	30,00,00,000/-	2	978677	05.08.2020	21,67,88,824/-	3	978942	05.10.2020	25,00,00,000/-	4	979021	12.11.2020	26,42,86,733/-	5	979040	24.11.2020	1,87,500/-	6	979066	07.12.2020	2,02,658/-	7	979112	30.12.2020	30,00,00,000/-	8	979167	29.01.2021	2,25,000/-	9	979504	11.08.2021	75,00,00,000/-	10	979508	12.08.2021	75,00,00,000/-	11	979655	02.11.2021	69,93,00,000/-
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11 and 12, which amounts to further fraud.	12	979865	25.02.2022	50,00,00,000/-
			Total	403,09,90,715/-
<p>The prior period items are now revised as per IndAs and the same has been revised in the Additional Affidavit dated 10.01.24.</p>				
<p><b>Views of the Commission:</b>  The comments of the stakeholder and the reply made by the Licensee have been noted and have been dealt with appropriately in the relevant chapter.</p> <p>The remarks not related to this petition in particular have not been taken by the Commission in this order.</p>				

### **8. M/s WRI**

<b>Comments</b>	<b>Reply of TANGEDCO</b>
To clarify the difference between Operating charges & Extra-ordinary items along with components covered under each category as furnished in Clause no.3.21 of True-Up petition as the components of extra-ordinary items are not explained and also, in the annexure particularly for Hydro plants - the term "Extraordinary items" & "Operating Charges" are used interchangeably.	There are certain expenses like water cost/lubricant etc., which are not covered in regular O&M expenses and not mentioned specifically in regulation, hence grouped under operating expenses & claimed in line with CERC in line Regulation. However, extraordinary items like expenses on flood, cyclone etc., which are grouped along with operation expenses. However, in FY 2021-22, there is no such extra ordinary charges claimed for Generating functions.
<u>2.To specify wheeling units' calculation since there is a deviation in wheeling units (as given in #2 above) despite the same revenue values (INR 9076.48 Crs)</u>	Wheeling units mentioned as 17,016 MU in table No.27 is the inclusion of line loss.(Injection end) . However, the wheeling units mentioned as 16,210 MU in table No.29 &31 is drawl end

Wheeling units mentioned in the table no.27 = 17,016 MU Wheeling units mentioned in table no. 29 and 31 = 16,210 MU	after considering the line loss. Hence, wheeling units considered as per injection and drawl of energy.
<b>Views of the Commission:</b> The comments of the stakeholder and the reply made by the Licensee have been noted and dealt with appropriately in the relevant chapter.	



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