

TRIPURA ELECTRICITY REGULATORY COMMISSION



TARIFF ORDER FOR FY 2023-24

Petition No. 3 (Truing up) of 2023 and 4 (MYT) of 2023

True-up of FY 2020-21 and FY 2021-22, Annual Performance Review of FY 2022-23 and ARR Determination for Generation, Transmission and Distribution Business for FY 2023-24 and Retail Supply Tariff for FY 2023-24 of Tripura State Electricity Corporation Limited

September, 2023

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Before the
TRIPURA ELECTRICITY REGULATORY COMMISSION

Bidyut Bhawan, Banamalipur, Bhutoria,
Agartala – 799001 (Tripura)

Coram

Honourable Shri. D. Radhakrishna, Chairman
Honourable Shri. Jiban Krishna Sen, Member

Dated: 22 September, 2023

Petition No: 3 (Truing-up) of 2023

In the matter of

Petition of Tripura State Electricity Corporation Limited (TSECL) for Truing-up of FY 2020-21 and FY 2021-22 for Generation, Transmission and Distribution Business under TERC MYT Regulations, 2015 and Section 62 of Electricity Act, 2003.

By

Tripura State Electricity Corporation Limited (TSECL)

..... Petitioner

Bidyut Bhawan, North Banamalipur
Agartala – 799001
Tripura

Petition No:4 (MYT) of 2023

In the matter of

MYTTariff Petition of Tripura State Electricity Corporation Limited (TSECL) for FY 2022-23 to FY 2023 -24 for Generation, Transmission and Distribution and retail Supply Business under TERC MYT Regulations, 2015 along with the Annual Performance Review of FY 2020-21 and direction issued by TERC under Section 62 of the Electricity Act 2003.

By

Tripura State Electricity Corporation Limited (TSECL)


..... Petitioner


Bidyut Bhawan, North Banamalipur
Agartala – 799001
Tripura

ORDER

The Commission, in exercise of the powers vested under Section 62 read with Section 64 of the Electricity Act, 2003 and TERC Tariff Regulations (Multi Year Tariff), 2015 and all other powers conferred on the Tripura Electricity Regulatory Commission after thorough examination of the Petition submitted by TSECL in Petition No. 3 (Truing-up) of 2023 and Petition No. 4 (MYT) of 2023, all documents and records as submitted and all oral and written submissions made by the Petitioners during Public Hearing and all objections submitted by the objectors, replies thereof from the Petitioner, and other submissions made by the representatives presented and in consultation with the State Advisory Committee or otherwise information received and after due consideration of the consumers' interest and sustainability of the stakeholders including Licensee, the Commission passes the Tariff Order and directives as detailed in the respective Chapters. The Tariff Order will be effective from **1 October, 2023** and remain valid until issuance of further Tariff Order.

This disposes off Petition No. 3 (Truing-up) of 2023 and Petition No 4 (MYT) of 2023.


22/09/2023
Jiban Krishna Sen
(Member, TERC)


22/09/23
D. Radhakrishna
(Chairman, TERC)

ABBREVIATIONS

A&G	Administrative and General
Act	Electricity Act, 2003
AGBPP	Assam Gas Based Power Plant
AGTPP	Agartala Gas Turbine Power Plant
APTEL	Appellate Tribunal for Electricity
ARR	Aggregate Revenue Requirement
AT&C	Aggregate Technical and Commercial
BGTPP	Baramura Gas Thermal Power Plant
BPL	Below Poverty Line
CAG	Comptroller and Auditor General
CAGR	Compounded Annual Growth Rate
Capex	Capital Expenditure
CERC	Central Electricity Regulatory Commission
CGS	Central Generating Stations
Ckt. Km	Circuit Kilometre
CPI	Consumer Price Index
Crs.	Crore
CWIP	Capital Works in Progress
DHEP	Doyang Hydro-Electric Project
DPR	Detailed Project Report
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GAIL	Gas Authority of India Limited
GFA	Gross Fixed Assets
GHEP	Gumti Hydro-Electric Project
GoT	Government of Tripura
HEP	Hydro-Electric Project
HSD	High Speed Diesel
HT	High Tension
IEX	Indian Energy Exchange
Kcal	kilo calorie
kV	kilo Volt
LT	Low Tension
MMSCM	Million Metric Standard Cubic Metre

MoP	Ministry of Power
MU	Million Units
MW	Mega Watt
NEEPCO	North Eastern Electric Power Corporation Limited
NEP	National Electricity Policy
NER	North Eastern Region
NHPC	National Hydro Power Corporation Limited
NTI	Non-tariff Income
O&M	Operation and Maintenance
ONGC	Oil and Natural Gas Corporation
OTPC	ONGC Tripura Power Company
PFC	Power Finance Corporation
PGCIL	PowerGrid Corporation of India Limited
PLF	Plant Load Factor
PLR	Prime Lending Rate
POSOCO	Power System Operation Corporation Limited
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
REC	Rural Electrification Corporation
RGVY	Rajiv Gandhi Grameen Vidyutikaran Yojana
RGTPP	Rokhia Gas Thermal Power Plant
RHEP	Ranganadi Hydro-Electric Project
RLDC	Regional Load Dispatch Centre
Rs.	Rupees
SBI	State Bank of India
SCM	Standard Cubic Metre
SLM	Straight Line Method
T&D	Transmission and Distribution
TERC	Tripura Electricity Regulatory Commission
TP	Tariff Policy
TPP	Thermal Power Plant
TPGL	Tripura Power Generation Limited
TSECL	Tripura State Electricity Corporation Limited
WPI	Wholesale Price Index

1 Background and Salient Features of the Order

1.1 Background

- 1.1.1 Tripura State Electricity Corporation Limited ((hereinafter referred to as ‘**TSECL**’ or the ‘**Petitioner**’ or the ‘**Utility**’) was formed and registered under the Companies Act 1956 on 9 June, 2004, in compliance with the MOU among Ministry of Power, Government of India & Government of Tripura on 28 August, 2003. TSECL was made functional, under section 131 & 133 of the Electricity Act 2003 (hereinafter referred to as “**the Act**” or “**the EA, 2003**”), w.e.f. 1 January, 2005 with the operational control of all assets related to Generation, Transmission, Distribution & its allied activities related to power sector of Tripura transferred to TSECL from Government of Tripura. TSECL was the sole electricity utility in Tripura responsible for generation, transmission and distribution of electricity in the State.
- 1.1.2 Tripura Power Generation Limited (TPGL) has been formed with all generation assets of TSECL with effect from June, 2015. TPGL which is now responsible for the State generation started functioning as an operational independent entity from September 2016. However, the demerger of TPGL from TSECL as per provisions of Companies Act, 2015, is still awaited, post which the independent functioning of TPGL shall commence. Accordingly, TSECL filed a combined Petition for generation and distribution.
- 1.1.3 TSECL filed a Petition for Truing-up of FY 2020-21 and FY 2021-22 and determination of Aggregate Revenue Requirement (ARR) for FY 2023-24 and Retail Supply Tariff for FY 2023-24 along with Annual Performance Review of FY 2021-22 as per Section 62 of the Act read with Tripura Electricity Regulatory Commission (Tariff Procedure) Regulations, 2004, Tripura Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 and Tripura Electricity Regulatory Commission Tariff Regulations (Multi Year Tariff), 2015 (hereinafter referred to as “**TERC MYT Regulations, 2015**”).
- 1.1.4 TSECL in the said Petition has submitted that it has not segregated the account statements for Generation, Transmission and Distribution business completely and the allocation has been undertaken based on certain principles as provided in the Petition. The break-up of costs in Generation, Transmission and Distribution business, wherever necessary for ARR and Tariff calculation, have been done based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like accounts and finance, HR, projects etc. at corporate level.
- 1.1.5 The Petitioner has submitted audited accounts FY 2020-21, FY 2021-22, and half year of FY 2022-23. Also, the ARR and tariff for FY 2022-23 and FY 2023-24 has been projected based on the actual data of past years and norms of TERC MYT Regulations, 2015, as applicable.
- 1.1.6 The Commission notified TERC MYT Regulations, 2015 on 18 December, 2015 and

the said Regulations were applicable from the date of notification and shall remain in force for a period of five (5) years from the date of publication or until notification of the revised Regulations whichever is later. Since the period of five years is over and the said Regulations are still applicable, the Commission has determined tariff for FY 2022-23 only and not for FY 2022-23 and FY 2023-24 as there is no such provision to determine the tariff for two years.

- 1.1.7 Accordingly, the Commission in the present tariff proceedings is dealing with the following in respect of Petitions filed by TSECL for Truing-up of FY 2020-21 and FY 2021-22 and determination of Aggregate Revenue Requirement (ARR) for FY 2023-24 and Retail Supply Tariff for FY 2023-24 along with Annual Performance Review of FY 2021-22 as per TERC MYT Regulations, 2015 for Generation, Transmission and Distribution Business.

1.2 Tariff Orders issued by the Commission earlier:

- 1.2.1 The chronology of the filing of the Tariff Petitions and issuance of the Tariff Orders from FY 2005- 06, are listed below:
- 1.2.2 TSECL filed its first Tariff Petition for FY 2005-06 in accordance with the TERC Tariff Regulations, 2004. The Commission, in exercise of the powers vested under Sections 61, 62 and 64 of the Act carried out a detailed review of the Petition and issued its first Tariff Order on 24 June, 2005.
- 1.2.3 TSECL filed its second Tariff Petition for FY 2006-07 on 4 August, 2006 in accordance with Section 62 of the Act and TERC Tariff Regulations, 2004. The Commission, in exercise of the powers vested under Sections 61, 62 and 64 of the Act issued its second Tariff Order on 14 September, 2006.
- 1.2.4 In FY 2010-11, TSECL submitted a Petition for Fuel & Power Purchase Cost Adjustment (FPPCA) for approval of adjustment of cost against increase of fuel (gas) cost for its own generating stations, namely, Rokhia Gas Thermal Power Plant (RGTPP) and Baramura Gas Thermal Power Plant (BGTPP), and cost incurred for procurement of power from the Central Generating Stations (CGS). The Commission, after due examination of the Petition and considering all the aspects of this matter, issued the FPPCA Order on 13 September, 2010. The Commission subsequently issued the amendment to the Order on 22 September, 2010 after allowing subsidy to some categories of consumers, wherein the Commission allowed Rs. 1.40/unit as FPPCA charge.
- 1.2.5 TSECL did not file any ARR and Tariff Petition from FY 2007-08 to FY 2011-12 despite several reminders from time to time by the Commission. Non-finalization of the Annual Accounts from FY 2007-08 to FY 2011-12 was the main reason for non-submission of the Tariff Petitions.
- 1.2.6 Subsequently, after a hiatus of 6 years from the issuance of the second Tariff Order of the Commission, the Petitioner filed its third ARR and Tariff Petition on 20 January,

2012 (Case No. 01 of 2012) for approval of ARR and Tariff for FY 2012-13 along with the Truing-up of ARR for the period from FY 2007-08 to FY 2010-11. As highlighted above, in absence of the audited Annual Accounts for FY 2005-06 and FY 2006-07, the truing-up exercise could not be completed previously. The Commission, according to Regulation 3 of the TERC Tariff Regulations, 2004 and Regulation 25(1) of the TERC (Conduct of Business) Regulations, 2004, also undertook the suo-motu proceedings for truing-up of FY 2005-06 and FY 2006-07 and included the same in the tariff proceedings for FY 2012-13. On 28 March 28, 2012, the Commission issued the third Tariff Order for TSECL, approving the ARR and tariff for FY 2012-13 along with truing up for the period from FY 2005-06 to FY 2010-11.

- 1.2.7 The Petitioner filed its fourth ARR and Tariff Petition on 15 March, 2013, for approval of ARR and Tariff for FY 2013-14 along with the truing-up of the ARR of FY 2011-12 and Review of ARR for FY 2012-13. The Commission, in exercise of the powers vested under Sections 61, 62 and 64 of the Act and all other powers enabling it in this regard and after taking into consideration the submissions made by TSECL, the objections by various stakeholders, response of TSECL, issues raised during the Public Hearing and all other relevant material, issued the fourth Tariff Order for TSECL on 25 June, 2013.
- 1.2.8 Subsequently, the Commission issued an Order with regard to truing-up for FY 2012-13, Review of FY 2013-14 and determination of Tariff for FY 2014-15 on 22 November, 2014.
- 1.2.9 Further, the tariff order was passed on 1 September, 2020 after almost 6 years with regard to truing-up for FY 2013-14 to FY 2015-16, determination of the ARR for FY 2016-17 to FY 2020-21 and Retail Tariff for FY 2020-21.
- 1.2.10 Thereafter, the tariff Order was issued on 2 September, 2022 for truing up for FY 2017-18 to FY 2019-20, determination of ARR for MYT Control Period from FY 2020-21 to FY 2022-23 and Retail supply tariff for FY 2022-23.

1.3 Admission of Current Petition filed by TSECL

- 1.3.1 TSECL has filed Petition No.3 (Truing-up) of 2023 for Truing-up of FY 2020-21 and FY 2021-22 and Petition No.4 (MYT) of 2023 for determination of Aggregate Revenue Requirement (ARR) for FY 2023-24 and Retail Supply Tariff for FY 2023-24 along with Annual Performance Review of FY 2022-23 as per TERC MYT Regulations, 2015 for Generation, Transmission and Distribution Business. The Prayers of TSECL are as given below:
 - 1.3.2 Petition No.3 (Truing-up) of 2023
 - a. Admit this Petition;
 - b. Examine the proposal submitted by the Petitioner for a favourable dispensation as detailed in the enclosed proposal;

-
- c. Consider the submissions and allow the proposed Truing up for FY 2020-21;
 - d. Pass suitable orders for implementation of the tariff proposal;
 - e. Approve the terms and conditions of tariff and various other matters as proposed in this petition and the proposed changes therein.
 - f. Condone any inadvertent omissions/ errors/ shortcomings and permit TSECL to add/ change/ modify / alter this filing and make further submissions as may be required at a future date.
 - g. Pass such orders as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case;

1.3.3 Petition No. 3 (Truing-up) of 2023

- a. Admit this Petition;
- b. Examine the proposal submitted by the Petitioner for a favourable dispensation as detailed in the enclosed proposal;
- c. Consider the submissions and allow the proposed Truing up for FY 2021-22;
- d. Pass suitable orders for implementation of the tariff proposal;
- e. Approve the terms and conditions of tariff and various other matters as proposed in this petition and the proposed changes therein.
- f. Condone any inadvertent omissions/ errors/ shortcomings and permit TSECL to add/ change/ modify / alter this filing and make further submissions as may be required at a future date.
- g. Pass such orders as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case;

Petition No.4 (MYT) of 2023

- a. Admit this Petition;
- b. Examine the proposal submitted by the Petitioner for a favorable dispensation as detailed in the enclosed proposal;
- c. Consider the submissions and allow the proposed MYT for FY 2022-23 to FY 2023-24;
- d. Pass suitable orders for implementation of the tariff proposal;
- e. Approve the terms and conditions of tariff and various other matters as proposed in this petition and the proposed changes therein.
- f. Condone any inadvertent omissions/ errors/ shortcomings and permit TSECL to add/ change/ modify / alter this filing and make further

submissions as may be required at a future date.

- g. Pass such orders as the Hon'ble Commission may deem fit and proper, keeping in view the facts and circumstances of the case;

1.3.4 On preliminary scrutiny of the Petition, the Commission observed several discrepancies and gaps in the Petition filed by TSECL. The Commission observed that as per the TERC MYT Regulations, 2015 and TERC Tariff Procedure Regulations, 2004, significant data and information that is important to process the Tariff Petition was not submitted by the Petitioners. Hence, the Commission sent preliminary data gaps to TSECL citing several discrepancies and gaps in the Petition and supporting information. The reply to data gaps submitted by the Petitioner has been considered by the Commission.

1.4 Public Consultation Process

1.4.1 After admission of the ARR and Tariff Petition, the Commission, in accordance with Section 64 of the Act and Clause 10 of the TERC (Tariff Procedure) Regulations, 2004, directed TSECL to publish its Tariff Petition in abridged form in the newspapers and on their website. Accordingly, the abridged form of the Petition was published on 19.05.2023 in the leading newspapers in Tripura. The Petitioner also posted the public notice and the Petition on their website (www.tsecl.in). The publication invited the attention of all interested parties, stakeholders including members of the public for their objections/suggestions on the said Petition of TSECL on or before 03.06.2023.

1.4.2 The following stakeholder filed his objections on the Petition of TSECL:

Table 1: Name of the Objectors who filed objections/suggestions in writing on Tariff Petition of TSECL

Sr. No.	Name
1	Tripura Electricity Consumer's Association (TECA)
2	ILS Hospitals
3	Tripura Medical College and Dr. BRAM Teaching Hospital
4	ML Plaza and Rupasi Multiplex Co.
5	Directorate of Industry & Commerce
6	Mr. Anup Bhowmik, Consumer

1.4.3 The Commission examined the objections received from the objector and fixed the date for public hearing as on 16 June, 2023. The Commission invited the objector to take part in the Public Hearing process and present his views in person before the Commission. The Commission, subsequently published the Notice for Public Hearing in the newspapers on 12 June, 2023

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- 1.4.4 The public hearing was conducted at the Commission's office in Banamalipur, Agartala on 16 June, 2023.
- 1.4.5 The Commission has ensured that the due process contemplated under the Law to ensure transparency and public participation was followed at every stage and adequate opportunity was given to all concerned to express their views. The suggestions and objections raised on TSECL's Petition in writing as well as orally during the Public Hearing, along with TSECL's response and the Commission's Rulings are summarised in Section 2 of this Order.

1.5 State Advisory Committee

- 1.5.1 The tariff proposal of TSECL was placed before the State Advisory Committee (SAC) in its meeting held on 13 June, 2023 at the Commission's Office. The Committee members were briefed on the Petition filed by TSECL.
- 1.5.2 The SAC members desired that the Commission should verify all the elements of the ARR before issuing the Tariff Order for FY 2023-24. All the members raised their apprehensions on enormous tariff increase required based on the submissions of the Petitioner and requested the Commission to look into the reasonableness of the same.
- 1.5.3 Thus, the Commission has taken all the necessary steps to ensure that the due process, as contemplated under the Act and Regulations framed by the Commission, are followed and adequate opportunity were given to all stakeholders in presenting their views on the Tariff Petition submitted by TSECL.

1.6 Content of the Order

This Order is organised in the following Sections:

- 1.6.1 **Chapter 1** (this Chapter) provides a background of the Petitioner, the Petition, public hearing process, and the approach adopted for this Order;
- 1.6.2 **Chapter 2** summarises the written and oral suggestions and objections raised. These are followed by the responses of TSECL and the rulings of the Commission;
- 1.6.3 **Chapter 3** deals with Truing up of FY 2020-21 and FY 2021-22 and ARR for FY 2023-24 and Generation Tariff for FY 2023-24 along with Annual Performance Review of FY 2022-23;
- 1.6.4 **Chapter 4** deals with Truing up of FY 2020-21 and FY 2021-22 and ARR for FY 2023-24 along with Annual Performance Review of FY 2022-23 for TSECL for Transmission business;
- 1.6.5 **Chapter 5** deals with Truing up of FY 2020-21 and FY 2021-22 and ARR for FY 2023-24 and Retail Supply Tariff for FY 2023-24 along with Annual Performance Review of FY 2022-23 for Distribution business;
- 1.6.6 **Chapter 6** summarises the Directives of the Commission;

1.6.7 **Chapter 7** details the Commission's Tariff Philosophy and the category-wise retail supply tariffs applicable for FY 2023-24, including charges for Open Access consumers.

2 Suggestions/Objections, TSECL's responses and Commission's Ruling

2.1.1 This section deals with the suggestions/objections raised by various Stakeholders regarding the tariff Petition submitted by TSECL, details of which were provided in the public notice published in various newspapers mentioned earlier. Submissions and responses, pertaining to specific and detailed aspects of tariff, have been taken into account in the formulation of equitable tariff, balancing the interests of stakeholders. The Commission has not considered the submissions which are not related to tariff determination.

2.1 Objection: Discount to Commercial Tariff to be given for Hospitals

2.1.1 ILS Hospitals and Society for Tripura Medical College and Dr BRAM Teaching Hospital have sought for allowing concessional /discounted tariff compared to the existing Commercial Tariff considering the high operating cost and that these hospitals provide treatment at concessional rate to BPL Families and super speciality treatments are available at much lower costs. The hospital also has to incur considerable expenses on maintaining two 500 kVA generator sets for providing back up power because of non-continuity of supply. ILS Hospitals also submitted that similar concessions have been provided to hospitals by different State Governments viz. Maharashtra and Gujarat, considering the role of hospitals in providing services to the people. Society for Tripura Medical College and Dr BRAM Teaching Hospital have also additionally submitted that tariff is unbearable on the part of the Society which is running on no loss no profit basis.

TSECL's Reply

2.1.2 TSECL submitted that no increase of electricity tariff in Tripura in the last 8 years since November 2014. During this period, the cost of TSECL on various heads have increased substantially as detailed in the tariff petition. The average increase in the common inflation indices during this period shown below is more than 32% and the increase in inflation is more pronounced in the last few months due to the change in the global geopolitical scenario.

Particulars	FY 15-16	FY 16-17	FY 17-18	FY 18-19	FY 19-20	FY 20-21	FY 21-22	FY 22-23	Combined 8 years
Wholesale Price Index	-3.65%	1.73%	2.92%	4.28%	1.68%	1.27%	12.98%	2.32%	23.53%
Consumer Price Index	5.65%	4.12%	3.08%	5.45%	7.53%	5.02%	5.07%	4.9%	40.28%
Average of WPI and CPI for last 8 years									32.34%

2.1.3 Steep rise in Wholesale Price Index (WPI) and Consumer Price Index (CPI) after the consequences of the COVID-19 pandemic has resulted in an increase in supply costs, material costs, raw material price, etc. which resulted in overall hike in generation costs. Tariff hike for it is critical to recover the increase in additional costs

accrued over the past few years as well as to recover the pending accumulated gap of past years. TSECL has accumulated losses of more than INR 557 crores as on 31st March 2023 as per the audited account statements.

- 2.1.4 Moreover, this pandemic has also impacted the power utilities in a big way and the revenues of the power distribution utilities were reduced due to the lockdown imposed to tackle COVID 19 as well as rebate in tariff provided in the last tariff order. As such, a tariff increase is critical for the financial sustainability of TSECL.
- 2.1.5 Moreover, it is not possible and viable to reduce the tariff or show preference for one consumer (like ILS in this case) as it is against the principles laid down in Section 62 (3) of Electricity Act 2003. Creating a special concessional tariff category for only private hospitals or only for ILS hospitals would result in requests from other private healthcare institutions for providing them with concessional categories as well. This would result in TSECL being accused of having preferential treatment which TSECL cannot provide keeping in mind the interest of all other consumers across various categories in the state.
- 2.1.6 In addition to the above, it is important to note that the state of Tripura primarily has small domestic consumers and with limited presence of big industrial or large commercial consumers, a further reduction in tariff of commercial consumers, TSECL would not be able to supply reliable and affordable power to all the consumers in state particularly, poor rural households. As such, the socio-economic situation in Tripura is very different from the large industrial states like Maharashtra or Gujarat. Tripura being a North-Eastern state has to bear considerable costs in terms of transportation and being far away from most of the manufacturing hubs of the country has to rely on distant suppliers which has a higher cost incursion on it compared to other states which has regional connectivity advantage being at the heartland of India.
- 2.1.7 It is also pertinent to note that state like Maharashtra and Gujarat have a higher rate of base tariff per kWh compared to Tripura. TSECL has not been able to revise tariffs under Commercial category for the past 9 years. Besides Tripura has very low Fixed charges rate compared to other states like Maharashtra and Gujarat, which is only Rs 75/kVAh compared to Rs 400-450/kVAh in other states. Also, TSECL provides rebate in certain government run health care institutions as they are mainly run through Government based subsidy funds. Thus, creating a more concessional tariff category would eventually put a burden on the existing financial crunch of TSECL further.
- 2.1.8 From the above, it can be summarized that rebate or discount in tariff cannot be provided to one consumer or a type of consumer other than for the reasons allowed in Electricity Act 2003. Moreover, the retail supply tariff needs to be increased in alignment with the increasing costs of TSECL, accumulated losses and in general increasing inflation across the globe.

Commission's Ruling

- 2.1.9 The Commission is bound to fix up the tariff as per Tariff Regulations and no special dispensation can be given to any particular categories of consumers unless it has a social implication. It may also be observed that hospital services are based on economics of patients and therefore the Commission is constraint not to give any concessional tariff to any particular hospitals. However, one of the objects of Electricity Act is to promote competition and consumers are free to move into the markets or look for alternative cheaper sources like solar, etc which Commission is along with the government is encouraging so that consumers get cheaper power.

2.2 Objection: ARR Petition for FY 2023-24

TECA submitted that TSECL in its Petition has considered the ARR for FY 2023-24 on the basis of projection of costs considering the average growth rate of 3 years actual. If any increase in ARR is adjusted in tariff of subsequent years on the basis ARR submitted based on audit report, then there would be considerable increase in tariff. Hence, present petition should not be accepted by TERC.

TSECL's Reply

- 2.2.1 TSECL has filed the present MYT petition based on TSECL MYT Regulations 2015 which provides for filing of annual petitions with truing up of past years, revised ARR of current year and projected ARR of future years. This is as per standard regulatory practice and regulatory norms.

Commission's Ruling

- 2.2.2 The Commission notes that TSECL submitted the Petition based on the provisions of TERC MYT Regulations, 2015. The Commission has undertaken the truing up for FY 2020-21 and FY 2021-22 and determination of ARR for FY 2022-23 & FY 2023-24 as per the provisions of TERC MYT Regulations, 2015, which has been discussed in the subsequent Chapters of this Order.

2.3 Objection: Allowance of Higher Return on Equity by separation of TSECL

- 2.3.1 TECA submitted that higher Return on Equity is allowed to TSECL by segregating the business into Generation, Transmission and Distribution. If Return on equity is allowed to TSECL as undivided utility then there would be substantial reduction in Return on equity and thereby reduction in tariff. To safeguard the interest of consumers, Return on Equity should not be allowed more than 16% for all three businesses of TSECL.
- 2.3.2 TECA further submitted that allowance of Return on Equity of 15.5% to Generation business would lead to tariff hike of 15.5%, which is against the interest of consumers. Hence, TSECL should not be segregated into three businesses as

TSECL's Reply

- 2.3.3 TSECL submitted that, the claim of return on equity is as per the TERC MYT Regulations 2015 and standard regulatory norms which allow claim of a reasonable return on the investments made in the business to make it sustainable. The returns claimed on generation, transmission and distribution are separate and cannot be added up as percentages as they are claimed on separate bases. The total amount of return on equity is a small portion of the ARR and necessary for sustainable operation of the business and as per standard regulatory and economic practice.
- 2.3.4 The separation of TPGL shall have no impact on the overall ARR as there is no increase in the return on equity as a result of separation. The equity amount and the overall asset amount for integrated company will be same as the combined equity of the segregated companies. The Tariff hike proposed by TSECL is based on the ARR gap which has been accumulated over the years and the figures have been determined based on the True-up order submitted for FY 17-18 to FY 19-20 earlier and for FY 20-21 to 21-22 in this current petition with MYT projected for the years FY 23 and FY 24. The tariff hike covers for the entire ARR recovery for all three businesses of Generation, Transmission and Distribution.

Commission's Ruling

- 2.3.5 The Commission has allowed Return on Equity to Generation, Transmission and Distribution as per the provisions of TERC MYT Regulations, 2015. The allowance of Return on Equity and treatment of tariff hike is discussed in subsequent Chapters of this Order. It may also be mentioned that whenever MYT Regulations are floated and comments are invited the Commission always care for taking up the comments of stakeholders into consideration once the Regulations are framed it may not be appropriate to make the comments.

2.4 Objection: Performance Parameters for RGTPP and BGTPP

- 2.4.1 TECA submitted that Gross generation and PLF of RGPP has reduced from FY 2020-21 to FY 2022-23, which signifies the increased cost and uneconomical use of resources. Also, in case of BGTPP, the Gross Generation and PLF have been increased from FY 2020-21, which should have been led to decrease in cost of generation. However, the tariff increase has been proposed in the Petition. Also, it is submitted that PAF of RGTPP is much higher compared to PLF. For economical use, PLF should be near to PAF.
- 2.4.2 TECA further submitted that Heat rate is proposed same for RGTPP and BGTPP from FY 2021-22 onwards in spite of increase in Heat rate from FY 2020-21 to FY 2021-22. This reflects higher consumption of gas and there by higher cost. This is not economical use of resources and inefficiencies should not be passed on to

consumers.

- 2.4.3 Mr Anup Bhowmik submitted that TSECL needs to increase the efficiency in the generation of power through adoption of latest technology and optimum utilisation of resources.

TSECL's Reply

- 2.4.4 Compared to the PLF, the availability factor of RGTPP and BGTPP are at around 95% and 65% respectively for the period FY 2020-21 - FY 2022-23 as compared to the PLF. The availability factors for FY 23 & FY 24 have been increased based on the current improvement in the units of the plants in BGTPP and improved fuel supply scenario. PLF indicates the ratio of the actual energy generated by a power plant to the maximum possible energy it could have generated during a given period whereas the Plant Availability Factor (PAF) amount of time that it is able to produce electricity over a certain period, divided by the amount of the time in the period. Thus, there are two different factor which cannot be similar and equated hence this cannot be a factor for non-consideration of tariff hike.
- 2.4.5 TSECL further submitted that RGTPP and BGTPP are Gas based thermal power plants which are being run from natural gas sources. The high rate of heat value of Gas based sources varies and is found to be on the higher side due to high calorific value of natural gas. The natural gas supply is taken from GAIL and ONGC which is administered under the APM and MDP pricing mechanism, thus TSECL has no authority to control the prices, neither it has any control to alter in the properties of the gas supplied. Hence there are no quality issues in terms of fuel supplied to the consumers, the entire generation process has been handled by TPGL (in association with TSECL) efficiently.
- 2.4.6 TPGL is planning to take up the life extension and R&M of Gumti project under ADB funding which would increase the generation and reduce the tariff of Gumti plant also thereby further improving the affordability of power within the state

Commission's Ruling

- 2.4.7 The Commission has allowed the performance parameters and sharing of gains on account of the same as per provisions of TERC MYT Regulations, 2015 and the same has been discussed in Chapter 3 of this Order.

2.5 Objection: Rate of Interest on Loan capital and Working Capital

- 2.5.1 TECA submitted that rate of interest on loan capital submitted as 7.55% for FY 2022-23 and 9.40% for FY 2023-24. The rate of interest should be considered based on actual values, not on projected basis. Also, normative rate of interest on working capital are submitted as 11.15% to 12.40%, which is extremely high. Such higher rate of interest should not be allowed.
- 2.5.2 TECA submitted that TSECL should switch on to Indian Bank loan having lower

interest rates as compared to foreign currency loans.

- 2.5.3 Mr. Anup Bhowmik has raised issue of loan taken from REC and details given thereof being typographical error.

TSECL's Reply

- 2.5.4 TSECL submitted that the rate of interest on working capital is based on the performance wise expenditure of TSECL and its rate of lending of interest from the bank (i.e., SBI lending rates). The rate of interest has no control by TSECL and is determined from the rates available for lending by the banks. The same could be verified from SBI's official website from its historical lending rates tally. Hence, TSECL does not have any authority in lending rates specified by the Bank for its operation and does not wish to impose on to its consumers. The tariff hike proposed is based on the overall accumulated revenue gap resulted from the non-passing of tariff which is due to the Utility over many years which its has not yet been recovered due to non-hike in tariff.
- 2.5.5 TSECL submitted that the currency depreciation highlighted in the petition accounts for gas price increase not for lending rates increase as TSECL lends its finances from Indian banks on Indian currency only. It has no effect on the overall policy for tariff hike and is not imposed on to the consumers.
- 2.5.6 The interest on REC Loan showing for FY 22 @ 10.5% is Rs 0.02 Crore is not a typographical error, it is based on the account statements of TSECL and as per loan details furnished in actual by TSECL.

Commission's Ruling

- 2.5.7 The Commission has allowed the rate of Interest on loan capital and Working capital as per provisions of TERC MYT Regulations, 2015 and the same has been discussed and directions in the subsequent paragraphs.

2.6 Objection: Increase in Gas prices

- 2.6.1 TECA submitted that gas prices are increased by more than 40%. There is need to find alternative way for thermal generation. The actual price of gas shall be submitted for appropriate assessment of fuel cost for FY 2023-24. This unreasonable increase in gas prices of 40% should not be allowed in FY 2023-24.

TSECL's Reply

- 2.6.2 TSECL submitted that, as per the gas prices notified by MoPNG, GOI, it is observed that there was an average increase of 30% in average gas price from FY 2017-18 to FY 2019-20. From FY 19-20 to FY 20-21 the gas prices dipped by 40%. In Apr-22 more than 110% increase has been notified in raw APM gas price which is from USD 2.9/ MMBTU to USD 6.1/MMBTU. The increase of end cost after incorporation of

foreign exchange, transportation cost, VAT etc. is going to further increase for TPGL.

- 2.6.3 TPGL has projected the fuel cost based on the latest rate as notified and effective from April'22 and TPGL has already received a fuel bill based on the escalated rates for the first fortnight of April'22. This is expected to increase the overall costs of TSECL by around Rs. 250 Crore assuming the same levels of gas price is prevalent for the entire year. The projection of the Fuel cost for the plants has been done based on the explanation given above. Hence, the gas price increase projected is not unreasonable, it is based on the Gas price increasing trend that has been notified from the Ministry (MOPNG), TSECL has no control of it.

Commission's Ruling

- 2.6.4 The Commission has already noted the increase in gas prices in FY 2023-24 and projected gas prices by TPGL in the instant Petition. The Commission has sought the data of actual gas prices based on invoices raised by Gas suppliers and accordingly considered the gas prices for projection of Fuel cost for FY 2023-24. The approach adopted and prudence undertaken by the Commission is discussed in Chapter 3 of this Order. It may also be mentioned that gas is procured on a monthly price as per Administrative Price Mechanism (APM) with discount of North-Eastern states as well as long term contract.

2.7 Objection: Depreciation

- 2.7.1 TECA submitted that depreciation of assets remains the same unless new asset is added in the year.

TSECL's Reply

- 2.7.2 TSECL submitted that the depreciation of assets is calculated yearly based on the assets present and booked as per Companies Act, verified duly by the statutory auditors in the audited accounts statements. Whether TSECL installs new assets or not the depreciation needs to be calculated as it is taken on the fixed running assets in operation to the Licensee. The assets which are discarded are not booked either hence for fixed assets which are currently in operation has to be booked.

Commission's Ruling

- 2.7.3 The Commission has allowed the Depreciation for TSECL as per provisions of TERC MYT Regulations, 2015 and the same has been discussed in Chapters of this Order.

2.8 Objection: Tariff for Industry Category (New)

- 2.8.1 Directorate of Industries & Commerce submitted that as per the Tripura Industrial Investment Promotion Incentive scheme (TIIPIS), scheme, 2022, power subsidy will be provided to all eligible industrial units which commence their commercial production in the state on or after the first day of April, 2022 but before or on thirty-

first day of March. 2027”, as per the following norms:

- i) The eligible industrial units with connected load up to 20 HP shall be provided partial reimbursement of power charges @25% of power charges actually paid by the enterprise, subject to a maximum amount of Rs. 15 Lakhs per enterprise per annum. In case of thrust sector Industries, the annual upper ceiling shall be Rs.25 Lakhs per enterprise per annum,
- ii) Power charges shall be provided to all eligible industrial units with connected load of above 20HP @ Rs.5.00 per unit without any upper ceiling.

TSECL's Reply

2.8.2 TSECL submitted that as per the Section 65 of the Electricity Act, 2003, any reduction in the tariff of any particular category of consumers as determined by the State Commission could be implemented only if there is confirmed provision of subsidy disbursement from the State Government. It may be noted that the TSECL has no objection in providing reduced tariff rate to the Industrial consumers registered under the Tripura Industrial Investment Promotion Incentive Scheme (TIIPS), provided that:

- (a) The above said incentive amount be compensated to TSECL by the State Government in the form of subsidy given in advance so as to implement this partial reimbursement of power charges as requested by the Directorate of Industries in this regard. TSECL would have no hesitation to implement this if assurance of subsidy is received from the State Government.
- (b) The State Government confirms or notifies such provision to TSECL, so as to TSECL gives such provisions in the tariff for the Industrial consumers under this category.
- (c) The tariff @ Rs 5.00/kWh for industrial consumers upto 20 HP of connected load could be implemented to those industrial consumers who are registered under the TIIPS scheme after April 1, 2022 till March 31, 2027, duly verified from the Directorate of Industries and Commerce database. Also as mentioned above, such notification gets confirmed by the State Government to TSECL.
- (d) There is a definite assurance of subsidy to be disbursed from the State Government to TSECL on this regard.
- (e) The tariff as suggested above gets notified by the Commission as the Commission directs the tariff in their respective tariff order, which TSECL follows for the respective years. Hence, such provision of allowing reduced tariffs should be confirmed by the Commission in particular in their respective tariff order to be issued. The above reduction in tariff schedule to such Industries could be implemented by TSECL as TSECL has no objections to such reductions provided that the subsidy gets passed to TSECL by the State Government and could be given to those industries who are registered on or after April 1, 2022 or to be registered by March 31, 2027 and such tariff proposal gets approved by the

Commission in their tariff order.

Commission's Ruling

- 2.8.3 The Commission's approach and tariff philosophy regarding Tariff for Industrial Consumers is discussed in Chapter 7 of this Order.
- 2.8.4 The Commission rules that the power subsidies for new industries which will be granted as per Government of Tripura policies be credited from the consumers bills either severally or jointly for which TSECL and respective industries department can work out modalities.

2.9 Objection: Increase in Electricity Bill Unit Price

- 2.9.1 Mr Ratan Saha has submitted that there has been increase in the bill inspite of Agartala being declared as Smart City. He has also raised issue in respect of excess billing by TSECL, more specifically fixed charges and frequent interruptions

TSECL's Reply

- 2.9.2 TSECL submitted that the Agartala Smart City Development project is still undergoing construction work and the allocation of the Smart City development project has been allotted only till recently. Hence, the completion of the smart city developmental work and upgrading the necessary infrastructure work will take time to complete.
- 2.9.3 The fixed charges which are accounted for in the electricity bill are as per TERC tariff order dated September 2022, where the Fixed Charge under the Bulk Supply of power category of consumers are to be charged at Rs 75/kW/month. The Energy charges are also charged as per the Tariff schedule proposed in the Tariff order as finalized by the Commission at Rs 7.33/kWh. Hence TSECL is not procuring any charges which is outside the purview of the Commission, nor it does it billing to the consumers anything outside the proposed tariff order structure as finalized by the Commission.
- 2.9.4 TSECL has undertaken the upgradation of Feeders and Distribution Transformers (DTs) work under the recently launched RDSS scheme. Also, under the existing IPDS scheme the strengthening of sub-transmission and distribution lines across the urban network is still in progress

Commission's Ruling

- 2.9.5 The Commission notes the submission of TSECL. It is observed that the issue raised is of an individual consumer in respect of billing and interruptions. The Commission is of the view that the issue is not related to the exercise of the tariff related Petition. The Consumer may take up the issue with TSECL directly. TSECL is also expected to resolve the issues to the satisfaction of the Consumers in a timely manner as per relevant provisions of Act, Rules and Regulations made thereunder and the

Orders of the Commission. However, the Commission is cognisant of the issues of the Consumer and has held in this Order that the Commission will also set up monitoring cell for consumer grievances for pro-active interactions with stakeholders.

2.10 Objection: UDAY Scheme Details and Distribution Loss

2.10.1 Mr Anup Bhowmik has raised various issues related to UDAY MoU and assets being created by TSECL along with details of Distribution Loss and ACS-ABR gap not being provided by TSECL.

TSECL's Reply

2.10.2 The UDAY MoU signed between the Ministry of Power, Government of India and TSECL, Government of Tripura was for a period of between FY 2017-18 to FY 2019-20, signed in 2017, where TSECL was tasked to achieve reduction in AT&C loss levels from 33.8% in FY 15-16 to 15% in FY 19-20. TSECL has achieved reducing AT&C losses to 26.11% in FY 22 under the RDSS scheme. The RDSS scheme (Revamped Distribution Sector Scheme) has been introduced by the Government of India to take of the pending revamping of distribution sector schemes which was initially signed for UDAY scheme. The UDAY scheme to be noted, has been discontinued since 2019-20. In place of UDAY scheme, the RDSS scheme has been introduced where the electrification works are being undertaken such as 100% DT metering, 100% smart metering, total replacement of old feeders with new one and 100% installation of new feeders in new distribution sector. TSECL has already undertaken work for 100% DT metering under the RDSS scheme. As the UDAY scheme was initiated only for setting the targets to be met by TSECL, the license has not taken any financial assistances under this scheme. The RDSS schemes on the other hand, was undertaken to implement these target set under the UDAY MoU so as to achieve the initiatives which Govt. of India wants to achieve under the RDSS scheme. The UDAY targets at present in now applicable and this has been replaced by the RDSS schemes.

2.10.3 The Distribution Loss has a decreasing trend from 33.71% in FY 2018-19 to 24.74% in FY 2020-21. Further TSECL is making sincere efforts in electrifying the un-electrified areas of the state at a fast pace under grants and loans provided by the Rural Electrification Corporation (REC) under the Rajiv Gandhi Gramin Viduyatikaran Yojna (RGGVY) and Saubhagya Scheme. Through the implementation of the scheme the TSECL has provided the electricity to the far-flung areas and villages of the Tripura state. At the same time, due to increase in the LT network and the domestic and Kutir Jyoti consumers, losses of the utility are also increasing at considerable pace. Through different loss reducing measures and schemes the TSECL has remained successful to contain the losses at the level mentioned. In the past few years, TSECL has made limited investments in its distribution network for modernization, system improvement and loss reduction. However, now, TSECL is implementing large system improvement schemes under ADB funding as well as under the GoI scheme of RDSS (Revamped Distribution Sector Scheme) to reduce

losses and the effect of such measures is expected to gradually reflect in the performance of Distribution losses.

- 2.10.4 For reducing the losses and for reducing the ACS-ARR several steps have been taken among which RDSS is one of them along with REC electrification, IPDS scheme, Saubhagya, RGGVY. These schemes have been undertaken with the intention of providing 100% electrification and providing smart metering, DT metering, replacing old assets with new ones, erecting new feeder lines and installing new DT, substations, etc. for providing access to electricity to maximum consumers

Commission's Ruling

- 2.10.5 The Commission notes the reply of TSECL on the issue raised by the Objector in respect of UDAY Scheme Details. Further, as seen in the subsequent part of the Order, the Commission has approved the Distribution Loss as per target approved in the last tariff order and not as per actual loss submitted by TSECL. Further, based on the approved ARR, the Commission's approach and tariff philosophy regarding Tariff to recover the ARR is discussed in Chapter 7 of this Order.

3 Truing up of ARR for FY 2020-21 and FY 2021-22, APR of FY 2022-23 and ARR of FY 2023-24 for Generation Business

3.1 Background and Approach

- 3.1.1 The Commission in its Order dated 02 September 2022 in Case No. 2 of 2022 and 4 of 2022 has approved Truing-up for FY 2017-18 to FY 2019-20, Annual Performance Review of 2020-21 and ARR determination for Generation, Transmission and Distribution Business for FY 2021-22 and FY 2022-23 and Retail Supply Tariff for FY 2022-23 of TSECL.
- 3.1.2 The TERC Tariff Regulations, 2015 provides for truing-up of all the parameters of ARR at the end of each year based on the audited annual accounts and prudence check by the Commission. The Commission has conducted the truing-up for ARR for FY 2020-21 and FY 2021-22 based on the audited annual accounts submitted by TSECL for the said period.
- 3.1.3 In compliance of the regulatory obligation, TSECL has filed True-Up Petition for FY 2020-21 and FY 2021-22 for Generation business, Transmission and Distribution & Retail Supply business separately. The audited accounts of the respective years along with the audit report is submitted as an Annexure along with the petition.
- 3.1.4 It is noted that, TSECL has not yet segregated the account statements for Generation, Transmission and Distribution business and the same is under work in progress. However, TSECL in its Petition has provided the break-up of costs in generation, transmission and distribution business, wherever necessary for ARR and tariff calculation, based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like Accounts & finance, HR, Projects etc. at corporate level. As such, TSECL is submitting a combined petition for generation, transmission and distribution business with segregated ARR calculations. Accordingly, the Commission has relied upon the said submission related to function-wise data submitted by TSECL along with replies to data gaps submitted by TSECL for truing-up exercise.
- 3.1.5 The Petitioner has submitted the statutory audit of the account statements for FY 2020-21 and FY 2021-22. However, the actual performance of the plant and the provisional accounts without any segregation of the expenses into Generation, Transmission and Distribution business for FY 2020-21 has been provided. The Commission has considered the same, wherever applicable for determination of ARR.
- 3.1.6 Considering the details provided and additional information obtained during these proceedings, the Commission has undertaken the truing up of ARR of TSECL Generation business for FY 2020-21 and FY 2021-22, Annual Performance Review

for FY 2022-23 and determination of Aggregate Revenue Requirement and Generation Tariff for FY 2023-24 as set out below.

3.2 Norms for Operations

3.2.1 The norms of operation specified under the TERC MYT Regulations, 2015 for thermal generating stations are as follows:

- (a) Normative Annual Plant Availability Factor (NAPAF);
- (b) Normative Annual Plant Load Factor (NAPLF) for Incentive;
- (c) Auxiliary Energy Consumption (Aux); and
- (d) Gross Station Heat Rate (SHR);

3.2.2 The Commission has specified the norms in the TERC MYT Regulations, 2015 and has approved the operational norms for the respective years considering other aspects as detailed out in respective Section of this Order. The Petitioner has submitted the actual performance of their own generation plant viz., Rokhia gas based thermal power plant (RGTPP), Baramura gas based thermal power plant (BGTPP) and Gumti Hydro Electric Plant (GHEP) for FY 2020-21 and FY 2021-22. Any variation in the norms as specified in TERC MYT Regulations 2015 and the actual parameters are specified in the tariff Order.

3.2.3 Also, the Commission has specified the Norms of Operation till FY 2019-20 in the TERC MYT Regulations, 2015. Further, the Commission has adopted the similar norms in Tariff Order dated 2 September, 2022 while approving the ARR for FY 2020-21 to FY 2022-23. With respect to determination of ARR for FY 2023-24, the similar norms have either been extrapolated or projected considering the extension of the TERC MYT Regulations, 2015, wherever applicable.

3.2.4 TSECL's submissions on the performance parameters and the Commission's analysis are detailed hereunder.

3.3 Gross Generation and Net Generation

Petitioner's Submission

3.3.1 TSECL has submitted that it owns and operates the following three generating stations viz. RGTPP, BGTPP and GHEP. TSECL in its petition has calculated the installed capacity based on the average capacity available for the respective year. The details of the existing stations along with their capacities and dates of commissioning as submitted by Petitioner, are given in the following Table:

Table 2: Plant wise Effective Capacity

Name of Generation station	Unit	Capacity (MW)	De rated Capacity (MW)	Year of Installation	Status
Gumti Hydro-	Unit-I	5	5	June 1976	Only 1 unit of 5MW is in

Name of Generation station	Unit	Capacity (MW)	De rated Capacity (MW)	Year of Installation	Status
<i>Electric Project (GHEP)</i>	Unit-II	5	5	February 1977	operation and that to at a de-rated capacity of 2 MW
	Unit -III	5		January 1984	
	Sub-total	15			
<i>Baramura Gas Thermal Power Plant (BGTPP)</i>	Unit-IV*	21	21	27 th Nov 2002	In operation
	Unit-V*	21	21	3 rd August 2010	In operation
	Sub-total	42	42		
<i>Rokhia Gas Thermal Power Plant (RGTPP)</i>	Unit-VII	21	21	24 th Sept 2002	In operation
	Unit-VIII	21	21	30 th Mar 2006	
	Unit-IX	21	21	28 th Aug 2013	
	Sub-total	63	63		
Total		120.0	110.0		

3.3.2 For RGTPP, the Petitioner submitted that PLF of RGTPP is ranging around 63%, because of the shutdown of the plant due to the periodic maintenance in FY 2020-21. PLF of RGTPP has dropped from FY 2020-21 as one unit is not operational as per the directive of Ministry of Environment and Forest (MoEF), due to the pending issue of clearance of Environmental Clearance of the existing units. The matter is under process and in FY 2022-23, TPGL has obtained TOR (Terms of Reference) for conducting the EIA study (Environmental Impact Assessment Study which is also under advanced stage of completion and approval. As such, TPGL plans to obtain the pending Environmental Clearance (EC) within next 3-4 months and the shut unit is planned to be made operational from April'23. Also, one unit of RGTPP was breakdown/shutdown since April'22 till September 22 impacting the PLF in FY 22-23. However, the unit has been repaired and the same has been made operational with effect from first week of October 22 onwards and is expected to be operational also in the next year.

3.3.3 Further, based on the expected performance, the performance of RGTPP for FY 2022-23 to FY 2023-24 is as provided and PLF of RGTPP to be improved at levels of 70% based on the expected commencement of operation of third unit post regularization of EC. Also, due to shutdown of one of the units in RGTPP in FY 2022-23, the plant was operational on the basis of only one unit, which later got functional from October onwards and hence has considered that RGTPP would be operating all the three units subject to the availability of gas for full operation of all three units. The RGTPP unit is expected to be operational with all of its 3 performing units in FY 2023-24 when the final clearance from the Ministry of Environment and Forests, is expected to be given for operating all of the three units in FY 23-24, from April '23 onwards.

3.3.4 For BGTPP, the Petitioner submitted that PLF of BGTPP was much higher than TERC norms in previous years. But FY 2015-16 onwards, it is in the range of 63% to

48%. This is because of constraints in gas availability for BGTPP in the last few years. BGTPP has gas allocations of 0.40 MMSCMD (Million Metric Standard Cubic Metre per Day), out of which 0.2 MMSCMD is under the Administered Price Mechanism (APM) gas mechanism and balance 0.2 MMSCMD under the MDP (Market Determined Price) mechanism. However, of late, GAIL is able to supply gas only up to 0.30 MMSCMD on an average (75% of allocation) of which the APM quota shall be exhausted first and the balance shall be under MDP mechanism. As the huge quantity of gas is required initially only to run the gas turbine, it is not technically and economically feasible to run the plant at full capacity with this supply. So, currently BGTPP is able to run only one unit of the plant for most durations resulting in lower PLF.

3.3.5 In case of GHEP, out of the three units, only two units run based on the annual average live storage capacity which can generate electricity of 50-60 MUs annually. As such, GHEP plant can presently generate only 7-8 MW output by running two units.

3.3.6 The Petitioner submitted that based on the trend of past years and expected performance, the performance of Generating Plant for FY 2022-23 and FY 2023-24 is projected in the instant petition. The Installed Capacity, Gross Generation, PLFs and auxiliary consumption for the three generation units for the period FY 2020-21 to FY 2023-24 is tabulated as below:

Table 3: Plant-wise own generation for FY 2020-21 to FY 2023-24 as submitted by TSECL

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Rokhia gas based thermal power plant (RGTPP)					
Gross Generation	MU	347.11	334.09	301.99	386.32
Installed Capacity	MW	63	63	63	63
PLF	%	62.90%	60.54%	54.72%	70.00%
Auxiliary Consumption	%	1.00%	1.00%	1.00%	1.00%
Net Generation	MU	343.64	330.75	298.97	382.45
Baramura gas based thermal power plant (BGTPP)					
Gross Generation	MU	192.50	235.25	308.98	312.73
Installed Capacity	MW	42	42	42	42
PLF	%	52.32%	63.94%	83.98%	85.00%
Auxiliary Consumption	%	1.00%	1.00%	1.00%	1.00%
Net Generation	MU	190.57	232.90	305.89	309.60
Gumti Hydro Electric Plant (GHEP)					
Gross Generation	MU	7.97	9.39	10.82	10.82
Installed Capacity	MW	10	10	10	10
PLF	%	9.10%	10.72%	12.36%	12.36%
Auxiliary Consumption	%	0.70%	0.70%	0.70%	0.70%
Net Generation	MU	7.92	9.33	10.75	10.75

Commission's Analysis and Ruling

3.3.7 Regulations 37 & 38 of the TERC MYT Regulations, 2015 specify the operational norms related to PLF and Auxiliary consumption for the Thermal and Hydro Generation Power Plant. The actual gross generation for FY 2020-21 and FY 2021-22 has been considered by the Commission. The actual/projected performance of the Thermal Generation Plant owned by Petitioner vis-à-vis norms specified is outlined in the following Table.

Table 4: Normative PLF and Aux. Consumption and Actual Performance of Generation Plant(%)

Particulars	Norms	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
PLF					
RGTPP	85	62.90%	60.54%	54.72%	70.00%
BGTPP	85	52.32%	63.94%	83.98%	85.00%
Auxiliary Consumption					
RGTPP	1.00%	1.00%	1.00%	1.00%	1.00%
BGTPP	1.00%	1.00%	1.00%	1.00%	1.00%
Hydro	0.70%	0.70%	0.70%	0.70%	0.70%

3.3.8 With respect to BGTPP, TSECL submitted that though PLF is lower from FY 2015-16 onwards, the same is due to constraints in gas availability for BGTPP. Currently BGTPP is able to run only one unit of the plant for most durations resulting in lower PLF.

3.3.9 However, the Commission would like to highlight that mere submission of the fact that gas constraint is going to affect the availability without any action being envisaged to factor such risk is not advisable. Based on the improvement in the gas availability scenario, the PLF of BGTPP has been improved in FY 2021-22 and FY 2022-23, but there has been a drop in generation from FY 2020-21, for which no explanation has been provided by TSECL. Considering the inconsistency in the gas availability which is affecting the PLF of the plant, the Commission has considered the projection of generation as provided by TSECL.

3.3.10 The Commission has verified the actual generation submitted by the Petitioner based on SLDC certificate issued in this regard. Based on the submission by the Petitioner after due prudence check, the Commission approves the actual PLF for FY 2020-21 and FY 2021-22 and the actual Gross Generation as provided by the Petitioner.

3.3.11 The Commission observes that, since the actual PLF for FY 2020-21 and FY 2021-22 achieved are below the targeted PLF of 85%, TSECL does not qualify for the incentives for actual generation in excess of ex-bus energy corresponding to target PLF, as per the norms specified in Regulation 37 of TERC MYT Regulations, 2015. However, for FY 2022-23 and FY 2023-24, the same will be reviewed by the Commission at the time of final truing up of the respective years.

3.3.12 Also, the Commission notes that the actual auxiliary consumption is equivalent to the

normative auxiliary consumption for each year, for which no explanation has been provided by TSECL. However, the Commission approves the normative / actual Auxiliary Consumption as per TERC MYT Regulations, 2015, based on the certificate as provided by SLDC. As per Regulation 10 (IV) of TERC MYT Regulations, 2015, the Commission has considered the Auxiliary Consumption as a controllable parameter and hence the same needs to be considered for computing the sharing of gains in accordance with Regulation 10 (VII) of the TERC MYT Regulations, 2015 and have been dealt in subsequently in this Order.

3.3.13 Accordingly, the approved Gross and Net Generation from the own Generating plants based on the norms as specified in the MYT Regulations 2015, from FY 2020-21 to FY 2023-24, is outlined in the Table below:

Table 5: Own generation from FY 2020-21 to FY 2023-24 approved by the Commission

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Rokhia gas based thermal power plant (RGTPP)					
Gross Generation	MU	347.11	334.09	301.99	386.32
Installed Capacity	MW	63	63	63	63
PLF	%	62.90%	60.54%	54.72%	70.00%
Auxiliary Consumption	%	1.00%	1.00%	1.00%	1.00%
Net Generation	MU	343.64	330.75	298.97	382.45
Baramura gas based thermal power plant (BGTPP)					
Gross Generation	MU	192.50	235.25	308.98	312.73
Installed Capacity	MW	42	42	42	42
PLF	%	52.32%	63.94%	83.98%	85.00%
Auxiliary Consumption	%	1.00%	1.00%	1.00%	1.00%
Net Generation	MU	190.57	232.90	305.89	309.60
Gumti Hydro Electric Plant (GHEP)					
Gross Generation	MU	7.97	9.39	10.82	10.82
Installed Capacity	MW	10	10	10	10
PLF	%	9.10%	10.72%	12.36%	12.36%
Auxiliary Consumption	%	0.70%	0.70%	0.70%	0.70%
Net Generation	MU	7.92	9.32	10.75	10.75

3.4 Plant Availability Factor

Petitioner's Submission

3.4.1 TSECL has submitted that, the availability factor of RGTPP were higher than 79% and 95% and for BGTPP was in the range of 54% to 63%%, respectively, during the true-up period i.e, FY 2020-21 and FY 2021-22. The availability factors for FY 2022-23 & FY 2023-24 has been increased based on the current improvement in the units of the plants in BGTPP and fuel supply scenario.

3.4.2 Also, in case of GHEP, out of the three units, only two units run continuously based on the annual average live storage capacity.

3.4.3 The availability factors for the FY 2020-21 to FY 2023-24 are tabulated as below:

Table 6: Plant wise Availability (%) for FY 2020-21 to FY 2023-24 submitted by TSECL

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	%	79.01%	95.80%	95.00%	95.00%
BGTPP	%	54.12%	59.53%	83.98%	85.00%

3.4.4 TSECL further submitted that in the last Tariff Order dated 2 September 2022, the Commission while allowing the fixed cost for BGTPP has reduced the fixed cost on pro-rata basis on the basis of actual Plant Availability Factor as compared to the Normative Plant Availability Factor of 85%. In this context, TSECL submitted that the availability of BGTPP is constrained because of the uncontrollable factor of availability of gas for the power plant. The plant is not able to schedule/be available for one of its units (out of two units) due to constraints in availability of gas which has been elaborated in the Petition.

3.4.5 TERC MYT Regulations 2015 also allows for relaxation of NAPAF targets due to unavailability of fuel/gas since this is an uncontrollable factor. The Commission has ignored Regulation 37 of TERC MYT Regulations 2015, which clearly states that the NAPAF shall be reviewed in case of constraints in availability of gas.

3.4.6 The Commission in its previous Tariff Order dated 1 September 2020 had also considered the lower Availability Factor of BGTPP due to constraints in availability of gas and had not reduced the fixed charges. As such, the reduction in AFC as done in the impugned order is in contradiction with the own past orders of the Commission as well as the TERC MYT regulations 2015. The non reduction of AFC due to uncontrollable factor of gas availability would increase the gap by Rs. 16 crores.

Commission's Analysis and Ruling

3.4.7 As per Regulation 32 of the TERC MYT Regulations, 2015, Full Fixed Cost of Thermal Generating Station can be recovered only if the actual Availability is equal to or higher than the Normative Plant availability factor of 85% as specified in Regulations 37 of the TERC MYT Regulations, 2015.

3.4.8 With regards to Hydro Plant also, as per Regulations 33 of the TERC MYT Regulations 2015, Capacity Charges is calculated on a pro-rata basis of actual Plant Availability factor with the Normative Plant Availability factor of 85% as specified in Regulations 38 of the TERC MYT Regulations, 2015.

3.4.9 The Petitioner submitted the actual PAF for FY 2020-21 and FY 2021-22 and projected PAF for FY 2022-23 and FY 2023-24. It was noticed that availability is higher than normative Plant availability factor of 85% for RGTPP and lower for BGTPP. However, TSECL has not provided any details related to PAF of GHEP in the petition as well as to the replies to the data gaps.

3.4.10 The Commission has noted the submission made by the Petitioner with regards to constraint in gas availability for BGTPP and limited live storage capacity of water for

GHEP. With regards to FY 2022-23 and FY 2023-24, considering the improved condition of gas supply, the Commission has considered the normative Plant availability factor of 85% for all the generating plants.

3.4.11 Accordingly, the Commission approves the actual availability as specified by the Petitioner for FY 2020-21 and FY 2021-22 and normative availability for FY 2022-23 and FY 2023-24 as shown in the following Table:

Table 7: Plant wise Availability (%) for FY 2020-21 to FY 2023-24 approved by the Commission

Particulars	Units	Norm	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	%	85.00%	79.01%	95.80%	85.00%	85.00%
BGTPP	%	85.00%	54.12%	63.94%	85.00%	85.00%

3.4.12 Since the actual availability is higher than normative availability for RGTPP, the Commission allows the recovery of entire trued up fixed charges for FY 2020-21 and FY 2021-22 as determined in subsequent sections of this Order. However, with reference to BGTPP, it has been noticed that actual availability is lower than the normative availability as specified in the TERC MYT Regulations 2015. Accordingly, the recovery of fixed charges on truing-up for FY 2020-21 and FY 2021-22 is approved on pro-rata basis as specified in Regulations 37 of TERC MYT Regulations, 2015, and the same is determined in the subsequent sections of this Order. For GHEP, TSECL has not provided any details of PAF and therefore Commission directs TSECL to provide the PAF as certified by the SLDC for all the three plants in the next tariff petition on the basis of which the treatment of fixed charges will be decided for GHEP Plant.

3.4.13 With respect to FY 2022-23 and FY 2023-24, the Commission shall consider the treatment of recovery of fixed charges as specified in Regulations 37 and 38 of TERC MYT Regulations, 2015 as per the actual Availability at the time of final Truing-up of ARR for the respective years.

3.5 Station Heat Rate

Petitioner's Submission

3.5.1 TSECL has submitted that Station Heat rate of a thermal power plant is a measure of the power plant's energy efficiency and Station Heat Rate calculated for RGTPP and BGTPP is based on the net calorific values (kcal/Standard Cubic Meter) of the gas being supplied to power plants.

3.5.2 For 2020-21, the actual SHR of BGTPP has dipped compared to previous 3 years, i.e. to 3460 kcal/kWh, as per TERC MYT Tariff petition 2020. For RGTPP, the average heat rate is close to the normative value of 3700 kCal/kWh. For FY 2021-22, actual SHR of both the plants of RGTPP and BGTPP is slightly less than the normative values approved by the Commission thereby resulting in savings in fuel

cost. Further, SHR for FY 2022-23 & FY 2023-24 has been kept same based on the latest performance of FY 22 (upto March 22), which is expected to continue.

- 3.5.3 The SHR of BGTPP and RGTPP as submitted by Petitioner for FY 2020-21 to FY 2023-24 is highlighted as below:

Table 8: SHR for FY 2020-21 to FY 2023-24(kCal/ kWh)

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	kcal/kWh	3,459.68	3,550.40	3,550.40	3,550.40
BGTPP	kcal/kWh	3,702.40	3,696.51	3,696.51	3,696.51

Commission's Analysis and Ruling

- 3.5.4 As per Regulations 37 (C) (4) of TERC MYT Regulations 2015, the normative SHR considered for RGTPP and BGTPP is 3700 kCal/kWh.
- 3.5.5 The Commission observes that though the actual SHR as submitted by Petitioner are well within the norms except for BGTPP for FY 2020-21. For the purpose of Truing up for FY 2020-21 and FY 2021-22, the Commission has considered the actual SHR. For FY 2022-23 and FY 2023-24, the Commission approves the normative SHR of 3700 kcal/kWh.
- 3.5.6 Accordingly, the Commission approves the normative Station Heat Rate as per MYT Regulations 2015 for FY 2020-21 to FY 2023-24.

Table 9: Approved SHR (kCal/kWh)

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Actual					
RGTPP	kcal/kWh	3,459.68	3,550.40	3700.00	3700.00
BGTPP	kcal/kWh	3,702.40	3,696.51	3700.00	3700.00
Normative					
RGTPP	kcal/kWh	3700.00	3700.00	3700.00	3700.00
BGTPP	kcal/kWh	3700.00	3700.00	3700.00	3700.00

- 3.5.7 The Commission would like to state that as per Regulation 10 (IV) of TERC MYT Regulations, 2015, the Commission has considered the Station Heat Rate as a controllable parameter and hence the difference between the actual SHR and normative SHR as outlined in the above table for the respective years for FY 2020-21 and FY 2021-22 will be considered for computing the sharing of financial gains in accordance with Regulation 10 (VII) of TERC MYT Regulations, 2015 and have been dealt in subsequent section of this Order. With regards to the submission made by TSECL, it is submitted that while approving the Fuel cost, the Commission has calculated the normative fuel cost considering the normative performance parameter such as SHR and Auxiliary consumption, while determining the ARR. Accordingly, the difference between the actual fuel cost and normative fuel cost, if resulting in

gain, is shared with the consumers as per Regulation 10 (VII) of TERC MYT Regulations, 2015.

- 3.5.8 Accordingly, the Commission has considered the sharing of Financial gains in accordance with Regulation 10 (IV) and (VII) of TERC MYT Regulations, 2015, in subsequent Section of this Chapter.

3.6 Fuel Purchase Cost

Petitioner's Submission

- 3.6.1 The Petitioner has submitted that the only fuel used for self-generation of energy at RGTPP and BGTPP is natural gas which is being sourced from the reserves at RGTPP, BGTPP and Konaban partly under the Administrative Price Mechanism (APM) at the rates notified by the Ministry of Petroleum and Natural Gas (MoP&NG), Government of India and partly at the Market Determined Price (MDP). Accordingly, Petitioner has made allocations of 0.58 MMSCMD and 0.40 MMSCMD under the APM gas mechanism for its generation plants at RGTPP and BGTPP respectively.
- 3.6.2 Further Petitioner submitted that currently, GAIL is able to supply only 0.50 MMSCMD (86% of allocation) and 0.30 MMSCMD (75% of allocation) under APM gas mechanism to RGTPP and BGTPP respectively and balance requirement is sourced under MDP (Market Determined Price). For FY 2023-24, all the units of RGTPP and BGTPP are expected to be operational. Accordingly, source wise (APM and MDP) supply of gas of FY 2020-21 to FY 2023-24 is given in the following Table:

Table 10: Source wise Supply of Fuel and cost (per SCM) - FY 2020-21 to FY 2023-24

Particulars	FY 2020-21		FY 2021-22		FY 2022-23		FY 2023-24	
	RGTPP	BGTPP	RGTPP	BGTPP	RGTPP	BGTPP	RGTPP	BGTPP
Source wise supply of Natural Gas (In %)								
APM supply from GAIL	97.55%	90.79%	97.89%	68.87%	100.00%	54.16%	100.00%	54.16%
MDP Supply from ONGC	2.44%	9.21%	2.11%	31.13%	0.00%	45.83%	0.00%	45.8
Fuel Cost (Rs./SCM)								
APM Supply	5.57	4.33	5.98	5.06	19.62	19.45	19.62	19.45
MDP Supply	9.24	12.09	9.7	9.73	0	10.14	10.14	10.14

- 3.6.3 The Petitioner submitted the actual Fuel cost for FY 2020-21 and FY 2021-22 for the purpose of truing up.
- 3.6.4 As per Clause 25 of TERC MYT Regulations, 2015, the landed fuel cost of primary fuel and secondary fuel for tariff determination shall be projected based on actual weighted average cost of primary fuel of last three months. This fuel cost includes other costs like metering charges, Vat payable, etc. The projected fuel cost for FY 2022-23 and FY 2023-24 based on the latest applicable rates of fuel for October'22 and November'22.
- 3.6.5 The Petitioner submitted that APM prices notified by MoPNG, GoI during the control period is tabulated below. From April'22 there has been a sudden increase in the

price of raw APM gas prices as notified by MoPNG, GoI, where it has increased drastically around 110% to USD 6.1/MMBtu from April 22, from its previous value of USD 2.9/MMBtu, which was applicable in October 21-March22. The Gas prices have further increased to USD 8.57/MMBtu from 1st October 22 onwards for the October 22-March 23 period, as per MoPNG notification dated 30 September, 2022 which is an additional increase of more than 40%. In addition to the increase in raw APM gas price as per Govt notification, there is an additional impact on change in USD to INR exchange rate and increase in other charges like transportation, VAT etc. The Petitioner has projected the fuel cost based on the latest rate as notified and effective from October 22 for the remaining period of FY 2022-23 and for FY 2023-24. It has already received a fuel bill based on the escalated rates for the first fortnight of October 22. This is expected to increase the overall costs of TSECL by more than Rs. 250 Crore in the current year from the previous year considering the latest gas price increase from the second half of FY 2022-23. The Commission is requested to take a note of the same and accordingly compute the ARR of TPGL and pass this impact as the base tariff revision for the current year in order to prevent accumulation of gap and resultant carrying cost.

Table 11: Details of APM Gas price notified by MoPNG, GoI

Period	Gas Price (US\$)
April 2017 - Sept 2017	2.48
Oct 2017 - Mar 2018	2.89
April 2018 - Sept 2018	3.06
Oct 2018 - Mar 2019	3.36
April 2019 - Sept 2019	3.69
Sept 2019 - Mar 2020	3.23
April 2020 - Sept 2020	2.39
Sept 2020 - Mar 2021	1.79
April 2021 - Sept 2021	1.79
Sept 2021 - Mar 2022	2.90
April 2022 - Sept 2022	6.10
Oct 2022-March 2023	8.57

- 3.6.6 The Petitioner further submitted that latest foreign currency depreciation of Indian rupees in foreign exchanges has taken a major impact in the gas purchases in Indian currency. The USD rate in Indian currency has fluctuated from 75 INR to 78 INR from April to June'22 but then increased drastically to 80 INR and at present 82 INR (as of December 22) respectively. Such volatility in Indian rupee has taken a big impact in the Gas prices and is expected to be volatile in the next FY 2023-24 as well as the supply of natural gas has been still very low from international markets and prices have increased by over 150% in the last six months. Hence, the Petitioner requested to consider the tariff revision in this petition caused by the above factors which have

hampered substantially the generation cost of TSECL/TPGL and would further impact their operations.

- 3.6.7 Based on the aforesaid, TPGCL has claimed the Plant wise fuel consumption and fuel cost as tabled below:

Table 12: Fuel consumption and Fuel Cost as per TSECL (Rs. Crore)

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP					
Fuel Consumption	MMSCM	154.11	148.76	134.47	172.02
Fuel Cost	Rs. Crore	87.45	91.46	235.74	337.59
BGTPP					
Fuel Consumption	MMSCM	80.61	100.76	132.33	133.94
Fuel Cost	Rs. Crore	41.02	67.04	178.34	203.37

Commission's Analysis and Ruling

- 3.6.8 The Commission sought the reconciliation of fuel cost claimed in the Petition vis-à-vis audited accounts for FY 2020-21 and FY 2021-22. The Commission observed that the fuel consumption details provided agency wise reconciles with the total quantum of gas purchased as provided by the Petitioner in the petition. However, the Commission has also tried to reconcile the cost with the amount as highlighted in the audited annual accounts of FY 2020-21 and FY 2021-22 which is outlined as below:

Table 13: Reconciliation of Fuel Cost (Rs. Crore)

Particulars	Units	FY 2020-21	FY 2021-22
RGTPP	Rs. Crs	87.45	91.46
BGTPP	Rs. Crs	41.02	67.04
Total Fuel Cost as per petition	Rs. Crs	128.47	158.50
Fuel Cost as per Audited Accounts			
Natural Gas	Rs. Crs	128.43	158.46
HSD Cost	Rs. Crs	0.04	0.04
Total Fuel Cost as per Accounts	Rs. Crs	128.47	158.50

- 3.6.9 In view of the above, the Commission approves the cost of Natural gas and HSD cost as per audited annual accounts of FY 2020-21 and FY 2021-22 for the purpose of trueing up.
- 3.6.10 With respect to FY 2022-23 and FY 2023-24, the Commission has computed the Gas consumption and the Fuel Cost based on the normative operational parameter as specified in the MYT Regulations 2015 and as specified in the above relevant para of this order, subject to prudence check at the time of true-up.
- 3.6.11 As regards the Fuel price for FY 2022-23 and FY 2023-24, the Commission has noted the submission of the Petitioner regarding the increasing prices for gas. Further, the Commission sought the latest fuel cost purchase bills for verification of actual increase in the price of fuel. The Petitioner, in reply to query of the Commission, submitted the latest fuel bills for the period from April 1 to April 15 of

current year i.e., FY 2023-24 for both stations viz. RGTPP and BGTPP. The following fuel prices have been observed from the bills:

- (a) For RGTPP, the average price of purchased fuel works out as Rs. 12,288.77/SCM for purchase of 214,472 MMBTU of gas.
- (b) For BGTPP, the average price of purchased fuel works out as Rs. 12,224.71/SCM for purchase of 108,622 MMBTU of gas.

3.6.12 The above said prices reflects the latest prices as per market and purchase of the Petitioner. Hence, it would be appropriate for consideration of these prices for computation of fuel cost for FY 2022-23 and FY 2023-24 in order to rationalise the impact of fuel prices. In view of this, the Commission after exercising its power has considered above said fuel prices for determination of fuel cost for FY 2022-23 and FY 2023-24. The actual fuel cost based on actual fuel prices shall be considered at time of truing up for respective years, subject to prudence check.

3.6.13 Based on the approach adopted for FY 2021-22 and FY 2022-23, the Commission has recomputed the Fuel Cost based on the normative parameter for RGTPP and BGTPP and is outlined in the Table below:

Table 14: Fuel Purchase Cost of RGTPP for FY 2020-21 to FY 2022-23 as approved by the Commission

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
		Petitioners Submission				Approved by Commission			
Installed Capacity	MW	63.00	63.00	63.00	63.00	63.00	63.00	63.00	63.00
Days	Nos.	365.00	365.00	365.00	365.00	365.00	365.00	365.00	365.00
PLF	%	62.90%	60.54%	54.72%	70.00%	62.90%	60.54%	54.72%	70.00%
Gross Generation	MU	347.11	334.09	301.99	386.32	347.11	334.09	301.99	386.32
Auxiliary Consumption	%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation	MU	343.64	330.75	298.97	382.45	343.64	330.75	298.97	382.45
Heat Rate*	kcal/kWh	3,702.50	3,699.83	3,709.39	3,709.39	3,700.00	3,700.00	3,700.00	3,700.00
GCV of gas	kcal/SCM	8,339.21	8,309.11	8,330.34	8,330.34	8,339.21	8,309.11	8,330.34	8,330.34
Overall Heat	G. cal.	1,285,192	1,236,063	1,120,184	1,432,997	1,284,324	1,236,133	1,117,348	1,429,369
Gas consumption	M. SCM	154.11	148.76	134.47	172.02	154.01	148.77	134.13	171.59
Price of Gas	Rs./1000 SCM	5,674.36	6,148.16	17,531.06	19,624.84	5,674.36	6,148.16	12,288.77	12,288.77
Total Normative cost of Gas	Rs. Crore	87.45	91.46	235.74	337.59	87.39	91.47	164.83	210.86

Table 15: Fuel Purchase Cost of BGTPP for FY 2020-21 and FY 2022-23 approved by the Commission

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
		Petitioners Submission				Approved by Commission			
Installed Capacity	MW	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
Days	Nos.	365.00	365.00	365.00	365.00	365.00	365.00	365.00	365.00
PLF	%	52.32%	63.94%	83.98%	85.00%	52.32%	63.94%	83.98%	85.00%
Gross Generation	MU	192.50	235.25	308.98	312.73	192.50	235.25	308.98	312.73
Auxiliary Consumption	%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Net Generation	MU	190.57	232.90	305.89	309.60	190.57	232.90	305.89	309.60
Heat Rate*	kcal/kWh	3,459.95	3,552.22	3,544.18	3,544.18	3,700.00	3,700.00	3,700.00	3,700.00
GCV of gas	kcal/SCM	8,261.86	8,293.56	8275.11	8275.11	8,261.86	8,293.56	8,275.11	8,275.11
Overall Heat	G. cal.	666,022	835,659	1,095,073	1,108,378	712,232	870,425	1,143,219	1,157,108
Gas consumption	M. SCM	80.61	100.76	132.33	133.94	86.21	104.95	138.15	139.83
Price of Gas	Rs./1000 SCM	5,088.44	6,653.43	13,176.55	13,176.55	5,088.44	6,653.43	12,224.71	12,224.71
Total Normative cost of Gas	Rs. Crore	41.02	67.04	178.34	203.37	43.87	69.83	168.89	170.94

3.6.14 Accordingly, the Commission approves the Fuel Cost for FY 2020-21 to FY 2023-24 as outlined in the following Table:

Table 16: Fuel Cost for FY 2020-21 to FY 2023-24 approved by the Commission

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP					
Fuel Consumption	MMSCM	154.01	148.77	134.13	171.59
Fuel Cost	Rs. Crore	87.39	91.47	164.83	210.86
BGTPP					
Fuel Consumption	MMSCM	86.21	104.95	138.15	139.83
Fuel Cost	Rs. Crore	43.87	69.83	168.89	170.94

3.7 Annual fixed charges (AFC)

3.7.1 Regulation 23 of the TERC MYT Regulations, 2015 specifies the components of Annual Fixed Charges as follows:

- Return on equity;
- Interest on loan capital;
- Depreciation;
- Interest on working capital;
- Operation and maintenance expenses;
- Recovery of fee for tariff petition filing; and
- Minus Non-tariff income

Provided that special allowance in lieu of R&M where opted in accordance to Clause 18 and/or separate compensation allowance in accordance to Clause 19, wherever applicable shall be recovered separately and shall not be considered for computation of working capital.

3.8 Operation & Maintenance Expenses

Petitioner's Submission

3.8.1 TSECL submitted that, as per Regulation 31 (1) (b) of TERC MYT Regulations, 2015, Operation and Maintenance (O&M) expenses of RGTPP and BGTPP has been calculated based on the normative cost per MW of capacity and for Hydro Generating stations, O&M cost is calculated by escalating O&M cost of previous year by 6.64%.

3.8.2 The details of the norms of the O&M Expenses for RGTPP and BGTPP are as provided below:

Table 17: Norms for calculation of O&M expenses for Generating Station

Particulars	Amount (Rs. Lakh per MW)
FY 2020-21	69.08
FY 2021-22	73.77
FY 2022-23	78.78
FY 2023-24	84.13

3.8.3 Further, though the actual O&M cost for FY 2020-21 and FY 2021-22 are as per the

audited accounts, it has been segregated between Generation, Transmission and Distribution function, TPGL has claimed O&M expenses based on actual expenses in the tariff petition.

- 3.8.4 TSECL has submitted that the actual Operation & Maintenance (O&M) expenses is very less than the approved O&M expenses considered in the Tariff order as per the normative cost principle taken previously in our tariff petitions. This is because of reduced manpower at present in TPGL and limited maintenance being carried out at present due to the limitations in the funds. In future, TPGL intends to increase the manpower and also adopt best practices for maintenance required for improving efficiency and age of the plant. As such, TPGL requests the Commission to allow higher O&M costs in future and not take the present actual cost as a base cost for future projections, to maintain the desired efficiency.
- 3.8.5 TSECL further submitted that the total employee cost has been projected based on an assumption of normative average 5% increase minimum in employee wages, a 12% additional Dearness Allowance (DA) hike in Employee expenses from 1st Dec'22 onwards as announced by the Govt. of Tripura and there would be change in the number of manpower in the next two years in FY 2022-23 and 2023-24. The no. of employees expected to be retired by end of FY 2022-23 is around 8, compared to the expected no. of recruitment, which is 6. For FY 2023-24, the no. of employees expected to be retired is around 13. Further, 90 number of employees are expected to be recruited by FY 2023-24 which has already been approved and the recruitment process has been initiated. This requirement of manpower is due to the urgent need of personnel for operation of the substations under various divisions of TSECL. As of now there has been no consideration of pay revision in FY 2022-23 and 2023-24 from TSECL, hence the same has not been considered in employee expenses.
- 3.8.6 TSECL further submitted that actual O&M cost of each plants of TSECL booked in account statements of previous years are currently much less as compared to normative O&M cost. This is because the cost of periodic planned maintenance like CIBI, Major Inspection etc. is not being booked under R&M works but are booked as Capex and other R&M activities undertaken under disaster management is also not booked under R&M expenses resulting in understatement of R&M expenses in accounts.
- 3.8.7 The O&M expenses as claimed is outlined in the table below:

Table 18: O&M Expenses claimed by Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP				
Employee Cost	4.21	4.07	4.42	5.20
R&M Expenses	0.71	0.68	0.68	0.68
A&G Expenses	1.10	1.38	1.74	1.91
Total	6.02	6.13	6.83	7.78
BGTPP				
Employee Cost	3.02	2.62	2.83	3.33

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
R&M Expenses	2.00	2.42	2.42	2.66
A&G Expenses	1.57	1.50	1.50	1.50
Total	6.59	6.54	6.75	7.49
GHEP				
Employee Cost	2.94	2.88	3.13	3.68
R&M Expenses	0.15	0.78	0.78	0.86
A&G Expenses	0.37	0.54	0.54	0.59
Total	3.46	4.20	4.45	5.13

Commission's Analysis and Ruling

3.8.8 Regulations 31 (I)(b) of TERC MYT Regulations, 2015 specifies the norms for calculation of O&M Expenses of gas based generating plant as stated below:

“31. Operation and Maintenance Expenses:

I. Normative Operation and Maintenance expenses of thermal generating station shall be as follows:

b. Open Cycle Gas Turbine/Combined Cycle generating stations:

Year	Gas Turbine/ Combined Cycle Generating stations other than small gas turbine power generating stations	Small gas turbine power generating stations	Baramura Gas Thermal Project and Rokhia Gas Thermal Project (below 25MW units)	Advance F Class Machines
FY 2015-16	15.59	35.70	44.14	28.36
FY 2016-17	16.57	38.13	47.14	30.29
FY 2017-18	17.61	40.73	50.35	32.35
FY 2018-19	18.72	43.50	53.78	34.56
FY 2019-20	19.90	46.46	57.44	36.91

3.8.9 Regulations 31 (III) of TERC MYT Regulations, 2015 specifies the norms for calculation of O&M expenses of Hydro based generating plant as stated below:

“III. Hydro Generating Station

a. Following operations and maintenance expense norms shall be applicable for hydro generating stations (in Rs lakh)

i. The operation and maintenance expenses shall be derived on the basis of actual operation and maintenance expenses for the years 2009-10 to 2013-14, based on the audited balance sheets, excluding abnormal operation and maintenance expenses, if any, after prudence check by the Commission.

ii. The normalized operation and maintenance expenses after prudence check, for the years 2009-10 to 2013-14, shall be escalated at the rate of 6.04% to arrive at the normalized operation and maintenance expenses at the 2013-14 price level respectively and then averaged to arrive at normalized average operation and maintenance expenses for the 2009-10 to 2013-14 at 2013-14 price level. The average normalized operation and maintenance expenses at 2013-14 price level shall be escalated at the rate of 6.64% to arrive at the operation and maintenance expenses for year 2014-15 and thereafter escalated at the rate of 6.64% p.a., to arrive at the O&M expenses for the control period.”

3.8.10 As stated above, Regulation 31 of the TERC MYT Regulations, 2015 specifies the methodology for determination of normative O&M expenses for thermal and Hydro based Generating Stations. Regulation 31 (I) specifies the normative O&M expenses in Rs. lakh/MW for the gas-based thermal Generating Stations and Regulation 31 (III) specifies the methodology for determining the normative O&M expenses for existing Hydro Generating Stations.

3.8.11 With regards to the O&M norms of Gas based Power Plant, the Commission has observed that the norms in the TERC MYT Regulations 2015 is till the period FY 2019-20 and therefore, in Tariff Order dated 2 September 2022, the Commission has projected the O&M expenses for FY 2020-21 on a pro-rata basis considering the similar escalation factor as considered for FY 2015-16 to FY 2019-20 and accordingly, the derived O&M escalation rate for the gas based Power Plant is 6.81% which is considered for projection of O&M norms for FY 2020-21 to FY 2023-24.

3.8.12 With regards to the O&M norms of Hydro based Power Plant, though as per the Regulations, it is specified that an average O&M expenses of FY 2009-10 to FY 2013-14 is required to be considered and to be escalated at the rate as specified in the TERC MYT Regulations 2015 to derive the O&M expenses for FY 2014-15 and which will be further escalated @6.64% p.a. to arrive at the O&M expenses for the control period.

3.8.13 The similar approach as considered in last Tariff Order dated 2 September, 2022 has been considered by the Commission in the current tariff order, whereby the escalation norm of 6.64% p.a. has been considered on the normative O&M cost of GHEP as approved in the last tariff order to determine the normative O&M cost for FY 2020-21 to FY 2023-24.

3.8.14 Accordingly, the normative O&M cost as approved by the Commission for FY 2020-21 and FY 2023-24 is outlined in the Table below:

Table 19: Normative O&M Cost for FY 2020-21 and FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Norms - O&M Expenses	Rs. Lakh/MW	61.35	65.52	69.98	74.73
RGTPP					
Effective Capacity	MW	63	63	63	63
O&M Expenses of RGTPP	Rs. Crore	38.65	41.28	44.09	47.08
BGTPP					
Effective Capacity	MW	42	42	42	42
O&M Expenses of BGTPP	Rs. Crore	25.77	27.52	29.39	31.39
GHEP					
O&M Expenses of GHEP	Rs. Crore	3.42	3.65	3.89	4.15
Total normative O&M cost	Rs. Crore	67.84	72.45	77.37	82.62

- 3.8.15 Also, the Audited Annual Accounts of TSECL for FY 2020-21 and FY 2021-22, as provided by the Petitioner, is a consolidated financial statement of Generation, Transmission and Distribution Function and is yet to be disaggregated function wise. The notification of the transfer scheme providing segregation of assets and liabilities to the successor entities is still pending as on date and therefore, all the financial transaction related to Generation, Transmission and Distribution Function is accounted in the books of TSECL. The Petitioner in replies to data gaps has submitted that the asset transfer has not taken place from TSECL to the newly incorporated company-TPGL. The financial segregation is still in progress and only the administrative segregation has been completed.
- 3.8.16 Accordingly, the Petitioner has submitted the actual allocation of O&M cost for Generation, Transmission and Distribution function, wherever necessary for ARR and tariff calculation, based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like accounts and finance, HR, projects etc. at corporate level.
- 3.8.17 The Commission has reconciled the function-wise O&M cost as provided by the Petitioner with the consolidated audited annual accounts. The reconciliation carried out by the Commission is outlined as below:

Table 20: Reconciliation of O&M function-wise with Audited Accounts (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22
O&M Expenses as per audited accounts	242.40	246.89
O&M expenses - Function wise		
RGTPP	6.02	6.13
BGTPP	6.59	6.54
GHEP	3.46	4.20
Generation Function	16.07	16.87
Transmission Function	23.43	38.46
Distribution Function	202.90	191.56
Total O&M Expenses as per Petitioner	242.40	246.89

- 3.8.18 The Commission observes that the actual O&M expenses for Generation Function are lower than the normative O&M expenses as specified in Regulations 31 (1) (b) of TERC MYT Regulations, 2015. The Commission would like to highlight that the O&M norms as specified in the Regulations, is the ceiling cost which the Commission can allow and since the actual cost is lower than the normative cost, the Commission at present approves the O&M expenses in line with the audited annual accounts for FY 2020-21 and FY 2021-22.
- 3.8.19 As regards the O&M Expenses for FY 2022-23, the Commission observed that actual expenses incurred by the Petition for first half of the said year is far lower than normative O&M expenses approved by the Commission for RGTPP and BGTPP. The Commission does not incline to approve normative O&M expenses for both Stations and then approve the actual O&M expenses during truing up Petition next year wherein actual expenses incurred would be much lower than normative

expenses. Hence, in order to reduce the excess burden on consumer, the Commission approves the O&M Expenses for FY 2022-23 for RGTPP and BGTPP as submitted by the Petitioner.

3.8.20 However, for FY 2023-24, the normative O&M cost has been considered as per TERC MYT Regulations, 2015 for the determination of Aggregate Revenue Requirement for Generation function and the actual expenses will be considered at the time of the truing-up of the respective years as per the principle adopted by the Commission for previous years.

3.8.21 The O&M expenses as approved by the Commission for determination of ARR for FY 2020-21 to FY 2023-24 are outlined in the table below:

Table 21: O&M expenses for FY 2020-21 to FY 2023-24 as approved by the Commission (Rs. Crore)

Plant wise	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	6.02	6.13	6.83	47.08
BGTPP	6.59	6.54	6.75	31.39
GHEP	3.42	3.65	3.89	4.15
O&M Expenses	16.03	16.32	17.47	82.62

3.9 Depreciation

Petitioner's Submission

3.9.1 TSECL has considered the depreciation rates as per MYT Tariff Regulations, 2015 on the gross asset value. The Petitioner submitted that in account statement provided for FY 2020-21 and FY 2021-22, the depreciation has been calculated as per depreciation rate provided in Companies Act 2013 i.e., based on the useful life. Accordingly, the rate of depreciation considered by Petitioner for calculation of Depreciation is as provided below:

Table 22: Rate of Depreciation as per Tariff Regulations

Particulars	Depreciation Rate
Land	0.00%
Building	3.34%
Plant & Machinery	5.28%
Computer	15.00%
Computer and Office Equipment	15.00%
Office Equipment	6.33%
Furniture	6.33%
Vehicles	9.50%

3.9.2 In its reply to the data gaps raised by the Commission, TSECL has submitted the actual value of the gross value of assets and the asset base for calculation of depreciation. Further it has submitted that the book value of assets is based on the original gross value and no revaluation has been done for the value of assets.

3.9.3 With regards to the capitalisation, the Petitioner, in its reply to the data gaps has submitted the actual capitalisation for FY 2020-21 and FY 2021-22 and in order to project the value of assets for FY 2020-21 to FY 2022-23, the total capitalisation expected to be incurred in these years is projected based on the trend of actual

addition of assets in the past few years.

- 3.9.4 The actual value of the Gross Fixed Assets for FY 2020-21 and FY 2021-22 and projection for FY 2022-23 and FY 2023-24 along with the depreciation claimed by the Petitioner is outlined in the table below:

Table 23: Gross Value of Assets and Depreciation claimed for FY 2020-21 to FY 2023-24 (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Rokhia gas based thermal power plant (RGTPP)				
Opening GFA	280.29	273.86	274.84	274.84
Addition during the year	(6.43)	0.98	-	-
Closing GFA	273.86	274.84	274.84	274.84
Depreciation	6.39	5.18	5.18	5.18
Avg. Dep. Rate	2.31%	1.89%	1.89%	1.89%
Baramura gas based thermal power plant (BGTPP)				
Opening GFA	179.39	215.68	223.05	223.05
Addition during the year	36.29	7.37	-	-
Closing GFA	215.68	223.05	223.05	223.05
Depreciation	4.42	5.93	5.93	5.93
Avg. Dep. Rate	2.24%	2.70%	2.66%	2.66%
Gumti Hydro Electric Plant (GHEP)				
Opening GFA	16.57	15.14	15.14	15.14
Addition during the year	(1.43)	-	-	-
Closing GFA	15.14	15.14	15.14	15.14
Depreciation	0.66	0.68	0.68	0.68
Avg. Dep. Rate	4.19%	4.49%	4.49%	4.49%
Total Depreciation	11.48	11.79	11.79	11.79

Commission's Analysis and Ruling

- 3.9.5 Regulations 29 of TERC MYT Regulations, 2015, provide the basis of which the Petitioner can claim the depreciation and is specified as follows:

V. Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Annexure-8 of these regulations for the assets of the generating station and transmission/distribution system.....
(Emphasis Added)

VI. Depreciation shall not be allowed on assets funded by consumer contribution (i.e., any receipts from consumers that are not treated as revenue) and capital subsidies/ grants.

- 3.9.6 The above Regulations clearly provide for allowance of depreciation on assets on Straight Line Method and at the rates as specified in TERC MYT Regulations, 2015. Also, no depreciation shall be allowed on assets funded by Consumer Contribution or Capital Subsidies / Grant.

- 3.9.7 As per the significant Accounting policies as specified in the audited accounts, it has been specified that depreciation is calculated based on their useful life and

considering the date of use. Also, with regards to the Grants, the audit report also specifies that the same is included as deferred income and are credited to the Profit & Loss account on a systematic basis over the expected lives of assets and presented within the income. Accordingly, the depreciation on assets funded by grant is considered as income and is adjusted within the profit & loss account.

- 3.9.8 Also, as per the data provided by the Petitioner, the actual capitalisation during FY 2020-21 and FY 2021-22, is provided in the table below, whereby the Petitioner has not submitted any documentary evidence regarding the actual capitalisation of assets that have been actually put to use. Further, it is noted that the Petitioner has not projected any capitalisation for FY 2022-23 and FY 2023-24.

Table 24: Capitalisation of Assets of Generation business – Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	(6.43)	0.98	-	-
BGTPP	36.29	7.37	-	-
GHEP	(1.43)	-	-	-
Total Capitalisation	28.43	8.35	-	-

- 3.9.9 The Commission observed that the amount of capitalisation is very abnormal with no consistency and no explanation has been provided by the Petitioner for decapitalisation and capitalisation of assets for FY 2020-21 and FY 2021-22. Therefore, it is necessary to analyse the scheme wise details alongwith the spill over of the CAPEX and its capitalisation. **Accordingly, the Commission directs the Petitioner to provide the scheme wise details of CAPEX, Capitalisation and justification for any delay in commissioning of the asset in next tariff Petition.**
- 3.9.10 However, considering the minor capitalisation amount undertaken by the Petitioner, the Commission approved the additional capitalisation and decapitalisation of assets as proposed by the Petitioner. **However, the Commission directs the Petitioner to provide the documentary evidence of capitalisation in its future submission on tariff filing for consideration.**
- 3.9.11 Considering the above capital expenditure plan envisaged to be undertaken, the Commission is of the view that as per TERC MYT Regulations, 2015, a capital investment plan is required to be submitted to the Commission for approval highlighting the following year wise details:
- On-going projects that will spill into the control period under review
 - New projects that will commence within the control period and will be completed within the control period
 - New projects that will commence within the control period but may be completed within or beyond the control period.
 - Relevant commercial and technical details along with cost benefit analysis for each of the major item proposed under capital investment plan.
- 3.9.12 However, the Petitioner has not provided any details as specified in the Regulations

and accordingly, the Commission directs Petitioner to submit the capital investment plan at the earliest providing the details as specified above within 6 months of the issue of this tariff order.

- 3.9.13 It is observed that despite several directions from the Commission in this regard, the Petitioner has not complied with the Commission's directive regarding submission of Fixed Assets Register. As detailed in previous Orders, due to the absence of the Fixed Assets and Depreciation register, it is difficult for the Commission to ascertain the GFA value of the Petitioner. However, considering the audited account statement which also follows the Straight Line Method for calculation of depreciation, the Commission in absence of Fixed Assets Register, approves the depreciation in line with the audited accounts for FY 2020-21 and FY 2021-22.
- 3.9.14 The Commission continued the approach adopted in the previous Orders. The Commission has calculated the average rate of depreciation at the rates applicable for various classes of assets as per TERC MYT Regulations, 2015. The average rate of depreciation is applied to arrive at the allowable depreciation for FY 2020-21 to FY 2023-24 respectively. However, while considering the weighted average depreciation rate, the Commission has not considered depreciation for the assets block whereby the accumulated depreciation exceeds 90% of the Gross Fixed Assets value. Also, the opening balance of Gross Fixed Assets as on FY 2020-21 has been considered equivalent to the closing balance approved by the Commission for FY 2019-20 in the tariff order dated 2 September 2022. The Capitalisation as proposed by Petitioner has been approved by the Commission.
- 3.9.15 The summary of depreciation as approved by the Commission is shown in the Table below:

Table 25: Depreciation for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Rokhia gas based thermal power plant (RGTPP)				
Opening GFA	260.65	254.22	255.20	255.20
Addition during the year	(6.43)	0.98	-	-
Closing GFA	254.22	255.20	255.20	255.20
Avg. Dep. Rate	2.31%	1.89%	1.89%	1.89%
Depreciation	5.94	4.81	4.81	4.81
Baramura gas based thermal power plant (BGTPP)				
Opening GFA	173.70	209.99	217.36	217.36
Addition during the year	36.29	7.37	-	-
Closing GFA	209.99	217.36	217.36	217.36
Avg. Dep. Rate	2.24%	2.70%	2.66%	2.66%
Depreciation	4.30	5.78	5.78	5.78
Gumti Hydro Electric Plant (GHEP)				
Opening GFA	32.26	30.83	30.83	30.83
Addition during the year	(1.43)	-	-	-
Closing GFA	30.83	30.83	30.83	30.83
Avg. Dep. Rate	4.19%	4.49%	4.49%	4.49%
Depreciation	1.32	1.38	1.38	1.38
Total Depreciation	11.56	11.97	11.97	11.97

3.10 Interest on Working Capital

Petitioner's Submission

3.10.1 The Petitioner has submitted that the working capital is estimated for calculating the normative interest charges to be allowed for financing the working capital requirements. As per TERC MYT Regulations, 2015, the working capital norms have been defined separately for thermal generation station and Hydro generating stations, as given below:

For Open-cycle Gas Turbine/Combined Cycle thermal generating stations (for RGTPP and BGTPP):

- a. One month Fuel cost
- b. Maintenance spares @ 30% of operation and maintenance expenses
- c. Receivables equivalent to two months of capacity charge and energy charge
- d. One Month O&M Expenses

For Hydro generating station (for GHEP):

- a. Receivables equivalent to two months of fixed cost
- b. Maintenance spares @ 15% of operation and maintenance expenses
- c. One Month O&M Expenses

3.10.2 Based on the above submission, the Petitioner has calculated the normative working capital requirements as per TERC regulations and has tabulated below:

Table 26: Interest on working Capital for FY 2020-21 to FY 2023-24, submitted by TSECL (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP				
Fuel Cost for 30 days*	7.29	7.62	19.65	28.13
Receivables for 2 months	19.32	19.46	44.28	62.17
O&M Expenses for one month	0.35	0.51	0.57	0.65
Maint Spares @30% of O&M Expenses	1.26	1.84	2.05	2.33
Grand Total	28.21	29.43	66.55	93.29
Normative Interest rate	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	3.15	3.06	7.02	11.57
BGTPP				
Fuel Cost for 30 days*	3.42	5.59	14.86	16.95
Receivables for 2 months	10.48	14.89	33.98	38.58
O&M Expenses for one month	0.25	0.55	0.56	0.62
Maint Spares @30% of O&M Expenses	0.91	1.96	2.03	2.25
Grand Total	15.07	22.98	51.43	58.40
Normative Interest rate	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	1.68	2.39	5.43	7.24
GHEP				
Receivables for 2 months	0.82	0.93	0.97	1.10

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
O&M Expenses for one month	0.03	0.35	0.37	0.43
Maint Spares @15% of O&M Expenses	0.11	1.26	1.33	1.54
Grand Total	0.96	2.54	2.68	3.07
Normative Interest rate	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	0.11	0.26	0.28	0.38
Total Interest on Working Capital	4.93	5.71	12.73	19.19

Commission's Analysis and Ruling

3.10.3 As per the Regulation 31 of the TERC MYT Regulations, 2015, the calculation of the normative working capital requirements of Gas and Hydro based Generating Station is specified which is outlined as below:

30. Interest on Working Capital:

I. The working capital shall cover:

b. Open-cycle Gas Turbine/Combined Cycle thermal generating stations

- i. Fuel cost for 30 days corresponding to the normative annual plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel;*
- ii. Liquid fuel stock for 15 days corresponding to the normative annual plant availability factor, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;*
- iii. Maintenance spares @ 30% of operation and maintenance expenses specified in Clause 31;*
- iv. Receivables equivalent to two months of capacity charge and energy charge for sale of electricity calculated on normative plant availability factor, duly taking into account mode of operation of the generating station on gas fuel and liquid fuel; and*
- v. Operation and maintenance expenses for one month.*

c. Hydro generating station:

- i. Receivables equivalent to two months of fixed cost;*
- ii. Maintenance spares @ 15% of operation and maintenance expenses specified in Clause 31; and*
- iii. Operation and maintenance expenses for one month.*

3.10.4 The Commission has computed the total working capital requirement in accordance with Regulation 31 of TERC MYT Regulations, 2015. To estimate the working capital requirement for FY 2020-21 to FY 2023-24 corresponding to O&M expenses, the Commission has taken the normative O&M expenses as specified in earlier Section of this order.

3.10.5 With regards to the consideration of Receivables while calculating the Interest on Working Capital, the Commission notes that no separate billing of Generation and

Transmission function has been undertaken to the retail supply business and the operation of the entities has been undertaken as a single business without any commercial arrangement. Therefore, considering Revenue as a component for calculation of working capital requirement for Generation, Transmission and Distribution function separately will result in double accounting and hence in case of own Generating Stations, no amount shall be allowed towards receivables, to the extent of supply of power by the Generation Business to the Retail Supply Business, so as to avoid any double accounting and additional burden on the consumers.

3.10.6 As per Regulations 31 (III) of TERC MYT Regulations, 2015, the interest rate for computing IoWC is considered as the weighted average SBI Base plus 300 basis points as on 1st April of the year for which tariff is determined.

Table 27: Computation of rate of Interest on Working Capital

FY	Effective Date of SBI Base Rate	Effective SBI Base Rate	Additional Basis points	Rate of IoWC
FY 2020-21	10-03-2020	8.15%	3.00%	11.15%
FY 2021-22	10-03-2021	7.40%	3.00%	10.40%
FY 2022-23	15-03-2022	7.55%	3.00%	10.55%
FY 2023-24	15-03-2023	9.40%	3.00%	12.40%

Source - <https://www.sbi.co.in/web/interest-rates/interest-rates/base-rate-historical-data>

3.10.7 The Commission has computed the IoWC for FY 2020-21 to FY 2023-24 considering the above rates as follows:

Table 28: Interest on Working Capital for FY 2020-21 to FY 2023-24, approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP				
Fuel Cost for 30 days*	7.28	7.62	13.74	17.57
Receivables for 2 months	-	-	-	-
O&M Expenses for one month	3.22	3.44	3.67	3.92
Maint Spares @30% of O&M Expenses	11.60	12.38	13.23	14.12
Grand Total	22.10	23.45	30.64	35.62
Normative Interest rate	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	2.46	2.44	3.23	4.42
BGTPP				
Fuel Cost for 30 days*	3.66	5.82	14.07	14.24
Receivables for 2 months	-	-	-	-
O&M Expenses for one month	2.15	2.29	2.45	2.62
Maint Spares @30% of O&M Expenses	7.73	8.26	8.82	9.42
Grand Total	13.53	16.37	25.34	26.28
Normative Interest rate	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	1.51	1.70	2.67	3.26
GHEP				
Receivables for 2 months	-	-	-	-

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
O&M Expenses for one month	0.29	0.30	0.32	0.35
Maint Spares @15% of O&M Expenses	0.51	0.55	0.58	0.62
Grand Total	0.80	0.85	0.91	0.97
Normative Interest rate	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	0.09	0.09	0.10	0.12
Total Interest on Working Capital	4.06	4.23	6.00	7.80

3.11 Return on Equity and Tax on Income

Petitioner's Submission

- 3.11.1 TSECL has submitted that in line with Regulations 26 of TERC MYT Regulations, 2015, Return on Equity is required to be computed at a base rate of 15.50% for thermal stations and 16.50% storage type hydro stations on equity base. Accordingly, Base rate for calculation of RoE of two gas plants (RGTPP & BGTPP) and GHEP would be 15.50% and 16.50% respectively.
- 3.11.2 Further the Petitioner has submitted that the amount of equity base to be considered for calculation of return has been calculated based on the Regulations 21 of TERC MYT Regulations, 2015, which states
- “For a project declared under commercial operation on or after 16th Oct 2015, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan. In case of the generating station declared under commercial operation prior to 16th Oct 2015, debt-equity ratio allowed by the Commission for determination of tariff for the period ending the year before the date of publication of above regulation on the Official Gazette shall be considered”.*
- 3.11.3 The Petitioner has submitted that the Commission in its past orders had considered equity base for the generation projects as 30% of the Gross Fixed Asset Value and as such the same is considered here for the purpose of calculation of RoE based on legal precedent as per past orders.
- 3.11.4 Accordingly, the Equity fund of Petitioner is calculated after allocating equity fund of Petitioner in the Gross fixed assets ratio among generation, transmission and distribution business. After that equity fund of generation business allocated among three plants based on gross fixed assets ratio for each of the plants.
- 3.11.5 Further, the Petitioner submitted that no actual tax has been claimed and accordingly there is no change in rate of return. Based on the above submission, the Return on Equity claimed by the Petitioner is outlined in the Table below:

Table 29: Calculation of Equity Fund and Return on Equity as claimed by the Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP				
Total GFA	277.08	238.69	238.69	238.69
Normative Equity fund (30% of GFA)	83.12	71.61	71.61	71.61
Return on Equity	12.88	11.10	11.10	11.10
BGTPP				
Total GFA	197.53	166.45	166.45	166.45
Normative Equity fund (30% of GFA)	59.26	49.94	49.94	49.94
Return on Equity	9.19	7.74	7.74	7.74
GHEP				
Total GFA	15.85	14.77	14.77	14.77
Normative Equity fund (30% of GFA)	4.76	4.43	4.43	4.43
Return on Equity	0.78	0.73	0.73	0.73
Total Return on Equity Claimed	22.85	19.57	19.57	19.57

Commission's Analysis and Ruling

- 3.11.6 Regulation 26 of TERC MYT Regulations, 2015 specifies for computation of Return on Equity for Control period. Further, Regulation 21 of TERC MYT Regulations, 2015 specifies for computation debt-equity and limited the amount of equity to 30% of GFA after excluding the consumer contribution or grant.
- 3.11.7 The Commission in previous Orders has adopted a principle for computation of Regulatory equity, in absence of assets register and after considering the consumer contribution/grant. For computing the equity capital, the Commission has considered the same principle in the present Order.
- 3.11.8 Accordingly, the equity capital has been computed as 30% of Gross Fixed assets after excluding consumer contribution/grant. However, the segregated details of consumer contribution/grant are not available at this stage before the Commission, hence, the Commission applies the uniform percentage of consumer contribution/grant across generation, transmission and distribution business for FY 2020-21 and FY 2021-22. Also, the derived capital grants towards GFA of FY 2021-22 has been considered for FY 2022-23 and FY 2023-24 for projection purpose. The contribution of Capital Grants towards GFA from FY 2022-23 and FY 2023-24 will be reviewed by the Commission at the time of final true-up based on the audited accounts.
- 3.11.9 The detailed calculation of Equity base as approved by the Commission is outlined in the following table:

Table 30: Equity Base for Generating Station for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
As per Balance Sheet of TSECL				
GFA	1,513.66	1,530.54		
CWIP	905.13	1,097.26		
Capital Grant	1,301.24	1,423.95		
Capital Grant towards GFA	814.30	829.37		
Capital Grant towards GFA (%)	53.80%	54.19%	54.19%	54.19%
Calculation of Equity Base of Generating Plants				
RGTPP				
Opening GFA	260.65	254.22	255.20	255.20
Closing GFA	254.22	255.20	255.20	255.20
Average	257.44	254.71	255.20	255.20
Normative Equity (30% of GFA)	77.23	76.41	76.56	76.56
Equity base for RoE calculation	35.68	35.01	35.07	35.07
BGTPP				
Opening GFA	173.70	209.99	217.36	217.36
Closing GFA	209.99	217.36	217.36	217.36
Average	191.84	213.67	217.36	217.36
Normative Equity (30% of GFA)	57.55	64.10	65.21	65.21
Equity base for RoE calculation	26.59	29.37	29.87	29.87
GHEP				
Opening GFA	32.26	30.83	30.83	30.83
Closing GFA	30.83	30.83	30.83	30.83
Average	31.54	30.83	30.83	30.83
Normative Equity (30% of GFA)	9.46	9.25	9.25	9.25
Equity base for RoE calculation	4.37	4.24	4.24	4.24

3.11.10 The Petitioner has not considered any interest on Loan in the tariff Petition and hence the Commission has also not computed the same.

3.11.11 Based on the approach as adopted by the Commission, the approved Equity base of all the Generating Station is considered for calculation of Return on Equity as specified in above said Table. The approved Return on Equity is calculated as per Regulations 26 and 27 of TERC MYT Regulations, 2015 and is outlined in the following table:

Table 31: RoE for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP				
Equity Base for the year	35.68	35.01	35.07	35.07
Pre-tax RoE	15.50%	15.50%	15.50%	15.50%
Return on Equity	5.53	5.43	5.44	5.44
BGTPP				
Equity Base for the year	26.59	29.37	29.87	29.87
Pre-tax RoE	15.50%	15.50%	15.50%	15.50%
Return on Equity	4.12	4.55	4.63	4.63
GHEP				
Equity Base for the year	4.37	4.24	4.24	4.24
Pre-tax RoE	16.50%	16.50%	16.50%	16.50%
Return on Equity	0.72	0.70	0.70	0.70
Total RoE	10.37	10.68	10.77	10.77

3.12 Non-Tariff Income

Petitioner's Submission

3.12.1 The Petitioner has submitted that the other income of TSECL covers mainly interest earned on fixed deposits made in various banks, sale of tender forms and other miscellaneous income like sale of scrap, sale of tender, meter rent etc. These incomes are being separately booked under other income category. The figure submitted for FY 2020-21 and FY 2021-22 are based on the figures derived from division wise account statement. Also, the figures for FY 2022-23 and FY 2023-24 have been derived based on the previous years' trend.

Table 32: Non-Tariff Income as per Petitioner for FY 2020-21 to FY 2023-24(Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	-	0.18	0.18	0.18
BGTPP	0.02	0.31	0.31	0.31
GHEP	0.11	0.30	0.30	0.30
Total	0.13	0.79	0.79	0.79

Commission's Analysis and Ruling

3.12.2 As per Regulations 23 of TERC MYT Regulations, 2015, Non-Tariff income is required to be deducted to arrive at the Annual Fixed Charges of the Generating Station.

3.12.3 The Petitioner has submitted that it has not segregated the account statements for generation, transmission and distribution business completely and the allocation has been undertaken based on certain principles, wherever necessary for ARR and tariff calculation. This has been undertaken based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like accounts and finance, HR, projects etc. at corporate level.

3.12.4 The Petitioner has provided the details of consolidated amount of the Non-Tariff Income with providing break-up of the same component wise and has reconciled the same with the available audited. The Commission approves the Non-Tariff Income of Generating Station as proposed by the Petitioner for the purpose of truing up of FY 2020-21 and FY 2021-22 based on actuals.

3.12.5 With regards to the FY 2022-23 and FY 2023-24, the Commission approves the Non-Tariff Income as approved for FY 2021-22 after truing up. The actual income for FY 2022-23 and FY 2023-24 shall be considered at time of truing up for respective years, subject to prudence check.

Table 33: Non-Tariff Income for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
RGTPP	-	0.18	0.18	0.18
BGTPP	0.02	0.31	0.31	0.31
GHEP	0.11	0.30	0.30	0.30
Total	0.13	0.79	0.79	0.79

3.13 Sharing of Gains and Losses on Controllable Parameters

Commission's Analysis and Ruling

3.13.1 Regulations 10 (IV) of TERC MYT Regulations, 2015 clearly states that the generating station shall carry out truing up of tariff of generating station based on the performance of Controllable Parameters such as SHR, Secondary Fuel Oil Consumption, Auxiliary Energy Consumption and Refinance of Loan. Also, as per Regulations 7 (IV), it specifies that the Commission will broadly classify costs incurred by generating company as controllable and non-controllable, for which the target will be set and such targets will be used for computing revenue requirement.

3.13.2 Also, as per Regulations 10 (VII) of TERC MYT Regulations, 2015, the financial gains on account of controllable parameters shall be shared with the beneficiaries in the ratio of 60:40.

“VII. The financial gains by a generating company or the Transmission or the Distribution licensee, on account of controllable parameters shall be shared between generating company or the Transmission or the Distribution licensee and the beneficiaries on monthly basis with annual reconciliation. The financial gains computed shall be shared in the ratio of 60:40 between generating company or the Transmission or the Distribution licensee as the case may be, and the beneficiaries.”

3.13.3 In view of the aforementioned Regulations, at the time of truing up, it is necessary to share any financial gain on account of controllable parameters with the beneficiaries, which has not been proposed by the Petitioner. Accordingly, the Commission has computed sharing mechanism of financial gain due to resultant saving in normative and actual expenses of Fuel Expenses for FY 2020-21 and FY 2021-22.

Sharing of Fuel Expenses:

3.13.4 With regards to Fuel Expenses, the difference between the actual fuel cost and the normative fuel cost as due to consideration of norms for SHR and Auxiliary Consumption Loss is considered for sharing of Financial Gains.

3.13.5 The detailed with regards to the approved actual operational parameters and the norms as specified in the TERC MYT Regulations, 2015 is outlined in the below table which is considered for calculation of the normative and actual fuel cost.

Table 34: Actual and Normative Operational Parameters for Fuel Cost for FY 2020-21 and FY 2021-22

Particulars	Units	FY 2020-21	FY 2021-22	Norm as per Regulations
		Approved	Actual Norms	
Station Heat Rate	kCal/kWh			
RGTPP		3702.50	3699.83	3,700
BGTPP		3459.95	3552.22	3,700
Auxiliary Consumption	%			
RGTPP		1.00%	1.00%	1%
BGTPP		1.00%	1.00%	1%

3.13.6 Based on the above operational parameters, the normative Fuel Cost has been computed and the difference of actual and normative fuel cost will be considered as a financial gain to be shared with the beneficiaries in the ratio of 60:40. The detailed computation of the same is as outlined below:

Table 35: Sharing of Financial gain on Fuel Cost for FY 2020-21 and FY 2021-22

Particulars	Units	FY 2020-21		FY 2021-22	
		RGTPP	BGTPP	RGTPP	BGTPP
Total Normative cost of Gas	Rs. Crs	87.39	43.87	91.47	69.83
Actual Fuel Cost	Rs. Crs	87.45	41.02	91.46	67.04
Financial Gain, if Actual cost is lower than normative	Rs. Crs	-	2.85	0.01	2.79
Sharing with Beneficiaries	Rs. Crs	-	1.41	0.00	1.12

3.14 Summary of True-up for FY 2020-21 and FY 2021-22 and ARR for FY 2022-23 to FY 2023-24

3.14.1 Based on the approval of various components of the ARR, the Commission has undertaken the truing up exercise for FY 2020-21 and FY 2021-22 as elaborated above in accordance with the tariff Regulations and justification, the Commission approves the ARR comprising of Fuel Cost and Annual Fixed Charges (AFC) in the determination of Revenue Requirement process.

3.14.2 Also, the Commission has undertaken the exercise for determination of ARR for FY 2022-23 and FY 2023-24 based on approval of various ARR Components, as elaborated above in accordance with the tariff Regulations and justification. The Commission has accordingly approved the ARR comprising of Fuel Cost and Annual Fixed Charges (AFC) in the determination of Revenue Requirement process for the said purpose.

3.14.3 Considering the FY 2020-21 and FY 2021-22, the Commission would like to highlight that the AFC as calculated considering the truing up of various components is recoverable at Target normative availability, as specified in Regulations 37 of TERC MYT Regulations, 2015.

3.14.4 As the actual Availability of the BGTPP Generating Station was lower than the target normative Availability approved for recovery of full AFC, the Commission has disallowed the AFC on account of approved the recovery of trued-up AFC on pro-rata

basis for BGTPP.

3.14.5 The Computation of ARR comprising of Fuel Cost and Annual Fixed Charges (AFC) along with the disallowance due to non-achievement of target normative availability in the truing up of FY 2020-21 and FY 2021-22 and determination of ARR for FY 2022-23 and FY 2023-24 is outlined in the table below:

Table 36: ARR for FY 2020-21 to FY 2023-24 for RGTPP approved by the Commission (Rs. Crore)

Sr. No	Particulars	Submitted by the Petitioner				Approved in this Order			
		FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
A	Annual Fixed Charges								
1	O&M Expenses	6.02	6.13	6.83	7.78	6.02	6.13	6.83	47.08
2	Depreciation	6.39	5.18	5.18	5.18	5.94	4.81	4.81	4.81
3	Interest and Finance Charges	-	-	-	-	-	-	-	-
4	Return on Equity	12.88	11.10	11.10	11.10	5.53	5.43	5.44	5.44
5	Interest on Working Capital	3.15	3.06	7.02	11.57	2.46	2.44	3.23	4.42
6	Sharing of (gains)								
7	Less: Non-tariff Income	-	0.18	0.18	0.18	-	0.18	0.18	0.18
8	Reduction in AFC due to Low availability					(1.41)	-	-	-
	Total	28.44	25.29	29.95	35.45	18.55	18.63	20.13	61.57
B	Energy Charges								
1	Fuel Cost	87.45	91.46	235.74	337.59	87.39	91.47	164.83	210.86
2	Sharing of (gains)	-	-	-	-	-	(0.00)	-	-
	Total	87.45	91.46	235.74	337.59	87.39	91.46	164.83	210.86
C	Net ARR	115.89	116.75	265.69	373.04	105.94	110.09	184.96	272.43
1	Gross Generation (MU)	347.11	334.09	301.99	386.32	347.11	334.09	301.99	386.32
2	Net Generation (MU)	343.64	330.75	298.97	382.45	343.64	330.75	298.97	382.45
3	Energy Charge Rate (Rs./kWh)	2.54	2.77	7.89	8.83	2.54	2.77	5.51	5.51
4	PLF (%)	62.90%	60.54%	54.72%	70.00%	62.90%	60.54%	54.72%	70.00%
5	PAF (%)	79.01%	95.80%	95.00%	95.00%	79.01%	95.80%	85.00%	85.00%

Table 37: ARR for FY 2020-21 to FY 2023-24 for BGTPP approved by the Commission (Rs. Crore)

Sr. No	Particulars	Submitted by the Petitioner				Approved in this Order			
		FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
A	Annual Fixed Charges								
1	O&M Expenses	6.59	6.54	6.75	7.49	6.59	6.54	6.75	31.39
2	Depreciation	4.42	5.93	5.93	5.93	4.30	5.78	5.78	5.78
3	Interest and Finance Charges								
4	Return on Equity	9.19	7.74	7.74	7.74	4.12	4.55	4.63	4.63
5	Interest on Working Capital	1.68	2.39	5.43	7.24	1.51	1.70	2.67	3.26
6	Sharing of (gains)	-	-	-	-	-	-	-	-
7	Less: Non-tariff Income	0.02	0.31	0.31	0.31	0.02	0.31	0.31	0.31
8	Reduction in AFC due to Low availability					(5.99)	(4.52)	-	-
	Total	21.86	22.29	25.54	28.09	10.50	13.74	19.52	44.74
B	Energy Charges								
1	Fuel Cost	41.02	67.04	178.34	203.37	43.87	69.83	168.89	170.94
2	Sharing of (gains)	-	-	-	-	(1.14)	(1.12)	-	-
	Total	41.02	67.04	178.34	203.37	42.73	68.71	168.89	170.94
C	Net ARR	62.88	89.33	203.88	231.46	53.23	82.45	188.41	215.68
1	Gross Generation (MU)	192.50	235.25	308.98	312.73	192.50	235.25	308.98	312.73
2	Net Generation (MU)	190.57	232.90	305.89	309.60	190.57	232.90	305.89	309.60
3	Energy Charge Rate (Rs./kWh)	2.15	2.88	5.83	6.57	2.30	3.00	5.52	5.52
4	PLF (%)	52.32%	63.94%	83.98%	85.00%	52.32%	63.94%	83.98%	85.00%
5	PAF (%)	54.12%	59.53%	55.76%	55.76%	54.12%	63.94%	85.00%	85.00%

Table 38: ARR for FY 2020-21 to FY 2023-24 for GHEP approved by the Commission (Rs. Crore)

Sr. No	Particulars	Submitted by the Petitioner				Approved in this Order			
		FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
A	Annual Fixed Charges								
1	O&M Expenses	3.46	4.20	4.45	5.13	3.42	3.65	3.89	4.15
2	Depreciation	0.66	0.68	0.68	0.68	1.32	1.38	1.38	1.38
3	Interest and Finance Charges								
4	Return on Equity	0.78	0.73	0.73	0.73	0.72	0.70	0.70	0.70
5	Interest on Working Capital	0.11	0.26	0.28	0.38	0.09	0.09	0.10	0.12
6	Sharing of (gains)								
7	Less: Non-tariff Income	0.11	0.30	0.30	0.30	0.11	0.30	0.30	0.30
8	Total	4.91	5.57	5.84	6.62	5.44	5.52	5.77	6.05
9	Gross Generation (MU)	7.97	9.39	10.82	10.82	7.97	9.39	10.82	10.82
10	Net Generation (MU)	7.92	9.33	10.75	10.75	7.92	9.32	10.75	10.75
11	PLF(%)	9.10%	10.72%	12.36%	12.36%	9.10%	10.72%	12.36%	12.36%

Table 39: ARR for FY 2020-21 to FY 2023-24 for Generation Business approved by the Commission (Rs. Crore)

Sr. No	Particulars	Submitted by the Petitioner				Approved in this Order			
		FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1	O&M Expenses	16.07	16.87	18.03	20.41	16.03	16.32	17.47	82.62
2	Depreciation	11.48	11.79	11.79	11.79	11.56	11.97	11.97	11.97
3	Interest and Finance Charges	-	-	-	-	-	-	-	-
4	Return on Equity	22.85	19.57	19.57	19.57	10.37	10.68	10.77	10.77
5	Interest on Working Capital	4.93	5.71	12.73	19.19	4.06	4.23	6.00	7.80
6	Sharing of (gains)					-	-	-	-
7	Reduction in AFC due to Low availability					(5.99)	(4.52)	-	-
8	Less: Non-tariff Income	0.13	0.79	0.79	0.79	0.13	0.79	0.79	0.79
9	Fuel Cost	128.47	158.50	414.08	540.96	130.12	160.18	333.72	381.80
10	Total	183.68	211.66	475.41	611.13	166.02	198.06	379.14	494.16

3.15 Generation Tariff for FY 2023-24

3.15.1 Based on the approved Aggregate Revenue requirement including Annual Fixed Cost and Energy Charges, the Commission approves the Generation Tariff for FY 2023-24 as shown in the following Table:

Table 40: Generation Tariff for FY 2023-24 approved by the Commission

Sr. No.	Particulars	UoM	FY 2023-24	
			Petition	Approved
	RGTPP			
1	Annual Fixed Charges	Rs. Crore	35.45	61.57
2	Energy Charges	Rs./kWh	8.83	5.51
	BGTPP			
1	Annual Fixed Charges	Rs. Crore	28.09	44.74
2	Energy Charges	Rs./kWh	6.57	5.52
	GHEP			
1	Annual Fixed Charges	Rs. Crore	6.62	6.05
	Total			
1	Annual Fixed Charges	Rs. Crore	70.17	112.36
2	Energy Charges for thermal Station (wt. Avg.)	Rs./kWh	7.82	5.52

4 Truing up of ARR for FY 2020-21 and FY 2021-22, APR of FY 2022-23 and ARR of FY 2023-24 for Transmission Business

4.1 Background and Approach

- 4.1.1 The Commission in its Order dated 01 September 2020 in Case No. 4 of 2020 and 5 of 2020 has approved Truing-up for FY 2013-14 to FY 2016-17 and ARR for FY 2017-18 to FY 2020-21 with Generation, Transmission and Retail Tariff determination of FY 2020-21. The Tariff Order for determination of tariff for FY 2021-22 was not issued, hence, the same tariff approved for FY 2020-21 and was continued for FY 2021-22 as well.
- 4.1.2 Further, the Commission vide its Order dated 2 September, 2022 in Case No. 2 of 2022 and 4 of 2022 has approved the Truing up for FY 2020-21 and FY 2021-22, APR for FY 2020-21, ARR for FY 2021-22 and FY 2022-23 and Tariff for FY 2022-23.
- 4.1.3 In compliance of the regulatory obligation, TSECL has filed True-Up Petition for FY 2020-21 and FY 2021-22 for Generation business, Transmission and Distribution & Retail Supply business separately. The audited accounts of the respective years along with the audit report is submitted as an Annexure along with the petition.
- 4.1.4 The TERC Tariff Regulations, 2015 provides for truing-up of all the parameters of ARR at the end of each year based on the audited annual accounts and prudence check by the Commission. The Commission has conducted the truing-up for ARR for FY 2020-21 and FY 2021-22 based on the audited annual accounts submitted by TSECL for the said period.
- 4.1.5 TSECL in its Petition has provided the break-up of costs in generation, transmission and distribution business, wherever necessary for ARR and tariff calculation, based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like Accounts & finance, HR, Projects etc. at corporate level. As such, TSECL is submitting a combined petition for generation, transmission and distribution business with segregated ARR calculations. Accordingly, the Commission has relied upon the said submission related to function-wise data submitted by TSECL along with replies to data gaps submitted by TSECL for truing-up of FY 2020-21 and FY 2021-22. There is already a process undergoing for separation of Transmission business from Generation & Distribution business.
- 4.1.6 The Petitioner has submitted the statutory audit of the account statements for FY 2020-21 and FY 2021-22. The Commission has relied on the TERC MYT Regulations, 2015 for truing up of all the parameters of ARR at the end of each year based on the audited accounts and prudence check by the Commission.
- 4.1.7 Also, the instant petition has been filed considering the projection of data based on the actual data of past years and norms as specified in TERC MYT Regulations, 2015, as applicable for determination of ARR for FY 2022-23 and FY 2023-

24.However, the Commission has considered the determination of ARR process till FY 2023-24 as discussed in Chapter 1 of this Order.

- 4.1.8 Considering the details provided and additional information obtained during these proceedings, the Commission has undertaken the prudence check for approval of each expenditure and determination of Revenue Requirement of TSECL Transmission Business for the FY 2020-21 to FY 2023-24as set out below:

4.2 Transmission Loss

Petitioner's Submission

- 4.2.1 The Petitioner in the submission in relation to the energy balance has highlighted the intra-state transmission loss of 3% for FY 2020-21 and FY 2021-22 and projected the similar trend for FY 2022-23 and FY 2023-24, as shown in the following Table:

Table 41: Transmission Loss from FY 2020-21 to FY 2023-24as submitted by the Petitioner (%)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Transmission Loss	3.00%	3.00%	3.00%	3.00%

Commission's Analysis and Ruling

- 4.2.2 The Commission notes that, in past Orders, it has been approving T&D loss for TSECL. There is no segregation of Transmission and Distribution Loss.
- 4.2.3 The Commission in last Tariff Order has approved target of 6% of transmission loss for FY 2020-21 to FY 2022-23. The Commission would like to deviate from the Target approved in last Tariff Orders. Hence, though the Commission has approved transmission loss of 6% for FY 2020-21 to FY 2022-23, it has deviated the approach for FY 2023-24.
- 4.2.4 Further, it is noted that four (4) years of the Control Period are already over. The actual transmission loss is not available due to absence of complete voltage wise metering and calculation of losses. Hence, stipulating the same target for years would not be prudent. In view of the above, the Commission approves transmission loss target of 3% for FY 2023-24.
- 4.2.5 Further, the Commission directs TSECL to complete the boundary metering and commence the measurement and accounting of separate voltage-wise losses for Transmission business. The progress of the same shall be submitted to the Commission in next Tariff Petition.
- 4.2.6 In view of the above, the transmission loss approved by the Commission is shown in the following Table:

Table 42: Transmission Loss from FY 2017-19 to FY 2022-23 approved by the Commission (%)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Transmission Loss	6.00%	6.00%	6.00%	3.00%

4.3 Annual Fixed Cost (AFC)

4.3.1 Regulation 23 of the MYT Regulations, 2015 specifies the components of Annual Fixed Cost for a transmission system including communication system as follows:

- Return on equity;
- Interest on loan capital;
- Depreciation;
- Interest on working capital;
- Operation and maintenance expenses;
- Recovery of fee for tariff petition filing; and
- Minus Non-tariff income

4.4 Operation & Maintenance Expenses

Petitioner's Submission

4.4.1 TSECL has submitted that TERC MYT Regulations, 2015 stipulates the O&M cost to be comprising of Employee cost, R&M expense and A&G expense. The Petitioner has submitted the actual O&M expenses for FY 2020-21 and FY 2021-22 based on the audited annual accounts.

4.4.2 From FY 2022-23 onwards, the employee cost of transmission business has been projected based on assumption of average annual escalation rate of 5.0% salary increase from previous year, a 12% additional DA hike in Employee cost from 1 December 22 onwards and the change in number of employees has been considered based on the data of the number of employees in their current year (FY 22-23) and next year (FY 2023-24) expected number of retirement and number of employees to be recruited. The R&M expenses and the A&G expenses have been escalated at the Wholesale Price Index (WPI) of 6.17%. The O&M expenses have been projected similar to the distribution business since the nature of business is similar and most of the O&M expenses in TSECL is on account of the distribution business.

4.4.3 Based on the above submission, the Petitioner has submitted the actual O&M expenses for FY 2020-21 and FY 2021-22 and projected O&M expenses for FY 2022-23 and FY 2023-24 as stated below:

Table 43: O&M Expense for Transmission Business for MYT Period (Rs. Crore) as submitted by the Petitioner

Sl. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1	Employee Cost	17.40	18.54	20.13	23.67
2	R&M Cost	2.44	11.31	5.59	5.93
3	A&G Cost	3.59	8.61	5.04	5.35
4	Total	23.43	38.46	30.75	34.95

Commission's Analysis and Ruling

- 4.4.4 The Commission notes that, Regulation 31 (IV) of TERC MYT Regulations, 2015 specifies the norms for O&M Expenses for Transmission system based on number of bays and transmission line length. However, TSECL in its Petition has proposed the recovery of actual O&M expenses for FY 2020-21 and FY 2021-22 and has applied the different principle for determination of normative O&M Expenses for Transmission System, which is applicable for Distribution system for projection of O&M expenses. In reply to specific query regarding the justification of the same, TSECL submitted that, TERC MYT Regulations 2015 provides for calculation of O&M expenses based on the number of voltage wise bays and nature wise voltage wise length of transmission lines, however the segregated data of voltage wise and nature wise line length of transmission lines and voltage wise bays is not available with TSECL. Hence, TSECL requested the Commission to consider the actual expenditure as per the account statements.
- 4.4.5 The Commission notes that, TSECL has not submitted any data regarding the number of bays and transmission line length for different voltages. In absence of such data, the Commission cannot proceed for determination of normative O&M Expenses for Transmission as per norms specified in TERC MYT Regulations, 2015. Further, the Commission notes that transmission business and distribution network business involves the transmission and supply of power through a power network and therefore to some extent is similar in nature.
- 4.4.6 Accordingly, the Commission in past Tariff Order dated 2 September, 2022 has adopted the principle for determination of normative O&M Expenses of transmission business and approved the normative O&M Expenses for FY 2020-21 to FY 2022-23.
- 4.4.7 Hence, for the purpose of Truing up for FY 2020-21 and FY 2021-22, the Commission approves the normative O&M expenses as approved in Tariff Order dated 2 September, 2022. For FY 2022-23, the Commission approves the normative O&M expenses as approved in Tariff Order dated 2 September, 2022.
- 4.4.8 Further, the audited accounts for FY 2020-21 and FY 2021-22 is available with the Commission whereby the Commission in this order is undertaking a true-up exercise and therefore the normative O&M expenses and actual O&M Expenses is compared for approval purpose. It is submitted that the norms are considered to be ceiling and any cost above that represent the inefficiencies and needs to be borne by the Utility. Accordingly, minimum of actual or normative cost is allowed for true-up purpose. The normative, actual and approved O&M cost component wise for FY 2020-21 and FY 2021-22 is highlighted as below:

Table 44: Normative and actual O&M Expenses for FY 2020-21 and FY 2021-22(Rs. Crore)

Particulars	FY 2020-21			FY 2021-22		
	Normative	Actual	Minimum	Normative	Actual	Minimum
Employee Cost	18.20	17.40	17.40	19.17	18.54	18.54
A&G Cost	1.93	3.59	1.93	2.03	8.61	2.03
R&M Cost	2.62	2.44	2.44	2.55	11.31	2.55
Total	22.74	23.43	21.77	23.75	38.46	23.12

4.4.9 For FY 2022-23, the Commission has approved the normative O&M expenses as approved in Tariff Order dated September 02, 2022. For FY 2023-24, the Commission has determined the normative expenses based on similar principle followed for FY 2022-23 as the year is considered as extension in MYT control Period and extended the parameters specified in Tariff Regulations, 2015. The normative O&M expenses are determined as under:

- The base O&M Expenses are considered same as considered for FY 2022-23 and escalation has been considered on the expenses determined for FY 2022-23.
- The increase in CPI and WPI is considered as 5.35% and 5.32% respectively as considered for FY 2022-23 for computation of Employee expense and A&G Expenses.
- K-factor has been considered as 1.45% as considered for FY 2022-23

4.4.10 In view of the above, considering the approved O&M expenses for FY 2020-21 and FY 2021-22 and applying the escalation of WPI and CPI Index as well as k Factor, the O&M Expenses as approved by the Commission for transmission business is shown in the following Table:

Table 45: O&M Expenses approved for FY 2020-21 to FY 2023-24 by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Employee Cost	17.40	18.54	20.20	21.28
A&G Cost	1.93	2.03	2.14	2.25
R&M Cost	2.44	2.55	2.70	2.59
Total	21.77	23.12	25.04	26.12

4.5 Depreciation

Petitioner's Submission

4.5.1 TSECL has considered the depreciation rates as per Tariff Regulation (Multi Year Tariff) 2015 on the gross asset value. The Petitioner submitted that in account statement provided for FY 2020-21 and FY 2021-22, the depreciation has been calculated as per depreciation rate provided in Companies Act 2013 i.e. based on the useful life. Accordingly, the rate of depreciation considered by Petitioner for calculation of Depreciation is as provided below:

Table 46: Rate of Depreciation as per Tariff Regulations

Particulars	Depreciation Rate
Land	0.00%
Building	3.34%
Plant & Machinery	5.28%
Computer	15.00%
Computer and Office Equipment	15.00%
Office Equipment	6.33%
Furniture	6.33%
Vehicles	9.50%

- 4.5.2 Based on the reply to the data gaps, TSECL has submitted the actual value of the gross value of assets and the asset base for calculation of depreciation.
- 4.5.3 Further, the depreciation asset value in transmission business considered for FY 2021-22 is kept similar for r FY 2022-23 as well as FY 2023-24.
- 4.5.4 Based on the consideration of the above depreciation rate, the depreciation claimed by the Petitioner for the Transmission business on the Gross Value of the assets is outlined as below:

Table 47: GFA and Depreciation for Transmission Asset - Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Opening GFA	332.21	327.93	329.92	329.92
Addition during the year	(4.28)	1.99	-	-
Closing GFA	327.93	329.92	329.92	329.92
Depreciation	6.87	6.18	6.18	6.18
Avg. Dep. Rate	2.08%	1.88%	1.87%	1.87%

Commission's Analysis and Ruling

- 4.5.5 The Commission computed the depreciation as per Regulation 29 of TERC MYT Regulations, 2015. The scheduled rates of depreciation have been considered as per Annexure 8 to TERC MYT Regulations, 2015.
- 4.5.6 It is observed that Fixed Asset Register was not submitted by the petitioner and as a result the GFA value of the petitioner could not be ascertained. . Therefore considering the audited account statement which also follows the Straight Line Method for calculation of depreciation, the Commission in absence of Fixed Assets Register, approves the depreciation in line with the audited accounts for FY 2020-21 and FY 2021-22. Also, even though the Petitioner has submitted in the petition that the depreciation claimed are as per TERC MYT Regulations, 2015 on the gross asset value, whereas the accounts specified SLM depreciation rate as per Companies Act, 2013, it has been observed that TSECL has claimed the depreciation as per accounts only for truing up. The same is also considered by the Commission for calculation of depreciation.
- 4.5.7 Based on the above observation, the Commission has calculated the average rate of depreciation at the rates applicable for various classes of assets as per TERC MYT Regulations, 2015. The average rate of depreciation is applied to arrive at the

allowable depreciation. The Commission has considered the calculation of depreciation based on the details provided by TSECL in the Petition as well as in the replies to the data gaps. Also, the opening balance of Gross Fixed Assets as on FY 2020-21 has been considered equivalent to the closing balance approved by the Commission for FY 2019-20 in the tariff order dated 2nd September 2022.

- 4.5.8 As regards the addition of GFA, as per the data provided by the Petitioner, the actual capitalisation during FY 2020-21 and FY 2021-22 is provided in the table below, whereby the Petitioner has not submitted any documentary evidence regarding the actual capitalisation of assets that have been actually put to use. The Commission has not considered any capitalisation for FY 2022-23 and FY 2023-24 based on the submission of TSECL.

Table 48: Capitalisation of Assets for Transmission Business - Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Capitalisation of Assets	(4.28)	1.99	-	-

- 4.5.9 The Commission observed that the amount of capitalisation is very abnormal with no consistency and no explanation has been provided by the Petitioner for decapitalisation and capitalisation of assets for all the years. Therefore, it is necessary to analyse the scheme wise details alongwith the spill over of the CAPEX and its capitalisation. **Accordingly, the Commission directs the Petitioner to provide the scheme wise details of CAPEX, Capitalisation and justification for any delay in commissioning of the asset at the time of submission of final truing up in next tariff petition.**

- 4.5.10 However, considering the minor capitalisation amount undertaken by the Petitioner, the Commission approved the additional capitalisation and decapitalisation of assets as proposed by the Petitioner. **Further, the Commission directs the Petitioner to provide the documentary evidence of capitalisation in its future submission on tariff filing for consideration.**

- 4.5.11 Accordingly, the depreciation approved by the Commission for truing up of FY 2020-21 and FY 2021-22 and for FY 2022-23 and FY 2023-24 is shown in the following Table:

Table 49: GFA and Depreciation for Transmission Asset as approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Opening GFA	180.98	176.70	178.69	178.69
Addition during the year	(4.28)	1.99	-	-
Closing GFA	176.70	178.69	178.69	178.69
Avg. Dep. Rate	2.08%	1.88%	1.87%	1.87%
Depreciation	3.72	3.34	3.34	3.34

4.6 Interest and Finance Charges

Petitioner's Submission

- 4.6.1 The Petitioner has submitted that it has not considered any interest charge for FY 2020-21 to FY 2023-24 for the transmission business as it does not have any long term loan and has not incurred any actual expense towards interest and finance charges.

Commission's Analysis and Ruling

- 4.6.2 The Commission accepts the submission of TSECL and has not considered any interest and finance charges for Control period for Transmission business.

4.7 Return on Equity and Tax on Return on Equity

Petitioner's Submission

- 4.7.1 TSECL has submitted that in line with Regulation 26 of TERC MYT Regulations, 2015, Return on Equity is required to be computed at a base rate of 15.50% for transmission business.
- 4.7.2 Further, it is submitted that, the amount of equity base to be considered for calculation of return has been considered based on the relevant Regulation 21 of TERC MYT Regulations, 2015 as shown under:

"For a project declared under commercial operation on or after 16th Oct 2015, if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan. In case of the generating station declared under commercial operation prior to 16th Oct 2015, debt-equity ratio allowed by the Commission for determination of tariff for the period ending the year before the date of publication of above regulation on the Official Gazette shall be considered."

- 4.7.3 The Petitioner has submitted that the Commission in its past orders had considered equity base for the transmission projects as 30% of the Gross Fixed Asset Value and as such the same is considered here for the purpose of calculation of RoE based on legal precedent as per past orders. The equity fund of TSECL is calculated after allocating equity fund of TSECL in the Gross fixed assets ratio among generation, transmission and distribution business. After that equity fund of transmission business is allocated based on gross fixed assets ratio.
- 4.7.4 With regards to the Income Tax, as per Regulation 27 of TERC MYT Regulations, 2015, the Return on Equity is required to be grossed up with effective tax rate and is stated as below:

"The base rate of return on equity as allowed by the Commission under Clause 26 (mentioned above) shall be grossed up with the effective tax rate of the respective

financial year. For this purpose, the effective tax rate shall be considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts.

- 4.7.5 The tax portion on Return on Equity has not been claimed as no tax payment was booked in the audited accounts statement in FY 2020-21 and FY 2021-22 because of accumulated financial losses in the books of TSECL.
- 4.7.6 The GFA has been projected as the same value as the asset value of the previous GFA addition during the year in FY 2021-22 for FY 2022-23 and for FY 2023-24 respectively. Based on the above submission, the Return on Equity claimed by the Petitioner is outlined in the Table below:

Table 50: Calculation of RoE for Transmission Business as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Normative Equity (30% of GFA)	99.02	94.37	96.50	98.68
Rate of Return (%)	15.50%	15.50%	15.50%	15.50%
Return on Equity	15.35	14.63	14.96	15.30

Commission's Analysis and Ruling

- 4.7.7 Regulation 26 of TERC MYT Regulations, 2015 specifies for computation of Return on Equity for Control period. Further, Regulation 21 of TERC MYT Regulations, 2015 specifies for computation debt-equity and limited the amount of equity to 30% of GFA after excluding the consumer contribution or grant.
- 4.7.8 The Commission in previous Orders has adopted a principle for computation of Regulatory equity, in absence of assets register and after considering the consumer contribution/grant. For computing the equity capital, the Commission has considered the same principle in the present Order.
- 4.7.9 Accordingly, the equity capital has been computed as 30% of Gross Fixed assets after excluding consumer contribution/grant. However, the segregated details of consumer contribution/grant are not available at this stage before the Commission, hence, the Commission applies the uniform percentage of consumer contribution/grant across generation, transmission and distribution business for FY 2020-21 and FY 2021-22. Also, the derived capital grants towards GFA of FY 2021-22 has been considered for FY 2022-23 and FY 2023-24 for projection purpose. The contribution of Capital Grants towards GFA from FY 2022-23 and FY 2023-24 will be reviewed by the Commission at the time of final true-up based on the audited accounts.
- 4.7.10 The detailed calculation of Equity base as approved by the Commission is outlined in the following table:

Table 51: Equity Base for Transmission for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
As per Balance Sheet of TSECL				
GFA	1,513.66	1,530.54		
CWIP	905.13	1,097.26		
Capital Grant	1,301.24	1,423.95		
Capital Grant towards GFA	814.30	829.37		
Capital Grant towards GFA (%)	53.80%	54.19%	54.19%	54.19%
Calculation of Equity Base of Transmission Business				
Opening GFA	180.98	176.70	178.69	178.69
Closing GFA	176.70	178.69	178.69	178.69
Average	178.84	177.69	178.69	178.69
Normative Equity (30% of GFA)	53.65	53.31	53.61	53.61
Equity base for RoE calculation	24.79	24.42	24.56	24.56

4.7.11 Based on the approach as adopted by the Commission, the approved Equity base of Transmission business is considered for calculation of Return on Equity. Since, no tax payment is considered for FY 2020-21 and FY 2021-22, the Commission has considered the rate of Return on Equity as 15.50% as per TERC MYT Regulations, 2015.

4.7.12 The approved Return on Equity is calculated as per Regulations 26 and 27 of TERC MYT Regulations, 2015 and is outlined in the following table:

Table 52: Return on Equity for Control Period for Transmission Business as approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Equity Base for the year	24.79	24.42	24.56	24.56
Rate of Return (%)	15.50%	15.50%	15.50%	15.50%
Return on Equity	3.84	3.79	3.81	3.81

4.8 Interest on Working Capital

Petitioner's Submission

4.8.1 The Petitioner has submitted that the TERC MYT Regulations, 2015 provides for normative interest on working Capital based on the methodology outlined in the Regulations. Accordingly, the Petitioner is eligible for interest on working capital worked out on methodology specified in the Regulations for transmission business as provided below:

- Receivables equivalent to two months of fixed cost;
- Maintenance spares @ 15% of operation and maintenance expenses specified in Clause 31; and
- Operation and maintenance expenses for one month.

4.8.2 Also, in accordance with the TERC MYT Regulations, 2015, the interest on the working capital requirement considered is SBI Base Rate plus 300 basis points as on 1st April of the year for which tariff is determined. The Petitioner in the instant Petition has considered the following interest rate on working capital requirement:

Table 53: Interest rate on Working Capital (%)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Normative Interest Rate on Working Capital	11.15%	10.40%	10.55%	12.40%

- 4.8.3 Accordingly, the Petitioner in accordance with the TERC MYT Regulations, 2015, has calculated the interest on working capital for Transmission business as shown in the table below:

Table 54: Interest on working Capital for Transmission Business as submitted by TSECL (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Receivables for 2 months	7.84	10.18	8.99	9.85
O&M Expenses for one month	1.95	3.21	2.56	2.91
Maint Spares @15% of O&M Expenses	3.51	5.77	9.22	10.48
Total Working Capital Requirement	13.30	19.16	20.77	23.25
Rate of Interest (%)	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	1.48	1.99	2.19	2.88

Commission's Analysis and Ruling

- 4.8.4 The Commission has computed the interest on working capital as per principles specified in TERC MYT Regulations, 2015. With regards to the consideration of Receivables while calculating the Interest on Working Capital, the Commission has observed that there is no separate billing has been undertaken to the retail supply business and the operation of the entities has been undertaken as a single business without any commercial arrangement. Therefore, considering Revenue as a component for calculation of working capital requirement for Generation, Transmission and Distribution function separately will result in double accounting and hence, no amount shall be allowed towards receivables, to the extent of supply of power by the Transmission Business to the Retail Supply Business, so as to avoid any double accounting and additional burden on the consumers.
- 4.8.5 As per Regulations 31 (III) of MYT Regulations 2015, the interest rate for computing loWC is considered as the weighted average SBI Base plus 300 basis points as on 1st April of the year. In view of the above, interest on working capital for transmission business approved for FY 2020-21 to FY 2023-24 is shown in the following Table:

Table 55: Interest on working Capital for Transmission Business as approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Receivables for 2 months	-	-	-	-
O&M Expenses for one month	1.90	1.98	2.09	2.18
Maint Spares @15% of O&M Expenses	3.41	3.56	3.76	3.92
Total Working Capital Requirement	5.31	5.54	5.84	6.09
Rate of Interest (%)	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	0.59	0.58	0.62	0.76

4.9 Non-Tariff Income

Petitioner's Submission

- 4.9.1 The Petitioner has submitted that the other income of TSECL covers mainly interest earned on fixed deposits made in various banks, sale of tender forms and other miscellaneous income like sale of scrap, sale of tender, meter rent etc. These incomes are being separately booked under other income category. The figure submitted for FY 2020-21 and FY 2021-22 are based on the figures derived from division wise account statement. Also, the figures for FY 2022-23 and FY 2023-24 have been projected based on the previous years' trend.
- 4.9.2 For FY 2020-21 and FY 2021-22, TSECL has claimed the actual other income based on audited accounts for respective years. The Non-tariff income claimed by TSECL is shown in the following Table:

Table 56: Non-Tariff Income for Transmission Business as per Petitioner for FY 2020-21 to FY 2022-23(Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Non-Tariff Income	0.12	0.16	0.16	0.18

Commission's Analysis and Ruling

- 4.9.3 As per Regulations 23 of TERC MYT Regulations, 2015, Non-Tariff income is required to be deducted to arrive at the Annual Fixed Charges of the Transmission business.
- 4.9.4 The Petitioner has submitted that it has not segregated the account statements for generation, transmission and distribution business completely and the allocation has been undertaken based on certain principles, wherever necessary for ARR and tariff calculation. This has been undertaken based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like accounts and finance, HR, projects etc. at corporate level.
- 4.9.5 The Petitioner has provided the details of consolidated amount of the Non-Tariff Income with providing break-up of the same component wise and has reconciled the same with the available audited. The Commission, as per the approach adopted in previous Orders, approves the Non-Tariff Income of Transmission Function as proposed by the Petitioner for the purpose of truing up of FY 2020-21 and FY 2021-22.
- 4.9.6 For FY 2022-23 and FY 2023-24, the Commission approves the Non-tariff income equivalent to approved for FY 2021-22. The same shall be allowed on actual basis at time of truing up, subject to prudence check.

Table 57: Non-Tariff Income for Transmission Business for FY 2020-21 to FY 2023-24 approved by Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Non-Tariff Income	0.12	0.16	0.16	0.16

4.10 Summary of True-up for FY 2020-21 and FY 2021-22 and ARR for FY 2022-23 and FY 2023-24 for Transmission Business

4.10.1 The Commission in Tariff Order dated 2 September 2022, has approved the Annual Revenue Requirement for each Year of the MYT Control Period i.e., from FY 2020-21 to FY 2022-23 as outlined below:

Table 58: Aggregate Revenue Requirement for Transmission Business approved for FY 2020-21 to FY 2022-23 in Tariff Order dated 02.09.2022 (Rs. Crore)

Sl. No.	Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23
A	Fixed Charge				
1	O&M Expenses	Rs. Crore	22.74	23.75	25.04
2	Depreciation	Rs. Crore	5.02	5.11	5.20
3	Interest on Working Capital Loans	Rs. Crore	0.59	0.58	0.62
4	Return on Equity	Rs. Crore	4.92	5.00	5.12
5	Total Fixed Charge	Rs. Crore	33.27	34.44	35.98
6	Less: Non-Tariff Income	Rs. Crore	0.39	0.23	0.14
7	Total Cost	Rs. Crore	32.88	34.21	35.84
B	Total unit transmitted or wheeled	MUs			1,340.69
C	Transmission Charges	Paisa/kwh			26.73

4.10.2 Based on the approval of various components of the ARR, the Commission has undertaken the truing up exercise for FY 2020-21 and FY 2021-22 as elaborated above in accordance with the tariff Regulations and justification and accordingly the Commission approves Annual Fixed Cost (AFC) in the determination of Aggregate Annual Revenue Requirement.

4.10.3 Also, the Commission has undertaken the exercise for determination of ARR for FY 2022-23 and FY 2023-24 based on approval of various ARR Components, as elaborated above in accordance with the tariff Regulations and justification. The Commission has accordingly approved the Annual Fixed Charges (AFC) in the determination of Revenue Requirement process for the said purpose.

4.10.4 Considering the FY 2020-21 and FY 2021-22, since the audited accounts were available, the Commission has calculated AFC considering the truing up of various components which is recoverable at Target Normative Annual Transmission System Availability Factor, as specified in Regulations 39 of MYT Regulations 2015.

4.10.5 The Commission notes that, the actual Availability of the Transmission system is not provided by TSECL. The Commission with an apprehension has approved the total recovery of AFC and directs Petitioner to provide actual Transmission System Availability and Normative Annual Transmission System Availability Factor (NATAF) for the MYT Control period in the next tariff petition.

4.10.6 Based on the above analysis, the submitted and approved Annual Revenue Requirement for truing up year of FY 2020-21 and FY 2021-22 and for FY 2022-23 and FY 2023-24 is shown in the Table below:

Table 59: Aggregate Revenue Requirement for Transmission Business for FY 2020-21 to FY 2023-24as submitted by the Petitioner and approved by the Commission(Rs. Crore)

S. No.	Particulars	Units	Submitted by TSECL				Approved by the Commission			
			FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
A	Fixed Charge									
1	O & M Expenses	Rs. Crore	23.43	38.46	30.75	34.95	21.77	23.12	25.04	26.12
2	Depreciation	Rs. Crore	6.87	6.18	6.18	6.18	3.72	3.34	3.34	3.34
3	Return on Equity	Rs. Crore	15.35	14.63	14.96	15.30	3.84	3.79	3.81	3.81
4	Interest on Working Capital	Rs. Crore	1.48	1.99	2.19	2.88	0.59	0.58	0.62	0.76
5	Total Fixed Charge	Rs. Crore	47.14	61.25	54.07	59.30	29.93	30.82	32.81	34.03
6	Less: Non-Tariff Income	Rs. Crore	0.12	0.16	0.16	0.18	0.12	0.16	0.16	0.16
7	Total Cost	Rs. Crore	47.02	61.09	53.91	59.12	29.81	30.66	32.64	33.86
B	Total unit transmitted or wheeled	Mus				1,651.84				1,676.49
C	Transmission Charges	Paisa/kwh				35.79				20.20

Note: The Commission has determined Transmission Charge for in Paisa/kWh only for FY 2023-24.

4.10.7 Based on the Annual Fixed Charges as approved above and in line with Regulations 34 (I) of TERC MYT Regulations 2015, transmission charges are required to be recovered on monthly basis from the Transmission System User.

4.10.8 It is abundantly clear that transmission business needs to be separated out as a whole and work as a commercially profitable utility instead of banking of generation or distribution businesses. The utility needs to work out wheeling charges and losses and recover from the GENCOs or DISCOMs. It may also be worth to mention that all substations of 33 KV are brought under ambit of transmission company. It is directed that from now onwards, transmission business should operate as a separate business.

5 Truing up of ARR for FY 2020-21 and FY 2021-22, APR of FY 2022-23 and ARR of FY 2023-24 for Distribution Business

5.1 Background and Approach

- 5.1.1 The Commission in its Order dated 2 September 2022 has approved Truing-up for FY 2017-18 to FY 2019-20, ARR for FY 2020-21 to FY 2022-23 for Generation, Transmission and Retail Tariff determination of FY 2022-23.
- 5.1.2 The TERC MYT Regulations, 2015 provides for truing-up of all the parameters of ARR at the end of each year based on the audited annual accounts and prudence check by the Commission. The Commission has conducted the truing-up for ARR for FY 2017-18 to FY 2019-20 based on the audited annual accounts submitted by TSECL for the said period.
- 5.1.3 In compliance of the regulatory obligation, TSECL has filed True-Up Petition for FY 2020-21 and FY 2021-22 for Generation business, Transmission and Distribution & Retail Supply business separately. The audited accounts of the respective years along with the audit report is submitted as an Annexure along with the Petition.
- 5.1.4 It is noted that, TSECL has not yet segregated the account statements for Generation, Transmission and Distribution business and the same is under work in progress. However, TSECL in its Petition has provided the break-up of costs in generation, transmission and distribution business, wherever necessary for ARR and tariff calculation, based on the division wise break-up of account statements and making suitable assumptions, as necessary, for the common functions like Accounts & finance, HR, Projects etc. at corporate level. As such, TSECL is submitting a combined petition for generation, transmission and distribution business with segregated ARR calculations. Accordingly, the Commission has relied upon the said submission related to function-wise data submitted by TSECL along with replies to data gaps submitted by TSECL for truing-up of FY 2020-21 and FY 2021-22.
- 5.1.5 The Petitioner has submitted the statutory audit of the account statements for FY 2020-21 and FY 2021-22. The Commission has relied on the TERC MYT Regulations, 2015 for truing up of all the parameters of ARR at the end of each year based on the audited accounts and prudence check by the Commission.
- 5.1.6 Also, the instant petition has been filed considering the projection of data based on the actual data of past years and norms as specified in TERC MYT Regulations, 2015, as applicable for determination of ARR for MYT Period of FY 2022-23 and FY 2023-24. However, the Commission has considered the MYT period till FY 2023-24 as discussed Chapter 1 of this order.
- 5.1.7 Considering the details provided and additional information obtained during these proceedings, the Commission has undertaken the prudence check for approval of each expenditure and determination of Revenue Requirement of TSECL Distribution Business for the FY 2020-21 to FY 2023-24 as set out below:

5.2 Energy Sales

Petitioner's Submission

- 5.2.1 The Petitioner in the true-up petition has provided actual sales for the FY 2020-21 and FY 2021-22. The Energy sales for FY 2022-23 and FY 2023-24 have been projected based on the trend of category wise sales of past years. It has been observed that the growth rate in Tripura over the last few years has been slow owing to various demand side management measures, use of energy efficient appliances and increase in prosumers. This trend is expected to continue for the next 2 years and as such the growth rates have been taken based on the past trends.
- 5.2.2 TSECL submitted that it has proposed some tariff provisions to incentivize growth of industries and promote increase industrial consumption in the state. This would not only help the development and economic growth in the state but also help TSECL improve its HT:LT ratio of sales, reduce losses and improve revenue. Based on the approval from the Commission and subsequent response, the future trajectory of sales may be taken accordingly in the next MYT period of corrections, if any, may be done during the true up of the future years.
- 5.2.3 Accordingly, based on the past trend, the growth rate and basis of the same, considered by TSECL for each category of consumers is outlined as below:

Table 60: Growth rate for projection of sales Category wise - by TSECL

Sr. No	Category of Consumers	Growth Rate
1.	Domestic	10%
2.	Public lighting	-50.97%
3.	Commercial	-2.62%
4.	Irrigation & Water	17.85%
5.	Public water works	10.00%
6.	Industries	13.95%
7.	Mobile Tower	15.00%
8.	Bulk supply	12.95%
9.	Tea Garden	31.04%

- 5.2.4 Accordingly, the Petitioner has submitted the actual category wise energy sales for FY 2020-21 and FY 2021-22 and projected the Sales for FY 2022-23 and FY 2023-24 based on the past trends applying the growth rate as outlined in the table above. Accordingly, the category wise actual sales are shown in the following table:

Table 61: Category-wise Sales submitted by TSECL (MU)

Sr. No	Consumer category	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	Domestic	571.09	640.38	704.42	774.86
2.	Public lighting	46.07	11.49	11.49	11.49
3.	Commercial	72.00	68.12	68.12	68.12
4.	Irrigation & Water	38.00	47.75	56.27	66.32
5.	Public water works	75.95	99.53	109.48	120.43
6.	Industries	43.44	52.09	59.36	67.65
7.	Mobile Tower	28.32	59.95	68.94	79.29
8.	Bulk supply	87.54	115.86	130.87	147.82
9.	Tea Garden	2.80	4.03	4.03	4.03
10.	Kutir Jyoti	17.13	-	-	-
11.	Grand Total	982.33	1,099.22	1,213.00	1,340.02

Commission's Analysis and Ruling

- 5.2.5 The Commission notes that the Petitioner has submitted the actual energy sales for the period from FY 2020-21 and FY 2021-22. Further, energy sales for FY 2022-23 and FY 2023-24 have been projected. The Commission has considered the actual energy sales for FY 2016-17 to FY 2021-22 as submitted by the Petitioner. The Commission analysed the past year trend for energy sales and observed that, energy sales during FY 2018-19 are reduced around by 6.4% over previous year. For projecting the energy sales for remaining years of the Control Period, the actual energy sales for FY 2021-22 has been considered as base data and the growth rate is applied on the same for projection purpose.
- 5.2.6 For projecting the energy sales, the Commission has analysed the growth rate for different period as shown in the following Table and accordingly has approved the Growth rate category wise:

Table 62: CAGR computed by the Commission

S. No.	Particulars	CAGR			
		5 Yr	3 Yr	YoY	Approved
1	Domestic	6.16%	9.56%	8.87%	9.56%
2	Commercial	-2.84%	6.00%	-5.39%	6.00%
3	Irrigation	5.84%	14.67%	25.67%	14.67%
4	Public water works	3.92%	17.07%	31.05%	17.07%
5	Industries	2.93%	9.11%	19.91%	9.11%
6	Tea, Coffee & Rubber Garden	28.66%	40.63%	44.11%	40.63%
7	Bulk supply	7.60%	4.31%	32.36%	4.31%
8	Public Lighting	-22.94%	-40.20%	-75.06%	0.00%
9	Mobile Towers	18.19%	21.98%	111.68%	21.98%

- 5.2.7 From the above table, the growth rate for most of the consumer categories works out to be similar to the proposed growth rate of TSECL except for few categories. It has

been noticed that TSECL has proposed the negative growth rate for certain categories due to YoY negative trend which may be due to the COVID pandemic and lockdown Impact. The Commission is of view that TSECL has adopted the conservative approach for projection of energy sales, without considering the ground realities and impact of relaxation of lockdown in the State. Therefore, the Commission has tried to normalise the same considering the relaxation in the COVID norm at present and will be reviewed at the time of truing up of the respective years.

- 5.2.8 With respect to number of consumers and connected load of each category of consumers, TSECL has not provided any rationale on the projection of the Number of consumers and connected load and no reference of the same was also provided in true-up petition for FY 2020-21 and FY 2021-22. The Commission has considered the similar logic as provided in above said paragraphs for projection purpose for number of consumers and connected load and is outlined in the following table:

Table 63: Category wise Number of Consumers and Connected Load approved by Commission for FY 2022-23 and FY 2023-24

S. No.	Particulars	FY 2022-23	FY 2023-24	FY 2022-23	FY 2023-24
		No. of Consumers - No		Connected Load - KW	
1	Domestic	912,556	977,771	248.82	276.90
2	Commercial	76,052	80,731	54.06	58.81
3	Irrigation	8,465	9,103	26.16	27.28
4	Public water works	10,869	12,509	94.50	111.05
5	Industries	6,947	7,462	106.29	110.79
6	Tea, Coffee & Rubber Garden	62	69	1.17	1.29
7	Bulk supply	1,553	1,750	50.84	57.62
8	Public Lighting	2,544	2,671	10.91	11.26
9	Mobile Towers	2,389	2,755	22.39	24.60
10	Grand Total	1,021,436	1,094,820	615.14	679.60

- 5.2.9 Based on the above analysis, the energy sales approved by the Commission for the Period from FY 2020-21 to FY 2023-24 are shown in the following Table:

Table 64: Category-wise Sales approved by the Commission (MU)

S. No.	Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1	Domestic	588.22	640.38	701.61	768.69
2	Commercial	72.00	68.12	72.21	76.54
3	Irrigation	38.00	47.75	54.75	62.79
4	Public water works	75.95	99.53	116.52	136.41
5	Industries	43.44	52.09	56.84	62.02
6	Tea, Coffee & Rubber Garden	2.80	4.03	5.67	7.98
7	Bulk supply	87.54	115.86	120.86	126.06
8	Public Lighting	46.07	11.49	11.49	11.49
9	Mobile Towers	28.32	59.95	73.13	89.21
10	Grand Total	982.33	1,099.22	1,213.09	1,341.19

5.3 Distribution Loss

Petitioner's Submission

- 5.3.1 The Petitioner has submitted the actual Distribution loss of FY 2020-21 and FY 2021-22, provisional loss for FY 2022-23 and projected the distribution loss for FY 2023-24 as shown in the following Table:

Table 65: Distribution and T&D Loss from FY 2020-21 to FY 2023-24(%)

Sr. No	Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	Distribution Loss (%)	30.72%	27.07%	23.72%	20.62%
2.	Transmission Loss (%)	2.54%	2.54%	2.54%	2.54%
3.	T&D Loss (%)	32.80%	29.26%	26.00%	23.00%

- 5.3.2 TSECL submitted the actual loss for FY 2020-21 and FY 2021-22 based on actual energy sales and actual energy purchased during the years. The high level of T&D loss, is due to increase in the LT:HT ratio as a result of extensive village electrification, new service connection in remote areas over the years, huge increase in the last mile connectivity and LT network etc. During this period, the state has also seen a number of severe gales and thunderstorms resulting in damage to the electrical network and increasing load on the electrical network thereby increasing technical losses. TSECL has been suffering from old ageing and overloaded assets like transformers/lines due to limited investment in strengthening and upgradation of distribution network particularly in HT network of 33 kV and 11 kV.
- 5.3.3 Further, TSECL also submitted that FY 2020-21 and FY 2021-22 were exceptional years when the whole world faced the unprecedented challenge of Covid 19 and the strict lockdowns resulting as a result of Covid 19. Even before this, TSECL was facing the challenge of reduction in T&D losses as it is not able to invest in system improvement, capacity strengthening and replacement of ageing assets due to the accumulated financial losses and limitations in fund availability. The financial position is getting further affected due to the non-revision of tariff since last 8 years. At his position, the onset of Covid 19 and its subsequent lockdowns created further difficulty for TSECL in FY 2020-21 and FY 2021-22 which are provided below:
- (a) The lockdowns impacted the timely operation and maintenance of the electrical system and challenges in regular periodic health assessment and upkeep of assets required for reducing technical losses
 - (b) The lockdowns resulted in complete shutdown of industries and commercial consumers impacting the HT:LT ratio of sales thereby impacting the overall losses
 - (c) The timely meter reading and bill distribution was also impacted during the lockdowns and also afterwards in FY 2020-21
 - (d) The overall economic condition was poor in FY 2020-21 impacting the ability of consumers to pay the bills and which in turn impacted the revenues and

cashflows of TSECL

- (e) The execution of capex schemes for loss reduction got delayed which resulted in increase of losses
- (f) The replacement of defective meters also got delayed resulting in increase of losses.

In spite of all the above challenges, TSECL strived continuously to provide reliable and affordable power to the consumers in the state.

- 5.3.4 TSECL requested not to impose penalty for not achieving the distribution loss target in a difficult year of FY 2020-21 because of the above challenge. This penalty will further weaken the already deteriorating financial position of TSECL which is affecting its overall performance.
- 5.3.5 Further, TSECL submitted that the Transmission losses for FY 2022-23 and FY 2023-24 has been considered at 2.54% as per the value obtained in FY 2020-21 as the latest NER transmission loss report figures is yet to be published so for projections.
- 5.3.6 TSECL is making sincere efforts in electrifying the un-electrified areas of the state at a fast pace under grants and loans provided by the Rural Electrification Corporation (REC) under the Rajiv Grandhi Gramin Viduyatikaran Yojna (RGGVY) and Saubhagya Scheme. Through the implementation of the scheme the TSECL has provided the electricity to the far-flung areas and villages to of the Tripura state. At the same time, due to increase in the LT network and the domestic and Kutir Jyoti consumers, losses of the utility are also increasing at considerable pace. Through different loss reducing measures and schemes the TSECL has remained successful to contain the losses at the level mentioned in the Petition. In the past few years, TSECL has made limited investments in its distribution network for modernization, system improvement and loss reduction. However, now, TSECL is implementing large system improvement schemes under ADB funding as well as under the GoI scheme of RDSS (Revamped Distribution Sector Scheme) to reduce losses and the effect of such measures is expected to gradually reflect in the performance of T&D losses. As such, for future years, TSECL has undertaken a target of reduction of more than 6% in next 2 years and achieve T&D target of 23% by FY 2023-24.
- 5.3.7 Accordingly, Petitioner has requested the Commission to approve the Distribution losses of the TSECL as submitted in the Petition.

Commission's Analysis and Ruling

- 5.3.8 The Commission notes that, TSECL has considered the actual Distribution Loss for FY 2020-21 and FY 2021-22 and projected T&D loss for FY 2022-23 and FY 2023-24. The Commission notes that, in past Orders, it has been approving T&D loss for TSECL. There is no segregation of Transmission and Distribution Loss. However, from the last tariff order onwards, TSECL has submitted the separate transmission

and distribution loss and accordingly, the Commission has also approved the segregated Transmission and Distribution loss. Further, while segregating the T&D loss into Transmission Loss and Distribution loss, TSECL has considered the Transmission loss of 6% and balance is considered to be distribution loss.

- 5.3.9 The Commission notes that the actual bifurcation of transmission and distribution loss is not available due to absence of complete voltage wise metering. The Commission tends to approve the combined T&D losses.
- 5.3.10 The Commission in Tariff Order dated 2 September 2022 has approved the T&D losses of 20% for FY 2020-21 and FY 2021-22. The Commission noted the submission of TSECL regarding the actual higher T&D losses. The Commission is of view that the T&C losses target has been given to TSECL from UDAY Scheme and the same has not been complied. The exception for single year on account of COVID-19 cannot be considered when there is consistent failure in meeting the T&D losses target. Hence, the Commission approves T&D Loss of 20% for FY 2020-21 and FY 2021-22 for the purpose of truing up. The sharing of gains/losses on account of the same shall be undertaken in subsequent part of this Chapter.
- 5.3.11 Considering the difficulty posed by TSECL and upcoming development for improvement of T&D losses, the Commission has not considered any aggressive target for TSECL for FY 2022-23 and FY 2023-24 and continue with the same target of 20% in the present Order.
- 5.3.12 Although the transmission loss of 3% for Transmission Business is approved for Transmission business, the Commission has approved T&D loss for the Distribution Business, as the approach adopted in previous Orders, The T&D loss approved by the Commission for FY 2020-21 to FY 2023-24 is shown in the following Table:

Table 66: T&D Loss from FY 2020-21 to FY 2023-24 approved by the Commission (%)

Sr. No	Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	T&D Loss - as per TSECL	32.80%	29.26%	26.00%	23.00%
2.	T&D Loss - Approved	20.00%	20.00%	20.00%	20.00%

5.4 Energy Balance

Petitioner's Submission

- 5.4.1 TSECL procures power both from the central generating stations of NTPC, NEEPCO, OTPC and NTPC as well as from State owned generating stations. The total power purchased is utilized to meet the demand within the state (intra state sales) and the surplus power is being sold outside the state.
- 5.4.2 The Petitioner has submitted the Energy Balance based on the actual Power Purchase, Sales and T&D Loss for FY 2020-21 and FY 2021-22. However, the same has been projected for FY 2022-23 and FY 2023-24.
- 5.4.3 Additionally, the Petitioner has submitted that presently it has an agreement for sale of power to Bangladesh sale till the end of FY 2025-26 and as such, the same has

been considered in the projections. However, the energy balance and financial projections for TSECL is expected to be heavily impacted if the sale to Bangladesh does not continue further beyond FY 2025-26 and the gap between cost and revenue will increase significantly in such a scenario. Therefore, TSECL has requested the Commission to assess the dynamic situation based on the sale to Bangladesh while approving the ARR projections of TSECL.

- 5.4.4 TSECL further submitted that the Commission while calculating the energy balance in each of the years from FY 2017-18 to FY - 2020-21 has erroneously considered the inter-state transmission losses as the PoC losses for Tripura withdrawal only. It is pertinent to note that in the PoC mechanism, the transmission losses are calculated as the sum of the losses applicable at the injection point and the losses applicable at the withdrawal point. The Commission while calculating the energy balance in FY 2020-21 has erroneously considered the inter-state transmission losses as the PoC losses for Tripura withdrawal only in the previous petition submitted. It is pertinent to note that in the PoC mechanism, the transmission losses are calculated as the sum of the losses applicable at the injection point and the losses applicable at the withdrawal point. The Regional Load Dispatch Centre also published the weekly average transmission loss of a region on its website for each year and also for the last week which is used by the stakeholders for calculation of transmission losses, calculation of transmission charges and billing of energy and energy management. This report clearly states the regional transmission losses to be in the range of 2.5-3.5% on an average basis for the last few years (as against 0.5-1.7% losses considered by the Commission in the impugned order). The figures of actual regional transmission losses have been taken from the annual compendium reports of NERLDC (<https://www.nerlhc.in/annual-compendium/>). The inconsistency or inadvertent error in consideration of inter state transmission loss is also evident from the fact that the approved inter-state transmission loss is considered as 0.4-0.5% for FY 17-20, 1.7% for FY 21 but the same has considered as 3.35% for FY2021-22 and FY 2022-23. It is easily understood that the inter-state transmission losses do not vary on year to year basis by such a huge margin and as such, the losses considered for the period FY 2017-18 to 2020-21 is taken incorrectly as only the withdrawal losses.
- 5.4.5 Further, it is submitted that, in the PoC mechanism, the transmission losses are calculated as the sum of the losses applicable at the injection point and the losses applicable at the withdrawal point. The Regional Load Dispatch Centre also published the weekly average transmission loss of a region on its website for each year and also for the last week which is used by the stakeholders for calculation of transmission losses, calculation of transmission charges and billing of energy and energy management. This report clearly states the regional transmission losses to be in the range of 2.5-3.5% on an average basis for the last few years (as against 1-1.5% losses considered by the Commission in the impugned order). The actual value of inter state transmission loss based on total of injection loss and withdrawal loss for

FY 2020-21 and as well for FY 2021-22 to FY 2023-24 to be considered as 2.54%.

5.4.6 Accordingly, the Petitioner has submitted the Energy Balance for FY 2020-21 to FY 2023-24 as shown in the following table:

Table 67: Energy Balance for FY 2020-21 to FY 2023-24 as submitted by the Petitioner

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Energy from CGS	2,399.73	2,533.67	2,679.33	2,903.99
Power Purchase from Other Sources	37.58	-	76.49	80.31
Inter State Sales	1,456.13	1,556.45	1,671.25	1,969.73
Energy Trading	10.86	-	-	-
Energy Swapping	1.38	-	-	-
DSM	76.13	72.90	74.51	74.51
Sale to Mizoram	41.26	115.11	68.46	68.46
Sale to Manipur	41.26		22.45	22.45
IEX	342.79	407.66	545.04	843.52
Bangladesh Sale	942.45	960.78	960.78	960.78
Inter-State Transmission Loss	1.00%	3.48%	2.50%	2.50%
Inter State Transmission Loss	23.97	88.19	66.98	72.60
ISGS Energy at State Bus	919.63	980.84	1017.59	941.97
Energy from State Generation	542.13	572.97	621.79	709.87
Energy at State Bus	1,461.76	1,553.81	1,639.38	1,651.84
Intra State Transmission Loss	43.85	46.61	49.18	49.55
Intra State Transmission Loss (%)	3.00%	3.00%	3.00%	3.00%
Energy at 11 kV level	1,417.91	1,507.20	1,590.20	1,602.29
Energy Sales	982.33	1,099.22	1,213.00	1,271.89
Distribution Loss	435.58	407.98	377.20	330.40
Distribution Loss (%)	30.72%	27.07%	23.72%	20.62%
T&D Loss (%)	32.80%	29.26%	26.01%	23.00%

Commission's Analysis and Ruling

5.4.7 For the purpose of computing energy balance, the Commission has considered actual energy purchase for FY 2020-21 and FY 2021-22. For FY 2022-23 and FY 2023-24, the Commission has considered the source wise energy availability as submitted by the Petitioner. However, the additional energy availability on account of reduced T&D loss target has been considered as energy sale through Trading.

5.4.8 The Commission noted the submission of TSECL regarding the POC losses. The issue has already been addressed by the Commission in Tariff Order dated 2 September 2022 and is not being re-iterated for sake of brevity. Further, the Commission continues with the approach adopted in that Order and accordingly, considered the Inter-State Transmission losses for FY 2020-21 and FY 2021-22. Based on the Transmission loss computed by POSOCO, the Commission has considered the following Inter State Transmission Loss as declared by POSOCO.

Table 68: Inter State Transmission Loss approved by Commission (%)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
As per TSECL	1.00%	3.48%	2.50%	2.50%
Approved by Commission	1.70%	3.35%	3.56%	3.00%

5.4.9 Based on the approved energy sales, target T&D loss and Tripura Drawl-ISTS POC loss, the Commission approves the energy balance as shown in the following Table:

Table 69: Energy Balance for FY 2020-21 to FY 2023-24as approved by the Commission(MU)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Energy from CGS	2,362.15	2,533.67	2,667.06	3,034.45
Power Purchase from Other Sources	37.58	91.81	-	-
Inter State Sales	1,456.13	1,556.45	1,671.25	1,969.73
Energy Trading	10.86	-	-	-
Energy Swapping	1.38		-	-
DSM	76.13	72.90	74.51	74.51
Sale to Mizoram	41.26	115.11	68.46	68.46
Sale to Manipur	41.26	-	22.45	22.45
IEX	342.79	407.66	545.04	843.52
Bangladesh Sale	942.45	960.78	960.78	960.78
Inter-State Transmission Loss	1.70%	3.35%	3.56%	3.00%
Inter State Transmission Loss	23.97	88.19	95.06	91.03
ISGS Energy at State Bus	919.63	980.84	900.75	973.68
Energy from State Generation	542.13	572.97	615.60	702.81
Energy at State Bus	1,461.76	1,553.82	1,516.36	1,676.49
Intra State Transmission Loss	87.71	93.23	90.98	50.29
Intra State Transmission Loss (%)	6.00%	6.00%	6.00%	3.00%
Energy at 11 kV level	1,374.05	1,460.59	1,425.38	1,626.19
Energy Sales	982.33	1,099.22	1,213.09	1,341.19
Distribution Loss	391.72	361.37	212.29	285.00
Distribution Loss (%)*	28.51%	24.74%	14.89%	17.53%
T&D Loss (%)	32.80%	29.26%	20.00%	20.00%

Note - *Distribution loss are shown as indicative and are higher in FY 2023-24 because of lower transmission loss approved by the Commission. However, T&D loss are kept at same level, which is considered for computation of Energy.

5.5 Power Purchase

Petitioner's Submission

5.5.1 TSECL has submitted that, it procures power from Central Generating Stations of NEEPCO, NHPC and OTPC Palatana in which Tripura is having allocated share/ allocation of power. Also, the power purchase rates for these CGS and the associated transmission charges paid to PGCIL for transmission of power to State bus of Tripura, are governed by CERC tariff regulations and are uncontrollable by TSECL.

5.5.2 Accordingly, the power purchase cost as submitted by the Petitioner for the FY 2020-

21 to FY 2023-24 is as shown in the following Table:

Table 70: Actual Power Purchase Cost from FY 2020-21 and FY 2021-22 as submitted by Petitioner

Power Purchase Data	FY 2020-21			FY 2021-22		
	Cost	Energy Purchased	Cost Per Unit	Cost	Energy Purchased	Cost Per Unit
	Rs. Crore	MU	Rs/Unit	Rs. Crore	MU	Rs/Unit
NEEPCO	370.12	870.76	4.25	562.95	1,106.23	5.09
NHPC	22.92	71.24	3.22	19.56	45.81	4.27
NTPC	160.96	130.81	12.30	194.96	298.73	6.53
OTPC	423.73	1,284.01	3.30	303.60	1,077.03	2.82
NEEPCO Solar	1.85	5.32	3.48	1.70	5.86	2.90
PGCIL Charges	52.24			142.92		
Short term Power Purchase (IEX, DSM, swapping)	10.64	37.58	2.83	35.61	91.81	
Grand total	1,042.46	2,399.73	4.34	1,261.30	2,625.48	4.80

Table 71: Power Purchase cost for FY 2022-23 and FY 2023-24 as submitted by TSECL

Power Purchase Data	FY 2022-23			FY 2023-24		
	Cost	Energy Purchased	Cost Per Unit	Cost	Energy Purchased	Cost Per Unit
	Rs. Crore	MU	Rs/Unit	Rs. Crore	MU	Rs/Unit
NEEPCO	556.61	1,155.76	4.82	573.31	1,155.76	4.96
NHPC	25.19	73.38	3.43	25.95	73.38	3.54
NTPC	113.53	231.09	4.91	151.17	298.73	5.06
OTPC	391.65	1,212.72	3.23	455.56	1,369.54	3.33
NEEPCO Solar	1.85	6.38	2.90	1.96	6.58	2.99
PGCIL Charges	123.22			126.91		
Short term Power Purchase (IEX, DSM, swapping)	28.55	76.49	3.73	31.48	80.31	3.92
Grand total	1,240.60	2,755.82	4.55	1,366.34	2,984.30	4.58

Commission's Analysis and Ruling

- 5.5.3 The Commission sought the station wise details of actual power purchase during FY 2020-21 and FY 2021-22 and projected for FY 2022-23 and FY 2023-24. The Commission has analysed the source wise details of power purchase with respect to the submission made by the TSECL.
- 5.5.4 The Commission notes that TSECL has submitted the actual power purchase cost for FY 2020-21 and FY 2021-22. The Commission notes that audited accounts are

available and has reconciled the cost with the audited balance sheet. The Commission notes that the source-wise power purchase cost was reconciled with the power purchase cost reported in the audited accounts by TSECL in replies to the data gaps.

- 5.5.5 Further, the Commission notes that TSECL has not paid any delayed payment charges for FY 2020-21 and FY 2021-22. Also, the actual power purchase cost does not include any cost towards the prior period.
- 5.5.6 In view of the above, for the purpose of truing up, the Commission approves the power purchase cost for FY 2020-21 and FY 2021-22 based on audited accounts and other details received from TSECL and after due prudence check.
- 5.5.7 Accordingly, the power purchase cost approved for FY 2020-21 and FY 2021-22 after true-up is shown in the following Table:

Table 72: Power Purchase cost for FY 2020-21 and FY 2021-22 approved by the Commission

Power Purchase Data	FY 2020-21			FY 2021-22		
	Cost	Energy Purchased	Cost Per Unit	Cost	Energy Purchased	Cost Per Unit
	Rs. Crore	MU	Rs/Unit	Rs. Crore	MU	Rs/Unit
NEEPCO	369.81	870.76	4.25	552.65	1,106.23	5.00
NHPC	22.61	71.24	3.17	19.56	45.81	4.27
NTPC	160.65	130.81	12.28	194.96	298.73	6.53
OTPC	423.42	1,284.01	3.30	303.60	1,077.03	2.82
NEEPCO Solar	1.54	5.32	2.90	1.70	5.86	2.90
Short term Power Purchase (IEX, DSM, swapping)	10.33	37.58	2.75	35.77	91.81	3.90
PGCIL Charges	51.93			142.92		
Grand total	1,040.29	2,399.73	4.34	1,251.15	2,625.48	4.77

- 5.5.8 For FY 2022-23 and FY 2023-24, the Commission has considered the energy purchase based on approved T&D loss and energy balance as discussed in earlier Section of this Order. For these years, source-wise the average rate of power purchase has been considered same as submitted by the Petitioner.
- 5.5.9 With regards to the Inter-State transmission charges, actual transmission charges based on Inter-state transmission charges notification issued by POSOCO has been considered for FY 2022-23 and similarly, the charges are projected for FY 2023-24.
- 5.5.10 The approved Power Purchase cost for FY 2022-23 and FY 2023-24 is shown in the following Table:

Table 73: Power Purchase cost for FY 2022-23 and FY 2023-24 approved by the Commission

Source	FY 2022-23			FY 2023-24		
	Cost	Energy Purchased	Cost Per Unit	Cost	Energy Purchased	Cost Per Unit
	Rs. Crore	MU	Rs/Unit	Rs. Crore	MU	Rs/Unit
NEEPCO	550.48	1,143.49	4.81	573.31	1,155.76	4.96
NHPC	25.19	73.38	3.43	25.62	73.38	3.49
NTPC	113.53	231.09	4.91	136.83	298.73	4.58

Source	FY 2022-23			FY 2023-24		
	Cost	Energy Purchased	Cost Per Unit	Cost	Energy Purchased	Cost Per Unit
	Rs. Crore	MU	Rs/Unit	Rs. Crore	MU	Rs/Unit
OTPC	391.65	1,212.72	3.23	430.25	1,369.54	3.14
NEEPCO Solar	1.85	6.38	2.90	1.96	6.58	2.98
Trading/Swapping	-	-	-	50.62	130.46	3.88
PGCIL Charges	124.43	-	-	116.64	-	-
TOTAL	1,207.13	2,667.06	4.53	1,335.53	3,034.45	4.40

5.5.11 The Commission is wary of the fact that to achieve the renewable target set by Government of India, Renewable Purchase Obligation (RPO) by obligated entities including TSECL is required to be monitored. No details has been provided by TSECL on the same. The Commission is of the view that it will take up issue of compliance of RPO in separate proceedings.

5.6 Intra-State Transmission Charges

Petitioner's Submission

5.6.1 The Petitioner in the present Petition has submitted Intra-State Transmission Charges, which is in line with the standalone ARR submitted for separate Transmission business of TSECL for FY 2020-21 to FY 2023-24.

Table 74: Intra State Transmission Charges (Rs. Crore) as submitted by the Petitioner

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Intra State Transmission charges	47.02	61.09	53.91	59.12

Commission's Analysis and Ruling

5.6.2 The Commission in the previous Chapter of this Order, has approved the Annual fixed cost for Transmission Business for the Control Period. The Commission has considered the same Annual fixed cost as intra-state transmission charges for the FY 2020-21 to FY 2023-24 as shown in the following Table:

Table 75: Intra State Transmission Charges approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Intra State Transmission charges	29.81	30.66	32.64	33.86

5.7 Operation & Maintenance Expenses

Petitioner's Submission

5.7.1 TSECL has submitted that TERC MYT Regulations, 2015 stipulates the principle of determination of O&M expenses, which comprise of Employee cost, R&M expense and A&G expense.

- **Employee Cost:** Employee expenses comprise of salaries, dearness

allowance, bonus, terminal benefits in the form of pension & gratuity, leave encashment and staff welfare expenses.

- **Repair & Maintenance expenses:** The A&G expenses of TSECL mainly cover expenses for administrative requirements like telephone, electricity, vehicles lease, statutory taxes to be paid etc and payment of outsourced agencies like statutory auditors, legal charges, consultancy fees etc.
- **Administration and General (A&G) Expenses:** Regular Repair and Maintenance of the electrical system as well as the civil and IT infrastructure is critical for operating the system and ensuring that assets are able to serve for complete expected life.

5.7.2 The Petitioner has submitted the actual O&M expenses for FY 2020-21 and FY 2021-22 based on the audited annual accounts.

5.7.3 For FY 2022-23 and FY 2023-24, the projection of these expenses has been done in accordance with the TERC MYT Regulations, 2015, whereby the employee cost of distribution business has been escalated at the rate of CPI (Consumer Price Index) escalation rate of 5.07% based on the actual prorated expenses of FY 2021-22. R&M expenses have been calculated as 3.98% of GFA (the actual R&M expenses of past year being 3.98% of GFA). The A&G (Administrative and General) expenses have been escalated at the Wholesale Price Index (WPI) of 5.17%. Accordingly, the Petitioner has considered following WPI and CPI Index for projection of Employee cost and A&G cost.

5.7.4 With regards to the component wise explanation on actual O&M Expenses for Distribution business, TSECL has submitted the explanation for employee and R&M expenses as follows:

Employee Expenses

5.7.5 The reason for deviation in the actual and approved O&M expenses is mainly on account of the high difference in the employee cost which was due to non-consideration of impact of 7th Pay Revision in the employees cost in the tariff order dated 1 September 2020. The Commission had calculated the employee cost for distribution business based on the formula provided in TERC MYT Regulations, 2015 and considering actual employee expense of FY 2015-16 as base and applying the yearly escalation factor based on CPI and WPI.

5.7.6 However, the Commission has erroneously not considered the impact of 7th Pay Commission as a onetime provision which is allowed as per regulations and is a justified expenditure already incurred. The formula prescribed in clause 31 (V) of TERC MYT regulations, 2015 clearly allows provisional increases (apart from inflation increase) based on pay commission. The formula prescribed in clause 31 (V) of TERC MYT regulations, 2015 is produced below:

“Employee cost shall be escalated by consumer price index (CPI), adjusted by provisions for expenses beyond the control of the Distribution Licensee and

one time expected expenses, such as recovery/adjustment of terminal benefits, implications of pay commission, arrears and Interim Relief, governed by the following formula:

$$EMP_n = (EMP_b * CPI \text{ inflation}) + Provision$$

- 5.7.7 It is pertinent to note that TSECL had mentioned the impact of 7th Pay Commission in its petition clearly stating an increase of around 22% in FY 2017-18 and around 4% in FY 2016-17. This impact should be considered by the Commission under the Provision, as provided in the above formula. The same was also claimed by TSECL in the review petition filed by TSECL on the tariff order dated 1st September 2020. The Commission on its order dated on the review petition dated 14th December 2020 had stated the following:

“Para 1.8: Therefore, it would be appropriate to allow such impact based on actual audited details, subject to prudence check. Hence, the Commission shall consider such impact at time of truing up of such years based on audited accounts.”

- 5.7.8 As such, now based on the audited accounts, TSECL requested the Commission to consider the actual employee cost and the other O&M expenses based on the audited statement of accounts.

Repairs & Maintenance Expenses

- 5.7.9 The R&M expenses in distribution is quite high as the assets are old and because of the terrain of the State which has high forest coverage, high frequency of gales, thunderstorms etc. The expenses are required for keeping the reliability of the power supply.
- 5.7.10 Based on the above submission, Petitioner has claimed the following O&M expenses for FY 2020-21 to FY 2023-24 as shown in the following Table:

Table 76: O&M Expense for Control Period as submitted by the Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Employee Expenses	143.93	135.45	142.32	149.54
A&G Expenses	33.18	19.13	20.12	21.17
R&M Expenses	26.24	23.56	26.79	27.02
O&M Expenses	203.34	178.14	189.23	197.73

Commission's Analysis and Ruling

- 5.7.11 The Commission notes that, Regulation 31 (V) of TERC MYT Regulations, 2015 specifies the principle for O&M Expenses for Distribution. As per the said principle, the employee expenses are linked to CPI inflation, A&G Expenses to WPI inflation and R&M Expenses are linked to Gross Fixed Assets. The Commission determines the normative O&M Expenses for Distribution Business for Control Period from FY 2020-21 to FY 2023-24 as under:
- 5.7.12 The Commission in past Tariff Order dated 2 September, 2022 has adopted the

principle for determination of normative O&M Expenses of distribution business and approved the normative O&M Expenses for FY 2020-21 to FY 2022-23.

5.7.13 Hence, for the purpose of Truing up for FY 2020-21 and FY 2021-22, the Commission approves the normative O&M expenses as approved in Tariff Order dated 2 September, 2022. For FY 2022-23, the Commission approves the normative O&M expenses as approved in Tariff Order dated 2 September, 2022.

5.7.14 However, the audited accounts for FY 2020-21 and FY 2021-22 is available with the Commission whereby the Commission in this order is undertaking a true-up exercise and therefore the normative O&M expenses and actual O&M Expenses is compared for approval purpose. The Commission hereby approves the normative O&M Expenses for FY 2020-21 and FY 2021-22. O&M Expenses being controllable factor, the sharing of gains are undertaken in subsequent Section of this Chapter.

5.7.15 For FY 2022-23, for the purpose of Annual Performance review, the Commission approves the normative expense for the year as per Tariff Order dated 2 September 2022. For FY 2023-24, the Commission has determined the normative expenses based on similar principle followed for FY 2022-23 as the year is considered as extension in MYT control Period and extended the parameters specified in Tariff Regulations, 2015. The normative O&M expenses are determined as under:

(a) The base O&M Expenses are considered same as considered for FY 2022-23 and escalation has been considered on the expenses determined for FY 2022-23.

(b) The increase in CPI and WPI is considered as 5.35% and 5.32% respectively as considered for FY 2022-23 for computation of Employee expense and A&G Expenses.

(c) K-factor has been considered as 3.36% as considered for FY 2022-23

5.7.16 In view of the above, considering the approved O&M expenses for FY 2020-21 and FY 2021-22 and applying the escalation of WPI and CPI Index as well as k Factor, the O&M Expenses as approved by the Commission for transmission business is shown in the following Table:

Table 77: O&M Expenses approved for FY 2020-21 to FY 2023-24 by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Employee Cost	164.55	173.35	182.62	192.39
A&G Cost	14.47	15.25	16.06	16.91
R&M Cost	23.36	23.37	23.86	26.31
Total	202.38	211.96	222.53	235.60

5.8 Depreciation

Petitioner's Submission

5.8.1 The Petitioner has submitted the detail regarding the Gross Fixed Assets and Asset

wise calculation of Depreciation based on the account statements of the respective years. The Petitioner has submitted the audited accounts for FY 2020-21 and FY 2021-22.

5.8.2 Further the Petitioner has submitted that the depreciation is calculated in the following manner:

- full year depreciation on the opening balance of GFA;
- reduction of depreciation on assets which are fully depreciated;
- reduction of depreciation on assets created out of government grants;

5.8.3 Also, the depreciation rates to be charged on each class of assets is in line with the “Annexure: 8” to the TERC MYT Regulations, 2015 and is highlighted below:

Table 78: Depreciation rate as per TERC MYT Regulations, 2015

Asset	Depreciation Rate as per SLM
Land under full ownership	0.00%
Building	3.34%
Plant & Machinery	5.28%
Computer	15.00%
Computer and Office Equipment	15.00%
Office Equipment	6.33%
Furniture	6.33%
Vehicles	9.50%

5.8.4 TSECL has submitted that the gross asset base booked in account statements includes assets created out of government grants. However, in accordance with accounting procedures as well as regulatory practices in other states, depreciation on such assets has not been claimed to be recovered through tariff and ARR. Further, the assets which have completely depreciated have also been deducted from the total gross value of assets shown in account statements for the purpose of calculation of depreciation.

5.8.5 Based on the consideration of the above depreciation rate, the GFA added for FY 2020-21 and FY 2021-22 and the projected depreciation for FY 2022-23 and FY 2023-24 for the distribution business claimed by the Petitioner is outlined as below:

Table 79: GFA and Depreciation for Distribution Asset as submitted by Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Opening GFA	680.76	681.05	687.59	767.59
Addition of GFA	0.29	6.54	80.00	360.00
Closing GFA	681.05	687.59	767.59	1,127.59
Average GFA	680.91	684.32	727.59	947.59
Depreciation	6.71	10.08	10.58	13.34
Avg. Dep. Rate	0.99%	1.47%	1.45%	1.41%

Commission’s Analysis and Ruling

5.8.6 The Commission computed the depreciation as per Regulation 29 of TERC MYT Regulations, 2015. The scheduled rates of depreciation have been considered as per Annexure 8 to TERC MYT Regulations, 2015.

5.8.7 As regards the addition of GFA, as per the data provided by the Petitioner, the actual capitalisation during FY 2020-21 and FY 2021-22 is provided in the table below, whereby the Petitioner has not submitted any documentary evidence regarding the actual capitalisation of assets that have been actually put to use. The Commission has not considered any capitalisation for FY 2022-23 and FY 2023-24 based on the submission of TSECL. The Commission observed that the amount of capitalisation is very abnormal with no consistency and no explanation has been provided by the Petitioner for decapitalisation and capitalisation of assets for all the years. Therefore, it is necessary to analyse the scheme wise details along with the spill over of the CAPEX and its capitalisation. **Accordingly, the Commission directs the Petitioner to provide the scheme wise details of CAPEX, Capitalisation and justification for any delay in commissioning of the asset at the time of submission of final truing up in next tariff petition.**

5.8.8 However, considering the minor capitalisation amount undertaken by the Petitioner, the Commission approved the additional capitalisation and decapitalisation of assets as proposed by the Petitioner. **However, the Commission directs the Petitioner to provide the documentary evidence of capitalisation in its future submission on tariff filing for consideration.**

5.8.9 Further, for FY 2022-23 and FY 2023-24, the Commission has considered the capitalisation as proposed by TSECL. However, the actual capitalisation shall be allowed at time of truing up for respective years, subject to prudence check.

5.8.10 The capitalisation approved by the Commission for FY 2020-21 to FY 2023-24 is shown in the following table:

Table 80: Approved Capitalisation of Assets for Distribution business (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Capitalisation of Assets	0.29	6.54	81.00	360.00

5.8.11 It is observed that despite several directions from the Commission in this regard, the Petitioner has not complied with the Commission's directive regarding submission of Fixed Assets Register. As detailed in previous Orders, due to the absence of the Fixed Assets and Depreciation register, it is difficult for the Commission to ascertain the GFA value of the Petitioner. However, considering the audited account statement which also follows the Straight Line Method for calculation of depreciation, the Commission in absence of Fixed Assets Register, approves the depreciation in line with the audited accounts for FY 2020-21 and FY 2021-22. Also, even though the Petitioner has submitted in the petition that the depreciation claimed are as per TERC MYT Regulations, 2015 on the gross asset value, whereas the accounts specified SLM depreciation rate as per Companies Act, 2013, it has been observed that TSECL has claimed the depreciation as per accounts only for truing up. The same is also considered by the Commission for calculation of depreciation.

5.8.12 Further, the Commission has calculated the average rate of depreciation at the rates applicable for various classes of assets as per TERC MYT Regulations, 2015. The

average rate of depreciation is applied to arrive at the allowable depreciation. The Commission has considered the calculation of depreciation based on the details provided by TSECL in the Petition as well as in the replies to the data gaps. Also, the opening balance of Gross Fixed Assets as on FY 2020-21 has been considered equivalent to the closing balance approved by the Commission for FY 2019-20 in the tariff order dated 2 September 2022.

5.8.13 Accordingly, the depreciation approved by the Commission for truing up of FY 2020-21 and FY 2021-22 and for FY 2022-23 and FY 2023-24 is shown in the following Table:

Table 81: GFA and Depreciation for Distribution Asset as approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Opening GFA	695.32	695.61	702.15	783.15
Addition during the year	0.29	6.54	81.00	360.00
Closing GFA	695.61	702.15	783.15	1,143.15
Avg. Dep. Rate	0.99%	1.47%	1.45%	1.41%
Depreciation	6.85	10.29	10.80	13.56

5.9 Interest and Finance Charges

Petitioner's Submission

5.9.1 TSECL has submitted that it has considered the following for total interest and finance charges for FY 2020-21 and FY 2021-22 as outlined below:

- Interest on loans from REC and IPDS
- Loan processing fee
- Bank Commission for letter of credit

5.9.2 For MYT Control period, TSECL has taken some term loans under the Central Government Schemes of RGGVY, DDUGJY, Soubhagya and IPDS. In addition to this, the finance charges such as guarantee charge, bank commission for Letter of Credit etc. have been shown under interest and finance charges.

5.9.3 The TSECL has taken loans from the PFC/REC/ Govt. of Tripura. The details about the loan taken by TSECL is given below:

- **Loan from PFC:** The fund is released by PFC under various schemes. 100% of the approved cost is provided as loan from the Government of India through Gross Budgetary Support (GBS). The loan along with interest thereon shall be converted into grant once the establishment of the required system is achieved and verified by an independent agency appointment by Ministry of Power (MoP). No conversion to grant will be made in case projects are not completed within 3 years from date of sanction of the project. In such case, TSECL will have to bear full loan and interest repayment. As no interest payment and repayment schedule is mentioned for PFC loan for the computation of interest and finance charges in this petition no repayment of loan from PFC has been considered.
- **Loan from REC:** The fund is released by REC under RGGVY scheme. 90% of the approved cost is provided as grant and remaining 10% as loan. This fund is

not given directly to TSECL but is disbursed through Government of Tripura. TSECL is paying interest on this loan on behalf of GoT in four quarterly instalments. In the accounts, this loan is treated under head 'GoT loan'. The moratorium period of 5 years is provided on repayment of this loan. Since this is not the loan given to TSECL and fund received on behalf of the GoT,

- **Loan from Govt. of Tripura (GoT):** The Government of Tripura loan is disbursed as interest free loans from the state government under budgetary Non-Plan consideration and to be repaid to the GoT under 30 equal instalments within a period of 15 years as provided in Memorandum of the government of Tripura dated 17th July 2009. The TSECL is persuading with the government of Tripura to convert this interest free loan into equity portion. But, till it is converted into equity the amount have been treated as loan.
- **Loan from PNB (Earlier UBI):** This is a working capital loan taken for the payment of outstanding dues of NEEPCO and OTPC in FY 2016-17. Since this is a working capital loan and the same has been claimed as per norms separately, the same is not considered here in this petition.

5.9.4 The Interest and Finance Charges submitted by TSECL for FY 2020-21 and FY 2021-22 are on actual basis and are projected for FY 2022-23 and FY 2023-24 as outlined in the table below:

Table 82: Interest and Finance Charges for FY 2020-21 to FY 2023-24– submitted by TSECL (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Interest on REC loan for RGGVY @average rate of 10.5%	0.75	0.02	0.42	0.42
Interest on IPDS loan @average rate of 11.067%	1.79	1.26	1.26	1.26
Interest on Soubhagaya Loan (10.75% quarterly and 10.66% Monthly)	3.00	1.80	1.62	1.62
Interest for DDUGJY(10.75% quarterly and 10.66% Monthly)	0.57	3.48	3.48	3.75
Bank Commission for Letter of Credit		0.62	0.62	0.62
Loan Processing Fees	1.31	-	-	-
Total Interest & Finance Charges	7.41	7.18	7.41	7.67

Commission's Analysis and Ruling

5.9.5 TSECL has submitted the claim in relation to interest on REC loan for trueing up year of FY 2020-21 and FY 2021-22. It has been observed that TSECL has claimed only the part of the interest amount pertaining to REC loan as compared to the total interest amount highlighted in audited accounts. However, TSECL has not provided any supporting or documentary evidence for the said interest amount even after the same was sought by the Commission.

5.9.6 Also, with regards to the projection of interest on loan, no details has been provided by TSECL on the IPDS, Saubhagya and DDUGJY loan and just provided the loan profile of the same. No justification or supporting document has been provided by TSECL. The Scheme such as IPDS, Saubhagya and DDUGJY has been funded

through grants and loan amount and the details of which are necessary to allow such claims. **Therefore, TSECL is directed to provide the overall details of the scheme highlighting the total capex amount, activities to be undertaken under such scheme, phasing of the capitalisation, funding pattern and interest liability for overall period of the scheme, in the next tariff petition.**

- 5.9.7 Also, for the amount claimed for FY 2020-21 to FY 2021-22, even though no details have been provided by TSECL and mere loan profile statement has been provided, the Commission understands that such schemes are envisaged to be undertaken for improvement of the distribution system and is a need for the Power development within the State. Therefore, the Commission approves the amount as submitted by TSECL
- 5.9.8 Further, the Commission approves the interest amount projected by TSECL for FY 2022-23 and FY 2023-24 with direction to provide all justification along with the supporting documents and the break-up of the interest cost as per different sources in next tariff petition.
- 5.9.9 Accordingly, the Commission approves the interest and finance charges as submitted by TSECL for Distribution business, after due prudence check with audited accounts for FY 2020-21 and FY 2021-22 and projection for FY 2022-23 and FY 2023-24 as outlined below:

Table 83: Interest and Finance Charges for FY 2020-21 to FY 2023-24 approved by Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Interest on REC loan for RGGVY @average rate of 10.5%	0.75	0.02	0.42	0.42
Interest on IPDS loan @average rate of 11.067%	1.79	1.26	1.26	1.26
Interest on Soubhagaya Loan (10.75% quarterly and 10.66% Monthly)	3.00	1.80	1.62	1.62
Interest for DDUGJY(10.75% quarterly and 10.66% Monthly)	0.57	3.48	3.48	3.75
Bank Commission for Letter of Credit		0.62	0.62	0.62
Loan Processing Fees	1.31	-	-	-
Total Interest & Finance Charges	7.41	7.18	7.41	7.67

5.10 Interest on Working Capital

Petitioner's Submission

- 5.10.1 The Petitioner has submitted that the TERC MYT Regulations, 2015 provides for normative interest on working Capital based on the methodology outlined in the Regulations. Accordingly, the Petitioner is eligible for interest on working capital worked out on methodology specified in the Regulations for Distribution business as provided below:

- Receivables equivalent to two months of fixed cost;
- Maintenance spares @ 15% of operation and maintenance expenses

specified in Clause 31; and

iii. Operation and maintenance expenses for one month.

5.10.2 Also, in accordance with the TERC MYT Regulations, 2015, the interest on the working capital requirement considered is SBI Base Rate plus 300 basis points as on 1st April of the year for which tariff is determined.

5.10.3 Accordingly, the Petitioner in accordance with TERC MYT Regulations, 2015, has calculated the interest on working capital for Distribution business as shown in the table below:

Table 84: Interest on Working Capital as submitted by Petitioner for Distribution (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Receivables for 2 months	117.20	140.39	186.17	223.46
O&M Expenses for one month	16.91	15.96	17.23	19.77
Maint Spares @ 15% of O&M Expenses	30.43	28.73	62.04	71.18
Total Working Capital Requirement	164.54	185.09	265.45	314.41
Rate of Interest (%)	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	18.35	19.25	28.00	38.99

Commission's Analysis and Ruling

5.10.4 The Commission has computed the interest on working capital as per principles specified in TERC MYT Regulations, 2015. Further, Regulation 30 of TERC MYT Regulations, 2015 specifies for consideration of fixed cost for computation of receivables. As per Regulations 31 (III) of TERC MYT Regulations 2015, the interest rate for computing IoWC is considered as the weighted average SBI Base plus 300 basis points as on 1st April of the year for which tariff is determined. In view of the above, interest on working capital for Distribution business approved for FY 2020-21 to FY 2023-24 is shown in the following Table:

Table 85: Interest on working Capital for distribution business as approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Receivables for 2 months	104.67	117.05	143.43	160.36
O&M Expenses for one month	16.87	17.66	18.54	19.63
Maint Spares @ 15% of O&M Expenses	30.36	31.79	33.38	35.34
Total Working Capital Requirement	151.89	166.51	195.36	215.33
Rate of Interest (%)	11.15%	10.40%	10.55%	12.40%
Interest on Working Capital	16.94	17.32	20.61	26.70

5.11 Return on Equity and Tax on Return on Equity

Petitioner's Submission

5.11.1 The Petitioner submitted that the Regulation 26 of the TERC MYT Regulations, 2015 specifies for Return on Equity (RoE) @ 15.5% on equity base.

"26. Return on Equity:

Return on equity shall be computed in rupee terms, on the equity base determined in accordance with Clause 21.

Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission/distribution system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations and run of river generating station with pondage.”

5.11.2 Further, it has submitted that the amount of equity base to be considered for calculation of return has been considered based on the relevant Regulations 21 of TERC MYT Regulations, 2015.

“21. Debt-Equity Ratio:

I. For a project declared under commercial operation on or after the date of publication of this regulation on the Official Gazette, the debt-equity ratio would be considered as 70:30 as on COD. If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan:

Provided that:

- i. where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:*
- ii. the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:*
- iii. any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt : equity ratio.”*

5.11.3 Also, the Petitioner has stated that the Commission in its past orders had considered equity base for the transmission and distribution business as 30% of the Gross Fixed Asset Value and as such the same is considered here for the purpose of calculation of RoE.

5.11.4 Accordingly, the Equity fund of TSECL is calculated after allocating equity fund of TPECL in the Gross fixed assets ratio among generation, transmission and distribution business. After that equity fund of distribution business is allocated based on gross fixed assets ratio

5.11.5 Based on the above submission, the Return on Equity claimed by the Petitioner is outlined in the Table below:

Table 86: Calculation of RoE on Pre-tax basis as per TSECL (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Average GFA	680.90	803.00	843.00	1,063.00
Normative Equity (30% of GFA)	204.27	240.90	252.90	318.90
Rate of Return (%)	15.50%	15.50%	15.50%	15.50%
Return on Equity	31.66	37.34	39.20	49.43

Commission's Analysis and Ruling

5.11.6 Regulation 26 of TERC MYT Regulations, 2015 specifies for computation of Return on Equity for Control period. Further, Regulation 21 of TERC MYT Regulations, 2015 specifies for computation debt-equity and limited the amount of equity to 30% of GFA after excluding the consumer contribution or grant.

5.11.7 The Commission in previous Orders has adopted a principle for computation of Regulatory equity, in absence of assets register and after considering the consumer contribution/grant. For computing the equity capital, the Commission has considered the same principle in the present Order.

5.11.8 Accordingly, the equity capital has been computed as 30% of Gross Fixed assets after excluding consumer contribution/grant. However, the segregated details of consumer contribution/grant are not available at this stage before the Commission, hence, the Commission applies the uniform percentage of consumer contribution/grant across generation, transmission and distribution business for FY 2020-21 and FY 2021-22. Also, the derived capital grants towards GFA of FY 2021-22 has been considered for FY 2022-23 and FY 2023-24 for projection purpose. The contribution of Capital Grants towards GFA from FY 2022-23 and FY 2023-24 will be reviewed by the Commission at the time of final true-up based on the audited accounts.

5.11.9 The detailed calculation of Equity base as approved by the Commission is outlined in the following table:

Table 87: Equity Base for Distribution for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
As per Balance Sheet of TSECL				
GFA	1,513.66	1,530.54		
CWIP	905.13	1,097.26		
Capital Grant	1,301.24	1,423.95		
Capital Grant towards GFA	814.30	829.37		
Capital Grant towards GFA (%)	53.80%	54.19%	54.19%	54.19%
Calculation of Equity Base of Transmission Business				
Opening GFA	695.32	695.61	702.15	783.15
Closing GFA	695.61	702.15	783.15	1,143.15
Average	695.47	698.88	742.65	963.15
Normative Equity (30% of GFA)	208.64	209.66	222.80	288.95
Equity base for RoE calculation	96.40	96.05	102.07	132.37

5.11.10 Based on the approach as adopted by the Commission, the approved Equity base of Distribution business is considered for calculation of Return on Equity. Since, no tax payment is considered for FY 2020-21 and FY 2021-22, the Commission has considered the rate of Return on Equity as 15.50% as per TERC MYT Regulations, 2015.

5.11.11 The approved Return on Equity is calculated as per Regulations 26 and 27 of

TERC MYT Regulations, 2015 and is outlined in the following table:

Table 88: Return on Equity for Control Period for Distribution Business as approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Equity Base for the year	96.40	96.05	102.07	132.37
Rate of Return (%)	15.50%	15.50%	15.50%	15.50%
Return on Equity	14.94	14.89	15.82	20.52

5.12 Non-Tariff Income

Petitioner's Submission

5.12.1 TSECL submitted that the other income of TSECL covers mainly interest earned on fixed deposits made in various banks and as detailed under the head above, and other miscellaneous income like sale of scrap, sale of tender, meter rent, etc. These incomes are being separately booked under other income category.

5.12.2 TSECL submitted the Non-tariff income for distribution business for FY 2020-21 to FY 2023-24 as shown in the following Table:

Table 89: Non-Tariff Income as per Petitioner for FY 2020-21 to FY 2023-24(Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Non-tariff Income	27.48	44.59	44.59	44.59

Commission's Analysis and Ruling

5.12.3 As per Regulations 23 of TERC MYT Regulations, 2015, Non-Tariff income is required to be deducted to arrive at the Annual Fixed Charges of the Distribution business.

5.12.4 The Petitioner has provided the details of consolidated amount of the Non-Tariff Income without providing break-up of the same component wise and has reconciled the same with the available audited. The Commission, as per the approach adopted in previous Orders, approves the Non-Tariff Income of Distribution function as proposed by the Petitioner for the purpose of truing up of FY 2020-21 and FY 2021-22.

5.12.5 For FY 2022-23 and FY 2023-24, the Commission approves the Non-tariff income equivalent to approved for FY 2021-22. The same shall be allowed on actual basis at time of truing up, subject to prudence check.

5.12.6 Accordingly, the Non-tariff income approved by the Commission is shown in the following Table:

Table 90: Non-Tariff Income for FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Non-tariff Income	27.48	44.59	44.59	44.59

5.13 Sharing of Controllable Factor

Commission's Analysis and Ruling

5.13.1 Regulation 10 (VI) of TERC MYT Regulations, 2015 specifies the controllable parameters for distribution business, which includes the O&M Expenses, Interest on Working Capital and T&D Losses. Further, Regulation (VII) of TERC MYT Regulations, 2015 specifies the treatment of such controllable parameter on account of sharing of efficiency gains and losses as under:

“The financial gains by a generating company or the Transmission or the Distribution licensee, on account of controllable parameters shall be shared between generating company or the Transmission or the Distribution licensee and the beneficiaries on monthly basis with annual reconciliation. The financial gains computed shall be shared in the ratio of 60:40 between generating company or the Transmission or the Distribution licensee as the case may be, and the beneficiaries.”

O&M Expenses

5.13.2 As per Regulations 10 (VI) (I) (i) of MYT Regulations 2015, the variation in O&M expenses will be considered as a Controllable parameter for distribution business and only financial gain has to be shared with the consumers in the ratio of 60:40 as per Regulation 10 (VI) of TERC MYT Regulations, 2015. However, with respect to any loss, the same has to be borne by the licensee due to their inefficiencies.

5.13.3 The Commission in earlier Section of this Order has allowed O&M Expenses on normative basis. Since audited accounts for FY 2020-21 and FY 2021-22 are available, the Commission has considered the sharing of gains for O&M Expenses. It is observed that actual O&M expenses for FY 2021-22 are lower than normative expenses. Hence, the Commission has considered the sharing of gains for FY 2021-22 and such sharing of gains shall be deducted from the allowed normative expenses so as to share with the consumers.

5.13.4 The sharing of gains for O&M expenses as shown in the following Table

Table 91: Sharing of efficiency gains for Interest on Working capital for Distribution for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21				FY 2021-22			
	Normative	Actual	Gain / (Loss)	Sharing of Gain / (loss)	Normative	Actual	Gain / (Loss)	Sharing of Gain / (loss)
O&M expenses	202.38	202.90	(0.52)	-	211.96	191.56	20.40	8.16

Interest on Working capital

5.13.5 As per Regulations 10 (VI) (I) (f) of MYT Regulations 2015, the variations in working capital requirements will be considered as a Controllable parameter for distribution

business and only financial gain has to be shared with the consumers in the ratio of 60:40 as per Regulation 10 (VI) of TERC MYT Regulations, 2015.

5.13.6 The Commission in earlier Section of this Order has allowed Interest on Working capital on normative basis. Since audited accounts for FY 2020-21 and FY 2021-22 are available, the Commission has considered the sharing of gains for Interest on Working capital comparing the normative and actual interest on working capital loan. However, TSECL has not provided any bifurcation of the interest on loan as reflected in the audited accounts and therefore the Commission would like to show its discontentment on the approach of TSECL and the data quality. Also, TSECL did not submit the details of any actual interest on working capital loans for FY 2020-21 and FY 2021-22 in response to the query of the Commission. Hence, the Commission has considered the actual interest on working capital as Nil and undertaken the sharing of gains. Such sharing of gains shall be deducted from the allowed normative expenses so as to share with the consumers.

5.13.7 Based on the above, the Commission has considered the sharing of gains for Interest on Working capital as shown in the following Table:

Table 92: Sharing of efficiency gains for Interest on Working capital for Distribution for FY 2020-21 and FY 2021-22 (Rs. Crore)

Particulars	FY 2020-21				FY 2021-22			
	Normative	Actual	Gain / (Loss)	Sharing of Gain / (loss)	Normative	Actual	Gain / (Loss)	Sharing of Gain / (loss)
Interest on working Capital	16.94	-	16.94	6.77	17.32	-	17.32	6.93

T&D Losses

5.13.8 Further, the Commission notes that, actual T&D losses for TSECL are much higher than target specified for the respective financial year. Hence, the Commission decides to reduce the power purchase cost on account of higher T&D losses. Hence, the Commission disallows the power purchase cost for FY 2020-21 and FY 2021-22 for truing up purpose. Based on the approved own generation, sales and energy balance for FY 2020-21 and FY 2021-22, the Commission has computed additional energy purchase as shown in the following table:

Table 93: Additional Energy purchase on account of increase in T&D losses for FY 2020-21 and FY 2021-22 (in MU)

Sl. No.	Particulars	Derivation	FY 2020-21	FY 2021-22
1	Energy sales within State	A	982.33	1,099.22
2	Target T&D Loss	B	20.00%	20.00%
3	Target Energy at State Bus	$C = A / (1-B)$	1,227.91	1,374.02
4	Actual Energy purchased at State Periphery as given in Energy Balance	D	1,461.76	1,553.82
5	Additional Energy Purchase	$E = D - C$	233.85	179.79

5.13.9 Accordingly, the Commission has computed the cost towards such additional energy purchase for FY 2020-21 and FY 2021-22 and the same is disallowed from the ARR approved for these years as shown in the following Table:

Table 94: Cost of additional energy purchase for FY 2017-18 to FY 2020-21

Particulars	Units	Derivation	FY 2020-21	FY 2021—22
Fuel cost	Rs. Crore	A	130.12	160.18
Net energy generated (from fuel based plants)	MU	B	534.21	563.65
Total Power Purchase cost	Rs. Crore	C	988.37	1,108.23
Total power purchase quantum	MU	D	2,399.73	2,625.48
Total fuel and power purchase cost	Rs. Crore	E=A+C	1,118.48	1,268.41
Total energy quantum (own generation from fuel-based plants + power purchase)	MU	F=B+D	2,933.94	3,189.13
Average fuel and power purchase cost	Rs./kWh	G=(E×10)/F	3.81	3.98
Additional energy purchase	MU	J	233.85	179.79
Cost of additional energy purchase	Rs. Crore	K = I×J/10	89.15	71.51

5.14 Summary of ARR for FY 2020-21 to FY 2023-24

5.14.1 The Commission has approved the Annual Revenue Requirement for each Year of the MYT Control Period i.e., from FY 2020-21 to FY 2022-23 vide order dated 02 September 2022 as outlined below:

Table 95: Aggregate Revenue Requirement for Distribution Business approved for FY 2020-21 to FY 2022-23 in Tariff Order dated 02.09.2022 (Rs. Crore)

Sr. No.	Particulars	Approved in Tariff Order dated 02 September 2022		
		FY 2020-21	FY 2021-22	FY 2022-23
1.	Power Purchase Cost	988.37	1,086.42	958.56
2.	Inter State Transmission Charges	51.93	135.44	137.40
3.	Intra State Transmission Charges	32.88	34.21	35.84
4.	Cost of State own/ TSECL Generation	227.50	256.12	503.30
5.	O&M Expenses	202.38	211.96	222.53
6.	Depreciation	7.39	7.51	7.66
7.	Interest on Term Loans & Fin. Charges	7.41	6.49	6.17
8.	Return on Equity	19.12	19.33	19.63
9.	Interest on Working Capital	16.94	16.88	19.38
10.	Reduction in power purchase on account of higher T&D Losses	(83.05)	-	-
11.	Gross ARR	1,470.86	1,774.35	1,910.46
12.	Less: Non-Tariff Income (Excluding Government Grant)	30.04	33.88	43.80
13.	Net ARR	1,440.82	1,740.47	1,866.67

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- 5.14.2 Based on the approval of various components of the ARR, the Commission has undertaken the truing up exercise for FY 2020-21 and FY 2021-22as elaborated above in accordance with the tariff Regulations and justification, the Commission approves the Aggregate Revenue requirement of Distribution business.
- 5.14.3 Considering the FY 2020-21 and FY 2021-22, since the audited accounts were available, the Commission has calculated sharing of gains on the controllable factor as specified in Regulations 10 (VII) of MYT Regulations 2015.
- 5.14.4 Also, as specified in Regulations 10 (VI) (i) (e) of MYT Regulations, 2015, the Commission has disallowed the power purchase cost proportionate to incremental T&D loss for FY 2020-21 and FY 2021-22.
- 5.14.5 Also, the Commission has undertaken the exercise for determination of ARR for FY 2023-24 along with Annual Performance Review for FY 2022-23 based on approval of various ARR Components, as elaborated above in accordance with the tariff Regulations and justification.
- 5.14.6 Based on the above analysis, the submitted and approved Aggregate Revenue Requirement for FY 2020-21 to FY 2023-24 is shown in the Table below:

Table 96: Aggregate Revenue Requirement for FY 2020-21 to FY 2023-24 of Distribution business approved by the Commission (Rs. Crore)

Sr. No.	Particulars	TSECL Petition				Approved by the Commission			
		FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	Power Purchase Cost	990.23	1,118.38	1,117.38	1,239.43	988.37	1,108.23	1,082.70	1,218.59
2.	Inter State Transmission Charges	52.24	142.92	123.22	126.91	51.93	142.92	124.43	116.64
3.	Intra State Transmission Charges	47.02	61.09	53.91	59.12	29.81	30.66	32.64	33.86
4.	Cost of State own/ TSECL Generation	183.68	211.58	475.41	611.13	166.02	198.06	379.14	494.16
5.	O&M Expenses	202.90	191.56	206.80	237.27	202.38	211.96	222.53	235.60
6.	Depreciation	6.71	10.08	10.58	13.34	6.85	10.29	10.80	13.56
7.	Interest on Term Loans & Fin. Charges	7.41	7.18	7.41	7.67	7.41	7.18	7.41	7.67
8.	Return on Equity	31.66	37.34	39.20	49.43	14.94	14.89	15.82	20.52
9.	Interest on Working Capital	18.35	19.25	28.00	38.99	16.94	17.32	20.61	26.70
10.	Reduction in power purchase on account of higher T&D Losses	-	-	-	-	(89.15)	(71.51)	-	-
11.	Sharing of (Gains)	-	-	-	-	(6.77)	(15.09)	-	-
12.	Gross ARR	1,540.18	1,799.37	2,061.92	2,383.29	1,388.72	1,654.91	1,896.08	2,167.31
13.	Less: Non-Tariff Income (Excluding Government Grant)	27.48	44.59	44.59	44.59	27.48	44.59	44.59	44.59
14.	Net ARR	1,512.70	1,754.78	2,017.33	2,338.70	1,361.25	1,610.32	1,851.49	2,122.72

5.15 Revenue from Sale of Power

Petitioner's Submission

Revenue from Intra-State sales

- 5.15.1 TSECL supplies power both within the State to the consumers of Tripura at the retail supply tariff notified by TERC as well as to other States based on bilateral contracts or surplus availability from time to time. Also, the power within Tripura is completely met (except during peak period) before supplying the surplus power to other States.
- 5.15.2 TSECL has submitted the detailed break-up of the actual revenue for FY 2020-21 and FY 2021-22. The revenue for FY 2022-23 and FY 2023-24 has been projected based on the average existing tariff of FY 2022-23 multiplied by total sales as per the Energy Balance table. The revenue submitted by the Petitioner is shown in the following Table:

Table 97: Revenue for FY 2020-21 to FY 2023-24(Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Revenue from Intra-State Sale of Power	573.80	648.02	613.07	628.74

Revenue from Inter-State sales

- 5.15.3 The Petitioner has been selling power to the States of Manipur and Mizoram and Export to Bangladesh which is considered as inter-State sale of power.
- 5.15.4 The actual revenue from such inter-state sales has been submitted by Petitioner for FY 2020-21 and FY 2021-22. For FY 2022-23 and FY 2023-24, the same has been projected based on escalation as shown in the following Table:

Table 98: Revenue from Inter-State sales from FY 2020-21 to FY 2023-24(Rs. Crore)

Particulars	Units	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Sale of Power	MUs	1,456.13	1,556.45	1,671.25	1,969.73
Revenue from Sale of Power	Rs. Crore	809.50	858.12	900.31	997.94

Revenue Subsidy from Government of Tripura

- 5.15.5 TSECL has claimed subsidy received from Government of Tripura as Income. TSECL has claimed the actual Revenue as per the audited accounts of FY 2020-21 and FY 2021-22.
- 5.15.6 Further TSECL submitted that the projected figure is based on the budget estimated of State Government to provide subsidy in the existing tariff regime.

Table 99: Revenue subsidy from FY 2020-21 to FY 2023-24 (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Revenue Subsidy	54.21	54.30	50.00	50.00

5.15.7 Based on the revenue from sale of Intra-State and Inter-State Power as well as Revenue from Subsidy from Government of Tripura, the total revenue claimed by Petitioner for FY 2020-21 to FY 2023-24 is outlined in the table below:

Table 100: Total Revenue from FY 2020-21 to FY 2023-24 as per Petitioner (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Revenue from Intra-State Sale of Power	573.80	648.02	740.76	818.04
Revenue subsidy	54.21	54.30	50.00	50.00
Revenue from Inter-State Sale of Power	809.50	858.12	900.31	997.94
Total Revenue	1,437.51	1,560.44	1,691.07	1,865.98

Commission's Analysis and Ruling

5.15.8 The Commission notes that audited annual accounts for FY 2020-21 and FY 2021-22 are available. Hence, the Commission has considered the revenue from inter-state sale of power, intra-state sale of power and revenue from government subsidy based on audited annual accounts for the respective years.

5.15.9 With respect to Revenue from Intra-State Sales, for FY 2022-23 and FY 2023-24, the Commission has recomputed the Revenue on the sales approved in this order, based on the existing tariff as approved in previous tariff order.

5.15.10 With respect to Revenue from Inter-State Sales, as regards to FY 2022-23 and FY 2023-24, the Commission has considered the sales approved in the Energy balance of this Chapter as submitted by TSECL. The rate of sale of power to Bangladesh, Manipur and Mizoram has been considered based on the existing contract entered by TSECL. Further, the rate of sale of power for IEX has been considered based on prevailing market prices.

5.15.11 The revenue from government subsidy has been considered as submitted by the Petitioner. In view of the above, the revenue from sale of power considered by the Commission for the Control period is shown in the following Table:

Table 101: Total Revenue from FY 2020-21 to FY 2023-24 approved by the Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
From Intra-State Sale of Power	573.80	648.02	786.25	869.48
Revenue subsidy	54.21	54.30	50.00	50.00
From Inter-State Sale of Power	809.50	858.12	990.89	1,160.57
Total Revenue	1,437.51	1,560.44	1,827.15	2,080.05

5.16 Revenue Gap/(surplus)

Petitioner's Submission

5.16.1 TSECL has considered the revenue gap at existing tariff. Further the gap is

calculated considering the revenue from retail and bulk sales and the total cost of distribution business for the respective FY 2020-21 to FY 2023-24.

- 5.16.2 Based on the proposed Aggregate Revenue Requirement and total Revenue for FY 2020-21 to FY 2023-24, TSECL has proposed the revenue gap as shown in Table below:

Table 102: Revenue Gap/(Surplus) for FY 2020-21 to FY 2023-24 considered by the TSECL (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Net ARR	1,512.70	1,754.78	2,017.33	2,338.70
Less: Total Revenue	1,437.51	1,560.44	1,691.07	1,865.98
Revenue Gap/(surplus)	75.19	194.34	326.26	472.72
Gap/(Surplus) already considered	3.31	(46.65)	-	-
Net Revenue Gap/(Surplus)	71.89	240.99	326.26*	472.72

*-calculation error by not considering the Gap already considered in past order of Rs. 79.28 Crore

- 5.16.3 The Total Revenue gap as proposed by TSECL, based on the revised submission considering the replies to data gaps, including the approved regulatory asset pending for liquidation as per past orders is outlined as below:

Table 103: Total Revenue Gap considered by TSECL (Rs. Crores)

Sl. No.	Particulars	Amount
1	ARR for FY 2023-24	2,338.70
2	Revenue from Sale of Power	1,865.98
3	Gap/(surplus)	472.72
4	Approved Regulatory Asset as per Tariff Order FY 2022-23	60.43
5	Carrying cost on above said Regulatory asset @12.40%	7.49
6	True-up for FY 2020-21	71.89
7	True-up for FY 2021-22	240.99
8	Provisional True-up for FY 2022-23	247.08
9	Total Gap /(surplus)	1,100.59

Commission's Analysis and Ruling

- 5.16.4 Based on the approved Aggregate Revenue Requirement and total Revenue for FY 2020-21 to FY 2023-24, the Commission determines the revenue gap as shown in Table below:

Table 104: Revenue Gap/(Surplus) for FY 2020-21 to FY 2023-24 approved by Commission (Rs. Crore)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Net ARR	1,361.25	1,610.32	1,851.49	2,122.72
Less: Total Revenue	1,437.51	1,560.44	1,827.15	2,080.05
Revenue Gap/(surplus)	(76.27)	49.88	24.34	42.67

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Gap/(Surplus) already considered	3.31	(46.65)	79.28	-
Net Revenue Gap/(Surplus)	(79.57)	96.53	(54.94)	42.67

5.16.5 The Commission has computed the carrying cost considering the present revenue gap and revenue gap already considered in previous Tariff Order. Accordingly, the Commission has recalculated the carrying cost, based on the standalone gap approved in this order:

Table 105: Calculation of Carrying cost as approved by Commission (Rs. Crores)

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Opening Gap	-	(79.57)	16.96	22.45
Addition	(79.57)	96.53	5.49	42.67
Recovery	-	-	-	65.12
Closing Gap	(79.57)	16.96	22.45	-
Rate of Interest (%)	11.15%	10.40%	10.55%	12.40%
Carrying cost	(4.44)	(3.26)	2.08	1.39
Total Carrying cost	(4.22)			

5.16.6 Accordingly, the Total Revenue gap approved by the Commission, including the approved regulatory asset as per past orders, is outlined as below:

Table 106: Total Revenue Gap including Past Regulatory assets approved by Commission (Rs. Crores)

Sr. No	Particulars	Petition	Analysis
1	ARR for FY 2023-24	2,338.70	2,122.72
2	Revenue from Sale of Power	1,865.98	2,080.05
3	Gap/(surplus)	472.72	42.67
4	Approved Regulatory Asset as per Tariff Order FY 2022-23	60.43	60.43
5	Carrying cost on above said Regulatory asset @12.40%	7.49	-
6	True-up for FY 2020-21	71.89	(79.57)
7	True-up for FY 2021-22	240.99	96.53
8	Provisional True-up for FY 2022-23	247.08	(54.94)
9	Carrying cost	-	(4.22)
10	Total Gap /(surplus) (A)	1,100.59	60.89
11	ARR for FY 2023-24	2,338.70	2,122.72
12	Less: Revenue from Inter-State Sales	997.94	1,160.57
13	Less: Revenue from Subsidies	50.00	50.00
14	Net ARR for determination of Tariff (B)	1,290.76	912.15
15	Less: Revenue at existing Tariff	818.04	869.48
16	Revenue Gap/(surplus)(C)	472.72	42.67
17	Consolidated ARR including Past revenue Gaps (A)+(B)- (C)	1,918.63	930.37

5.16.7 The treatment of this revenue gap is elaborated in the subsequent chapter of this Order.

6 Directives of the Commission

- 6.1.1 The Commission in the last tariff order dated September 02, 2022 has issued multiple directions to TSECL. TSECL, in its Tariff Petition has not submitted any compliance status of the directives given by the Commission.
- 6.1.2 The Commission directs TSECL to submit the compliance status of the directives given by the Commission in order dated September 02, 2022 within 3 months of the date of the order. Failure to comply with the directions of the Commission will compel to take appropriate action as per provision of the Act.
- 6.1.3 The Commission issues following directions for compliance by TPGL and TSECL
- 6.1.3.1 TPGL should immediately work out for improvement of performance of existing power plants to avoid any shortages as demand is growing up rapidly in the state of Tripura. The Commission feels that TPGL should work as a commercial utility as the power rates in open markets are touching roof of caps and can take advantage of the same. The Commission further notes that hydro power which is installed for 40 years back can have a new life with R&M. The hydro power is the cleanest power and the GHPP need to be brought back with full stream as to avoid purchase of costly power from the market.
- 6.1.3.2 The Commission hereby directs all three Companies to independently work so that consumers get quality of power besides reliability for which consumer rightfully expects to get the economical services in lieu of the payments and also in the reliability and efficiency.
- 6.1.3.3 There should be a consumer awareness programmes periodically for energy economic efficiency and conservations. Tripura uses bulk of its power for lighting and fan loads and therefore safe use of the system is also to be one of the priorities for the service providers. Electrical inspectors should also inspect regularly to avoid fatalities/injuries due to electrical accidents.
- 6.1.3.4 The Commission is setting up one monitoring cell for Consumer Grievances for proactive interactions with stakeholders.

7 Tariff Principles and Design

7.1 Tariff Proposal for FY 2023-24

Petitioner's submission

- 7.1.1 TSECL submitted the cumulative revenue gap of Rs. 1100.60 Crore for FY 2023-24. TSECL submitted that the revenue at existing tariff would not be sufficient enough to meet the annual revenue requirement of each of the years during control period. Besides, when the revenue gap carried over from previous years is considered, it becomes imperative that there is a need to increase the existing tariff to make it sufficient enough to meet the requirement and recover the pending gap of past years which has accumulated over the past few years.
- 7.1.2 Since this is a high amount calculated and includes gap of a long period of more than 10 years, TSECL has not proposed the exact tariff hike at this stage since the quantum of approved gap over such a long period cannot be estimated at this stage. However, in order to give an idea of the tariff hike that may be required, TSECL is showing the average time taken to recover the proposed gap in different scenarios of tariff hike.
- 7.1.3 The Commission is requested to consider one of these scenarios depending upon the approved amount of regulatory assets and an appropriate time period considered justified:

Table 107: Scenario proposed by Petitioner to recover Revenue Gap

Particulars	Scenarios	10% average hike across all categories	20% average hike across all categories	30% average hike across all categories
Additional Revenue at Proposed Tariff in FY 2023-24		81.8	163.6	246.4
Time Taken for Bridging Regulatory Gap	years	13.45	6.72	4.5

Commission's Analysis and Ruling

- 7.1.4 The Commission in this Order has undertaken the truing up for FY 2020-21 and FY 2021-22 and APR for FY 2022-23 and computed the revenue gap arising out of such truing up. Such revenue gap has been carried forward to consider for recovery during FY 2023-24.
- 7.1.5 Further, the Commission has determined the Aggregate Revenue Requirement for FY 2023-24. The revenue gap/(surplus) for the said period is determined in the previous Chapter of this Order. Such revenue gap/(surplus) has been carried forward and mechanism of the recovery of the same is described in the subsequent section of this order.
- 7.1.6 The cumulative revenue gap approved by the Commission for FY 2023-24 as Rs.

60.89 Crore as described in the previous Chapter.

7.1.7 For full recovery of this Gap, there would be increase in consumer tariff by 7%. The Commission decides to recover this revenue gap through adequate tariff hike in fixed charges and energy charges. The Commission does not intend to create any regulatory asset and allows TSECL to recover this gap through the increase in tariff.

7.1.8 Accordingly, the Commission approves the Average Cost of Supply for FY 2023-24 as shown in the following Table:

Table 108: Average Cost of Supply for FY 2023-24 approved by the Commission

Sl. No.	Particulars	Approved for FY 2023-24
1	Net ARR for FY 2023-24 for recovery through Tariff (excluding Revenue from Inter-State sale) (Rs. Crore)	930.37
2	Average Cost of Supply (Rs./kWh)	6.94

7.1.9 The Commission has considered the category wise tariff increase for fulfilling the total tariff hike of 7%. The Commission has attempted for rationalizing tariff hike across all categories. The proposed tariff for FY 2023-24 is discussed in subsequent part of this Chapter.

7.2 Wheeling Charges

Petitioner's submission

7.2.1 No submission has been made by TSECL with respect to Wheeling Charges.

Commission's Analysis and Ruling

7.2.2 TERC MYT Regulations, 2015 specifies that distribution licensee should segregate the accounts of licensed business into wheeling business and retail supply business. The Commission notes that neither TSECL has not segregated its account in wheeling and retail supply business nor proposed any wheeling charges computation in the Petition. Such lackluster approach may not be appreciable and it is directed to TSECL to provide the complete tariff petition as per the provisions of the MYT Regulations, as applicable.

7.2.3 Considering the approach as adopted in the last tariff order, the Commission considers the similar allocation matrix which are also specified in other SERC's Tariff Regulations whereby the ARR has been segregated into wheeling and retail supply business based on this allocation matrix and wheeling charges has been determined thereafter. The Allocation matrix considered by the Commission is outlined in the following table:

Table 109: Allocation Matrix for segregation of Wire and Supply business

Sl. No.	Particulars	Allocation Ratio	
		Wire	Retail Supply
1	Power Purchase Cost	0%	100%
2	Inter State Transmission Charges	0%	100%
3	Employee Cost	60%	40%
4	A&G Expenses	50%	50%
5	R&M Expenses	90%	10%
6	Depreciation	90%	10%
7	Interest and Finance Charges	90%	10%
8	Return on Equity	90%	10%
9	Interest on Working Capital	10%	90%
10	Less: Non-Tariff Income	0%	100%

7.2.4 Accordingly, the Commission segregated the ARR approved for Distribution business for FY 2023-24 into ARR for Wheeling business and retail supply business. Further, as regards cost of generation, the Commission has considered this cost as part of power purchase cost and allocated to retail supply business only. The segregated ARR for FY 2023-24 approved by the Commission is shown in the following Table:

Table 110: Segregation of ARR for Distribution Business as approved by the Commission (Rs. Crore)

Sl. No.	Particulars	ARR- FY 2023-24		
		Wire	Retail Supply	Total
1	Power Purchase Cost	-	1,218.59	1,218.59
2	Inter State Transmission Charges	-	116.64	116.64
3	Intra State Transmission Charges	33.86	-	33.86
4	Cost of State own/ TSECL Generation	-	494.16	494.16
5	Employee Cost	115.43	76.95	192.39
6	A&G Expenses	8.46	8.46	16.91
7	R&M Expenses	23.68	2.63	26.31
8	Depreciation	12.20	1.36	13.56
9	Interest and Finance Charges	6.91	0.77	7.67
10	Return on Equity	18.47	2.05	20.52
11	Interest on Working Capital	2.67	24.03	26.70
12	Gross ARR	221.67	1,945.64	2,167.31
13	Less: Non-Tariff Income (Excluding Government Grant)	-	44.59	44.59
14	Net ARR	221.67	1,901.05	2,122.72

7.2.5 Further, for computation of wheeling charges, the Commission approves the wheeling charges for FY 2023-24 as shown in the following Table:

Table 111: Wheeling Charges for FY 2023-24as approved by the Commission

Sl. No.	Particulars	UoM	FY 2023-24
1	Distribution Cost	Rs. Crore	221.56
2	Total Energy input into Distribution System	MU	1,626.19
3	Distribution cost for wires business for 33 kV voltage level (assuming 35% of cost at 33 kV)	Rs. Crore	77.54
4	Wheeling Charges	Rs./kWh	0.48

7.2.6 The Wheeling charges determined above are applicable for use of the distribution system of TSECL by other licensees or generating companies or captive power plants or consumers/users who are permitted open access at 33 kV voltage level under relevant regulations of the Commission.

7.3 Cross Subsidy

7.3.1 An element of cross-subsidy is inherent in the present tariff structure. The Commission has continued with the tariff approved in previous Tariff Order. The tariffs of different consumer categories in relation to the approved ACoS is such that the tariffs for some categories of consumers are higher than the ACoS while the tariffs for other categories are lower than the ACoS.

7.3.2 However, the cross-subsidy considering the similar tariff is more or less rationalised as shown in the Table below, it is directed to the Petitioner to provide the proper road map for reduction in cross subsidy in line with the provisions of the Electricity Act and National Tariff Policy in the Tariff Petition to be submitted in the future.

Table 112: ABR/ACoS for FY 2032-24 as approved by the Commission

Category of Consumers	FY 2023-24				
	Sales	Revenue	Average Billing Rate (ABR)	Average Cost of Supply (ACoS)	Cross Subsidy
	(MU)	(Rs. Crore)	(Rs./kWh)	(Rs./kWh)	%
Kutir Jyoti	22.38	7.25	3.24	6.94	47%
Domestic	746.31	468.86	6.28	6.94	91%
Commercial	76.54	62.23	8.13	6.94	117%
Irrigation	62.79	39.51	6.29	6.94	91%
Water Works	136.41	103.12	7.56	6.94	109%
Industries	62.02	56.24	9.07	6.94	131%
Tea, Coffee & Rubber Plants	7.98	6.57	8.23	6.94	119%
Bulk Supply	126.06	104.37	8.28	6.94	119%
Public Lighting	11.49	8.44	7.34	6.94	106%
Mobile Towers	89.21	73.86	8.28	6.94	119%
Total	1,341.19	930.45	6.94	6.94	100%

7.4 Cross-Subsidy Surcharge

Petitioner's Submission

- 7.4.1 No submission has been made by TSECL with respect to Cross Subsidy Surcharge (CSS).

Commission Analysis and Ruling

- 7.4.2 As per Section 2(47) of the said Electricity Act, 2003 defines "Open Access", while the Section 42 of the said Act inter-alia mandates the Distribution Licensee to provide Open Access to eligible consumers, subject to payment of "Cross Subsidy Surcharge" and other applicable open access charges. Also, as per Tripura Electricity Regulatory Commission (Terms and Condition of Open Access) Regulation, 2010, consumers with a connected load of 1 MW and above shall be allowed open access against which the open access charges are required to be paid by such consumers.
- 7.4.3 The Commission notes that TSECL has not proposed any CSS computation in the Petition. Such lackluster approach may not be appreciable and it is directed to TSECL to provide the complete tariff petition as per the provisions of the MYT Regulations, as applicable.
- 7.4.4 The Commission observes that Hon'ble APTEL in its Judgment dated March 24, 2015 in Appeal No. 103 of 2012 had stipulated the methodology for determination of tariff and cross-subsidy with reference to the VCoS. However, at present, the voltage-wise losses are not available and the actual voltage-wise losses would be available only after appropriate metering and measurement of separate losses undertaken by TSECL. Further, the framework prescribed by the Hon'ble APTEL requires that the category-wise tariffs be determined on the basis of ACoS as well as VCoS, and also the tariffs for all categories should be within $\pm 20\%$ of the overall ACoS for the Distribution Licensee.
- 7.4.5 The Commission feels that since the segregation of assets is still pending with the various function and in the absence of a realistic assessment of the voltage-wise losses, the determination of VCoS and thereafter CSS, may lead to incorrect conclusions. Further, there is no denying that the cost of supply at higher voltages, i.e., 220 kV, 132 kV, etc., will be lower than the cost of supply at lower voltages, i.e., LT, 11 kV, etc., on account of the lower distribution losses at higher voltages and non-utilisation of the assets at lower voltages for supplying electricity to the consumers at higher voltages.
- 7.4.6 As per the provisions of Section 42(2) of the Electricity Act 2003, the cross-subsidy surcharge needs to be based on the current level of cross subsidy. Accordingly, the consumers who opted for open access needs to be charged for the compensation of current level of cross subsidy which prevailed during the period and in order to avoid the burden of the same getting passed on other consumers who are with the Distribution Licensee

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- 7.4.7 Therefore, in this order, the Commission has determined category-wise tariffs on the basis of ACoS, while at the same time moving towards the philosophy that the tariffs for the consumers taking supply at higher voltages is lower than that for consumers taking supply at lower voltages. However, this objective cannot be achieved immediately till the submission of reliable data. The Commission, in earlier chapter of this Order, has already directed TSECL to segregate the voltage wise losses. In view of this, the Commission does not accept the methodology proposed by TSECL.
- 7.4.8 Also, the Central Government notified the revised National Tariff Policy on 28th January 2016 and has revised the “Surcharge Formula” as follows:

$$S = T - [C / (1 - L / 100) + D + R]$$

Where,

S is the Surcharge

T is the Tariff Payable by the relevant category of consumers including reflection the Renewable Purchase Obligation

C is the per unit weighted average cost of power purchase by the Licensee, including meeting the Renewable Purchase Obligation

D is the aggregate of transmission, distribution and wheeling charge applicable to the relevant voltage level.

L is the aggregate of transmission, distribution and commercial losses, expressed as a percentage applicable to the relevant voltage level

R is the per unit cost of carrying regulatory assets

Provided that the surcharge shall not exceed 20% of the tariff applicable to the category of the consumers

seeking open access.

- 7.4.9 Based on the above formula, the Commission has worked out the various components of CSS formulae based on the approved values of FY 202-23 and computed category wise CSS in accordance with the Tariff Policy 2016.

Computation of Cross Subsidy Surcharge for FY 2023-24:

- **Computation of Weighted Average cost of Power – “C”**

Computation of C is per unit weighted average cost of power purchase which is calculated based on the approved power purchase cost excluding PGCIL cost and including the cost of own generation. The detail calculation is provided as below:

Table 113: Calculation of C for computation of CSS for FY 2023-24

Particulars	FY 2023-24		
	MUs	Cost	Rs./kWh
Own Generation	702.81	494.16	7.03
Power Purchase	3,034.45	1,218.59	4.02
Total	3,737.25	1,712.75	4.58

- Computation of system Loss - “L”**

Computation of Lis the aggregate of transmission, distribution and commercial losses. The Commission notes that at present, the voltage-wise losses are not available and TSECL has made certain assumptions. The actual voltage-wise losses would be available only after appropriate metering and measurement of separate losses undertaken by TSECL. Further, the framework prescribed by the Hon'ble APTEL requires that the category-wise tariffs be determined on the basis of ACoS as well as VCoS, and also the tariffs for all categories should be within $\pm 20\%$ of the overall ACoS for the Distribution Licensee.

The Commission feels that being the first petition filed by TSECL based on the segregation of various function and in the absence of a realistic assessment of the voltage-wise losses, the determination of VCoS and thereafter CSS, may lead to incorrect conclusions. Accordingly, the overall system loss has been considered for computation of loss for the category of consumers and the Commission directs the Petitioner to provide the actual voltage wise loss for determination of CSS in future tariff petition submission.

The Approved wheeling losses of the whole distribution system and the transmission losses are used to arrive at the grossed up total system losses for the Petitioner which is shown in the following table:

Table 114: Computation of System Loss for FY 2023-24

Particulars	Loss (%)
Intra-State Transmission Loss	3.00%
Wheeling Loss	17.53%
Total System Loss	20.00%

- Computation of transmission, distribution and wheeling Charges – “D”**

The Component D is the aggregate of the Transmission and Wheeling charges as approved in the tariff order along (including PGCIL charges and intra-state) and is outlined in the following table:

Table 115: Computation of Transmission and wheeling charges per unit for FY 2023-24

Particulars	Unit	FY 2023-24
Inter-State Transmission Charges	Rs. Crores	116.64
Intra-State Transmission Charges	Rs. Crores	33.86
Total Transmission Charges	Rs. Crores	150.51

Particulars	Unit	FY 2023-24
Sales	Mus	1,341.19
Total Transmission Charges	Rs./kWh	1.12

- **Computation of Average Billing Rate 'T':**

The effective Average Billing Rate as per tariff approved for FY 2023-24 has been considered.

- **Determination of Cross Subsidy Surcharge 'S':**

The category wise CSS applicable to open access consumers arrived on consideration of the components ABR, C, L & D from the above referred respective sections is provided in the tables below:

Table 116: Cross Subsidy Surcharge for FY 2023-24 as approved by the Commission

Consumer Category	T (ABR)	C	WL	TL	L	D=WL + Tx	CSS Comp uted - a	20% of Tariff - b	CSS - Min (a,b)
	Rs./unit		%				Rs./unit		
Commercial									
<i>Semi-commercial: All units</i>	8.22	4.58	17.53%	3.00%	20.00%	1.12	1.37	1.64	1.37
<i>Three phase: All units</i>	8.66	4.58	17.53%	3.00%	20.00%	1.12	1.81	1.73	1.73
<i>Three phase Group</i>	8.74	4.58	17.53%	3.00%	20.00%	1.12	1.89	1.75	1.75
IRRIGATION									
<i>Upto 5 H.P.: All units</i>	5.48	4.58	17.53%	3.00%	20.00%	1.12	-	1.10	-
<i>Above 5 H.P.: All units</i>	6.71	4.58	17.53%	3.00%	20.00%	1.12	-	1.34	-
WATER WORKS: All units	7.56	4.58	17.53%	3.00%	20.00%	1.12	0.71	1.51	0.71
INDUSTRIAL									
<i>Upto 5 H.P.(E-R/5)</i>	6.79	4.58	17.53%	3.00%	20.00%	1.12	-	1.36	-
<i>Upto 5 H.P.(E-U/5)</i>	7.32	4.58	17.53%	3.00%	20.00%	1.12	0.47	1.46	0.47
<i>Above 5 - 20 H.P.</i>	8.69	4.58	17.53%	3.00%	20.00%	1.12	1.84	1.74	1.74
<i>Above 20 - 100 H.P.</i>	9.27	4.58	17.53%	3.00%	20.00%	1.12	2.42	1.85	1.85
<i>Above 100 H.P.</i>	9.50	4.58	17.53%	3.00%	20.00%	1.12	2.65	1.90	1.90
Tea, Coffee & Rubber garden	8.23	4.58	17.53%	3.00%	20.00%	1.12	1.38	1.65	1.38
BULK SUPPLY: All units	8.28	4.58	17.53%	3.00%	20.00%	1.12	1.43	1.66	1.43
PUBLIC LIGHTING									
Panchayat: All units	6.35	4.58	17.53%	3.00%	20.00%	1.12	-	1.27	-
Nagar Panchayat / Municipal Area: All units	7.85	4.58	17.53%	3.00%	20.00%	1.12	1.00	1.57	1.00
Special public utility	6.80	4.58	17.53%	3.00%	20.00%	1.12	-	1.36	-
Mobile Tower	8.28	4.58	17.53%	3.00%	20.00%	1.12	1.43	1.66	1.43

7.4.10 CSS determined above shall be applicable to consumer availing open access as per TERC (Terms and Condition of Open Access) Regulation, 2010, as amended from time to time.

7.5 Tariff Principles

7.5.1 The Commission is guided by the provisions of the EA 2003, National Tariff Policy and other Orders by APTEL in the matter of Tariff design, TERC Tariff Regulations, 2015. The Commission has considered the main objectives of the Electricity Act, 2003 including the protection of the interest of consumers, the supply of electricity to all areas and rationalisation of tariffs. Apart from the above, the Commission also taken into consideration TSECL's submissions as well as the Public responses in these proceedings.

7.5.2 Section 61 of the Act lays down the broad principles and guidelines for determination of retail supply tariff. The guiding principles as laid down in Section 61 of the Act are as follows:

- a) The principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;
- b) The generation, transmission, distribution and supply of electricity are conducted on commercial principles;
- c) The factors which would encourage competition, efficiency economical use of the resources, good performance and optimum investments;
- d) Safeguarding of consumers, interest and at the same time, recovery of the cost of electricity in a reasonable manner;
- e) The principles rewarding efficiency in performance;
- f) Multi-year tariff principles;
- g) That the tariff progressively, reflects the cost of supply of electricity, and also reduces and eliminates cross-subsidies within the period to be specified by the Appropriate Commission;
- h) The promotion of co-generation and generation of electricity from renewable sources of energy;
- i) The National Electricity Policy and Tariff Policy.

7.5.3 Further, the Commission is well within its power to make required changes in the tariff structure even if the Licensee has not proposed such changes or no indication has been given to the public regarding the intended changes. In this context, the Hon'ble Appellate Tribunal of Electricity (APTEL), vide its Order in Appeal No. 106 of 2008, has ruled that the Commission has the power to design the tariff as per its own wisdom. It also mentions that the Commission does not need to seek public comments before announcement of the tariff. The relevant part of the APTEL Order in Appeal No. 106 of 2008 is reproduced below:

“ ...

14) It is not the case of the appellant that the Commission had no power to create a tariff design different from the one proposed by the licensee. The

Commission has the power to design the tariff as per its own wisdom. The Commission need not, before issuing the actual order, publicly announce the tariff it proposed and call for public comments. In fact this is not even the appellant's contention.

15) The rule of natural justice requires the Commission to issue a public notice about the ARR and Tariff petition of the licensee and to allow the public to make its submissions on the ARR and Tariff proposals. The Commission has, thereafter, to design the scheme for recovery of the ARR keeping in view various relevant factors. If the classification of the consumers can be supported on any of the grounds mentioned in section 62(3) it would not be proper to say that the tariff fixing was violative of principles of natural justice because the Commission did not issue a public notice of the tariff categories which the Commission had intended to create.”

- 7.5.4 Considering the above judgement, the Commission is proceeding with its analysis of the existing tariff structure and considering changes as deemed appropriate by the Commission.
- 7.5.5 The subsequent paragraphs deal with the submissions of TSECL regarding the Tariff Philosophy and the changes approved by the Commission in the existing tariff structure.

(a) Rebate for incremental consumption

TSECL's Submission

- 7.5.6 TSECL has proposed a rebate of Rs. 1 per Unit (kWh) in energy charges to be applicable for incremental monthly consumption applicable for consumers under Industrial category (Above 20 HP). The incremental consumption for any month shall be worked out based on the increase in monthly consumption compared to the consumption of the same month last year.
- 7.5.7 For example, if a consumer had consumed 100 units in April'21 and consumes 120 units in April'22, then on the additional 20 units consumed, a rebate of Rs.1 i.e., Rs 20 on the monthly bill shall be provided.
- 7.5.8 This rebate shall also be applicable to the existing captive consumers who would like to reduce their share of captive consumption and take more power from TSECL. The same rebate of Rs. 1 per Unit (kWh) in energy charges shall be paid to the captive consumers on every additional unit sourced from licensee (instead of captive consumption).

Commission's Analysis and Ruling

- 7.5.9 The Commission is of the view that TSECL has only proposed the rebates without giving any details of the impact on the revenue. The Commission directs TSECL to propose such changes in tariff along with its impact on revenue in the next tariff

(b) Rebate for Greenfield Industries

TSECL's Submission

- 7.5.10 TSECL has proposed a rebate of Rs. 1 per unit to be applicable in energy charges for new industrial connection for the total consumption recorded. The rebate shall be allowed initially for a period of 5 years from the date of connection for such new projects for which agreements for availing supply from licensee are finalized during and after the date of issue of tariff order by the Commission. This is applicable for all new industrial connections (> 50 kW or taking supply at 11 kV or above) or greenfield connection who are setting up new Industries on a newly owned premises.

Commission's Analysis and Ruling

- 7.5.11 The Commission is of the view that TSECL has only proposed the rebates without giving any details of the impact on the revenue. The Commission directs TSECL to propose such changes in tariff along with its impact on revenue in the next tariff Petition.

(c) Load factor Rebate

TSECL's Submission

- 7.5.12 TSECL has proposed Load factor rebate to the high load industries having contract demand > 500 kW. If such consumers achieve load factor of more than 75%, then a rebate of 5% shall be provided on the total bill. If the load factor is more than 85%, then a rebate of 10% shall be provided on the total bill.

Commission's Analysis and Ruling

- 7.5.13 The Commission is of the view that TSECL has only proposed the rebates without giving any details of the impact on the revenue. The Commission directs TSECL to propose such changes in tariff along with its impact on revenue in the next tariff Petition.

(d) Separate Tariff category for IT and ITeS consumers (Industries)

TSECL's Submission

- 7.5.14 TSECL has submitted that the State Government is taking various steps to promote IT industries within the state. In line with this, TSECL proposed a separate category to all IT and ITES consumers who shall get an attractive single part tariff of INR 6 per unit.

Commission's Analysis and Ruling

7.5.15 The Commission at this stage is not inclined to change any terms and conditions of Tariff and introduce separate tariff category for IT and ITeS consumers without having details of its impact on other consumer categories.

(e) Power Factor Rebate and Penalty

TSECL's Submission

7.5.16 TSECL has submitted that, at present, all the consumer categories are charged based on the electricity consumption in kWh and as such there is no incentive for improvement in power factor. Most of the other states in India have an incentive-penalty provision in tariff for the big consumers like the industrial consumers to keep the power factor within the acceptable limits and reduce the losses in the system.

7.5.17 Based on the similar provisions prevalent in other states, TSECL proposed to introduce the following power factor rebate and penalty provision for Industrial Category consumers (above 20 HP) initially. The same shall be presently applicable only for all industrial category consumers but may be extended for other categories in future:

(a) Power Factor Rebate:

- i. In case, the average PF (leading or lagging) maintained by the consumer is more than 0.85 and upto 0.95, a rebate of 1% on the Energy Charges on unit consumption shall be applicable;
- ii. For PF (leading or lagging) of 0.95 and above upto 0.97, a rebate of 2% on the Energy Charges on unit consumption shall be applicable;
- iii. For PF (leading or lagging) of 0.97 and above upto Unity PF, a rebate of 3% on the Energy Charges on unit consumption shall be applicable.

(b) Power Factor Penalty:

- i. In case average PF (leading or lagging) in a month for a consumer falls below 0.85, a penalty @1% for every 1% fall in PF (leading or lagging) from 0.85 to 0.60; plus 2% for every 1% fall below 0.60 to 0.30 upto and including 0.30 shall be levied on total unit consumption.

Commission's Analysis and Ruling

7.5.18 The Commission in the last tariff order had TSECL to start awareness program among the HT Consumers informing them about the impact of having low PF and also inform the Commission of the availability of metering infrastructure to introduce the said mechanism of PF Incentive/Penalty. The Commission was of the view that it is advisable that consumers get sufficient lead time to take corrective action to improve the PF to avoid penalty of maintaining low PF when it is approved by the Commission in the next tariff Order. TSECL was also directed to do sample study of HT Consumers of different category and submit the impact of the same on tariff of the consumers in the next tariff Petition.

7.5.19 However, TSECL has not submitted any such details as directed by the Commission. Accordingly, the Commission is not inclined to introduce the PF Incentive/Penalty in the present Order. It will be considered once all the details are submitted by TSECL as mentioned herein above in the next tariff Petition

(f) Revision in Fixed Charges

TSECL's Submission

7.5.20 TSECL has submitted that it has been observed that the fixed charges in Tripura is much less than the fixed charges applicable for most of the states. As such, it is requested that beyond, the uniform tariff increase approved by the Commission in this order, the Commission is requested for approving additional increase in fixed charges to bring it at the level of other states in India. A comparative statement of fixed charges of industrial consumers is provided below. It can be observed that the fixed charges can be increased by at least by 100% to bring to the level of other States.

S.No.	Consumer Category	Tripura Fixed Charges (Rs./kVA/month) (2021-22)	Haryana Fixed Charges (Rs./kVA/month) (2021-22)	Meghalaya Fixed Charges (Rs./kVA/month) (2021-22)	Karnataka Fixed Charges (Rs./kVA/month) (2021-22)	Assam Fixed Charges (Rs./kVA/month) (2021-22)	West Bengal Fixed Charges (Rs./kVA/month) (2021-22)	Maharashtra Fixed Charges (Rs./kVA/month) (2021-22)	Andhra Pradesh Fixed Charges (Rs./kVA/month) (2021-22)	Madhya Pradesh Fixed Charges (Rs./kVA/month) (2021-22)
III HT Industry: Industrial Level										
1	11 kV	75	165	230	250	350	384	432	475	372
2	33 kV	75	165	230	250	350	384	432	475	597
3	132 kV	75	165	230	240	350	384	432	475	682
4	220 kV	75	165	230	240	350	384	432	475	682
IV *Power Intensive/ Energy Intensive Industries/Ferro Alloys										
1	33 kV	75	165	200	220	350	384	432	0.00	608
2	132 kV	75	165	200	220	350	384	432	0.00	742
3	220 kV	75	165	200	220	350	384	432	0.00	742

Commission's Analysis and Ruling

7.5.21 The Commission notes that Fixed Charges in the State are comparatively lower than the Other States. The revenue from Fixed Charges contributes to only 7.77% of total revenue in FY 2023-24 at existing tariff. The Commission opines that the contribution of Fixed Charges is much lower considering the fixed cost payable by TSECL. Hence, it would be appropriate to increase the Fixed Charges in the current Order. The Commission has not inclined to increase the Fixed Charges by 100% as proposed by TSECL. However, the gradual revision in Fixed Charges is required to be made over period of 5 years. Hence, in the present Order, the Commission has revised Fixed Charges across consumer categories.

(g) Tariff for Bulk Supply

TSECL's Submission

7.5.22 TSECL submitted that, at present, the Bulk Supply category has options for supply at

LT level with provision of adding transformation loss of 3%. It is submitted that the bulk category option in all states is provided for consumers with high load/demand and in such cases, the supply is provided only at HT level. As such, allowing the bulk consumers to get the supply at LT level results in increase of line losses for high value consumers, increasing the operation and maintenance cost for TSECL and uniformity in providing connections to different consumers. Hence, it is requested that the current provision of allowing bulk consumers to receive supply at LT level be discontinued and all bulk consumers should get supply at HT level.

Commission's Analysis and Ruling

7.5.23 The Commission at this stage is not inclined to change any terms and conditions of Tariff.

7.6 Approved Tariff for FY 2023-24

The category-wise tariffs approved by the Commission for FY 2023-24 are as follows:

A. Kutir Jyoti

Applicability

Kutir-Jyoti connection is covered under scheme of the State Government or Central Government. Maximum connected load of 120 Watt (60 watt x 2 points) and maximum monthly consumption of 15 kWh is allowed for this category. If consumption of a Kutir Jyoti Consumer in a month increases beyond 15 kWh, then such consumer will be charged as per tariff rates applicable to normal Domestic Category for that month.

Tariff:

Particulars	Fixed Charge
For consumption upto 15 kWh/month	Rs. 68 / connection / month

- If, during any billing period, the consumption exceeds the stipulated 30 kWh/month, the consumers will be considered as if they are shifted to the next appropriate Domestic category on telescopic tariff structure.
- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

B. Domestic

Applicability

Electric service connection related to consumption of electricity for lights, all types of fans, heating devices, television, radio, refrigerator, air conditioner and all other appliances for consumers' own domestic use but not for commercial purpose, educational institutions owned or aided by State/Central Government and all Government hospitals and all hospitals owned by charitable institutions (not maintained for commercial purposes), as approved and notified by the State Government.

Tariff:

Sub-Category/Slab	Energy Charge – Rs/kWh	Fixed Charge
Domestic (rural): 0-50 units	4.23	Rs. 20/Connection/Month
Slab 1: Up to 50 Units	5.08	Rs. 30/Connection/Month
Slab 2: 51 – 150 units	6.40	Rs. 45/Connection/Month
Slab 3: 151 – 300 units	6.59	Rs. 55/Connection/Month
Slab 4: 301 units onwards	7.70	Rs. 55/Connection/Month
Three phase (Compulsory above 4 kW): All units	7.70	Rs. 55/kW/Month

Consumers in Domestic (Rural) and Slab 1 to Slab 4 will be billed as per telescopic tariff structure, as explained below.

If an urban domestic consumer consumes 330 units in a month, his/her applicable Fixed Charge would be Rs. 55 for the month and applicable energy charge will be as shown in the following Table:

Slabs	Units Consumed	Energy Charge – Rs/kWh	Total Amount Rs.
Upto 50 Units	50	5.08	254.00
Next 100 Units	100	6.40	640.00
Next 150 Units	150	6.59	988.50
301 Unit onwards	30	7.70	231.00
Total	330		2,113.50

- a. **Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.

- b. **Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- c. Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extrato be computed on a quarterly basis.
- d. The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

Note:

If a portion of the household is used for the conduct of any purpose other than those specified above, the entire consumption shall be billed under the Commercial/Industrial category as applicable.

C. Commercial

Applicability

Electric service connection related to consumption of electricity for lights, all types of fans, heating devices, television, radio, refrigerator, air conditioner, lift motors, pumps and all other appliances used for commercial purposes maintained for private gain including other small power, supply of power to Cinema Hall, Auditorium, Stadium, Nursing Home, Pathological & Clinical Laboratories, Chamber of Medical Practitioners, Advocates/Consultant Engineers/Chartered Accountants and similar others, Private Educational Institutions, Hospitals, etc.

Tariff:

Sub-Category/Slab	Energy Charge – Rs/kWh	Fixed Charge
Small Commercial / Pan shop: 0-50 unit*	6.23	Rs. 30/Connection/Month
Slab 1: Up to 150 units	7.02	Rs. 50/Connection/Month
Slab 2: 151 units onwards	7.61	Rs. 65/Connection/Month
Semi Commercial: All units	7.76	Rs. 55/kW/Month
Three Phase (Compulsory above 4 kW): All units	7.97	Rs. 55/kW/Month
Three Phase – Group Consumer: All units	8.06	Rs. 55/kW/Month

* if consumption exceeds beyond 50 unit in any month, the consumer will be treated as consumer of next slab for that month.

Consumers in Slab 1 and Slab 2 will be charged as per telescopic tariff structure as explained below.

If, a commercial consumer consumes 330 unit in a month, his/her applicable fixed charge shall be Rs. 65 for the month and energy charge shall be as shown in the following Table:

Slabs	Units Consumed	Energy Charge – Rs/kWh	Total Amount Rs.
Upto 150 Units	150	7.02	1,053.00
151 Units Onwards	180	7.61	1,369.80
Total	330		2,422.80

- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

D. Mobile Towers

Applicability

Electric service connection related to consumption of electricity in Mobile Tower and metered on HT supply end or on L.T. supply plus 3% transformer loss.

Tariff:

Category	Energy Charge – Rs/kWh	Fixed Charge
Mobile Tower – All Units	7.85	Rs. 130/kW/Month

- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

E. Irrigation

Applicability

Applicable for motive power for irrigation including the power consumed for light and fans in pump house for irrigation.

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
Up to 5 H.P: All units	5.30	Rs.35/KW/Month
Above 5 H.P.: All units	6.37	Rs.65/KW/Month

- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

F. Water Works

Applicability

Applicable for motive power for Water Works including the power consumed for light and fans in pump house for Water Works for all units consumed.

Tariff:

Category	Energy Charge – Rs/kWh	Fixed Charge
Water Works – All Units	7.12	Rs. 45/kW/Month

- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

G. Industrial

Applicability

Electric service connection related to supply/consumption of electricity for industrial purpose, each installation having motor and other industrial appliances, Battery Charger, Welding Transformer, etc., including the power consumed for light & fan in an industry

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
Up to 5 HP (E-R/5): All units	6.35	Rs.30/KW/Month
Up to 5 HP (E-U/5): All units	6.81	Rs.35/KW/Month
Above 5 to 20 HP: All units	7.60	Rs.50/KW/Month
Above 20 to 100 HP: All units	7.75	Rs.65/KW/Month
Above 100 HP: All units	7.76	Rs.80/KW/Month

- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

H. Tea, Coffee and Rubber Garden

Applicability

Electric service connection related to consumption of electricity for Tea, Coffee and Rubber Plantation/Garden for utilisation of electric power for factory and irrigation in the estate including the power consumed for lights and fans, in and around the factory premises for all units.

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
Tea, Coffee and Rubber Gardens: All units	8.03	Rs.105/KW/Month

- Rebate:** A special rebate of 15% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.

- c. Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- d. The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

I. Bulk Supply

Applicability

Electric service connection related to consumption of electricity to the organizations and establishments having total connected load of 25 kVA or above, such Institutions, School, College, University, Defence installations, Railways, All India Radio, Office complex Departmental, Colony, Dairy with Chilling Plant, Doordarshan, Cold storage, who are maintaining LT distribution system and having mixed load but desirous to be bulk power supply consumers based on bulk power supply contract agreement and metered on HT supply end or on L.T. supply plus 3% transformer loss.

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
Bulk Supply: All units	7.84	Rs.80/KW/Month

- a. **Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- b. **Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- c. Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- d. The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

J. Public Lighting

Applicability

Electric service connection related to consumption of electricity for Public Lighting for Panchayat and Nagar Panchayat /Municipal area.

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
Public Lighting (Panchayat)	5.94	Rs.35/KW/Month
Public Utility (Nagar Panchayat / Municipality)	7.09	Rs.65/KW/Month

- a. **Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- b. **Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- c. Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- d. The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

K. Special Public Utility

Applicability

Special public utility for crematorium, emergency water pumping, drainage, dewatering, etc., for all units consumed.

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
Special Public Utility (Crematorium)	6.21	Rs.50/KW/Month
Special Public Utility (Emergency Water Pumping, Drainage, Dewatering, etc.)	6.21	Rs.50/KW/Month

- a. **Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- b. **Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- c. Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- d. The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

L. Electric Vehicle Charging Station

Applicability

Electric Vehicle Charging Station (Not for Own Use) for all units consumed.

Tariff:

Sub-Category	Energy Charge – Rs/kWh	Fixed Charge
All Units	6.90	Rs.50/KW/Month

- Rebate:** A special rebate of 5% on the total billing amount will be allowed to the consumer for prompt payment made within 7 days from billing date.
- Surcharge for delayed payment:** Surcharge @ 2% per month or part thereof at simple interest shall be levied, if payment is made after the due date.
- Fuel and Power Purchase Cost Adjustment (FPPCA) charges as applicable will be charged extra to be computed on a quarterly basis.
- The Tariff does not include any tax or duty levied by the Government, which will be charged at actual as and when applicable.

TOD Tariff

Applicability

All consumers under Industrial, Tea/Coffee/Rubber Gardens, Bulk Supply, Water Works, and Irrigation categories would have the option of taking TOD tariff, wherein the following rates would be applicable.

Tariff:

From	To	Period	Energy Charge – Rs/kWh
5:00 AM	5:00 PM	Normal	Normal Rate
5:00 PM	11:00 PM	Peak	140% of the Normal Rate
11:00 PM	5:00 AM	Off-Peak	60% of the Normal Rate

N.B: Any error or required corrections noticed may be pointed out to the Commission within 15 days of issuance of the Tariff Order.

7.7 Approved Miscellaneous and Other Charges for FY 2023-24

The Commission approves the existing Miscellaneous and Other Charges applicable for FY 2023-24, as shown in the table below:

Table 117: Miscellaneous and Other Charges as approved by the Commission

Sl. No.	Charge	Approved for FY 2023-24
	Category-I:- MISCELLANEOUS CHARGES	
A	The tariff for temporary supply for lights and fans for festival, ceremonies, public meeting shall be charged at the following rate, namely :-	
I	Net	Rs. 6.00 / kWh
li	Rebate	Rs. 0.10 / kWh
lii	Gross	Rs. 5.90 / kWh
	N.B: The minimum charge for each installation which shall be paid in advance shall be	Rs. 60/- per day per kW of contracted load


Sl. No.	Charge	Approved for FY 2023-24
		or a fraction thereof
B	The tariff for temporary supply for lights & fans to commercial establishment which shall include temporary Cinema, Theater, Circus, Exhibition, Fare shall be charged at the following rate, namely:-	
I	Net	Rs. 7.00 / kWh
li	Rebate	Rs. 0.10 / kWh
lii	Gross	Rs. 6.90 / kWh
	N.B: The minimum charge for each installation which shall be paid in advance shall be	Rs.60/- per day per KW of contracted load or a fraction thereof
	Category: Other Charges	
1	The monthly meter rent for different phases shall be at the following rate, namely:-	
I	For single phase meter not exceeding 10 Amp -	Rs. 10.00
li	For three phase meter -	Rs. 20.00
lii	For three phase meter with C.T.	Rs. 40.00
lv	For HT metering equipment i.e. kWh meter with MDI & KVR supplied by the Deptt. -	Rs. 250.00
V	For Trivector meter-	Rs. 400.00
Vi	For TOD meter	Rs. 400.00
2	The charges for testing of meter at the request of consumer for different phase shall be at the following rate, namely:-	
I	For each single phase meter-	Rs. 50.00
li	For each three phase meter -	Rs. 100.00
lii	For each HT meter -	Rs. 250.00
	Provided that after testing it is found that the meter has no defect, and it is in order.	
3	The charges for replacement of meter owing to temporary increase of load which shall be paid in advance shall be at the following rates, namely:-	
I	For single phase	Rs. 100.00
li	For three phase	Rs. 250.00
4	The charge for replacement of fuse at consumer premises.	Nil
5	The charges for installation of subtraction meter & additional meter at consumer's meter board shall be NOTE- Where two or more meters are installed against one connection instead of one meter to suit the convenience of the consumer, reading of the main meter will be taken and billed for.	Rs. 250.00
6	The monthly meter rent for an additional meter shall be at the following rates, namely:-	
I	For single phase	Rs. 15.00
li	For three phase	Rs. 30.00

Sl. No.	Charge	Approved for FY 2023-24
7	There shall be no charge for test, inspection and connection of a new installation. But for any further test or inspection which may be found necessary owing to any fault in the installation or due to non-compliance with the condition of supply the charge for each additional test shall be	Rs. 200.00
8	The charges for disconnection on consumers request shall be at the following rate, namely:-	
I	For single phase	Rs. 100.00
li	For three phase	Rs. 150.00
lii	For Bulk/HV/EHV	Rs. 200.00
9	The charges for reconnection on consumers request shall be at the following rates, namely:-	
I	For single phase	Rs. 150.00
li	For three phase	Rs. 200.00
lii	For Bulk/HV/EHV	Rs. 250.00
10	The charges for temporary connection which shall be non-refundable for all categories of load through a meter within permissible distance from the electric supply main shall be at the following rates, namely:-	
I	For 220-230V (i.e. Single Phase connection)	Rs. 300.00 per installation
li	For 380-400V (i.e. 3-phase, 4-wire connection).	Rs. 500.00 per installation
	N.B: (i) The consumer shall supply all materials required for service lines as may be approved by licensee, from the nearest pole of the supply point. There shall be no disconnection charge and meter rent for temporary connection. N.B: (ii) For temporary. Connection the consumer shall pay as security deposit of Rs.750.00 for single phase or Rs.1500.00 for three phase supply which is refundable after disconnection of the temporary connection and final payment of the energy bill by consumer. N.B: (iii) For the purpose of this clause, temporary connection means a connection for a continuous period not exceeding 15 days.	
11	The charge for changing of meter by a larger capacity at the request of consumer in respect of permanent connection shall be at the following rates, namely:-	
I	For 220-230V (Single phase)	Rs. 150.00
li	For 380-400V (3-phase, 4-wire).	Rs. 400.00
	The charge for changing the position the meter & the board within the same building at the request of the consumer when no addition in the service line is required shall be at the following rates, namely:-	
I	For 220-230V (Single phase)	Rs. 200.00
li	For 380-400V (3-phase, 4-wire).	Rs. 400.00
13.	Charges for calibration of check meter upon request of consumer.	Rs. 200.00
14.	Charges for special meter reading on consumer request	Rs. 150.00


The Government of Tripura will be providing subsidy of Rs. 50 Crore to different

The Government of Tripura will be providing subsidy of Rs. 50 Crore to different categories as submitted by TSECL. Accordingly, the Commission has indicated the category wise subsidised tariff as per Annexure 2 in the tariff order. If Government of Tripura decides to pay the subsidy for some categories of consumers for FY 2023-24, the subsidy shall be paid in advance on monthly basis to TSECL. The Commission directs TSECL to recover full tariff in case the Government of Tripura does not pay subsidy in advance for two consecutive months.

The approved retail supply tariff will be in accordance with the Tariff Schedule given in this Order. The Order shall come into force from 1 October, 2023 and shall remain valid till further order/amendment by the Commission.


22/09/2023

Jiban Krishna Sen
(Member, TERC)


22/09

D. Radhakrishna
(Chairman, TERC)

Place: Agartala

Date: 22 September, 2023

8 Annexure 1: Approved Tariff Schedule for FY 2023-24

Sl. No	Consumer Category/Slabs	Fixed Charge	Energy Charge (Rs./kWh)
A.	Kutir Jyoti	Rs.68/Connection/Month	
B.	Domestic		
	Domestic (rural): 0-50 units	Rs.20/Connection/Month	4.23
	Slab 1: Up to 50 Units	Rs.30/Connection/Month	5.08
	Slab 2: 51 – 150 units	Rs.45/Connection/Month	6.40
	Slab 3: 151 – 300 units	Rs.55/Connection/Month	6.59
	Slab 4: 301 units onwards	Rs.55/Connection/Month	7.70
	Three phase (Compulsory above 4 kW): All units	Rs.55/kW/Month	7.70
C.	Commercial		
	Small Commercial / Pan shop: 0-50 unit	Rs.30/Connection/Month	6.23
	Slab 1: Up to 150 units	Rs.50/Connection/Month	7.02
	Slab 2: 151 units onwards	Rs.65/Connection/Month	7.61
	Semi Commercial: All units	Rs.55/kW/Month	7.76
	Three Phase (Compulsory above 4 kW): All units	Rs.55/kW/Month	7.97
	Three Phase – Group Consumer: All units	Rs.55/kW/Month	8.06
D.	Mobile Tower: All units	Rs.130/kW/Month	7.85
E.	Irrigation		
	Up to 5 H.P: All units	Rs.35/kW/Month	5.30
	Above 5 H.P: All units	Rs.65/kW/Month	6.37
F.	Water works: All units	Rs.45/kW/Month	7.12
G.	Industrial		
	Up to 5 HP (E-R/5): All units	Rs.30/kW/Month	6.35
	Up to 5 HP (E-U/5): All units	Rs.35/kW/Month	6.81
	Above 5 to 20 HP: All units	Rs.50/kW/Month	7.60
	Above 20 to 100 HP: All	Rs.65/kW/Month	7.75

Sl. No	Consumer Category/Slabs	Fixed Charge	Energy Charge (Rs./kWh)
	units		
	Above 100 HP: All units	Rs.80/kW/Month	7.76
H.	Tea, Coffee and Rubber Gardens: All units	Rs.105/kW/Month	8.03
I.	Bulk Supply: All units	Rs.80/kW/Month	7.84
J.	Public Lighting		
	Public Lighting (Panchayat)	Rs.35/kW/Month	5.94
	Public Utility (Nagar Panchayat / Municipality)	Rs.65/kW/Month	7.09
K.	Special Public Utility		
	Special Public Utility (Crematorium)	Rs.50/kW/Month	6.21
	Special Public Utility (Emergency Water Pumping, Drainage, Dewatering, etc.)	Rs.50/kW/Month	6.21
L.	Electric Vehicle Charging Station	Rs.50/kW/Month	6.90

9 Annexure 2: Tariff Schedule for FY 2023-24 after considering Government Subsidy

Sl. No	Consumer Category/Slabs	Approved Tariff for FY 2023-24		Energy Charge after considering Govt. Subsidy	
		Fixed Charge	Energy Charge (Rs./kWh)	Govt Subsidy (Rs/kWh)	Energy Rate after Govt. Subsidy (Rs/kWh)
A.	Kutir Jyoti	Rs.68/Connection/Month		Rs.4/Connection/Month	Rs.64/Connection/Month
B.	Domestic				
	Domestic (rural): 0-50 units	Rs.20/Connection/Month	4.23	0.69	3.54
	Slab 1: Up to 50 Units	Rs.30/Connection/Month	5.08	0.67	4.41
	Slab 2: 51 – 150 units	Rs.45/Connection/Month	6.40	0.52	5.88
	Slab 3: 151 – 300 units	Rs.55/Connection/Month	6.59	-	6.59
	Slab 4: 301 units onwards	Rs.55/Connection/Month	7.70	-	7.70
	Three phase (Compulsory above 4 kW): All units	Rs.55/kW/Month	7.70	0.15	7.55
C.	Commercial				
	Small Commercial / Pan shop: 0-50 unit	Rs.30/Connection/Month	6.23	0.62	5.61
	Slab 1: Up to 150 units	Rs.50/Connection/Month	7.02	0.51	6.51
	Slab 2: 151 units onwards	Rs.65/Connection/Month	7.61	-	7.61
	Semi Commercial: All units	Rs.55/kW/Month	7.76	0.10	7.66
	Three Phase (Compulsory above 4 kW): All units	Rs.55/kW/Month	7.97	0.10	7.87
	Three Phase – Group Consumer: All units	Rs.55/kW/Month	8.06	0.15	7.91
D.	Mobile Tower: All units	Rs.130/kW/Month	7.85	-	7.85
E.	Irrigation				
	Up to 5 H.P: All units	Rs.35/kW/Month	5.30	1.40	3.90
	Above 5 H.P: All units	Rs.65/kW/Month	6.37	1.40	4.97
F.	Water works: All units	Rs.45/kW/Month	7.12	1.40	5.72
G.	Industrial				
	Up to 5 HP (E-R/5): All units	Rs.30/kW/Month	6.35	0.10	6.25
	Up to 5 HP (E-U/5): All units	Rs.35/kW/Month	6.81	0.10	6.71
	Above 5 to 20 HP: All	Rs.50/kW/Month	7.60	-	7.60

Sl. No	Consumer Category/Slabs	Approved Tariff for FY 2023-24		Energy Charge after considering Govt. Subsidy	
		Fixed Charge	Energy Charge (Rs./kWh)	Govt Subsidy (Rs/kWh)	Energy Rate after Govt. Subsidy (Rs/kWh)
	units				
	Above 20 to 100 HP: All units	Rs.65/kW/Month	7.75	-	7.75
	Above 100 HP: All units	Rs.80/kW/Month	7.76	-	7.76
H.	Tea, Coffee and Rubber Gardens: All units	Rs.105/kW/Month	8.03	0.30	7.73
I.	Bulk Supply: All units	Rs.80/kW/Month	7.84	-	7.84
J.	Public Lighting				
	Public Lighting (Panchayat)	Rs.35/kW/Month	5.94	0.57	5.37
	Public Utility (Nagar Panchayat / Municipality)	Rs.65/kW/Month	7.09	0.57	6.52
K.	Special Public Utility				
	Special Public Utility (Crematorium)	Rs.50/kW/Month	6.21	1.10	5.11
	Special Public Utility (Emergency Water Pumping, Drainage, Dewatering, etc.)	Rs.50/kW/Month	6.21	1.10	5.11
L.	Electric Vehicle Charging Station	Rs.50/kW/Month	6.90	-	6.90

10 Appendix 1: Number of Consumers from FY 2020-21 to FY 2023-24(P)

Sl. No.	Consumer Category	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	Domestic	747,973	851,690	912,556	977,771
2.	Commercial	67,018	71,645	76,052	80,731
3.	Irrigation	6,531	7,871	8,465	9,103
4.	Public water works	6,535	9,444	10,869	12,509
5.	Industries	5,226	6,467	6,947	7,462
6.	Tea, Coffee & Rubber Garden	48	56	62	69
7.	Bulk supply	1,140	1,378	1,553	1,750
8.	Public Lighting	2,405	2,423	2,544	2,671
9.	Mobile Towers	1,581	2,071	2,389	2,755
10.	Grand Total	838,457	953,045	1,021,436	1,094,820

11 Appendix 2: Connected Load from FY 2020-21 to FY 2023-24(P)

Sl. No.	Consumer Category	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	Domestic	205.33	223.58	248.82	276.90
2.	Commercial	54.22	49.70	54.06	58.81
3.	Irrigation	26.64	25.08	26.16	27.28
4.	Public water works	58.17	80.42	94.50	111.05
5.	Industries	109.32	101.97	106.29	110.79
6.	Tea, Coffee & Rubber Garden	0.92	1.06	1.17	1.29
7.	Bulk supply	40.58	44.86	50.84	57.62
8.	Public Lighting	12.06	10.57	10.91	11.26
9.	Mobile Towers	15.18	20.39	22.39	24.60
10.	Grand Total	522.41	557.63	615.14	679.60

12 Appendix 3: Sales (MU) from FY 2020-21 to FY 2023-24(P)

Sl. No.	Consumer Category	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
1.	Domestic	588.22	640.38	701.61	768.69
2.	Commercial	72.00	68.12	72.21	76.54
3.	Irrigation	38.00	47.75	54.75	62.79
4.	Public water works	75.95	99.53	116.52	136.41
5.	Industries	43.44	52.09	56.84	62.02
6.	Tea, Coffee & Rubber Garden	2.80	4.03	5.67	7.98
7.	Bulk supply	87.54	115.86	120.86	126.06
8.	Public Lighting	46.07	11.49	11.49	11.49
9.	Mobile Towers	28.32	59.95	73.13	89.21
10.	Grand Total	982.33	1,099.22	1,213.09	1,341.19