



**Telangana State Electricity Regulatory Commission**  
5<sup>th</sup> Floor, Singareni Bhavan, Red Hills, Lakdi-ka-pul, Hyderabad 500 004

**ORDER**

**ON**

**MID-TERM REVIEW AND TRUING UP THE  
GENERATION TARIFF  
FOR FY 2019-20 TO FY 2021-22  
AND  
REVISED TARIFF FOR FY 2022-23 AND FY 2023-24  
FOR THE EXISTING STATIONS OF**

**TELANGANA STATE POWER GENERATION  
CORPORATION LIMITED (TSGENCO)**

**23.03.2023**

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## List of Abbreviations

A&G	Administrative and General
AFC	Annual Fixed Charges
AP	Andhra Pradesh
APDISCOM	Distribution Company of Andhra Pradesh
APEPDCL	Eastern Power Distribution Company of Andhra Pradesh Limited
APERC	Andhra Pradesh Electricity Regulatory Commission
APGENCO	Andhra Pradesh Power Generation Corporation Limited
APSEB	Andhra Pradesh State Electricity Board
APSPDCL	Southern Power Distribution Company of Andhra Pradesh Limited
APTRANSCO	Transmission Corporation of Andhra Pradesh Limited
ARR	Aggregate Revenue Requirement
APTEL	Appellate Tribunal for Electricity
BHEL	Bharat Heavy Electricals Limited
BoP	Balance of Plant
BTG	Boiler, Turbine and Generator
BTPS	Bhadradi Thermal Power Plant
CAG	Comptroller and Auditor General of India
CAGR	Compound Annual Growth Rate
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
COD	Commercial Operation Date
CPCB	Central Pollution Control Board
CPI	Consumer Price Index
CSR	Corporate Social Responsibility
CT	Current Transformer
DCS	Distributed Control System
DISCOM	Distribution Company
DMFT	District Mineral Foundation Trust
DPR	Detailed Project Report
E&M	Electrical and Mechanical
ECR	Energy Charge Rate
EDC	Expenditure During Construction
EPC	Engineering, Procurement and Construction
EPCA	Environment Pollution Control Authority
EPS	Electric Power Survey
ERP	Enterprise Resource Planning
ESCOM	Electricity Supply Company
ESP	Electrostatic Precipitator
FC	Financing Charges
FGD	Flue Gas Desulphurization
FI	Financial Institution
FY	Financial Year
GCV	Gross Calorific Value
GDP	Gross Domestic Product
GFA	Gross Fixed Assets
GoAP	Government of Andhra Pradesh

Gol	Government of India
GoTS	Government of Telangana State
GST	Goods and Services Tax
GTO	Generation Tariff Order
IDC	Interest During Construction
IEX	Indian Energy Exchange
IoWC	Interest on Working Capital
IPPs	Independent Power Producers
IT	Information Technology
kcal	kilo calories
kg	Kilogram
KTPP	Kakatiya Thermal Power Plant
KTPS	Kothagudem Thermal Power Station
kWh	Kilo Watt Hour
LJHES	Lower Jurala Hydro Electric Project
LOI	Letter of Intent
MAT	Minimum Alternative Tax
MCLR	Marginal Cost of Funds based Lending Rate
MDBFP	Motor-Driven Boiler Feed Pump
MoEF&CC	Ministry of Environment, Forest & Climate Change
MoP	Ministry of Power
MoU	Memorandum of Understanding
MTPA	Million Tonnes Per Annum
MTR	Mid Term Review
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
NAPAF	Normative Annual Plant Availability Factor
NGT	National Green Tribunal
NMET	National Mineral Exploration Trust
NO <sub>x</sub>	Nitrogen Oxides
NPC	National Productivity Council
NTI	Non-Tariff Income
NTPC	National Thermal Power Corporation Limited
O&M	Operations and Maintenance
O.P.	Original Petition
OEM	Original Equipment Manufacturer
PB	Pension Bond
PCHES	Pulichinthala Hydro Electric Project
PCKL	Power Company of Karnataka Limited
PFC	Power Finance Corporation
PLC	Programmable Logic Controller
PLF	Plant Load Factor
PPA	Power Purchase Agreement
PRC	Pay Revision Commission
PSU	Public Sector Undertaking
R&M	Repairs & Maintenance
R&R	Rehabilitation & Resettlement

RBI	Reserve Bank of India
RCC	Reinforced Cement Concrete
REC	Rural Electrification Corporation
RoCE	Return on Capital Employed
RoE	Return on Equity
ROI	Rate of Interest
Rs.	Rupees
RST	Retail Supply Tariff
RTS	Ramagundam B Super Thermal Power Plant
SBI	State Bank of India
SCCL	Singareni Collieries Company Limited
SCR	Selective Catalytic Reduction
SERC	State Electricity Regulatory Commission
SHR	Station Heat Rate
SLDC	State Load Dispatch Centre
SO <sub>x</sub>	Sulphur Oxides
SPM	Suspended Particulate Matter
TSERC	Telangana State Electricity Regulatory Commission
TSGENCO	Telangana State Power Generation Corporation Limited
TSNPDCL	Northern Power Distribution Company of Telangana Limited
TSPCB	Telangana State Pollution Control Board
TSSPDCL	Southern Power Distribution Company of Telangana Limited
TSTPP	Telangana State Thermal Power Project
TSTRANSCO	Transmission Corporation of Telangana Limited
VFD	Variable Frequency Drive
WACC	Weighted Average Cost of Capital
WPI	Wholesale Price Index
YTPS	Yadadri Thermal Power Station



**TELANGANA STATE ELECTRICITY REGULATORY COMMISSION**  
5<sup>th</sup> Floor, Singareni Bhavan, Red Hills, Lakdi-ka-pul, Hyderabad 500 004

**O.P.No.78 of 2022**

**Dated 23.03.2023**

**Present**

Sri T.Sriranga Rao, Chairman  
Sri M.D.Manohar Raju, Member (Technical)  
Sri Bandaru Krishnaiah, Member (Finance)

**Between:**

Telangana State Power Generation Corporation Limited ... Petitioner

AND

1. Southern Power Distribution Company of Telangana Limited  
Corporate Office, 6-1-50, Mint Compound, Hyderabad 500 004.
2. Northern Power Distribution Company of Telangana Limited  
H.No.2-5-31/2, Corporate Office, Vidyut Bhavan, Nakkalagutta,  
Hanumakonda, Warangal 506 001.
3. ESCOMs of Karnataka State -  
BESCOM, Bangalore Electricity Supply Company Limited, KR Circle,  
Bangalore 560 001;  
MESCOM, Mangalore Electricity Supply Company Limited, Paradigm Plaza,  
AB Shetty circle, Mangalore 575 004;  
CESC, Chamundeshwari Electricity Supply Company Limited, Hinkal, Mysore  
570 017;  
HESCOM, Hubli Electricity Supply Company Limited, Hubli 580 025;  
GESCOM, Gulbarga Electricity Supply Company Limited, Kalaburagi 585 102;  
... Respondents

Telangana State Power Generation Corporation Limited (hereinafter referred as "TSGENCO" or "Applicant" or "Petitioner") filed a Petition on 30.11.2022 u/s 62 of the Electricity Act, 2003 and under the provisions of the "*Terms and Conditions of Generation Tariff*" Regulation No.1 of 2019 for approval of true-up for FY 2019-20 to FY 2021-22 and for revised generation tariff for FY 2022-23 and FY 2023-24 for the existing stations for 4<sup>th</sup> control period (FY 2019-20 to FY 2023-24).

The Commission, in exercise of its powers under the Electricity Act, 2003, Regulation No.1 of 2019, and after considering Petitioner's Submissions, objections and suggestions of the stakeholders, responses of Petitioner, issues that were raised during the Public Hearing held on 01.02.2023 and all other relevant material, passed the following:

## **ORDER**

### **Chapter-1 Introduction**

#### **1.1 BACKGROUND**

- 1.1.1 TSGENCO was established as a company registered under the Companies Act, 2013 on 29<sup>th</sup> May, 2014 upon coming into force of the Andhra Pradesh Reorganisation Act, 2014 with effect from 2<sup>nd</sup> June, 2014.
- 1.1.2 The entire energy availability (100%) of thermal and hydel stations of TSGENCO has been allocated to TSDISCOMs except from the Priyadarshini Jurala Hydro Electric Scheme (6x39 MW). In respect of Priyadarshini Jurala Hydel Electric Scheme, as per the provisions of Power Purchase Agreement (PPA) the fixed charges and the energy generated is being shared in the ratio of 50:50 between TSDISCOMs and ESCOMs of Karnataka State.
- 1.1.3 Telangana State Electricity Regulatory Commission (herein referred to as TSERC or the Commission) was constituted by the Government of Telangana State (GoTS) in terms of the provisions of Schedule XII(C)(3) of the A.P. Reorganisation Act of 2014, read with Section 82 of the Electricity Act, 2003 (Act) vide G.O.Ms.No.3, Energy (Budget) Department, dated 26.07.2014.
- 1.1.4 The Commission had notified TSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2019 which came into force from the date of its publication in Telangana Gazette i.e., on 01.02.2019.
- 1.1.5 Earlier, upon the filings of TSGENCO, the Commission issued Common Order dated 22.03.2022 in O.P.Nos.5&6 of 2021 and I.A.No.1 of 2021 for Truing-up for 3<sup>rd</sup> control period for FY 2014-15 to FY 2018-19, determined capital cost of New Stations, approved Business Plan, Capital Investment Plan, Aggregate



Revenue Requirement (ARR) and Multi-Year Tariff (MYT) for each Financial Year of 4<sup>th</sup> control period for FY 2019-20 to FY 2023-24.

## **1.2 STATUTORY PROVISIONS**

1.2.1 As per Section 62 of the Electricity Act, 2003 the Commission can determine the tariff for supply of electricity by a generating company to a distribution licensee, further the Commission is empowered to determine tariff for generation and sale of electricity within the State under Section 86(1)(a) & 86(1)(b).

1.2.2 The Commission had notified TSERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2019 [Regulations No.1 of 2019] which came into force from the date of its publication in Telangana Gazette i.e., on 01.02.2019. As per Clauses 3.8.2, 3.12, 27 and other applicable Clauses provided in Regulations No.1 of 2019 the TSGENCO is required to file a petition for Mid-Term Review for truing-up of generation tariff for TSGENCO generating stations for FYs 2019-2022 by 30<sup>th</sup> November of the 4<sup>th</sup> year of the control period i.e., by 30.11.2022., for the sake of convenience the Clauses 3.8.2, 3.12 and 27 and other applicable Clauses of Regulations No.1 of 2019 are reproduced below:

### **3.8.2 Mid-term Review Petition**

- a) *Truing-up for the first and second year and provisional truing-up for third year of the Control Period to be carried out under these Regulations.*
- b) *Revised forecast of Aggregate Revenue Requirement, expected revenue from existing tariff and charges and revenue gap for the fourth and fifth year of the Control Period.*  
*Provided that a petition may be filed at any time during the Control Period in case of variation in uncontrollable factors that may result in sudden, steep, and sustained increase in tariff.*

... ..

### **3.12. Mid-term Review**

3.12.1 *The Generating Entity shall file a petition for Mid-term Review and truing-up of the Aggregate Revenue Requirement and Revenue for FY 2019-20 and FY 2020-21, and provisional truing-up for the FY 2021-22 by November 30, 2021:*

*Provided that the Petition shall include information in such form as may be stipulated by the Commission, together with the Accounting Statements, extracts of Books of Account and such other details, including cost accounting reports or extracts thereof, as it may require to assess the reasons for and extent of any difference in operational and*

*financial performance from the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff.*

- 3.12.2 *The scope of the Mid-term Performance Review shall be a comparison of the actual operational and financial performance vis-à-vis the approved forecast for the first three years of the Control Period; and revised forecast of Aggregate Revenue Requirement, expected revenue from existing Tariff, expected revenue gap for the fourth and fifth year of the Control Period.*
- 3.12.3 *Upon completion of the review under clause 3.12.2 herein, the Commission shall attribute any variations or expected variations in performance, for variables specified under clause 6.7 & clause 6.8, to factors within the control of the Petitioner (controllable factors) or to factors beyond its control (uncontrollable factors).*
- 3.12.4 *Any variations or expected variations in performance, for variables other than those specified under clause 6.7 of this Regulation, shall not ordinarily be reviewed by the Commission during the Control Period and shall be attributed entirely to controllable factors:*
- 3.12.5 *Where the Petitioner believes, for any variable not specified under clause 6.7, that there is a material variation or expected variation in performance for any Year on account of uncontrollable factors, it may apply to the Commission for inclusion of such variable.*
- 3.12.6 *Upon completion of the Mid-term Review, the Commission shall pass an order recording:-*
- (a) *The approved aggregate gain or loss to the Generating Entity on account of controllable factors for the first two years of the Control Period and provisional Truing-up for the third year of the Control Period, and the amount of such gains or such losses that may be shared in accordance with clause 6.10 of this Regulation.*
  - (b) *The approved aggregate gain or loss to the Generating Entity on account of uncontrollable factors for the first two years of the Control Period and provisional Truing-up for the third year of the Control Period, and the amount of such gains or such losses that were not recovered during the respective years and which may be shared in accordance with clause 6.9 of this Regulation.*
  - (c) *The approved modifications to the Aggregate Revenue Requirement and Tariffs for the remainder of the Control Period.*

... ..

**6.6 Uncontrollable Factors**

*The “uncontrollable factors” shall comprise the following factors, which were beyond the control of, and could not be mitigated by the Petitioner, as determined by the Commission:*

- 6.6.1 *Force Majeure events;*
- 6.6.2 *Change in law;*
- 6.6.3 *Variation in fuel cost on account of variation in price of primary and/or secondary fuel prices;*
- 6.6.4 *Variation in market interest rates for long-term loan;*
- 6.6.5 *Variation in freight rates;*
- 6.6.6 *Non-Tariff Income;*

6.7 **Controllable Factors**

*Variations or expected variations in the performance of the Petitioner, which may be attributed by the Commission to controllable factors include, but are not limited to the following:*

- 6.7.1 *Variations in capitalisation on account of time or cost overruns or inefficiencies in the implementation of a capital expenditure scheme not attributable to an approved change in its scope, change in statutory levies or Force Majeure Events;*
- 6.7.2 *Variation in interest and finance charges, return on equity, and depreciation on account of variation in capitalisation as specified in clause 6.8.1 above;*
- 6.7.3 *Variation in performance parameters, such as Availability, Auxiliary Consumption, Secondary fuel oil consumption, Gross Station Heat Rate;*
- 6.7.4 *Variation in amount of interest on working capital;*
- 6.7.5 *Variation in Operation and Maintenance Expenses;*
- 6.7.6 *Variation in coal transit losses;*

6.8 **Mechanism for pass through of gains or losses on account of uncontrollable factors**

- 6.8.1 *The uncontrollable cost shall be determined based on a petition filed by the concerned Generating Entity;*
- 6.8.2 *The aggregate gain or loss to a Generating Entity on account of variation in cost of fuel from the sources considered in the Tariff Order, including blending ratio of coal procured from different sources, shall be passed through as an adjustment in its energy charges on a monthly basis, as specified in clause 21.6 of this Regulation;*
- 6.8.3 *The consequential impact of decisions of higher Courts or Tribunals or Review Orders passed by the Commission on the Generating Entity'*
  - (a) *for the first and second Years of the Control Period shall be addressed in the Mid-term Review Order;*
  - (b) *for the third, fourth or fifth Years of Control Period shall be addressed in the End of Control Period Review Order;*

6.9 **Mechanism for sharing of gains or losses on account of controllable factors**

- 6.9.1 *The approved aggregate gain to the Generating Entity on account of controllable factors shall be dealt with in the following manner:*
  - (a) *Two-third (2/3<sup>rd</sup>) of the amount of such gain shall be passed on as a rebate in tariff over such period as may be stipulated in the Order of the Commission;*
  - (b) *The balance amount of such gain shall be retained by the Generating Entity;*
- 6.9.2 *The approved aggregate loss to the Generating Entity on account of controllable factors shall be dealt with in the following manner:*
  - (a) *One-third (1/3<sup>rd</sup>) of the amount of such loss may be passed on as an additional charge in tariff over such period as may be stipulated in the Order of the Commission;*
  - (b) *The balance amount of such loss shall be absorbed by the Generating Entity;*

.....

27. **Summary of timelines**

<b>Description</b>	<b>Filing of the Document (on or before)</b>	<b>Obtaining additional information and acceptance by the Commission</b>	<b>Approval of the Document</b>
<i>Mid-Term Review</i>	<i>30<sup>th</sup> November of the fourth Year of the Control Period</i>	<i>Within 45 days of filing of document</i>	<i>Within 120 days of acceptance of the filing</i>

1.2.3 Further, the Commission in the MYT Order dated 22.03.2022 in O.P.No.6 of 2021 for the 4<sup>th</sup> control period has issued the following directive:

**New Directives**

5. **Mid-Term-Review (MTR) Petition**

*The Commission directs TSGENCO to submit MTR Petition in terms of Regulations No.1 of 2019 by 30<sup>th</sup> November, 2022.*

**1.3 PRESENT PETITION**

1.3.1 Accordingly, TSGENCO filed the present Petition on 30.11.2022 u/s 62 of the Electricity Act, 2003 and under the Clause 3.12 of the “*Terms and Conditions of Generation Tariff*” Regulation No.1 of 2019 for Mid-term Review and trueing-up for FY 2019-20 to FY 2021-22 and for revised generation tariff for FY 2022-23 and FY 2023-24 for the existing stations for 4<sup>th</sup> control period (FY 2019-20 to FY 2023-24).

**1.4 ADMISSION OF PETITION**

1.4.1 The Petition was examined and found to be generally in order as required under the TSERC (Conduct of Business) Regulations, 2015 (Regulation No.2 of 2015). The Commission admitted the Petition and the same was taken on record by assigning the Original Petition (O.P.) number as O.P.No.78 of 2022.

**1.5 DATA GAPS AND ADDITIONAL INFORMATION**

1.5.1 During verification, the filings of the Petitioner was found to be deficient in certain aspects and therefore, additional information was sought. The Commission has considered the original filings and additional information submitted by the Petitioner.

**1.6 OVERVIEW OF STAKEHOLDERS’ CONSULTATION PROCESS**

1.6.1 The Petitioner, as directed by the Commission, published for information of all stakeholders and the public at large a Public Notice (Annexure-I) in two (2) English, two (2) Telugu and One (1) Urdu daily newspapers on 15.12.2022. The

filings along with supporting material were also hosted on the websites of the Petitioner as well as the Commission.

1.6.2 It was also notified in the public notice that, objections/suggestions on the filings may be filed before the Commission by 12.01.2023.

1.6.3 In response to the public notice, comments/suggestions were received from One (1) stakeholder. The list of stakeholders who submitted their written objections/suggestions/comments on the filings of the petitioner is given in Annexure-II. All the comments/suggestions along with the additional objections/suggestions submitted pursuant to the Commission's directions during the Public Hearing held on 01.02.2023 have been considered by the Commission.

1.6.4 The Petitioner was directed to give the reply to the stakeholders on their written comments/suggestions on the filings by 21.01.2023 by sending the same to the respective stakeholder with a copy to the Commission. The objections/suggestions received and the responses of the petitioner against them were placed on the website of the Commission.

## **1.7 PUBLIC HEARING**

1.7.1 The Commission has conducted the Public Hearing on 01.02.2023 in the attendance of the Petitioner, the officials of TSDISCOMs and the other interested stakeholders.

1.7.2 During the Public Hearing, the Petitioner made a brief presentation on its filings and then the Commission heard the objector who desired to be heard. At the end, the Petitioner responded on the issues raised by the objectors and the objector and the petitioner on directions of the Commission, filed a written submission.

## **1.8 ACKNOWLEDGEMENT**

1.8.1 The Commission acknowledges Sri M.Venugopala Rao, the sole stakeholder, who participated in the regulatory process by timely submitting his written objections/suggestions on TSGENCO MTR filings and also appearing in person before the Commission to heard in person during the Public Hearing.

## Chapter-2 Summary of Filings

### 2.1 TSGENCO'S SUBMISSIONS

2.1.1 TSGENCO has made the following submissions in their petition and the additional submissions:

- (i) For Mid-Term review for trueing up of the generation tariff for the FY 2019-20 to FY 2021-22 and projected fixed charges for the FY 2022-23 and FY 2023-24 under Clause 3.12 of TSERC Regulations No.1;
- (ii) For approval of revised fixed charges for True-up the generation tariff for FY 2019-20 to FY 2021-22 and revised tariff for the FY 2022-23 and FY 2023-24 for supply of electricity generated by the petitioner from its various power generating stations to the distribution licensees;

### 2.2 TRUE UP AND PROJECTED FIXED CHARGES

2.2.1 The revised fixed charges claimed by TSGENCO for true-up for FY 2019-20 to FY 2021-22 and projected fixed charges for FY 2022-23 and FY 2023-24 is as shown in the Table below:

**Table 2.1: Revised AFC claimed for 4<sup>th</sup> control period**

Station	2019-20	2020-21	2021-22	2022-23	2023-24	Total
KTPS O&M	795.00	-	-	-	-	795.00
KTPS-V	358.12	397.70	429.67	446.94	455.90	2088.33
KTPS-VI	537.81	569.04	570.54	575.59	569.93	2822.91
KTPS-VII	1029.55	1393.14	1367.37	1386.58	1456.19	6632.83
RTS-B	115.51	124.36	123.50	128.32	132.00	623.68
KTPP-I	487.97	482.71	482.72	499.59	420.37	2373.36
KTPP-II	794.94	795.12	819.18	861.81	899.40	4170.46
BTPS	-	494.47	1194.04	1341.25	1722.96	4752.72
NSHES (Main & Left canal PH)	351.98	377.13	364.18	361.92	358.21	1813.33
Srisailam LBHES	441.44	482.85	468.60	468.22	465.76	2326.86
Small Hydel (Pochampad-I, Singur, Nizamsagar & Palair HES)	50.79	54.48	53.53	56.56	61.38	276.75
Mini Hydel (Peddapally)	10.16	10.77	10.53	10.82	11.13	53.42
Pochampadu-II	10.41	11.06	10.89	11.24	11.60	55.20
Priyadarshini Jurala JHES	126.77	130.57	121.96	122.70	115.97	617.97

*Rs.in crore*

Station	2019-20	2020-21	2021-22	2022-23	2023-24	Total
Lower Jurala HES	295.30	302.29	299.56	295.02	290.80	1482.97
Pulichinthala CHES	94.61	101.06	99.42	100.23	101.85	497.16
<b>Total</b>	<b>5500.27</b>	<b>5726.75</b>	<b>6415.71</b>	<b>6666.77</b>	<b>7073.46</b>	<b>31382.95</b>
Additional Pension Liability	1058.38	1160.11	1062.53	1108.67	1168.08	5557.77
Water Charges	27.95	50.58	43.69	62.05	68.32	252.59
Non-Tariff Income	4.63	7.17	18.52	32.30	32.30	94.92
<b>Grand Total</b>	<b>6581.97</b>	<b>6930.26</b>	<b>7503.41</b>	<b>7805.19</b>	<b>8277.56</b>	<b>37098.39</b>
<b>Approved</b>	<b>6421.31</b>	<b>6702.10</b>	<b>7860.34</b>	<b>7912.62</b>	<b>7832.46</b>	<b>36728.83</b>
<b>Variation +/-</b>	<b>160.66</b>	<b>228.16</b>	<b>(-)356.93</b>	<b>(-)107.43</b>	<b>445.10</b>	<b>369.56</b>

- The actual fixed charges for FY 2019-20 to FY 2021-22 is of Rs.21,015.64 crore against the approved fixed charges of Rs.20,983.75 crore.
- The true-up fixed charges for FY 2019-20 to FY 2021-22 is of Rs.31.89 crore. (Whereas there is an error in the approved figure taken by TSGENCO for FY 2019-20 as Rs.6421.31 crore instead of Rs.6421.29 crore thereby the true-up of fixed charges claim for MTR shall be Rs.31.91 crore in place of Rs.31.89 crore).
- Projected fixed charges for FY 2022-23 to FY 2023-24 worked out to Rs.16,082.75 crore.
- The total fixed charges (actual and projected) are Rs.37,098.39 crore as against the approved fixed charges of Rs.36,728.83 crore and variation is Rs.369.56 crore.

## 2.3 GROSS STATION HEAT RATE OF BTPS

2.3.1 The Commission has approved the Gross Station Heat Rate of BTPS as 2273 kcal/kWh at para 6.14.6 of MYT Order dated 22.03.2022. The design heat rate of BTPS is 2300 kcal/kWh and the maximum design heat rate of BTPS shall not exceed 2233 kcal/kWh as per the Clause No.17.4(a) of Regulation No.1 of 2019. Hence, the Gross Station Heat Rate of BTPS determined as per the Regulation No.1 of 2019 is 2333.485 kcal/kWh (2233x1.045).

## 2.4 COMPLIANCE REPORT ON COMMISSION'S DIRECTIVES

2.4.1 TSGENCO submitted the compliance report on the Commission's Directives issued in MYT Common Order dated 22.03.2022 as given in Table below:

**Table 2.2: Compliance report on Commission's Directives**

Directive No.	Commission Directive	Compliance Report
3	Maintain separate records and books of account for each unit of every power station.	Separate books of accounts have been maintained for each unit of the every power station.

Directive No.	Commission Directive	Compliance Report
4	Maintain the following with respect to capitalization of fixed assets: a) Date of capitalization/placed into service; b) Accumulated depreciation of each asset; c) Date of de-capitalisation wherever applicable;	a) Date of capitalization/placed into service of each asset is recorded and maintained accordingly; b) Accumulated depreciation of each asset is calculated and maintained the same records in the books of accounts against each asset; c) Date of de-capitalisation of asset (or) power generating unit wherever applicable is recorded and considered the same in the books of accounts;
7	The Commission directs TSGENCO to submit the Auditor's certificates for completed cost of KTPS-VII and BTPS along with financial packages, IDC drawl, etc., while filing MTR petition.	The Auditor's certificates for completed cost of KTPS-VII stage and BTPS are herewith submitted.
8	The Commission directs TSGENCO to submit the details of FGD installation along with DPR, Project cost, physical & financial progress of work etc., in the Mid-term Review petition for consideration of the Commission.	<b>The status of FGD installation is furnished below:</b> a) <u>KTPS-V&amp;VI</u> : The feasibility study completed and the preparation of detailed project report for installation of FGD is in progress. The bids were not yet awarded for FGD installation. b) <u>KTPS-VII</u> : i. BHEL proposal with technical writeup on FGD system on dated 20.05.2016 (copy enclosed). ii. FGD contract price is Rs.320 crore (enclosed LOI on FGD dated 29.05.2016) iii. Physical Progress of work: i) Civil agency was finalized by BHEL to start the civil works. Mobilisation of T&P and manpower is under progress. Also, excavation and PCC works a LHP and GHP area of FGD system are under progress. ii) Modification works in the existing switchyard bay are being carried out by erecting CTs, breakers, isolator, metering panels, laying of cables, etc., o as to extend supply for the



Directive No.	Commission Directive	Compliance Report
		<p>FGD system.</p> <p>iii) Supply of materials under different packages of FGD system such as RC pumps, gear box for RC pump, cables, bus post insulators, metering panel and other materials for SAS package etc., is made by BHEL till date.</p> <p>c) <u>KTPP</u>: The feasibility study completed and the preparation of detailed project report for installation of FGD is under progress. The bids were not yet awarded for FGD installation.</p> <p>d) <u>BTPS</u>:</p> <p>i. FGD installation details along with DPR is submitted.</p> <p>ii. Project cost is Rs.680 crore.</p> <p>iii. The Purchase order was placed on BHEL to implement MoEF norms for installation of FGD system. Engineering is under progress. Orders for major BOI are placed by BHEL. Agencies for civil works under finalization by BHEL.</p> <p>iv. Financial progress is Rs.222.19 crore as on 13.09.2022.</p>
11	<p><b>Action Plan for continued operation of old plants</b></p> <p>The Commission observed that RTS-B has far exceeded the useful life of 25 years. The Commission directs TSGENCO to submit the action plan for improving the operational efficiency of the same. The Commission also directs to submit the retirement plan if any, for RTS-B.</p>	<p><b>a) Action plan in order to improve operational efficiency by</b></p> <p>i. Reducing the unburnt carbon in bottom ash &amp; fly ash by which saving of coal consumption.</p> <p>ii. Improving the performance of the mill to reduce rejects from mills and oil consumption.</p> <p>iii. Reduction of DM water consumption by attending all the feed water &amp; steam leaks at various locations.</p> <p>iv. Reduction of auxiliary power consumption by operating the unit generation at full load.</p> <p>v. Reduction of unit trippings in order to reduce fuel oil consumption</p>

Directive No.	Commission Directive	Compliance Report
		<p>vi. Maintaining the draft by arresting the air ingressions of boiler for proper fuel combustion.</p> <p><b>b) Plans for De-commission of RTS-B</b>  RTS-B, Ramagundam was commissioned during 1971 and will be phased out after the payback period of R&amp;M cost i.e., by Dec'29.</p>



## **Chapter-3**

### **Issues raised by Stakeholders, responses of Petitioner and Commission's Views**

#### **3.1 OBJECTIONS/SUGGESTIONS/COMMENTS MADE ON FILINGS**

3.1.1 One (1) stakeholder has filed objections/suggestions/comments on the Mid-Term Review Petition for true-up of generation tariff for TSGENCO stations for FYs 2019-22 and for approval of revised tariffs for FYs 2022-24. The Petitioner has filed replies on the objections/suggestions/comments received from the stakeholder. For the sake of clarity, the objections/suggestions/comments raised by the stakeholders and responses of the Petitioner have been consolidated and summarised issue-wise. The Commission has concluded all the objections/suggestions/comments of the stakeholder made in writing and the responses to them by the Petitioner.

#### **3.2 GENERAL**

##### ***Stakeholders' Submissions***

3.2.1 TSGENCO and TSDISCOMs to send their replies to objectors to reach them at least one (1) week before the scheduled public hearing in the subject issue.

##### ***Petitioner's Replies***

3.2.2 TSGENCO has arranged necessary replies before the scheduled public hearing.

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

3.2.3 The Commission has set the timelines for the petitioner to send their replies to the stakeholder, who raised objections/suggestions on the filings, at least ten (10) days before the scheduled date of public hearing. The Commission intends for better participation in the public consultation process.

#### **3.3 NON-PARTICIPATION OF PARTIES IN THE PROCEEDINGS**

##### ***Stakeholders' Submissions***

3.3.1 TSDISCOMs, which are parties to the PPA, are not filing their counters to the petitions of TSGENCO, questioning abnormal escalations in the claimed capital costs of the station, thereby shirking their responsibility to protect their interests, which, in turn, means interests of their consumers of power. TSDISCOMs, as

respondents, should not be allowed to shirk their responsibility to meet regulatory requirements.

- 3.3.2 Silence and non-response of TSDISCOMs in the subject petitions means that they cannot act independently or that they are not allowed to act independently to protect their interests and those of their consumers of power. Secondly, it implies that they have no objection to the claims of TSGENCO in the subject petition or that they cannot express objections, if any. Thirdly, it implies that, whatever claims of TSGENCO the Commission permits, TSDISCOMs would simply pass through to their consumers and wash-off their hands.
- 3.3.3 TSDISCOMs should participate in the regulatory process and respond to the claims of TSGENCO and points raised by objectors in the subject petitions. Otherwise, issuance of Public Notice would be of no value and purpose.

***Petitioner's Replies***

- 3.3.4 Not in TSGENCO purview.

***Commission's View***

- 3.3.5 As directed by the Commission the petitioner published a Public Notice in daily newspapers having wide-circulation in the State, inviting objections/suggestion from all interested stakeholders and public at large on its MTR filings and it is to the choice of individual stakeholder to submit objections/suggestions.
- 3.3.6 The Commission reiterates its stand that it cannot insist any individual/ stakeholder to submit objections/suggestions. However, the respondents both TSDISCOMs and ESCOMs of Karnataka, were expected to actively participate in the regulatory process to ensure transparency. The Commission is of the view that better participation in the public consultation process would increase effectiveness of Regulatory system.

**3.4 AMENDMENTS TO CERTAIN PROVISIONS IN REGULATION**

***Stakeholders' Submissions***

- 3.4.1 In the name of provisional approvals, allowing the unjustifiable escalations in capital costs of BTPS during the period of impermissible delay in execution of the station repeatedly is against larger consumer interest and prudent norms. Further some of the questionable provisions in the applicable regulation of the Commission need to be amended prudently.

### ***Petitioner's Replies***

3.4.2 Not in TSGENCO purview.

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

3.4.3 The Commission after prudence check and as per the provisions of the Regulation No.1 of 2019 has approved the capital cost of BTPS in Chapter-4 of this order.

## **3.5 COMPLIANCE WITH REGULATORY PROVISIONS IN DETERMINATION OF FINAL TARIFF FOR NEW GENERATING STATIONS**

### ***Stakeholders' Submissions***

3.5.1 Regulation No.1 of 2019 relating to terms and conditions of generation tariff stipulates, inter alia, that "*the Generating Entity shall file the application for determination of final tariff for new Generating Station within one hundred and eighty days (180) from the COD of Generating Unit or Stage or Generating Station as a whole, as the case may be, based on the audited capital expenditure and capitalisation as on the COD*" Clause 4.2.7).

3.5.2 It further says that "*where there is no power purchase agreement or arrangement, the supply of electricity by such Generating Entity to the Distribution Licensee after April 1, 2019 shall be in accordance with a power purchase agreement approved by the Commission. Provided that the petition for approval of such power purchase agreement or arrangement shall be filed by the Distribution Licensee with the Commission within three months from the date of notification of these Regulations*" (clause 4.3.2).

3.5.3 The Regulation stipulates that "*The Commission shall, within one hundred and twenty (120) days from receipt of a complete petition, and after considering all suggestions and objections received from the public:- (a) Issue a Tariff Order accepting the Petition with such modifications or conditions as may be stipulated in that Order*" (clause 4.5.1)

3.5.4 Several clauses of the Regulation underline need for financial prudence. It emphasises that "*variations in capitalisation on account of time or cost overruns or inefficiencies in the implementation of a capital expenditure scheme not attributable to an approved change in its scope, change in statutory levies or Force Majeure Events,*" "*Variation in Operation & Maintenance Expenses*" and

*“variation in coal transit losses, among others,” may be attributed by the Commission to controllable factors (clause 6.7) have to be subjected to prudence check. “Prudence check may include scrutiny of the reasonableness of the capital expenditure, financing plan including the choice and manner of funding, interest during construction, use of efficient technology, cost over-run and time over-run, and such other matters as may be considered appropriate by the Commission for determination of tariff” (clause 7.10).*

3.5.5 The clause 7.19.1 says that *“Any additional capitalization after COD needs prior approval of the Commission.”*

3.5.6 The clause 7.22.4 emphasises that *“(a) The entire cost due to time over run has to be borne by the Generating Entity in case the causes for over-run are entirely attributable to the Generating Entity. For example, imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper coordination between the various contractors, etc.”* Further it says *“(b) ... .. Provided that the consumers should get full benefit of the Liquidated Damages (LDs) recovered from the contractors/suppliers of the Generating Entity and the insurance proceeds, if any, to reduce the capital cost.”*

### ***Petitioner’s Replies***

3.5.7 The issues now raised by the objector were already raised in submissions of additional objections/suggestions vide letter dated 30.03.2021 on the True-up & MYT proposals of TSGENCO for the control period 2014-19 & 2019-24. Replies to Objections/Suggestions were furnished by TSGENCO on 29.05.2021. However, the same are reproduced below:

*“The Commission will approve the capital cost after taking into consideration the reasons for cost over run time over run, financing prudence etc. Further as per Clause No.7.19(j) of TSERC Regulations, 2019 Any liability for works admitted by the Commission after the Cut-Off Date to the extent of discharge of such liabilities by actual payments.*

*7.19(k) Any additional capital expenditure which has become necessary for efficient operation.*

*Provided that the claim shall be substantiated with technical justification duly supported by documentary evidence like test results carried out by an independent agency in case of deterioration of assets, damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level.”*

- 3.5.8 Regarding PPA of BTPS, Commission has accorded consent to the PPAs vide Common Order in O.P.No.15 to 19 of 2021 dated 06.08.2021, subjected to certain amendments to certain clauses and Articles of PPAs and TSDISCOMs were directed to submit PPAs duly incorporating changes for the record of the Commission. In compliance with the direction of the Commission, the amendments were carried out by TSGENCO and TSDISCOMs on 22.12.2021 and submitted to the Commission on 19.01.2022. Therefore, the PPAs entered with Discoms were approved by the Commission.
- 3.5.9 In compliance with Clause 7.19.1, TSGENCO has submitted “*Capital Investment Plan*” for approval of the Commission, from time to time.
- 3.5.10 In compliance with Clause 7.22.4, TSGENCO is crediting the recovered penalties/liquidated damages to the capital cost of the project.

#### ***Commission’s View***

- 3.5.11 The Commission has carried out the Mid-Term Review in accordance with the terms of the Regulation No.1 of 2019.

### **3.6 APPROVAL OF PPA OF BTPS**

#### ***Stakeholders’ Submissions***

- 3.6.1 The issue of TSGENCO not submitting PPA of BTPS for approval of the Commission and the Commission entertaining the petitions of TSGENCO, without considering PPA, is questionable and goes against the provisions of the Commission’s applicable regulations.
- 3.6.2 TSGENCO has come up with the subject petitions, without submitting the PPA for consideration and approval by the Commission. In other words, it is seeking another provisional approval for the revised capital cost based on its projections and revision and true-up of fixed charges, without PPA being approved. There is no finality to even to this projected capital cost, as it is projected on capital expenditure to be incurred upto 01.04.2024. In other words, TSGENCO may come up in future with a petition seeking further revision of capital costs of the

station and true up of additional claims for fixed charges for FY 2023-24, it is shown in the ARR submissions of TSDISCOMs that, with a PLF of 78% against normative PLF of 85%, availability from BTPS is 7378 MU and fixed cost per unit Rs.2.57 and variable charges Rs.2.36 per unit, i.e., a tariff of Rs.4.93 per unit.

***Petitioner's Replies***

- 3.6.3 With regard to the PPA of BTPS, TSGENCO & TSDISCOMs have already entered Power Purchase Agreements valid up to 08.01.2047, and TSERC has accorded its consent to the PPA vide Order dated 06.08.2021.
- 3.6.4 TSGENCO has entered into PPA with TSDISCOMs for sale of power generated at BTPS on 17.09.2019. Southern Power Distribution Company of Telangana Limited (TSSPDCL) on behalf of TSDISCOMs viz., TSSPDCL and Northern Power Distribution Company of Telangana Limited (TSNPDCL), have requested for granting in principal consent for purchase of power u/s 86(1)(b) of the Electricity Act, 2003 in respect of BTPS on 26.09.2019.
- 3.6.5 The Commission has taken the requests of TSDISCOMs on record, examined with reference to the legality i.e., in the context of the provisions of the Electricity Act, 2003, Tariff Policy, provisions under applicable Regulations and sustainability of the clauses in the PPAs and decided to finalise the approval or consent of the PPAs through public consultation process and assigned the *Suo-Moto* O.P.No.17 of 2021.
- 3.6.6 The Commission organised Public Hearing as per the revised schedule i.e., on 30.06.2021 at 11:30 am through virtual video conference. The stakeholders who attended virtual Public Hearing held on 30.06.2021 were Sri M.Venugopala Rao and Federation of Telangana Chambers of Commerce and Industry. Based on the objections/suggestions received from the stakeholders, the Commission accorded the consent to the PPAs vide TSERC "Common Order" on O.P.No.15 to 19 of 2021 dated 06.08.2021, subject to amendments in certain clauses and Articles of PPAs. TSDISCOMs are directed to submit the PPAs duly incorporating changes for the record of the Commission.
- 3.6.7 In compliance with the directions of the Commission, the proposed amendments were carried out by TSGENCO & TSDISCOMs on 22.12.2021



and submitted to the Commission on 19.01.2022. Accordingly, the PPAs entered with TSDISCOMs were approved by the Commission.

3.6.8 In respect of Capital cost, as per TSERC Regulations, the Capital Expenditure up to the Commercial Operation Date of the last unit and there after additional capital expenditure incurred up to the cut-off date i.e., 31.03.2025 (last quarter after 3 years) may be admitted by the Commission subject to prudent check.

3.6.9 As per the latest administrative approval, the projected capital cost is of Rs.10515.84 crore, which was already figured in Clause No.6.3.4 of the Multi-Year Tariff Order for the control period FY 2019-24, dated 22.03.2022. Further, with regard to PLF in ARR filings for FY 2023-24 of TSDISCOMs in respect of BTPS, TSGENCO proposed for Gross Generation of 8063.72 MU (85% PLF), after adjusting the Auxiliary Consumption of 685.42 MU (8.5% as per TSERC Regulations), Net Energy Export is 7378.30 MU. TSDISCOMs have considered the Net Energy Export.

**Commission’s View**

3.6.10 The Commission has taken note of the submissions of stakeholder and petitioner. The Commission has accorded consent to the PPA of BTPS entered between TSGENCO and TSDISCOMs along with other PPAs vide order dated 06.08.2021 in O.P.No.15 to 19 of 2021.

**3.7 ABNORMAL DELAY IN DECLARATION OF COD OF BTPS AND ESCALATION OF CAPITAL COST**

**Stakeholders’ Submissions**

3.7.1 As per the submissions made by TSGENCO in its subject petitions, there has been abnormal delay in declaring commercial operation dates of the four units of the subject station as given below:

**Table 3.1: Abnormal delay in declaring COD of BTPS**

Unit	Scheduled COD	COD declared on	Delay
1 <sup>st</sup>	20.03.2017	05.06.2020	39 months
2 <sup>nd</sup>	20.05.2017	07.12.2020	44 months
3 <sup>rd</sup>	20.07.2017	26.03.2021	45 months
4 <sup>th</sup>	20.09.2017	09.01.2022	52 months

3.7.2 The capital cost, including interest during construction, was originally estimated to be Rs.7290.60 crore. TSGENCO has submitted that it would increase to Rs.10515.24 crore by 01.04.2023 from Rs.8691.43 crore provisionally

approved up to 22.03.2022. In other words, the capital cost increases by 3235.24 crore or 44.37%. Whatever be the reasons, abnormal delay in executing the project and declaring CODs of the four units from 39 to 52 months has led to this abnormal escalation in capital cost, including IDC, of the station. As per the revised capital cost, cost per MW works out to Rs.9.74 crore which is abnormal and prohibitive.

### **Petitioner's Replies**

- 3.7.3 As per Appendix-I of CERC Regulations, 2014 "Time line for completion of Projects", for coal based thermal power plants capacity in the range of 200 MW to 330 MW is "33 months for green field projects, subsequent units at an interval of 4 months each". In respect of BTPS it would be:

**Table 3.2: Timelines for completion of projects**

Zero Date	Unit	Scheduled CODs (As per CERC Norms)	Actual CODs	Delay in Months
21.03.2015	Unit-I	20.12.2017	05.06.2020	30
	Unit-II	20.04.2018	07.12.2020	32
	Unit-III	20.08.2018	26.03.2021	30
	Unit-IV	20.12.2018	09.01.2022	36

- 3.7.4 There was a delay due to the various Force Majeure situation which are not attributable either to TSGENCO or contractors and the reasons for delay are already explained at the time of Multi Year Tariff filings and the Commission examined the submissions made by TSGENCO.
- 3.7.5 Regarding the increase in project cost of BTPS, the following is submitted for consideration of Commission.
- i. The original capital cost of the project is Rs.7290.60 crore.
  - ii. Due to Change in law by Government of India towards stringent Environmental Norms towards Flue Gas Desulfurization the Cost of the project increased by Rs.880 crore.
  - iii. Due to change in tax law by Government of India replacing Indirect taxes with Goods and Services Tax w.e.f. 01.07.2017, cost of the project increased by Rs.300 crore (Rs.151 crore towards BHEL works and Rs.149 crore (Approx) towards Non-EPC supplies and works).
  - v. The above are beyond the control of the TSGENCO. Hence the actual original project cost is Rs.8470 crore as against Rs 7290.60 crore
  - vi. TSGENCO is making all efforts to complete the project within the revised administrative cost of Rs.10515.84 cores and assured to the Commission that the project will be completed within the revised administrative approval cost and no additional cost will be incurred over and above the approved cost of Rs.10515.84 crore.

- vi. In this connection it is to submit that till the date of COD of final unit of the project the expenditure capitalised is Rs.6946.30 crore and the cost of balance works in progress amounting to Rs.3569.54 crore are in different stage of completion.
- vii. Some of the ongoing and pending works as on date which were taken-up for the essential operation of the project are detailed below for information and consideration of Commission.
  - a. FGD (Fuel gas desulphurisation) ongoing works which are mandatory as per Ministry of Power/CEA/MOEF for all thermal projects is Rs.880 crore.
  - b. Residential Quarter to the staff and Construction of essential social infrastructure in Township etc., Approximately Rs.650 crore.
  - c. Railway line and Marshalling Yard approximately Rs.500 crore.
  - d. Flood protection walls approximately Rs.50 crore (additional work due to recent unprecedented floods to the Godavari River)
  - e. Ongoing works in BHEL scope viz., Mill rejects systems, boiler and turbine lifts etc. Rs.200 crore.
- viii. It is further stated that, the increase in project cost is due to the above-mentioned Force Majeure conditions (change in tax law, Hon'ble NGT Orders, COVID-19, etc.), the increase in project cost comes to around 20% not 43% as observed by the petitioner.

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

- 3.7.6 The Commission has analysed the reasons for delay in project and reasons for cost overrun and approved the capital cost as per the provisions in Regulation No.1 of 2019 in Chapter-4 of this order.

### **3.8 BURDEN ON CONSUMERS DUE TO DELAY IN EXECUTION OF BTPS**

#### ***Stakeholders' Submissions***

- 3.8.1 The reasons given by TSGENCO for delay in execution of the subject station, escalation in its capital cost, including IDC, and resultant avoidable and additional burdens on consumers, are untenable for the following reasons, among others:
- 3.8.2 As per the original schedule, CODs of the four units of BTPS had to be declared between 23.03.2017 and 20.09.2017. The developments subsequent to the scheduled COD of 4<sup>th</sup> unit cannot justify the delay in declaring scheduled CODs.
- 3.8.3 Granting of environmental clearance by the Ministry of Environment, Forest and Climate Change and mandating of new emission norms, and direction of National Green Tribunal are shown as reasons for the delay in execution of the station by TSGENCO. In view of the scheduled declaration of CODs,

TSGENCO should have applied and got EC from the Ministry well in time. It acted in a casual manner, leading to the said direction of NGT. Application for EC was filed by TSGENCO on 08.04.2016 and it took several months to get EC from the Ministry on 15.03.2017. In other words, TSGENCO should have initiated the process well in time and pursued with the MoEF&CC to get the EC. There is no clarity on who is responsible for taking up the project, without getting EC from the Ministry and also on the direction given by NGT on this failure.

- 3.8.4 Rains and COVID-19 are subsequent developments and for a temporary period. They cannot justify a delay in execution of the units of the station by 39 to 52 months.
- 3.8.5 Another reason trotted out by TSGENCO is that boiler erection works of unit IV of the station were hampered due to diversion of oxygen cylinders for medical purposes at the behest of the Gol. That diversion is also for a limited period and that cannot be the reason for delay in declaring CODs of the first three units and of the unit IV for a period of 52 months.
- 3.8.6 When GoTS decided to establish BTPS and order was placed on BHEL for supply of required machinery, serious allegations were made. Instead of taking up this project with super critical technology, it was decided to purchase the said machinery, with sub-critical technology, lying with BHEL for several years, which was originally manufactured for a private company "India Bulls," as the latter failed to make payments. The claim of the powers-that-be was that, since that machinery was readily available, BTPS can be completed early and power from the station would be available early. It was also pointed out that for using sub-critical technology substantial quantum of imported coal was needed and that several problems would arise, leading to increase in costs of generation and resultant additional burdens on consumers of power. The abnormal delay in execution of BTPS, with the said sub-critical technology machinery purchased from BHEL, completion of the station could have been advanced.
- 3.8.7 BTPS is a case of failures of commission and omission due to imprudent decisions taken and failure to take required steps in time and in an orderly manner. As a result, for the failures of commission and omission of the GoTS and TSGENCO, consumers are being penalised, with imposition of avoidable

burdens on them in the form of higher tariffs for power being purchased from BTPS, for their no fault.

***Petitioner's Replies***

- 3.8.8 The detailed justification for delay in COD is already furnished above. As per the directions of Government of Telangana, TSGENCO had entered an MOU with BHEL on 04.10.2014, in the presence of the Hon'ble Chief Minister of Telangana State for construction of 6000 MW Power Plants on EPC basis in Telangana State.
- 3.8.9 As per TS Govt. consent has been received from Principal Secretary to Chief Minister with directions to TSGENCO to set up (4x270 MW) Thermal Power Plant at Manuguru. The present Bhadradi (4x270 MW) Thermal Power Plant is a part of capacity addition programme for 6000 MW in Telangana State. TSGENCO has applied for MoEF&CC clearance in FORM-I through online on dated 03.02.2015 and Hard copy was also submitted on 09.02.2015. MoEF&CC has issued Terms of References (TOR) for BTPS on 23.06.2015.
- 3.8.10 In the process Hon'ble NGT has directed to stop all the construction works. Accordingly, TSGENCO has suspended all the works during the period Dec'15 to Mar'17 for a period of 15 months. Later MoEF&CC has accorded Environmental Clearance on 15.03.2017. Hence, the process of obtaining Environmental Clearances has begun much before commencement of BTPS Construction (4x270 MW).
- 3.8.11 Rains and COVID-19 are some of the reasons for the delay. The NGT orders thereafter and MOEF&CC clearances etc., contributed for the delay. Diversion of Oxygen cylinders is only one of the reasons for delay in COD of Unit-4, other reasons were already submitted in the filings.
- 3.8.12 BHEL is a Maharatna Central PSU and has expertise in establishment of Thermal Power Stations across the country and also is the sole manufacturer of BTG in the Central Government sector. It is erroneous on the part of petitioner to conclude that, BTPS plants will be dependent on imported coal. BTPS Coal requirement is met from domestic coal, as per linkage granted by Ministry of Coal, GOI. Now units are operating satisfactorily with coal supplies from SCCL and no imported coal is envisaged in future also. Further, but for

the Force Majeure conditions stated in detailed above, BTPS units could have been commissioned as per the scheduled target dates.

3.8.13 For any large-scale project, gestation period is needed to reach a stage where it can start showing returns. Especially in case of Thermal Power Projects, capital cost in the initial years of investment may appear to be more but in the long run these projects would yield reasonable rates of return & cheaper and reliable power. There were no failures of commission & omission in the project either by TSGENCO or GoTS. The delay was purely on account of unavoidable situations, natural calamities and force majeure as explained above in detail. Further, the capital cost increase is on account of FGD & implementation of GST statutory provisions etc. Further, it is stated that when compared with the CERC Norms of Benchmark Hard Cost (as per the CERC Order dated 04.06.2012) and escalated thereon, capital cost of Thermal Power Projects comes to around Rs.8.54 crore. per MW upto FY 2021–22. The benchmark Hard Cost of CERC does not include MGR, railway siding, unloading equipment at jetty, and rolling stock, locomotive, transmission line till tie point. As against this the actual capital cost of BTPS comes to around Rs.8.46 crore without FGD.

3.8.14 Hence, it is to reiterate that there were no failures of commission & omission on the part of Government of Telangana or TSGENCO.

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

3.8.15 The Commission takes note of the submissions of the stakeholder and petitioner.

### **3.9 REVISION OF FIXED CHARGES FOR BTPS**

#### ***Stakeholders' Submissions***

3.9.1 TSGENCO has sought the revised fixed charges for BTPS to the tune of Rs.5554.60 crore for the period from FY 2019-20 to FY 2023-24 against Rs.6535.13 crore claimed to have been provisionally approved. Compared to the provisionally approved fixed charges for the first three years of a total of Rs.4640.96 crore, the revised claim has come down to Rs.3504.96 crore. The reduction for the three years is Rs.1136 crore. The implication is that TSGENCO could not generate and supply power from BTPS to the extent

expected during that period based on which the Commission worked out permissible fixed charges earlier. For FY 2023-24, TSGENCO has revised its claim for fixed charges from the provisionally approved Rs.1894.18 crore to Rs.2049.68 crore. The implication is that BTPS is expected to generate and supply more power than what was estimated for the current financial year or that the increase is based on additional expenditure TSGENCO has claimed to have incurred, with or without increase in estimated availability of power from the station.

***Petitioner's Replies***

- 3.9.2 Revised tariff petition of BTPS has been filed in compliance to the directive no.6 of Multi Year Tariff Order dated 22.03.2022. The revised fixed charges claimed are provisional estimates based on administrative approval and scheduled completion of various works.
- 3.9.3 Subsequently, Mid Term Review petition is filed in line with regulations, based on the actual capital expenditure incurred up to the date of commercial operation of the last unit (Unit 4) of BTPS and capitalized as per audited accounts amounting to Rs.6946.30 crore. There are certain capital works in Progress (CWIP) viz., FGD, Staff Quarters & Township, Railway line, Marshaling yard etc., amounting to Rs.3,569.54 crore (Approx.) which shall be capitalized upon completion and the same shall be claimed in tariff.
- 3.9.4 In the Multi-Year Tariff order dated 22.03.2022, the Commission has provisionally approved the Annual Fixed Charges. In comparison of Fixed Charges approved in MYT, with the amounts claimed in Mid Term Review there is a variation in the claim. Variation is on account of the following:
- i) Change in the Commercial operation dates of the units of BTPS.
  - ii) Reduction in fixed charges during FYs 2020-23, is on account of:
    - a) Actual Capital cost of project;
    - b) Change in interest rates;
  - iii) Increase in fixed charges during the FY 2023–24, is on account of:
    - a) Proposed Capitalizations of ongoing capital work;
    - b) Increase in Income Tax Rates (from 17.472% to 25.168%);
    - c) Considering Year over Year O&M charges escalation as per CERC Rates;

3.9.5 Further, the Fixed Charges filed in the petition are as per the Norms approved in Regulation No.1 of 2019. However, TSGENCO Fixed Charges claim from TSDISCOMs is limited to actual operating parameters.

***Commission's View***

3.9.6 The Commission in MYT order dated 22.03.2022 has provisionally approved the capital cost of BTPS. It is stated that the Commission will analyse the reasons for delay in project and reasons for cost overrun in detail when TSGENCO submits complete details of project cost after project COD is achieved. The Commission has directed TSGENCO to submit the proposal for final capital cost and revised tariff for BTPS after commissioning of the final unit.

3.9.7 TSGENCO has filed revised Tariff Petition of BTPS in compliance to the directive no. 6 of Multi Year Tariff Order dated 22.03.2022. The same was taken on record by the Commission in I.A.No.58 of 2022 in O.P.No.6 of 2021.

3.9.8 Subsequently, Mid-Term Review petition for TSGENCO stations including BTPS was filed in line with regulations, based on the actual capital expenditure incurred up to the date of commercial operation of the last unit (Unit 4) of BTPS and capitalized as per audited accounts. The Mid-Term Review petition was taken on record in O.P.No.78 of 2022.

3.9.9 Since both the matters pertain to the Generation tariff, both the petitions are taken up for public consultation process together. The Mid-Term review is based on the provisions of the Regulation No.1 of 2019.

3.9.10 However, subsequently, TSGENCO has withdrawn the petition I.A.No.58 of 2022 in O.P.No.6 of 2021 vide its memo dated 21.03.2023 submitting that Revised Tariff application of BTPS is part & parcel of Mid-Term Review petition. Also, in Mid-Term Review filings capital cost etc., were filed based on actual expenditure (Audited Accounts), as against provisional estimates based on administrative approval and scheduled completion of works filed in Revised tariff petition of BTPS. Accordingly, the Commission passed order on 23.03.2023 accepting to withdraw the application and the application is dismissed as withdrawn.



### **3.10 TRUE-UP OF FIXED CHARGES**

#### ***Stakeholders' Submissions***

- 3.10.1 For the period of three years from FY 2019-20 to FY 2021-22, TSGENCO has sought true up of Rs.31.89 crore towards fixed charges against the approved Rs.20983.75 crore and actual Rs.21015.54 crore.
- 3.10.2 For the two years viz., FY 2022-23 and FY 2023-24, TSGENCO has claimed revision of fixed charges to increase by Rs.337.67 crore from the approved Rs.15745 crore to the projected Rs.16082 crore.

#### ***Petitioner's Replies***

- 3.10.3 As per mid-term true-up filing, the increase in fixed charges for three-year period is very minimum of Rs.31.89 crore and it is due to change in interest rates, capitalisation of certain capital works, increase in income tax rate and claiming of O&M Cost of new projects (KTPS-VII and BTPS) as per actuals.
- 3.10.4 As per mid-term filing, the estimated fixed charges for the subsequent two years period increased by Rs.337.67 crore is due to change in interest rates, proposed capitalisation of ongoing capital works, increase in income tax rate and claiming of O&M Cost of new projects (KTPS-VII and BTPS) escalated based on actuals. The above claims are in line with the TSERC regulation

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

- 3.10.5 The Commission has taken note of the submissions of stakeholder and petitioner. The Commission has gone through the submissions of TSGENCO in this regard and after prudence check approved Mid-term review and revised the AFC of the generating stations for FY 2022-23 and FY 2023-24 as detailed in Chapter-4 and Chapter-5 of this order.

## **Chapter-4**

### **Mid-Term Review for FY 2019-20 and FY 2021-22**

#### **4.1 REGULATORY PROVISIONS**

4.1.1 The Commission in the Tariff Order had adopted the (Terms and Conditions of Generation Tariff) Regulations No.1 of 2019 for tariff determination for FY 2019-20 to FY 2023-24. The Commission has carried Mid-Term Review in accordance with the (Terms and Conditions of Generation Tariff) Regulations No.1 of 2019.

4.1.2 As regards Mid-term Review, Clauses Regulation 3.8.2 of the (Terms and Conditions of Generation Tariff) Regulations No.1 of 2019 stipulates as under:

***“3.8.2 Mid-Term Review***

- a) *Truing up for the first and second year and provisional truing-up for the third year of control period to be carried out under these regulations.*
- b) *Revised forecast of Aggregate Revenue Requirement, expected Revenue from existing tariff and charges and revenue gap for the fourth and fifth year of control period“*

4.1.3 The Mid-term Review carried out by the Commission is detailed in the following paragraphs.

#### **4.2 BACKGROUND**

4.2.1 The Telangana State Generation Corporation Limited (TSGENCO) was established as a company registered under the Companies Act,2013, 19<sup>th</sup> May 2014 upon coming into force of the Andhra Pradesh Reorganisation Act,2014 with effect from 2<sup>nd</sup> June 2014.

4.2.2 TSERC vide its tariff order dated 22.03.2022 determined the tariff for TSGENCO stations for the 4<sup>th</sup> MYT period i.e., FY 2019-20 to FY 2023-24. The Commission also directed TSGENCO to file midterm revenue petition in terms of Regulation No.1 of 2019.

4.2.3 Accordingly, TSGENCO has submitted Petition for Mid Term Review of generation tariff for the period from FY 2019-20 to FY 2021-22 and Revised tariff for FY 2022-23 and FY 2023-24.

4.2.4 TSGENCO has filed a petition for determination of revised tariff considering the capital cost up to COD of 4<sup>th</sup> unit of Bhadradi Thermal Power Station (4x270) for 4<sup>th</sup> control period (FYs 2019-24) under Section 62 of the Electricity Act, 2003

for the electricity supplied by TSGENCO to Distribution Licensees on 18.07.2022 in compliance to the directive No.6 of Multi Year Tariff Order dated 22.03.2022.

4.2.5 However, TSGENCO has filed revised capital cost in the Mid Term Review petitions and the Commission has conducted Public Hearing on both the petitions on 01.02.2023 in the Court Hall of TSERC.

4.2.6 In view of TSGENCO filing a memo for withdrawing the petition for determination of BTPS, the Commission has accepted the request of TSGENCO for withdrawal of the petition. The matter of finalising the capital cost of BTPS is dealt in this order.

4.2.7 Analysis on the claim of TSGENCO and Commission's view is detailed below:

### 4.3 ADDITIONAL CAPITALISATION CLAIMED

4.3.1 The additional capitalisation claimed by TSGENCO duly considering the decapitalisation of assets for FY 2019-20 to FY 2021-22 is as shown in the Table below:

**Table 4.1: Additional Capitalisation claimed for Existing Stations**

*Rs.in crore*

Sl. No	Name of the Station	GFA approved in GTO	Additions in FY 2019-20	Additions in FY 2020-21	Additions in FY 2021-22	Total additions
1	KTPS-O&M	776.51	4.27	0.00	0.00	4.27
2	KTPS-V	2149.48	3.37	36.14	80.89	120.40
3	KTPS-VI	2530.48	-34.37	16.57	21.92	4.12
4	KTPS-VII	4602.87	174.27	192.53	53.13	419.93
5	RTS-B	127.04	1.72	0.02	0.33	2.07
6	KTPP-I	2548.83	1.01	4.18	133.27	138.46
7	KTPP-II	3408.75	34.12	83.33	253.54	370.99
8	BTPS	0.00	0.00	4871.17	2075.12	6946.29
9	Nagarjuna Complex	1920.80	0.80	0.73	6.37	7.90
10	Srisailam LB	3375.71	0.54	0.48	18.10	19.12
11	Small Hydel	120.54	0.86	0.77	0.48	2.11
12	Mini Hydel	31.23	0.15	0.13	0.08	0.36
13	Pochampad-II	29.74	0.14	0.13	0.08	0.35
14	Priyadarshini Jurala	690.68	0.45	12.14	2.39	14.98
15	Lower Jurala	1617.59	4.59	3.47	1.98	10.04
16	Pulichintala	433.85	9.30	1.07	1.05	11.42
	<b>Total</b>	<b>24364.10</b>	<b>201.22</b>	<b>5222.86</b>	<b>2648.73</b>	<b>8072.81</b>

4.3.2 TSGENCO's has also submitted the details of de-capitalization of assets as given in table below:

**Table 4.2: Details of Decapitalisation of Assets for MTR***Rs.in crore*

Sl. No.	Station	FY 2019-20	FY 2020-21	FY 2021-22	Remarks
1	KTPS-O&M	0.02			DAV School (acquiring transfer of current year acquisition from investment means)
2	KTPS-VI	57.12			LD recovered from BHEL and BGRESL
3	KTPS-VII	2.76			Governing System (acquiring transfer of current year acquisition from investment means)
4	KTPP-II			4.16	Rotor Assembly
5	Priyadarshini Jurala HES		0.02		Exchange variation
<b>Total</b>		<b>59.90</b>	<b>0.02</b>	<b>4.16</b>	

4.3.3 The Commission in order dated 22.03.2022, considering the clauses 7.19.1 & 7.19.2 of the Regulation No.1 of 2019, has approved the additional capitalization of expenses to be incurred for efficient and successful operation of the old plants. For new plants, the Commission has approved proposed additional capitalization which is within the original scope of the project, but incurred on a later date to save IDC. The details are as given in table below:

**Table 4.3: Capital Investment Plan approved in order dated 22.03.2022***Rs.in crore*

Station-wise GFA	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
<b>Thermal</b>						
KTPS-O&M	1.96	0.00	0.00	0.00	0.00	<b>1.96</b>
KTPS-V	7.78	79.42	43.65	0.00	0.00	<b>130.85</b>
KTPS-VI	-57.12	0.00	0.00	0.00	0.00	<b>-57.12</b>
KTPS-VII	249.43	403.67	276.01	193.78	194.08	<b>1316.97</b>
RTS-B	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
KTPP-I	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
KTPP-II	22.15	304.49	314.51	45.40	29.59	<b>716.14</b>
BTPS	0.00	7952.74	738.68	0.00	0.00	<b>8691.42</b>
<b>Hydel</b>						
Nagarjuna Complex	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Srisaillam LB	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Small Hydel	0.00	14.30	9.55	8.35	0.00	<b>32.20</b>
Mini Hydel	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Pochampad-II	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>
Priyadarshini Jurala	0.00	0.00	0.00	0.00	0.00	<b>0.00</b>

Station-wise GFA	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	Total
Lower Jurala	4.43	50.39	27.99	17.72	16.14	116.67
Pulichintala	4.71	13.03	5.95	5.87	6.10	35.66
<b>Total</b>	<b>233.34</b>	<b>8818.03</b>	<b>1416.35</b>	<b>271.13</b>	<b>245.91</b>	<b>10984.75</b>

4.3.4 The clauses 7.7, 7.19 of Regulation No.1 of 2019 stipulates the following:

7.7 *In the normal course, the Commission shall not revisit the approved capital investment plan during the Control Period. However, during Mid-Term Review, the Commission shall monitor the Year-wise progress of the actual capital expenditure incurred by the Applicant vis-à-vis the approved capital expenditure.*

*Provided that the actual capital expenditure incurrent shall be only as per the approved capital investment plan.*

**7.19 Additional Capitalisation**

7.19.1 *The capital expenditure actually incurred or projected to be incurred, on the following counts within the original scope of work, after the COD and up to the Cut-Off Date, may be admitted by the Commission subject to Prudence Check. Any additional capitalization after COD needs prior approval of the Commission:*

....

7.19.2 *The details of works included in the original scope of work along with estimates of expenditure, liabilities recognized to be payable at a future date and the works deferred for execution shall be submitted along with the petition for determination of final tariff after COD of the Generation Unit/Station.*

7.19.3 *Any expenditure, which has been claimed under renovation and modernisation or repairs and maintenance under O&M expenses shall not be claimed under this clause.*

7.19.4 *Impact of additional capitalisation on tariff, if any, shall be considered during Mid-term Review or tariff determination for the next Control period as the case may be.*

7.19.5 *Any expenditure on miscellaneous items/assets like normal tools and tackles, personal computers, furniture, air-conditioners, voltage stabilizers, refrigerators, fans, coolers, TV, washing machines, Heat-convector, carpets, mattresses etc., brought after the Cut-Off Date shall not be considered for additional capitalisation for determination of tariff. The said items are illustrated and may include any other similar items.*

4.3.5 In the present petition, TSGENCO has submitted station-wise, financial year-wise and item-wise additional capitalization details with justification. TSGENCO's submission generating station-wise on additional capitalisation and the Commission's consideration is dealt in the following paragraphs.

a) **KTPS-O&M:** The petitioner has claimed an amount of Rs.4.29 crore towards additional capitalisation along with decapitalisation of assets for FY 2019-20 for an amount of Rs.0.02 crore. This expenditure is proposed towards Compound Wall around Abandoned Railway track,

Northern Ash Pond works, 100 MVA Transformer and office equipment & furniture.

After prudence check it is observed that the Northern Ash Pond-II is also serving to KTPS-VII and the petitioner has claimed that the work is proposed to be taken up and claimed additional capitalisation for FY 2022-23 & FY 2023-24. In view of KTPS-O&M getting decapitalised and the same Ash pond is proposed to be utilised for KTPS-VII, the Commission is not inclined to allow the additional capitalisation towards Ash pond works of KTPS-O&M. The additional capitalisation towards Ash pond for KTPS-VII will be examined after completion of the works. Considering the clauses 7.19.1 & 7.19.2 of the Regulation No.1 of 2019, the balance additional capitalisation is not allowed.

- b) **KTPS-V:** The petitioner has claimed additional capitalisation of Rs.3.37 crore, Rs.36.14 crore and Rs.80.89 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards Ash pond works, etc.

Since the claim of the petitioner is within the approved capital investment plan, the Commission has allowed the claim of the petitioner.

- c) **KTPS-VI:** The petitioner has claimed additional capitalisation of Rs.22.75 crore with decapitalisation of Rs.57.12 crore, Rs.16.57 crore and Rs.21.92 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards decapitalisation of liquidated damages recovered from BHEL and BGRESL for delay in supply and erection of KTPS-VI which was capitalised in earlier years, works related to residential quarters, transformer augmentation, turbine & wet fly ash handling, BOP, rotor assembly and water treatment.

The Commission has not allowed the claim of the petitioner as the claim is not as per the approved capital investment plan in order dated 22.03.2022 and additional capitalisation after cut-off dates requires prior approval as per clause 7.19 of Regulation No.1 of 2019.

- d) **KTPS-VII:** The petitioner has claimed additional capitalisation of Rs.174.27 crore, Rs.192.53 crore and Rs.53.13 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to Boiler auxiliaries, Air pre heater, turbine and its auxiliaries, Ash handling plant, communication cabling, cooling towers, control system, power house building, etc.

Since the claim of the petitioner is within the approved capital investment plan, after prudence check, the Commission has allowed additional capitalisation of assets as Rs.174.27 crore, Rs.191.80 crore and Rs.53.13 crore for FY 2019 20, FY 2020-21 and FY 2021-22 respectively.

- e) **RTS-B:** The petitioner has claimed additional capitalisation of Rs.1.72 crore, Rs.0.02 crore and Rs.0.33 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to Electro static precipitator, main turbine, C&I system, Ash handling system, main boiler, surveillance system and furniture & office equipment.

The Commission has not allowed the claim of the petitioner as the claim is not as per the approved capital investment plan in order dated 22.03.2022 and additional capitalisation after cut-off dates requires prior approval as per clause 7.19 of Regulation No.1 of 2019.

- f) **KTPP-I:** The petitioner has claimed additional capitalisation of Rs.1.01 crore, Rs.4.18 crore and Rs.133.27 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to civil works, plant auxiliaries and furniture & office equipment.

The Commission has not allowed the claim of the petitioner as the claim is not as per the approved capital investment plan in order dated 22.03.2022 and additional capitalisation after cut-off dates requires prior approval as per clause 7.19 of Regulation No.1 of 2019.

- g) **KTPP-II:** The petitioner has claimed additional capitalisation of Rs.34.12 crore, Rs.83.33 crore and Rs.253.54 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to Boiler Auxiliaries, Turbine Auxiliaries, Generator Auxiliaries, Ash Pond, Power House Building, Quarters, Civil works, furniture & office equipment, etc.

Since the claim of the petitioner in FY 2019-20 is beyond the approved capital investment plan, after prudence check, the Commission has allowed Rs.22.15 crore. For FY 2020-21 & FY 2021-22 the Commission has allowed the claim of the petitioner i.e., Rs.83.33 crore, Rs.253.54 crore as the claim is within the approved capital investment plan.

- h) **Nagarjuna Sagar Complex:** The petitioner has claimed additional capitalisation of Rs.0.80 crore, Rs.0.73 crore and Rs.6.37 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to batteries, switchyard equipment, cables, DG set, civil works, furniture & office equipment.

The Commission has not allowed the claim of the petitioner as the claim is not in accordance with the approved capital investment plan in order dated 22.03.2022.

- i) **Srisailem Left Bank Power House:** The petitioner has claimed additional capitalisation of Rs.0.54 crore, Rs.0.48 crore and Rs.18.10 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to turbine digital regulation panels, switchyard equipment, furniture & office equipment.

The Commission has not allowed the claim of the petitioner as the claim is not in accordance with the approved capital investment plan in order dated 22.03.2022.

- j) **Small Hydel Stations:** The petitioner has claimed additional capitalisation of Rs.0.86 crore, Rs.0.77 crore and Rs.0.48 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to renovation of plants, circuit

breakers, relay testing kit, civil works and furniture & office equipment.

The Commission has not allowed the claim of the petitioner for FY 2019-20 as the claim is not in accordance with the approved capital investment plan. Whereas for FY 2020-21 and FY 2021-22 the Commission has allowed the claim of the petitioner i.e., Rs.0.77 crore, Rs.0.48 crore respectively as the claim is within the approved capital investment plan.

- k) **Mini Hydel Stations:** The petitioner has claimed additional capitalisation of Rs.0.15 crore, Rs.0.13 crore and Rs.0.08 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to vertical lift escape gate, hydroelectric system additions, plant & machinery and furniture & office equipment.

The Commission has not allowed the claim of the petitioner as the claim is not in accordance with the approved capital investment plan in order dated 22.03.2022.

- l) **Pochampad-II:** The petitioner has claimed additional capitalisation of Rs.0.14 crore, Rs.0.13 crore and Rs.0.08 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

The Commission has not allowed the claim of the petitioner as the claim is not in accordance with the approved capital investment plan in order dated 22.03.2022.

- m) **Priyadarshini Jurala:** The petitioner has claimed additional capitalisation of Rs.0.45 crore, Rs.12.14 crore and Rs.2.39 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to erection & testing of turbine, residential quarters, diesel generator set, generator transformers, SCADA PLCC system and furniture & office equipment.

The Commission has not allowed the claim of the petitioner as the claim is not in accordance with the approved capital investment plan in order dated 22.03.2022.

- n) **Lower Jurala:** The petitioner has claimed additional capitalisation of Rs.4.59 crore, Rs.3.47 crore and Rs.1.98 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to Turbine & Generator auxiliaries, power house intake and draft tube gates, civil works, lighting system, quarters and furniture & office equipment.

Since the claim of the petitioner in FY 2019-20 is beyond the approved capital investment plan, after prudence check, the Commission has allowed Rs.4.43 crore. For FY 2020-21 & FY 2021-22 the Commission has allowed the claim of the petitioner i.e., Rs.3.47 crore, Rs.1.98 crore as the claim is within the approved capital investment plan.

- o) **Pulichintala:** The petitioner has claimed additional capitalisation of Rs.9.30 crore, Rs.1.07 crore and Rs.1.05 crore for FY 2019-20, FY 2020-21 and FY 2021-22 respectively. This expenditure is proposed towards works related to Turbine & Generator auxiliaries, Bus ducts, control & relay panels, switchyard equipment, cabling system, power



house civil works, and furniture & office equipment.

Since the claim of the petitioner in FY 2019-20 is beyond the approved capital investment plan, after prudence check, the Commission has allowed Rs.4.71 crore. For FY 2020-21 & FY 2021-22 the Commission has allowed the claim of the petitioner i.e., Rs.1.07 crore, Rs.1.05 crore as the claim is within the approved capital investment plan.

#### 4.4 REVISED CAPITAL COST OF BTPS

4.4.1 The Commission had provisionally approved capital cost and additional capitalisation for BTPS in the GTO dated 22.03.2022. The capital cost approved by the Commission for BTPS is as under:

**Table 4.4: Capital Cost approved for BTPS in GTO dated 22.03.2022**

*Rs.in crore*

Stations	Capital Cost on Year of COD	Capital Cost for FY 2020-21	Capital Cost for FY 2021-22	Total Capital Cost
BTPS	5561.87	2390.87	738.68	8691.42

4.4.2 Since the capital cost was allowed for BTPS in the GTO on provisional-basis, the Commission has revisited the capital cost of BTPS and has allowed the final capital cost in this Order. For this, the Commission has scrutinised the submissions of the Petitioner and has approved the capital cost for BTPS based on prudence check and considering the provisions of Regulation No.1 of 2019.

4.4.3 The Commission has exercised following prudence check while approving the capital cost for BTPS:

- Capital cost was verified with the capital cost specified in PPA and actual cost recorded in the annual accounts.
- The penalties levied by the TSGENCO to the contractors reduced from capital cost.

4.4.4 As per the information submitted in the petition and additional information following is the claim made by TSGENCO for revised capital cost:

**Table 4.5: Capital Cost claimed for BTPS**

*Rs.in crore*

Sl. No.	Break up of expenditure	As per DPR	As per Revised approval	As per TSGENCO final Board Approval	Provisional cost approved in GTO	Revised cost claimed
1	Electrical & Mech. System (BHEL)	3546.60	3326.60	3326.60	3147.33	3326.60
2	Civil System (BHEL)	1476.03	1524.19	1522.76	1393.59	1522.76
3	Common works E&M other than BHEL	95.00	95.00	138.76	95.00	138.76
4	Common works Civil other than BHEL	1167.12	1208.88	1466.57	1208.88	1466.57

Sl. No.	Break up of expenditure	As per DPR	As per Revised approval	As per TSGENCO final Board Approval	Provisional cost approved in GTO	Revised cost claimed
5	Consultancy services	12.00	12.00	12.00	11.13	12.00
6	C&I/Pre project works	0.00	0.00	0.00	0.00	0.00
7	CSR	0.00	30.00	30.00	30.00	30.00
8	Land	0.00	100.00	100.00	100.00	100.00
9	Erection & Commissioning (BHEL)	551.83	551.83	551.83	482.45	551.83
10	New Norms (FGD, SCR & ESP addition)	680.00	680.00	686.24	0.00	686.24
11	Bus Reactor and CTs&CVTs	12.55	12.55	12.55	12.55	12.55
12	Back charges to BHEL	0.00	22.64	24.07	0.00	24.07
13	EDC	203.00	668.33	671.33	650.16	671.33
14	IDC	792.85	1727.30	1845.59	1560.35	1973.13
14a	IDC for FGD			127.54		
<b>Total</b>		<b>8536.98</b>	<b>9959.32</b>	<b>10515.84</b>	<b>8691.43</b>	<b>10515.84</b>

### **Commission's View**

4.4.5 The Commission has scrutinised the submissions of the Petitioner. The Commission has revisited the capital cost of BTPS in accordance with the provisions under Regulation No.1 of 2019 for approval of IDC and EDC and has accordingly after prudence check allowed the final capital cost of BTPS. The Commission has exercised following prudence check while approving the capital cost of BTPS.

- The Commission checked original actual capital cost recorded in the annual accounts.
- The revenue from the sale of infirm power already reduced from capital cost as submitted by TSGENCO in its submissions.
- The penalties levied by TSGENCO to the contractors reduced from the capital cost.
- Electrical & Mechanical System (BHEL): TSGENCO has claimed revised cost of Rs.3326.60 crore and submitted the contract price and liquidated damaged as Rs.3241.19 crore and Rs.93.86 crore respectively. The Commission after prudence check allowed Rs.3147.33 crore by disallowing the liquidated damages from the contract price.
- Civil System (BHEL): TSGENCO has claimed revised cost of Rs.1522.76 crore and submitted the contract price and liquidated damaged as Rs.1435.59 crore and Rs.42 crore respectively. The Commission after prudence check allowed Rs.1393.59 crore by disallowing the liquidated damages from the contract price.
- Common works E&M other than BHEL: TSGENCO has claimed revised cost of Rs.138.76 crore. The Commission after prudence check of revised DPR allowed Rs.138.76 crore as claimed.
- Common works Civil other than BHEL: TSGENCO has claimed revised cost of Rs.1466.57 crore. The Commission after prudence check of

revised DPR allowed Rs.1466.57 crore as claimed.

- Consultancy Services: TSGENCO has claimed revised cost of Rs.12.00 crore. The Commission after prudence check allowed Rs.11.13 crore.
- CSR & Land: TSGENCO has claimed revised cost of CSR and Land as Rs.30 crore and Rs.100 crore respectively. The Commission after prudence check allowed Rs.30 crore and Rs.100 crore respectively as claimed.
- Erection & Commissioning (BHEL): TSGENCO has claimed Rs.551.83 crore and submitted the liquidated damages levied on the contractor as Rs.36.57 crore. The Commission after prudence check allowed Rs.515.26 crore by disallowing the liquidated damages levied on the contractor.
- New Norms (FGD, SCR & ESP addition): The Commission has deferred capital cost towards New Norms (FGD, SCR & ESP addition) in the GTO dated 22.03.2022. As per revised DPR, the petitioner has claimed Rs.686.24 crore towards New Norms (FGD, SCR & ESP addition). The Commission has deferred the same, the cost towards FGD will be considered after completion of FGD works. The Commission directs TSGENCO to submit the details of FGD installation along with DPR, project cost, physical & financial progress of work, etc., in its End of Control Period Review petition for the consideration of the Commission.
- Bus Reactor and CTs & CVTs: TSGENCO has claimed Rs.12.55 crore. The Commission after prudence check allowed Rs.12.55 crore as claimed.
- Back charges to BHEL: The petitioner has claimed an amount of Rs.24.07 towards back charges to BHEL. The Commission has not allowed the claim of the petitioner.
- EDC: TSGENCO has claimed EDC of Rs.671.33 crore. The Commission after prudence check and in terms of clauses 7.23 and 8 of Regulation No.1 of 2019 has allowed Rs.553.26 crore.
- IDC: TSGENCO has claimed IDC of Rs.1845.59 and IDC for FGD of Rs.127.54 crore. The Commission after prudence check and in terms of clauses 7.22 of Regulation No.1 of 2019 has allowed Rs.1449.52 crore. and deferred the IDC for FGD. The IDC for FGD will be considered after completion of FGD works.

**Table 4.6: Capital Cost approved for BTPS**

*Rs.in crore*

Sl. No.	Break up of Expenditure	Provisional Capital Cost Approved in GTO	Revised Cost Claimed	Final Capital Cost approved in MTR	Basis of approved cost
1	Electrical & Mech. System (BHEL)	3147.33	3326.60	3147.33	Allowed after deducting LD from contract price.
2	Civil System (BHEL)	1393.59	1522.76	1393.59	
3	Common works E&M other than BHEL	95.00	138.76	138.76	Claimed cost is within the revised

Sl. No.	Break up of Expenditure	Provisional Capital Cost Approved in GTO	Revised Cost Claimed	Final Capital Cost approved in MTR	Basis of approved cost
4	Common works Civil other than BHEL	1208.88	1466.57	1466.57	cost estimates and hence allowed
5	Consultancy services	11.13	12.00	11.13	Limited to the approved amount in the GTO
6	CSR	30.00	30.00	30.00	Claim is same as approved in GTO.
7	Land	100.00	100.00	100.00	Claimed cost is within the revised cost estimates and approved cost deducting LD.
8	Erection & Commissioning (BHEL)	482.45	551.83	515.26	Deferred. Cost towards FGD will be considered after completion of FGD works.
9	New Norms (FGD, SCR & ESP addition)	0.00	686.24	0.00	Claim is same as approved in GTO.
10	Bus Reactor and CTs & CVTs	12.55	12.55	12.55	Disallowed the back charges.
11	Back charges to BHEL	0.00	24.07	0.00	Allowed as per clause 7.23 and 8 of Regulation No.1 of 2019.
12	EDC	650.16	671.33	553.26	Allowed as per clause 7.22 of Regulation No.1 of 2019 and IDC for FGD deferred and will be considered after completion of FGD works.
13	IDC	1560.35	1973.13	1449.53	
<b>Total</b>		<b>8691.43</b>	<b>10515.84</b>	<b>8817.97</b>	

#### 4.5 ADDITIONAL CAPITALISATION (GFA) OF BTPS:

4.5.1 The Petitioner has claimed Rs.4871.17 crore, Rs.2075.12 crore for FY 2020-21 and FY 2021-22. The Commission after prudence check has allowed the claim of the petitioner.

4.5.2 Based on the above the revised GFA of BTPS is as given in the table below:

**Table 4.7: Revised GFA of BTPS***Rs. in crore*

Financial Year	Provisional cost approved in GTO	Revised cost claimed in MTR	Revised cost approved in MTR
Approved as on COD	5561.87		
2020-21	2390.87	4871.18	4871.18
2021-22	738.68	2075.12	2075.12
2022-23		2058.33	1079.28
2023-24		1511.22	792.41
<b>Total</b>	<b>8691.43</b>	<b>10515.84</b>	<b>8817.97</b>

- Flue Gas Desulfurization (FGD) works for complying with statutory norms for environment in accordance with the notification of Ministry of Environment, Forest and Climate Change (MoEF&CC) are deferred for execution;
- TSGENCO shall approach the Commission for change in operational parameters such as change in normative Auxiliary Consumption on account of technology changes in the Generating Plant for installation of FGD.
- The Commission directs TSGENCO to submit the details of FGD installation along with DPR, project cost, physical & financial progress of work, etc., in its End of Control Period Review petition for the consideration of the Commission

4.5.3 Summary of station-wise additional capitalisation claimed and approved for MTR is as shown in table below:

**Table 4.8: Additional capitalisation claimed and approved for MTR***Rs.in crore*

Sl. No	Name of the Station	Claimed			Approved		
		2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
1	KTPS-O&M	4.27	0.00	0.00	-0.02	0.00	0.00
2	KTPS-V	3.37	36.14	80.89	3.37	36.14	80.89
3	KTPS-VI	-34.37	16.57	21.92	-57.12	0.00	0.00
4	KTPS-VII	174.27	192.53	53.13	174.27	191.80	53.13
5	RTS-B	1.72	0.02	0.33	0.00	0.00	0.00
6	KTPP-I	1.01	4.18	133.27	0.00	0.00	0.00
7	KTPP-II	34.12	83.33	253.54	22.15	83.33	253.54
8	BTPS	0.00	4871.17	2075.12	0.00	4871.17	2075.12
9	Nagarjuna Complex	0.80	0.73	6.37	0.00	0.00	0.00
10	Srisailam LB	0.54	0.48	18.10	0.00	0.00	0.00
11	Small Hydel	0.86	0.77	0.48	0.00	0.77	0.48
12	Mini Hydel	0.15	0.13	0.08	0.00	0.00	0.00
13	Pochampad-II	0.14	0.13	0.08	0.00	0.00	0.00
14	Priyadarshini Jurala	0.45	12.14	2.39	0.00	0.00	0.00
15	Lower Jurala	4.59	3.47	1.98	4.43	3.47	1.98
16	Pulichintala	9.30	1.07	1.05	4.71	1.07	1.05
<b>Total</b>		<b>201.22</b>	<b>5222.86</b>	<b>2648.73</b>	<b>151.80</b>	<b>5187.73</b>	<b>2466.19</b>

#### **4.6 ANNUAL FIXED CHARGES (AFC)**

4.6.1 In accordance with TSERC (Terms and Conditions of Generation Tariff) Regulations, 2019, the AFC shall comprise the following elements:

- i. Depreciation;
- ii. Interest and finance charges on loan;
- iii. Interest on working capital;
- iv. O&M expenses;
- v. Return on Equity; Minus
- vi. Non-Tariff Income;

#### **4.7 DEPRECIATION**

##### ***Petitioner's Submission***

4.7.1 TSGENCO submitted that it has computed depreciation annually based on Straight Line Method as per the clause 10 of TSERC Regulation No.1 of 2019 and at rates specified in CERC Regulations for the stations which have not completed 12 years. For the stations which have completed 12 years, the remaining depreciable value is spread over equally over the balance useful life of the project.

4.7.2 In FY 2019-20, all the units of KTPS-O&M were completely phased out, but the 90% of the approved capital cost could not be realized in the approved tariff. Hence, TSGENCO has claimed the under recovered portion of depreciation amounting to Rs.192.54 crore in FY 2019-20, along with regular claim of Rs.51.28 crore.

4.7.3 In respect of KTPS-V and RTS-B generating stations TSGENCO has claimed the balance depreciation in the 4<sup>th</sup> control period. In respect of all other stations, TSGENCO has considered actual depreciation as per books of accounts, including additions and deletions made during the respective years.

4.7.4 TSGENCO has claimed the depreciation of Rs.1311.03 crore, Rs.1217.73 crore, Rs.1386.19 crore, Rs.1483.13 crore and Rs.1427.41 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

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

4.7.5 The base value for the purpose of depreciation shall be the GFA of the capital cost admitted by the Commission. The Commission after prudence check and

based on the documents in support of the assets capitalisation has approved the GFA with additional capitalisation and decapitalisation of assets in respective financial years. The GFA claimed by TSGENCO and approved by the Commission is as shown in the Table below:

**Table 4.9: GFA claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	776.51	776.51	0.00	0.00	0.00	0.00
2	KTPS-V	2149.48	2149.48	2152.85	2152.84	2188.98	2188.98
3	KTPS-VI	2530.48	2530.48	2496.11	2473.36	2512.68	2473.36
4	KTPS-VII	4602.87	4602.87	4777.14	4777.14	4969.67	4968.94
5	RTS-B	127.04	127.04	128.76	127.04	128.78	127.04
6	KTPP-I	2548.83	2548.83	2549.84	2548.83	2554.02	2548.83
7	KTPP-II	3408.75	3408.75	3442.87	3430.90	3526.20	3514.22
8	BTPS	0.00	0.00	0.00	0.00	4871.17	4871.17
9	Nagarjuna Complex	1920.80	1920.80	1921.60	1920.80	1922.32	1920.80
10	Srisailam LB	3375.71	3375.71	3376.25	3375.71	3376.73	3375.71
11	Small Hydel	120.54	120.54	121.40	120.54	122.17	121.31
12	Mini Hydel	31.23	31.23	31.38	31.23	31.51	31.23
13	Pochampad-II	29.74	29.74	29.88	29.74	30.01	29.74
14	Priyadarshini Jurala	690.68	690.68	691.13	690.68	703.27	690.68
15	Lower Jurala	1617.59	1617.59	1622.18	1622.02	1625.65	1625.49
16	Pulichintala	433.85	433.85	443.15	438.56	444.22	439.63
<b>Total</b>		<b>24364.10</b>	<b>24364.10</b>	<b>23784.54</b>	<b>23739.38</b>	<b>29007.38</b>	<b>28927.11</b>

4.7.6 As per clause 10.10 of Regulation No.1 of 2019 stipulates that the depreciation shall be determined for assets capitalised at the time of Truing-up along with the Mid-term Review based on documentary evidence of assets capitalised by the Petitioner, subject to the Prudence Check of the Commission, such that the depreciation is allowed proportionately from the date of capitalisation.

4.7.7 The Commission after prudence check and based on approved GFA has determined the depreciation in accordance with clause 10.10 of Regulation No.1 of 2019 with additional capitalisation and decapitalisation of assets in respective financial years. The depreciation claimed by TSGENCO and approved by the Commission is as shown in the Table below:

**Table 4.10: Depreciation claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	243.82	16.86	0.00	0.00	0.00	0.00

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
2	KTPS-V	52.52	33.13	60.65	37.57	84.92	55.13
3	KTPS-VI	130.78	130.19	131.20	129.57	131.58	128.96
4	KTPS-VII	245.43	245.43	254.73	254.71	259.11	259.07
5	RTS-B	12.27	10.11	12.27	10.11	12.37	10.11
6	KTPP-I	134.88	134.86	134.85	134.69	132.74	129.11
7	KTPP-II	190.18	189.85	190.43	189.78	196.64	196.00
8	BTPS	0.00	0.00	125.05	125.05	275.73	275.73
9	Nagarjuna Complex	90.37	87.97	98.96	87.97	94.56	87.97
10	Srisailam LB	79.22	86.43	79.24	86.43	80.20	86.43
11	Small Hydel	3.14	3.36	3.21	3.40	3.27	3.47
12	Mini Hydel	1.09	0.90	1.10	0.90	1.11	0.90
13	Pochampad-II	0.72	0.72	0.72	0.71	0.73	0.72
14	Priyadarshini Jurala	32.93	32.92	32.70	32.40	20.45	20.05
15	Lower Jurala	81.28	81.27	81.28	81.27	81.42	81.41
16	Pulichintala	12.41	12.34	11.34	11.22	11.35	11.23
<b>Total</b>		<b>1311.03</b>	<b>1066.33</b>	<b>1217.74</b>	<b>1185.78</b>	<b>1386.19</b>	<b>1346.29</b>

4.7.8 The variation in depreciation as claimed by TSGENCO and approved by the Commission is on account of not allowing the balance depreciation with respect to KTPS-O&M generating station of Rs.226.96 crore and due to variations in GFA base. The Commission is of the considered view that the balance depreciation of KTPS-O&M shall reflect in the books of account under Non-Tariff Income under item sale of scrap.

#### 4.8 INTEREST AND FINANCE CHARGES ON LOAN

##### ***Petitioner's Submission***

4.8.1 TSGENCO submitted that it has claimed the interest on loan of Rs.876.79 crore, Rs.957.55 crore, Rs.1197.31 crore, Rs.1304.70 crore and Rs.1269.15 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

4.8.2 TSGENCO has considered the interest rate as the weighted average rate of interest for actual loan portfolio of respective station.

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

4.8.3 In terms of clause 9 of Regulation No.1 of 2019, the debt-equity ratio for all the generating stations was considered as 70:30 of the approved capital cost for calculating interest on loan. The loan amount i.e., 70% of GFA reduced by the corresponding loan amount of decapitalised asset is considered as gross loan for calculation of interest on loan. The approved depreciation has been



considered as the normative loan repayment for the year. The station-wise opening loan balance has been calculated by considering the 70% of the GFA approved and subtracting the accumulated depreciation. The approved depreciation has been considered as the normative loan repayment for the year.

- 4.8.4 The station-wise weighted average interest rate of the actual loan portfolio has been considered as the rate of interest on loan. The interest rate on loan as claimed by TSGENCO and as approved by the Commission for MTR period i.e., for FY 2019-20 to FY 2021-22 is as given in table below:

**Table 4.11: Weighted Average interest rate on loan as claimed and approved for MTR**

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	10.09%	10.09%	-	-	-	-
2	KTPS-V	10.13%	10.13%	9.55%	9.55%	9.55%	9.55%
3	KTPS-VI	10.13%	10.13%	10.37%	10.37%	10.25%	10.25%
4	KTPS VII	10.21%	10.21%	10.27%	10.27%	10.14%	10.14%
5	RTS-B	9.95%	9.95%	9.95%	9.95%	9.95%	9.95%
6	KTPP-I	10.12%	10.12%	10.49%	10.49%	10.33%	10.33%
7	KTPP-II	9.93%	9.93%	10.05%	10.05%	10.19%	10.19%
8	BTSP	-	-	11.26%	11.26%	10.92%	10.92%
9	Nagarjuna Complex	10.04%	10.04%	10.47%	10.47%	10.43%	10.43%
10	Srisaillam LB	10.15%	10.15%	10.15%	10.15%	10.15%	10.15%
11	Small Hydel	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
12	Mini Hydel	12.50%	12.50%	12.50%	12.50%	12.50%	12.50%
13	Pochampad-II	10.10%	10.10%	10.10%	10.10%	10.10%	10.10%
14	Priyadarshini Jurala	10.10%	10.10%	10.47%	10.47%	10.43%	10.43%
15	Lower Jurala	10.11%	10.11%	10.46%	10.46%	10.43%	10.43%
16	Pulichintala	10.56%	10.56%	10.56%	10.56%	10.56%	10.56%

- 4.8.5 The interest on loan has been calculated on the normative average loan balance for the year by applying the weighted average rate of interest.

- 4.8.6 The Commission has approved the interest and finance charges on loan in accordance clause 12 of the Regulations No.1 of 2019 and considering the submission of TSGENCO and upon the prudence check. The interest and finance charges claimed by TSGENCO and approved by the Commission is as summarised in the Table below:

**Table 4.12: Interest and Finance Charges on Loan claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	0.00	0.00	0.00	0.00	0.00	0.00

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
2	KTPS-V	0.00	0.12	0.00	1.49	0.00	5.57
3	KTPS-VI	45.99	42.66	31.03	28.13	18.41	14.56
4	KTPS VII	328.97	316.25	318.22	305.59	302.03	284.36
5	RTS-B	3.42	2.49	2.32	1.48	1.10	0.49
6	KTPP-I	22.95	41.28	9.71	28.65	0.00	14.59
7	KTPP-II	186.63	160.40	172.17	146.97	161.11	141.38
8	BTPS	0.00	0.00	158.85	105.13	480.61	382.19
9	Nagarjuna Complex	53.13	44.89	46.00	37.61	35.55	28.29
10	Srisailam LB	84.20	82.60	76.19	73.83	68.19	65.05
11	Small Hydel	0.81	0.67	0.49	0.28	0.16	0.07
12	Mini Hydel	0.57	0.51	0.44	0.40	0.32	0.28
13	Pochampad-II	1.27	1.18	1.21	1.11	1.14	1.04
14	Priyadarshini Jurala	28.26	25.63	25.89	23.15	23.26	20.32
15	Lower Jurala	92.86	81.63	87.91	76.24	79.43	67.74
16	Pulichintala	27.74	25.47	27.11	24.44	26.00	23.33
<b>Total</b>		<b>876.79</b>	<b>825.77</b>	<b>957.55</b>	<b>854.50</b>	<b>1197.31</b>	<b>1049.26</b>

4.8.7 The variation in interest and finance charges claimed by TSGENCO and approved by the Commission is on account of the variations in loan balances.

#### 4.9 INTEREST ON WORKING CAPITAL (IoWC)

##### *Petitioner's Submission*

4.9.1 TSGENCO has claimed IoWC of Rs.297.33 crore, Rs.265.15 crore, Rs.295.48 crore, Rs.314.47 crore and Rs.323.45 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

4.9.2 TSGENCO has computed station-wise working capital in accordance with Regulation No.1 of 2019. It considered maintenance spares as 20% and 15% of O&M expenditure for thermal and hydro generating station respectively.

4.9.3 The rate of interest on working capital has been considered as SBI MCLR rate as on 01.04.2022 plus 150 basis point based on Clause 13.3 of TSERC Regulation No.1 of 2019. The rates of interest on working capital claimed by TSGENCO are 10.05%, 9.25% and 8.50% for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

##### *Commission's View*

4.9.4 The Commission has approved IoWC in accordance with Clause 13 of the Regulation No.1 of 2019.

4.9.5 The working capital requirement has been determined considering the following:

- Cost of coal towards stock corresponding to 30 days generation corresponding to target Availability.
- Cost of coal for 30 days of generation corresponding to target Availability.
- Cost of secondary fuel oil for two months of generation corresponding to target Availability.
- Maintenance spares @ 20% of the O&M expenses for thermal stations and @ 15% of the O&M expenses for Hydel stations.
- O&M expenses for one month.
- Receivables equivalent to two months of capacity charges and energy charges for sale of electricity calculated on target Availability.
- Minus payables for fuel (including secondary fuel oil) to the extent of thirty days of the cost of fuel computed at target Availability.

4.9.6 The rate of loWC has been considered as 9.66%, 8.57% and 8.50% for FY 2019-20, FY 2020-21 and FY 2021-22 respectively, which is equivalent to the Bank Rate plus 150 basis points.

4.9.7 The loWC claimed by TSGENCO and approved by the Commission is as shown in the Table below:

**Table 4.13: loWC claimed and approved for MTR**

*Rs.in crore*

Sl. No	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	47.22	40.66	-	-	-	-
2	KTPS-V	34.37	30.50	33.31	27.19	32.21	28.13
3	KTPS-VI	36.34	33.97	36.08	29.92	34.90	30.27
4	KTPS-VII	58.14	52.99	64.58	59.02	61.43	56.26
5	RTS-B	7.27	6.38	7.31	5.87	7.04	6.00
6	KTPP-I	37.33	35.85	32.32	31.41	32.10	31.36
7	KTPP-II	47.03	44.16	41.73	38.94	41.53	39.26
8	BTPS	-	-	24.83	10.63	58.85	54.80
9	Nagarjuna Complex	7.89	7.37	3.09	6.98	7.28	6.60
10	Srisaillam LB	8.96	8.66	9.49	8.37	8.52	7.95
11	Small Hydel	1.74	1.47	1.73	1.36	1.62	1.41
12	Mini Hydel	0.32	0.27	0.32	0.25	0.29	0.25
13	Pochampad-II	0.32	0.27	0.32	0.25	0.30	0.26
14	Priyadarshini Jurala	2.69	2.50	2.58	2.28	2.41	2.06
15	Lower Jurala	5.52	5.11	5.24	4.54	4.94	4.45
16	Pulichintala	2.20	2.04	2.23	1.88	2.06	1.84
<b>Total</b>		<b>297.33</b>	<b>272.20</b>	<b>265.15</b>	<b>228.89</b>	<b>295.48</b>	<b>270.90</b>

4.9.8 The variation in loWC claimed by TSGENCO and approved by the Commission is on account of variation in working capital.

#### 4.10 O&M EXPENSES

##### *Petitioner's Submission*

- 4.10.1 TSGENCO has claimed O&M expenses based on audited accounts for the period FY 2019-20 to FY 2021-22 and for FY 2022-23 and FY 2023-24 the O&M expenses escalated at 6% on previous Financial Year. The component-wise O&M expenses for respective generation station as claimed by TSGENCO is given in table below:

**Table 4.14: Components of O&M Expenses claimed for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	FY 2019-20			FY 2020-21			FY 2021-22		
		Emp	R&M	A&G	Emp	R&M	A&G	Emp	R&M	A&G
1	KTPS-O&M	422.12	24.62	15.38	-	-	-	-	-	-
2	KTPS-V	144.01	26.17	11.93	181.16	20.70	13.77	169.95	40.23	19.33
3	KTPS-VI	144.01	26.17	11.93	181.16	20.70	13.77	169.95	40.23	19.33
4	KTPS-VII	115.12	8.87	13.67	409.04	24.57	25.15	352.50	28.33	55.15
5	RTS-B	74.08	5.30	6.01	78.67	6.96	8.83	72.41	9.32	13.26
6	KTPP-I	111.80	32.44	4.96	123.30	18.70	5.38	124.72	27.93	14.67
7	KTPP-II	134.16	38.93	5.95	147.96	22.44	6.46	149.67	33.51	17.61
8	BTPS	-	-	-	85.68	2.09	5.01	134.73	6.92	10.77
9	Nagarjuna Complex	71.39	6.94	6.96	82.23	11.82	7.93	79.54	8.82	11.27
10	Srisailam LB	53.19	6.44	6.96	73.86	10.77	9.96	67.26	10.07	11.00
11	Small Hydel	35.17	1.56	1.15	38.43	1.50	1.09	37.38	1.84	1.18
12	Mini Hydel	5.97	0.26	0.20	6.52	0.26	0.19	6.34	0.31	0.20
13	Pochampad-II	5.86	0.26	0.19	6.40	0.25	0.18	6.23	0.31	0.20
14	Priyadarshini Jurala	20.34	2.50	1.14	23.65	1.60	1.20	23.79	6.77	1.58
15	Lower Jurala	20.86	2.50	1.14	24.26	1.60	1.20	24.40	6.77	1.58
16	Pulichintala	24.34	1.24	0.66	27.18	3.18	0.70	26.84	3.08	0.71
	<b>Total</b>	<b>1382.43</b>	<b>184.20</b>	<b>88.23</b>	<b>1489.50</b>	<b>147.14</b>	<b>100.82</b>	<b>1445.72</b>	<b>224.44</b>	<b>177.84</b>
	<b>Grand Total</b>		<b>1654.86</b>			<b>1737.46</b>			<b>1848.00</b>	

- 4.10.2 TSGENCO has submitted the following reasons for variations in O&M expenses.

- Employee Cost:** There is an increase of 4.58% in actual employee cost during MTR period. In respect of KTPS-VII and BTPS the actual expenditure is less than the normative charges approved and is due to phasing out of KTPS-O&M units by 31.03.2020, the personnel working in the common auxiliaries' facilities like coal plant, stores, colonies, civil wings, accounts, security, canteen, etc., couldn't be transferred/redeployed immediately were being utilized for KTPS-VII works, pending assessing the actual personnel requirement, whereas the additional manpower assessed were redeployed during the year 2020 & 2021 at other stations under construction including BTPS-O&M operations. The same can be observed that the employee cost of KTPS-VII reduced considerably during FY 2021-22 and corresponding increase in BTPS & Other stations. Further, the staff utilized at KTPS-VII are more senior employees and experienced personnel, such employee cost is on higher side and the management of TSGENCO is making every effort to minimize the employee cost of KTPS-VII.
- R&M Expenses:** There is overall decrease of Rs.40.54 crore in R&M expenses for MTR period.
- A&G Expenses:** There is overall increase of Rs.109.43 crore in A&G expenses for MTR period. The basic reasons for increase in A&G

expenses are

- i) Colony Consumption Charges: As per clause 2.7 of Regulation No.1 of 2019, colony consumption is no longer a part of auxiliary consumption. Hence, the same was charged and the same is claimed under A&G charges in MTR.
- ii) SPF & Police Guard Charges: Recently the GoTS has declared Pay Revision to the Police Department, due to this TSGENCO had to reimburse the arrears of salaries and revised salaries paid to the SPF & Police Guards towards the security provided at various power generating stations of TSGENCO.
- iii) New Stations: In respect of KTPS-VII, a super-critical unit, very low normative charges allowed and are not sufficient to meet the actual expenses, as due to phasing out of KTPS-O&M units by 31.03.2020, there are certain unavoidable shut down costs of KTPS-O&M which are essential for the operation of KTPS-VII.

### **Commission's View**

4.10.3 The O&M expenses comprises of (i) employee cost, (ii) R&M expenses and (iii) A&G expenses. Clause 19 of the Regulation No.1 of 2019 stipulates the methodology and norms for determination of O&M expenses.

4.10.4 The Commission based on the norms specified under clause 19 of Regulation No.1 of 2019 has determined the O&M expenses for the TSGENCO generating stations in its MYT order dated 22.03.2022 for 4<sup>th</sup> control period i.e., for FY 2019-20 to FY 2023-24. However, the Commission has approved the O&M expenses for new stations viz., BTPS and KTPS-VII as per the norms of CERC Tariff Regulations, 2019 in terms of clause 19.5 of Regulation No.1 of 2019 as the actual O&M expenses for such stations are not available. The details of O&M expenses approved for TSGENCO generating stations in Order dated 22.03.2022 for 4<sup>th</sup> control period is shown in the Table below:

**Table 4.15: O&M Expenses approved in Order dated 22.03.2022 for FY 2019-20 to FY 2023-24**

Name of the Station	<i>Rs. in crore</i>				
	2019-20	2020-21	2021-22	2022-23	2023-40
KTPS-O&M	472.73	0.00	0.00	0.00	0.00
KTPS-V	165.79	173.04	180.61	188.51	196.75
KTPS-VI	166.71	174.00	181.61	189.55	197.84
KTPS-VII	145.84	150.96	156.32	161.76	167.44
RTS-B	78.71	82.17	85.77	89.53	93.46
KTPP-I	142.86	149.14	155.69	162.54	169.68
KTPP-II	161.66	168.77	176.19	183.95	192.04
BTPS	0.00	104.74	381.35	394.85	408.67
Nagarjuna Complex	103.02	107.54	112.25	117.18	122.32
Srisailam LB	86.06	89.84	93.78	97.89	102.18
Small Hydel	32.48	33.91	35.41	36.98	38.62

Name of the Station	2019-20	2020-21	2021-22	2022-23	2023-40
Mini Hydel	5.51	5.75	6.01	6.27	6.55
Pochampad-II	5.41	5.65	5.90	6.16	6.44
Priyadarshini Jurala	33.82	35.32	36.88	38.51	40.21
Lower Jurala	28.13	29.37	30.66	32.01	33.42
Pulichintala	46.37	48.44	50.59	52.83	55.17

4.10.5 The Commission has now determined normative expenses and were compared with the actual expenses as claimed by the petitioner and approved the least. In case of KTPS-VII and BTPS projects the total O&M expenses determined as per CERC (Terms and Conditions of Tariff) Regulations, 2014 is compared with actuals filed and the least is allowed for true-up in Mid-Term Review.

### Employee Cost

4.10.6 In terms of clause 19.2 of the Regulation No.1 of 2019, EMPb for FY 2019-20 for a generating station shall be the average of the true-up employee expenses after adding/deducting the share of efficiency gains/losses, for the immediately preceding control period, excluding abnormal, if any, subject to Prudence Check by the Commission.

4.10.7 The employee cost for FY 2019-20, FY 2020-21 and FY 2021-22 has been determined by considering the CPI Inflation of 1.04, 1.07 & 1.04 for FY 2019-20, FY 2020-21 & FY 2021-22 respectively based on point-to-point change in CPI for industrial workers as per Labour Bureau, Gol for FY 2018-19 and thereafter reducing by an efficiency factor of 1%.

4.10.8 The determined employee expenses on normative basis were compared with the actual employee expenses claimed by TSGENCO and the Commission has approved the least of determined normative expenses and actual expenses claimed. The details are as given below:

**Table 4.16: Employee cost at actuals claimed, determined and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20			2020-21			2021-22		
		Claimed	As determined	Approved	Claimed	As determined	Approved	Claimed	As determined	Approved
1	KTPS-O&M	422.12	426.69	422.12	-	-	-	-	-	-
2	KTPS-V	144.01	123.94	123.94	181.16	132.05	132.05	169.95	137.37	137.37
3	KTPS-VI	144.01	123.94	123.94	181.16	132.05	132.05	169.95	137.37	137.37
4	KTPS-VII *	115.12			409.04			352.50		
5	RTS-B	74.08	65.50	65.50	78.67	69.79	69.79	72.41	72.60	72.41
6	KTPP-I	111.80	113.41	111.80	123.30	120.83	120.83	124.72	125.70	124.72
7	KTPP-II	134.16	128.46	128.46	147.96	136.87	136.87	149.67	142.38	142.38
8	BTPS *	-	-	-	85.68			134.73		
9	Nagarjuna Complex	71.39	85.74	71.39	82.23	91.35	82.23	79.54	95.03	79.54
10	Srisaillam LB	53.19	72.20	53.19	73.86	76.93	73.86	67.26	80.03	67.26
11	Small Hydel	35.17	30.67	30.67	38.43	32.68	32.68	37.38	33.99	33.99

Sl. No.	Name of the Station	2019-20			2020-21			2021-22		
		Claimed	As determined	Approved	Claimed	As determined	Approved	Claimed	As determined	Approved
12	Mini Hydel	5.97	5.20	5.20	6.52	5.54	5.54	6.34	5.77	5.77
13	Pochampad-II	5.86	5.11	5.11	6.40	5.45	5.45	6.23	5.67	5.67
14	Priyadarshini Jurala	20.34	31.75	20.34	23.65	33.83	23.65	23.79	35.19	23.79
15	Lower Jurala	20.86	24.10	20.86	24.26	25.68	24.26	24.40	26.71	24.40
16	Pulichintala	24.34	53.26	24.34	27.18	56.75	27.18	26.84	59.04	26.84

“\*\*’ In MYT order dated 22.03.2022, as per clause 19.5 of Regulation No.1 of 2019, the normative O&M expenses of new generating entities viz., KTPS-VII and BTPS were determined as per norms approved by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, which do not have norms of O&M elements viz., employee expenses, R&M expenses and A&G expenses.

### **R&M Expenses:**

4.10.9 The clause 19.3 of the Regulation No.1 of 2019 stipulates as under:

“19.3 **Repairs and Maintenance Expense (R&M<sub>n</sub>)**

The expense shall be calculated as percentage (as per the norm defined) of Opening Gross Fixed Assets for the Year governed by following formula:

$$R\&M_n = K_n \times GFA_n \times WPI \text{ Inflation}$$

Where:

R&M<sub>n</sub>: Repairs & Maintenance expense for n<sup>th</sup> Year;

GFA<sub>n</sub>: Opening Gross Fixed Assets for n<sup>th</sup> Year;

K<sub>n</sub>: ‘K’ is the immediate preceding Control Period average (expressed in %) governing the relationship between R&M and Gross Fixed Assets (GFA);

WPI Inflation: point to point change in Wholesale Price Index (WPI) for immediately preceding Year;

Provided that in case WPI inflation is a negative number, the escalation/change shall be 0%.

Source for WPI – As published by Office of Economic Adviser – GOI”

4.10.10 The R&M expenses for FY 2019-20, FY 2020-21 and FY 2021-22 have been arrived at by multiplying the approved opening GFA for the respective year with the ‘K’ factor as per Regulation 1 of 2019 for each station and WPI Inflation of 1.04%, 1.02% and 1.01% for FY 2019-20, FY 2021-22 and FY 2021-22 respectively.

4.10.11 The determined normative R&M expenses were compared with the actual R&M expenses claimed by the petitioner and the Commission has approved the least of determined normative expenses and actual expenses claimed. The details are as given below:

**Table 4.17: R&M expenses at actuals claimed, determined and approved for MTR**

Rs.in crore

Sl. No.	Name of the Station	2019-20			2020-21			2021-22		
		Claimed	As determined	Approved	Claimed	As determined	Approved	Claimed	As determined	Approved
1	KTPS-O&M	24.62	44.14	24.62	-	-	-	-	-	-

Sl. No.	Name of the Station	2019-20			2020-21			2021-22		
		Claimed	As determined	Approved	Claimed	As determined	Approved	Claimed	As determined	Approved
2	KTPS-V	26.17	36.85	26.17	20.70	35.99	20.70	40.23	36.45	36.45
3	KTPS-VI	26.17	38.01	26.17	20.70	36.22	20.70	40.23	36.08	36.08
4	KTPS-VII	8.87			24.57			28.33		
5	RTS-B	5.30	10.32	5.30	6.96	10.06	6.96	9.32	10.02	9.32
6	KTPP-I	32.44	30.77	30.77	18.70	30.00	18.70	27.93	29.89	27.93
7	KTPP-II	38.93	30.19	30.19	22.44	29.62	22.44	33.51	30.23	30.23
8	BTPS	-	-	-	2.09			6.92		
9	Nagarjuna Complex	6.94	13.98	6.94	11.82	13.63	11.82	8.82	13.57	8.82
10	Srisaillam LB	6.44	9.80	6.44	10.77	9.55	9.55	10.07	9.52	9.52
11	Small Hydel	1.56	1.92	1.56	1.50	1.88	1.50	1.84	1.88	1.84
12	Mini Hydel	0.26	0.33	0.26	0.26	0.32	0.26	0.31	0.32	0.31
13	Pochampad-II	0.26	0.32	0.26	0.25	0.31	0.25	0.31	0.31	0.31
14	Priyadarshini Jurala	2.50	1.74	1.74	1.60	1.69	1.60	6.77	1.69	1.69
15	Lower Jurala	2.50	2.95	2.50	1.60	2.89	1.60	6.77	2.88	2.88
16	Pulichintala	1.24	0.82	0.82	3.18	0.81	0.81	3.08	0.81	0.81

\*\*' In MYT order dated 22.03.2022, as per clause 19.5 of Regulation No.1 of 2019, the normative O&M expenses of new generating entities viz., KTPS-VII and BTPS were determined as per norms approved by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, which do not have norms of O&M elements viz., employee expenses, R&M expenses and A&G expenses.

### **A&G Expenses**

4.10.12 Clause 19.4 of the Regulation No.1 of 2019 stipulates as under:

**“19.4 Administrative & General Expense (A&G<sub>n</sub>)**

*A&G expense shall be computed as per the norm escalated by the inflation factor and adjusted by provisions for confirmed initiative (IT etc. initiatives as proposed by the Generating Entity and validated by the Commission) or other expected one-time expenses, and shall be governed by the following formula:*

$$\mathbf{A\&G_n = A\&G_{f_0} * Inflation\ Factor) Provision}$$

*Where:*

*A&G<sub>n</sub>: A&G expense for the Year “n”;*

*A&G<sub>f<sub>0</sub></sub>: For the first Year of the Control Period, it shall be the average of the audited A&G expense for the immediately preceding 3 Financial Years if available, and for subsequent Years it shall be the preceding Year escalated by the inflation factor;*

*Inflation Factor: is the sum of the following:*

- > *point to point change in the Wholesale Price Index (WPI) numbers as per Office of Economic Advisor of Government of India for immediately Year reduced by an efficiency factor of 1% multiplied by 0.5.*
- > *point to point change in Consumer Price Index for Industrial Workers (all India) as per Labour Bureau, Government of India in the previous year, as reduced by an efficiency factor of 1% multiplied by 0.5.*

*Provided that in case inflation Factor is a negative number, the escalation/ change shall be 0%.*

*Provision: Cost for initiatives or other one-time expenses as proposed by the Generating Entity and validated by the Commission.”*

4.10.13 Clause 19.6 of the Regulation No.1 of 2019 stipulates as under:



“19.6 Any expenditure on account of license fee, initial or renewal, fee for determination of tariff and audit fee shall be allowed on actual basis, over and above the A&G expenses approved by the Commission.”

4.10.14 As per the above, the A&G<sub>fo</sub> for FY 2019-20 shall be the average of the audited A&G expenses for the immediately preceding 3 Financial Years i.e., FY 2016-17 to FY 2018-19 if available. The Commission has considered the audited A&G expenses for FY 2016-17 to FY 2018-19 and arrived at the average A&G expenses as A&G<sub>fo</sub> for FY 2019-20.

4.10.15 The A&G expenses for FY 2019-20, FY 2020-21 and FY 2021-22 have been determined by considering the Inflation Factor of 1.04, 1.04 and 1.02 for FY 2019-20, FY 2020-21 and FY 2021-22 respectively based on point-to-point change in CPI for industrial workers as per Labour Bureau, Gol and point-to-point change in WPI as Office of Economic Advisor, Gol and applying the efficiency factor of 1% and multiplication factor of 0.5% as per the Regulations.

4.10.16 The determined normative A&G expenses were compared with the actual A&G expenses claimed by the petitioner and the Commission has approved the least of determined normative expenses and actual expenses claimed. The details are as given below:

**Table 4.18: A&G expenses at actuals claimed, determined and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20			2020-21			2021-22		
		Claimed	As determined	Approved	Claimed	As determined	Approved	Claimed	As determined	Approved
1	KTPS-O&M	15.38	16.41	15.38	-	-	-	-	-	-
2	KTPS-V	11.93	10.92	10.92	13.77	11.32	11.32	19.33	11.56	11.56
3	KTPS-VI	11.93	10.92	10.92	13.77	11.32	11.32	19.33	11.56	11.56
4	KTPS-VII	13.67			25.15			55.15		
5	RTS-B	6.01	5.53	5.53	8.83	5.73	5.73	13.26	5.86	5.86
6	KTPP-I	4.96	4.00	4.00	5.38	4.15	4.15	14.67	4.24	4.24
7	KTPP-II	5.95	4.49	4.49	6.46	4.65	4.65	17.61	4.75	4.75
8	BTPS	-	-	-	5.01			10.77		
9	Nagarjuna Complex	6.96	7.07	6.96	7.93	7.33	7.33	11.27	7.49	7.49
10	Srisaillam LB	6.96	6.72	6.72	9.96	6.96	6.96	11.00	7.11	7.11
11	Small Hydel	1.15	0.82	0.82	1.09	0.85	0.85	1.18	0.87	0.87
12	Mini Hydel	0.20	0.14	0.14	0.19	0.14	0.14	0.20	0.15	0.15
13	Pochampad-II	0.19	0.14	0.14	0.18	0.14	0.14	0.20	0.14	0.14
14	Priyadarshini Jurala	1.14	1.29	1.14	1.20	1.34	1.20	1.58	1.37	1.37
15	Lower Jurala	1.14	1.76	1.14	1.20	1.83	1.20	1.58	1.87	1.58
16	Pulichintala	0.66	0.52	0.52	0.70	0.54	0.54	0.71	0.55	0.55

\*\* In MYT order dated 22.03.2022, as per clause 19.5 of Regulation No.1 of 2019, the normative O&M expenses of new generating entities viz., KTPS-VII and BTPS were determined as per norms approved by the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014, which do not have norms of O&M elements viz., employee expenses, R&M expenses and A&G expenses.

4.10.17 Normative Employee cost, normative R&M expenses and normative A&G expenses and O&M arrived by the Commission based on the above methodology is summarised in the table below:

**Table 4.19: Components of O&M Expenses approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	FY 2019-20				FY 2020-21				FY 2021-22			
		Emp	R&M	A&G	O&M	Emp	R&M	A&G	O&M	Emp	R&M	A&G	O&M
1	KTPS-O&M	422.12	24.62	15.38	457.50	-	-	-	-	-	-	-	-
2	KTPS-V	123.94	26.17	10.92	159.42	132.05	20.70	11.32	162.43	137.37	36.45	11.56	183.53
3	KTPS-VI	123.94	26.17	10.92	159.42	132.05	20.70	11.32	162.43	137.37	36.08	11.56	183.17
4	KTPS-VII				136.29				443.30				388.93
5	RTS-B	65.50	5.30	5.53	75.57	69.79	6.96	5.73	81.66	72.41	9.32	5.86	86.71
6	KTPP-I	111.80	30.77	4.00	145.11	120.83	18.70	4.15	142.24	124.72	27.93	4.24	155.32
7	KTPP-II	128.46	30.19	4.49	161.50	136.87	22.44	4.65	162.32	142.38	30.23	4.75	175.79
8	BTPS	-	-	-	-	-	-	-	91.85	-	-	-	150.89
9	Nagarjuna Complex	71.39	6.94	6.96	84.43	82.23	11.82	7.33	100.36	79.54	8.82	7.49	94.89
10	Srisailam LB	53.19	6.44	6.72	65.69	73.86	9.55	6.96	89.48	67.26	9.52	7.11	83.05
11	Small Hydel	30.67	1.56	0.82	32.71	32.68	1.50	0.85	34.68	33.99	1.84	0.87	36.33
12	Mini Hydel	5.20	0.26	0.14	5.55	5.54	0.26	0.14	5.88	5.77	0.31	0.15	6.16
13	Pochampad-II	5.11	0.26	0.14	5.45	5.45	0.25	0.14	5.78	5.67	0.31	0.14	6.06
14	Priyadarshini Jurala	20.34	1.74	1.14	22.99	23.65	1.60	1.20	26.19	23.79	1.69	1.37	26.58
15	Lower Jurala	20.86	2.50	1.14	24.26	24.26	1.60	1.20	26.79	24.40	2.88	1.58	28.58
16	Pulichintala	24.34	0.82	0.52	25.43	27.18	0.81	0.54	28.24	26.84	0.81	0.55	27.93
	<b>Total</b>				1561.33				1563.63				1633.71

4.10.18 Clause 19.1 of the Regulation No.1 of 2019 stipulates as under:

*“The O&M expenses for each year of the Control Period shall be approved based on the formula shown below*

$$O\&M_n = (R\&M_n + EMP_n + A\&G_n) \times 99\%$$

... ..”

4.10.19 Based on the above, the O&M expenses claimed by TSGENCO and approved by the Commission for FY 2019-20 to FY 2023-24 is as shown in the Table below:

**Table 4.20: O&M expenses claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	462.12	457.50	0.00	-	-	-
2	KTPS-V	182.11	159.42	215.63	162.43	229.51	183.53
3	KTPS-VI	182.11	159.42	215.63	162.43	229.51	183.17
4	KTPS-VII	137.66	136.29	458.76	443.30	435.98	388.93
5	RTS-B	85.39	75.57	94.46	81.66	94.99	86.71
6	KTPP-I	149.20	145.11	147.38	142.24	167.32	155.32
7	KTPP-II	179.04	161.50	176.86	162.32	200.79	175.59
8	BTPS	-	-	92.78	91.85	152.42	150.89
9	Nagarjuna Complex	85.29	84.43	101.98	100.36	99.63	94.89
10	Srisailam LB	66.59	65.69	94.59	89.48	88.33	83.05
11	Small Hydel	37.87	32.71	41.03	34.68	40.40	36.33
12	Mini Hydel	6.42	5.55	6.96	5.88	6.85	6.16
13	Pochampad-II	6.31	5.45	6.84	5.78	6.73	6.06
14	Priyadarshini Jurala	23.98	22.99	26.45	26.19	32.14	26.58
15	Lower Jurala	24.50	24.26	27.06	26.79	32.75	28.58

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
16	Pulichintala	26.24	25.43	31.06	28.24	30.63	27.93
<b>Total</b>		<b>1654.86</b>	<b>1561.33</b>	<b>1737.46</b>	<b>1563.63</b>	<b>1848.00</b>	<b>1633.71</b>

#### 4.11 RETURN ON EQUITY (RoE)

##### ***Petitioner's Submission***

- 4.11.1 TSGENCO has claimed RoE of Rs.1360.26 crore, Rs.1548.86 crore, Rs.1688.73 crore, Rs.1605.54 crore and Rs.1977.01 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.
- 4.11.2 The rate of RoE has been considered as 18.782% to 19.993% based on MAT @17.472% for FY 2019-20 and Base rate of RoE range from 15.50% to 16.50% (the base of RoE for the thermal stations and run-of-river Hydel stations is considered as 15.50% and for hydel stations with pondage is 16.50%).
- 4.11.3 The rate of RoE for FY 2020-21 and FY 2021-22 has been considered as 20.713% to 22.049% based on MAT @25.168% and Base rate of RoE range from 15.50% to 16.50% (the base of RoE for the thermal stations and run-of-river Hydel stations is considered as 15.50% and for hydel stations with pondage is 16.50%).
- 4.11.4 TSGENCO submitted that it has computed the RoE in accordance with the Regulation No.1 of 2019. Where actual equity base (Net Fixed Assets – Actual Loan) deployed is less than 30%, of the capital cost actual equity has been considered and where actual equity deployed is more than 30% of the capital cost, equity in excess of 30% has been considered as notional loan.

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

- 4.11.5 The Commission has approved RoE in accordance with Clause 11 of the Regulation No.1 of 2019. The gross normative equity for respective generating station as on 31.03.2019 approved in Order dated 22.03.2022 has been considered as the normative equity as on 01.04.2019. The Commission is of the opinion that petitioner's claim of change in effective income tax rate i.e., shift from MAT rate @ 17.472% to income tax rate as per new regime @ 25.168% would lead to higher RoE and burden on consumers. Hence, the Commission has considered concessional MAT rate instead of regular income tax rate as claimed by the petitioner. The rate of RoE has been considered as

18.782% for thermal stations and run-of-river hydel stations and 19.993% for hydel stations with pondage by grossing up the base rate of 15.50% and 16.50% with the MAT rate of 17.472%.

4.11.6 The equity base claimed by TSGENCO and approved by the Commission is as shown in the Table below:

**Table 4.21: Equity base claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	222.78	232.95	-	-	-	-
2	KTPS-V	474.52	645.35	425.37	651.27	400.85	668.83
3	KTPS-VI	759.14	750.58	748.83	742.01	753.80	742.01
4	KTPS-VII	1380.86	1407.00	1433.14	1461.91	1490.90	1498.65
5	RTS-B	38.11	38.11	38.63	38.11	38.63	38.11
6	KTPP-I	764.65	764.65	764.95	764.65	726.86	764.65
7	KTPP-II	1022.63	1025.95	1032.86	1041.77	1057.86	1092.30
8	BTPS	-	-	1175.65	415.38	1357.22	1612.62
9	Nagarjuna Complex	576.24	576.24	576.48	576.24	576.70	576.24
10	Srisaillam LB	1012.71	1012.71	1012.87	1012.71	1013.02	1012.71
11	Small Hydel	36.16	36.16	36.42	36.28	36.65	36.46
12	Mini Hydel	9.37	9.37	9.41	9.37	9.45	9.37
13	Pochampad-II	8.92	8.92	8.97	8.92	9.00	8.92
14	Priyadarshini Jurala	207.20	207.20	207.34	207.20	210.98	207.20
15	Lower Jurala	485.28	485.94	486.65	487.13	487.69	487.94
16	Pulichintala	130.16	130.86	132.95	131.73	133.27	132.05
<b>Total</b>		<b>7128.73</b>	<b>7332.00</b>	<b>8090.52</b>	<b>7584.62</b>	<b>8302.89</b>	<b>8888.07</b>

4.11.7 The RoE claimed by TSGENCO and approved by the Commission is summarised in the Table below:

**Table 4.22: RoE claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	KTPS-O&M	41.84	43.75	-	-	-	-
2	KTPS-V	89.12	121.21	88.11	122.32	83.03	125.62
3	KTPS-VI	142.58	140.97	155.11	139.36	156.14	139.36
4	KTPS-VII	259.35	264.26	296.85	274.57	308.81	281.47
5	RTS-B	7.16	7.16	8.00	7.16	8.00	7.16
6	KTPP-I	143.61	143.61	158.45	143.61	150.55	143.61
7	KTPP-II	192.06	192.69	213.94	195.66	219.12	205.15
8	BTPS	-	-	92.96	78.02	226.44	302.87
9	Nagarjuna Complex	115.21	115.21	127.11	115.21	127.16	115.21
10	Srisaillam LB	202.47	202.47	223.33	202.47	223.36	202.47
11	Small Hydel	7.23	7.23	8.03	7.25	8.08	7.29
12	Mini Hydel	1.76	1.76	1.95	1.76	1.96	1.76
13	Pochampad-II	1.78	1.78	1.98	1.78	1.99	1.78
14	Priyadarshini Jurala	38.92	38.92	42.95	38.92	43.70	38.92
15	Lower Jurala	91.14	91.27	100.80	91.49	101.02	91.64

Sl. No.	Name of the Station	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
16	Pulichintala	26.02	26.16	29.31	26.34	29.38	26.40
<b>Total</b>		<b>1360.26</b>	<b>1398.44</b>	<b>1548.86</b>	<b>1445.91</b>	<b>1688.73</b>	<b>1690.72</b>

#### 4.12 NON-TARIFF INCOME (NTI)

##### *Petitioner's Submission*

- 4.12.1 TSGENCO has adjusted NTI at the end with total fixed charges, hence it is not appearing against each station. TSGENCO has claimed NTI as per actuals as given below:

**Table 4.23: NTI at actuals claimed for MTR**

*Rs.in crore*

Particulars	Actuals as claimed			Approved in Order dated 22.03.2022			Variance		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
Non-Tariff Income	4.63	7.17	18.52	25.30	25.50	29.92	-20.67	-18.33	-18.33

##### *Commission's View*

- 1.1.1 The Commission after prudence check and based on audited accounts in terms of clause 16(a) of Regulation No.1 of 2019 allows the NTI as claimed by TSGENCO as shown in table below:

**Table 4.24: NTI at actuals claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Particulars	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	Non-Tariff Income (NTI)	4.63	4.63	7.17	7.17	18.52	18.52

#### 4.13 ADDITIONAL INTEREST ON PENSION BONDS & WATER CHARGES

##### *Petitioner's Submission*

- 4.13.1 TSGENCO has claimed Additional interest on Pension Bonds (over and above schedule) of Rs.1058.38 crore, Rs.1160.11 crore, Rs.1062.53 crore, Rs.1108.67 crore and Rs.1168.08 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.
- 4.13.2 TSGENCO has claimed water charges of Rs.27.95 crore, Rs.50.58 crore, Rs.43.69 crore, Rs.62.05 crore and Rs.68.32 crore for FY 2019-20, FY 2020-21, FY 2021-22, FY 2022-23 and FY 2023-24 respectively.

**Table 4.25: Additional interest on pension bonds and Water charges claimed for MTR**

*Rs.in crore*

Particulars	Actuals as claimed			Approved in Order dated 22.03.2022			Variance		
	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
Additional Interest on Pension Bonds (over and above schedule)	1058.38	1160.11	1062.53	1068.56	1125.86	1189.46	-10.18	-34.25	.126.93
Water Charges	27.95	50.58	43.69	27.54	46.67	49.47	0.41	3.91	-5.78

### **Commission's View**

- 4.13.3 In the statutory First Transfer Scheme dated 30.01.2000 notified by the erstwhile unified Government of Andhra Pradesh under the AP Electricity Reform Act, 1998, the obligation to meet pension liability of the erstwhile APSEB employees was vested with the erstwhile APGENCO. The G.O.Ms.No.29 (Transfer Scheme) issued on 31.05.2014 as per the AP Electricity Reform Act, 1998 and AP Reorganisation Act, 2014 provides for the payment of pension liabilities by TSGENCO.
- 4.13.4 Upon reorganisation of the erstwhile APSEB into erstwhile APGENCO and erstwhile APTRANSCO on 01.02.1999, the pension liability of employees who retired in erstwhile APSEB, and also of those employees on the payrolls on the date of reorganisation to the extent of their services in the erstwhile APSEB were transferred to the erstwhile APGENCO.
- 4.13.5 For the purpose of discharging pension liability as discussed above, a Master Trust was formed. During the year 2002-03, the erstwhile APGENCO issued two series of bonds, guaranteed by the erstwhile Government of Andhra Pradesh, to the Trust.
- 4.13.6 Based on the First Transfer Scheme notified by the erstwhile Govt. of A.P. vide G.O.Ms.No.9 Energy (Power-III) dated 29.01.1999 read with G.O.Ms.No.11, Energy (Power-III) dated 31.01.2000, the liabilities on account of loan repayment and terminal benefits of employees as on the effective date of the said transfer scheme were covered through the depreciation and RoE charged on the re-valued assets.
- 4.13.7 The erstwhile APGENCO had issued bonds in favour of the Master Trust which are redeemable over a period of 30 years. In order that the Master Trust is liable to pay 100% of the pension commitment of pensioners as on 31.01.1999 and 74% of the pension commitment of employees who retired after 01.02.1999 (26% being funded by the separate P&G Trusts of the erstwhile APGENCO, APTRANSCO and four DISCOMs), the APGENCO is required to make the following annual payments as per the bond schedule:
- An amount towards repayment of the principal as per the bond schedule; and
  - Interest on the outstanding liability as per the bond schedule; and

- Additional interest, being the actual amount of pension payment in a year in excess of the aggregate for that year of the scheduled repayment and interest aforesaid as per the bond schedule, which is passed through in the tariff.

4.13.8 The additional interest has been recognized and allowed in the tariff on a year-to-year basis to TSGENCO by the Commission in GTO dated 05.06.2017. The liability was transferred to TSGENCO vide G.O.Ms.No.29 dated 31.05.2014 (Transfer Scheme notified by the erstwhile Government of A.P.) based on the provisions of the A.P. Reorganisation Act, 2014 and the AP Electricity Reforms Act, 1998.

4.13.9 TSGENCO has to discharge 42.39% of the total pension liability of the erstwhile APGENCO as on the said date, as the assets constituting the generating stations allocated to the Telangana State were valued at Rs.1379 crore being 42.39% of the total asset value of Rs.3253 crore based on the provisional balance sheet of APGENCO as on 31.03.2014.

4.13.10 The erstwhile APERC in the Order dated 24.03.2003 in O.P.No.402 of 2002 allowed actual pension liabilities as a passthrough in the tariff on a year-to-year basis up to the FY 2032-33. The aforementioned Order of the APERC shows that any additional liability due to increase in the amount of pension is recognised as a pass through in the tariff of APGENCO.

4.13.11 The year wise estimated pension liability and the resulting additional liability over and above the year-wise amount to be redeemed as per the pension bond schemes are furnished by TSGENCO as given in Table below:

**Table 4.26: Additional pension liabilities claimed for MTR**

Particulars	Rs.in crore		
	FY 2019-20	FY 2020-21	FY 2021-22
Actual Pension Paid by TSGENCO	1221.45	1324.02	1228.56
Less: Scheduled Principal and Interest (for 2 Bonds)	163.07	163.91	166.03
<b>Additional Pension Liability Claim</b>	<b>1058.38</b>	<b>1160.11</b>	<b>1062.53</b>

4.13.12 The Commission after prudence check and based on audited accounts in terms of Regulation No.1 of 2019 allows the additional pension liability and water charges as claimed by TSGENCO as shown in table below:

**Table 4.27: Additional interest on pension bonds and Water Charges claimed and approved for MTR**

*Rs.in crore*

Sl. No.	Particulars	2019-20		2020-21		2021-22	
		Claimed	Approved	Claimed	Approved	Claimed	Approved
1	Additional Interest on Pension Bonds	1058.38	1058.38	1160.11	1160.11	1062.53	1062.53
2	Water Charges	27.95	27.54	50.58	50.58	43.69	43.69

The Commission directs TSGENCO to pursue with the Government of Telangana for favourable consideration for bearing the burden of additional interest on pension bonds.

#### 4.14 INCENTIVE & SECONDARY ENERGY CHARGES

4.14.1 There is no claim in the present filings on incentives and secondary energy charges. TSGENCO has submitted that the incentives for generation beyond the Target Plant Load Factor for thermal generating stations and the secondary energy charges for generation beyond the design energy for hydel generating stations shall be claimed annually at the rates specified in the Regulation No.1 of 2019.

#### 4.15 ENERGY CHARGES

##### ***Petitioner's Submission***

4.15.1 The energy charges have been computed based on clause 21 of the Regulation No.1 of 2019. The energy charges have been claimed at actuals, as per the norms approved in order dated 22.03.2022.

4.15.2 The ECR claimed by TSGENCO for FY 2019-20 to FY 2021-22 is as shown in the Table below:

**Table 4.28: ECR claimed for MTR**

*(Rs./kWh)*

Sl. No	Name of the Station	2019-20	2020-21	2021-22
1	KTPS-O&M	3.197	-	-
2	KTPS-V	2.626	2.657	2.848
3	KTPS-VI	2.509	2.673	2.941
4	KTPS-VII	2.701	2.554	2.867
5	RTS-B	2.464	2.256	2.588
6	KTPP-I	2.807	3.068	3.688
7	KTPP-II	2.821	2.594	2.910
8	BTPS	-	2.776	2.809



## Commission's View

4.15.3 Any variation in fuel prices on account of change in the GCV of coal or gas or liquid fuel shall be billed in accordance with the provisions under clause 21.10 and 21.11 of Regulation No.1 of 2019.

## 4.16 SUMMARY AND VARIATIONS IN ANNUAL FIXED CHARGES (AFC)

### Commission's View

4.16.1 Based on the above, the AFC claimed by TSGENCO and approved by the Commission is as shown in the Tables below:

**Table 4.29: AFC claimed and approved for MTR**

Rs.in crore

Item Particulars	Depreciation		Interest and Finance Charges on Loan		Interest on Working Capital		O&M Expenses		Return on Equity		Total	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
<b>FY 2019-20</b>												
KTPS-O&M	243.82	16.86	0.00	0.00	47.22	40.66	462.12	457.50	41.84	43.75	795.00	558.76
KTPS-V	52.52	33.13	0.00	0.12	34.37	30.50	182.11	159.42	89.12	121.21	358.12	344.37
KTPS-VI	130.78	130.19	45.99	42.66	36.34	33.97	182.11	159.42	142.58	140.97	537.81	507.22
KTPS-VII	245.43	245.43	328.97	316.25	58.14	52.99	137.66	136.29	259.35	264.26	1029.55	1015.22
RTS-B	12.27	10.11	3.42	2.49	7.27	6.38	85.39	75.57	7.16	7.16	115.51	101.71
KTPP-I	134.88	134.86	22.95	41.28	37.33	35.85	149.20	145.11	143.61	143.61	487.97	500.70
KTPP-II	190.18	189.85	186.63	160.40	47.03	44.16	179.04	161.50	192.06	192.69	794.94	748.60
BTPS	-	-	-	0.00	-	-	-	-	-	-	-	-
Nagarjuna Complex	90.37	87.97	53.13	44.89	7.89	7.37	85.29	84.43	115.21	115.21	351.89	339.88
Srisaillam LB	79.22	86.43	84.20	82.60	8.96	8.66	66.59	65.69	202.47	202.47	441.44	445.85
Small Hydel	3.14	3.36	0.81	0.67	1.74	1.47	37.87	32.71	7.23	7.23	50.79	45.44
Mini Hydel	1.09	0.90	0.57	0.51	0.32	0.27	6.42	5.55	1.76	1.76	10.16	8.99
Pochampad-II	0.72	0.72	1.27	1.18	0.32	0.27	6.31	5.45	1.78	1.78	10.41	9.41
Priyadarshini Jurala	32.93	32.92	28.26	25.63	2.69	2.50	23.98	22.99	38.92	38.92	126.77	122.95
Lower Jurala	81.28	81.27	92.86	81.63	5.52	5.11	24.50	24.26	91.14	91.27	295.30	283.54
Pulichintala	12.41	12.34	27.74	25.47	2.20	2.04	26.24	25.43	26.02	26.16	94.61	91.45
NTI											4.63	4.63
<b>AFC FY 2019-20</b>	<b>1311.03</b>	<b>1066.33</b>	<b>876.79</b>	<b>825.77</b>	<b>297.33</b>	<b>272.20</b>	<b>1654.86</b>	<b>1561.33</b>	<b>1360.26</b>	<b>1398.44</b>	<b>5495.64</b>	<b>5119.44</b>
<b>FY 2020-21</b>												
KTPS-O&M	-	-	-	-	-	-	-	-	-	-	-	-
KTPS-V	60.65	37.57	0.00	1.49	33.31	27.19	215.63	162.43	88.11	122.32	397.70	351.00
KTPS-VI	131.20	129.57	31.03	28.13	36.08	29.92	215.63	162.43	155.11	139.36	569.04	489.41
KTPS-VII	254.73	254.71	318.22	305.59	64.58	59.02	458.76	443.30	296.85	274.57	1393.14	1337.18
RTS-B	12.27	10.11	2.32	1.48	7.31	5.87	94.46	81.66	8.00	7.16	124.36	106.28
KTPP-I	134.85	134.69	9.71	28.65	32.32	31.41	147.38	142.24	158.45	143.61	482.71	480.59
KTPP-II	190.43	189.78	172.17	146.97	41.73	38.94	176.86	162.32	213.94	195.66	795.12	733.66
BTPS	125.05	125.05	158.85	105.13	24.83	10.63	92.78	91.85	92.96	78.02	494.47	410.68
Nagarjuna Complex	98.96	87.97	46.00	37.61	3.09	6.98	101.98	100.36	127.11	115.21	377.13	348.13
Srisaillam LB	79.24	86.43	76.19	73.83	9.49	8.37	94.59	89.48	223.33	202.47	482.85	460.58
Small Hydel	3.21	3.40	0.49	0.28	1.73	1.36	41.03	34.68	8.03	7.25	54.48	46.97
Mini Hydel	1.10	0.90	0.44	0.40	0.32	0.25	6.96	5.88	1.95	1.76	10.77	9.19
Pochampad-II	0.72	0.71	1.21	1.11	0.32	0.25	6.84	5.78	1.98	1.78	11.06	9.64
Priyadarshini Jurala	32.70	32.40	25.89	23.15	2.58	2.28	26.45	26.19	42.95	38.92	130.57	122.93
Lower Jurala	81.28	81.27	87.91	76.24	5.24	4.54	27.06	26.79	100.80	91.49	302.29	280.33
Pulichintala	11.34	11.22	27.11	24.44	2.23	1.88	31.06	28.24	29.31	26.34	101.06	92.13
NTI											7.17	7.17
<b>AFC FY 2020-21</b>	<b>1217.74</b>	<b>1185.78</b>	<b>957.55</b>	<b>854.50</b>	<b>265.15</b>	<b>228.89</b>	<b>1737.46</b>	<b>1563.63</b>	<b>1548.86</b>	<b>1445.91</b>	<b>5719.60</b>	<b>5271.54</b>
<b>FY 2021-22</b>												
KTPS-O&M	-	-	-	-	-	-	-	-	-	-	-	-
KTPS-V	84.92	55.13	0.00	5.57	32.21	28.13	229.51	183.53	83.03	125.62	429.67	397.97
KTPS-VI	131.58	128.96	18.41	14.56	34.90	30.27	229.51	183.17	156.14	139.36	570.54	496.31
KTPS-VII	259.11	259.07	302.03	284.36	61.43	56.26	435.98	388.93	308.81	281.47	1367.37	1270.09
RTS-B	12.37	10.11	1.10	0.49	7.04	6.00	94.99	86.71	8.00	7.16	123.50	110.47
KTPP-I	132.74	129.11	0.00	14.59	32.10	31.36	167.32	155.32	150.55	143.61	482.72	473.98
KTPP-II	196.64	196.00	161.11	141.38	41.53	39.26	200.79	175.59	219.12	205.15	819.18	757.38
BTPS	275.73	275.73	480.61	382.19	58.85	54.80	152.42	150.89	226.44	302.87	1194.04	1166.49
Nagarjuna Complex	94.56	87.97	35.55	28.29	7.28	6.60	99.63	94.89	127.16	115.21	364.18	332.95
Srisaillam LB	80.20	86.43	68.19	65.05	8.52	7.95	88.33	83.05	223.36	202.47	468.60	444.96
Small Hydel	3.27	3.47	0.16	0.07	1.62	1.41	40.40	36.33	8.08	7.29	53.53	48.57
Mini Hydel	1.11	0.90	0.32	0.28	0.29	0.25	6.85	6.16	1.96	1.76	10.53	9.36
Pochampad-II	0.73	0.72	1.14	1.04	0.30	0.26	6.73	6.06	1.99	1.78	10.89	9.86
Priyadarshini Jurala	20.45	20.05	23.26	20.33	2.41	2.06	32.14	26.58	43.70	38.92	121.96	107.93
Lower Jurala	81.42	81.41	79.43	67.74	4.94	4.45	32.75	28.58	101.02	91.64	299.56	273.82

Item Particulars	Depreciation		Interest and Finance Charges on Loan		Interest on Working Capital		O&M Expenses		Return on Equity		Total	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
Pulichintala	11.35	11.23	26.00	23.33	2.06	1.84	30.63	27.93	29.38	26.40	99.42	90.72
NTI											18.52	18.52
AFC FY 2021-22	1386.19	1346.29	1197.31	1049.26	295.48	270.90	1848.00	1633.71	1688.73	1690.72	6397.18	5972.36

#### 4.17 SUMMARY OF AFC ADMITTED AND SHARING OF GAINS/LOSSES IN MID-TERM REVIEW

4.17.1 The summary of variance and sharing of gains/Loss claimed by TSGENCO and approved by the Commission in accordance with the relevant clauses of the Regulation No.1 of 2019 is as shown in the Table below:

**Table 4.30: Aggregate AFC claimed and approved in MTR**

*Rs.in crore*

Sl. No.	Item Particulars	FY 2019-20		FY 2020-21		FY 2021-22		FY 2019-20 to FY 2022-23	
		Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
1	Depreciation	1311.03	1066.33	1217.74	1185.78	1386.19	1346.29	3914.96	3598.40
2	Interest and Finance Charges on Loan	876.79	825.77	957.55	854.50	1197.31	1049.26	3031.65	2729.53
3	Interest on Working Capital	297.33	272.20	265.15	228.89	295.48	270.90	857.96	771.98
4	O&M Expenses	1654.86	1561.33	1737.46	1563.63	1848.00	1633.71	5240.31	4758.66
5	Return on Equity	1360.26	1398.44	1548.86	1445.91	1688.73	1690.72	4597.86	4535.07
6	Less Non-Tariff Income	4.63	4.63	7.17	7.17	18.52	18.52	30.32	30.32
	<b>Aggregate AFC</b>	<b>5495.64</b>	<b>5119.44</b>	<b>5719.60</b>	<b>5271.54</b>	<b>6397.18</b>	<b>5972.36</b>	<b>17612.42</b>	<b>16363.33</b>
7	Additional Interest on Pension Bonds	1058.38	1058.38	1160.11	1160.11	1062.53	1062.53	3281.02	3281.02
8	Water Charges	27.95	27.54	50.58	50.58	43.69	43.69	122.22	121.81
	<b>Grand Total</b>	<b>6581.97</b>	<b>6205.36</b>	<b>6930.29</b>	<b>6482.23</b>	<b>7503.40</b>	<b>7078.58</b>	<b>21015.66</b>	<b>19766.16</b>

**Table 4.31: Summary of aggregate AFC admitted and variations approved in MTR**

*Rs.in crore*

Sl. No.	Item Particulars	Approved in order dated 22.03.2022			Approved in MTR			Variation approved in MTR		
		2019-20	2020-21	2021-22	2019-20	2020-21	2021-22	2019-20	2020-21	2021-22
1	Depreciation	1076.96	1243.59	1488.26	1066.33	1185.78	1346.29	-10.63	-57.80	-141.97
2	Interest and Finance Charges on Loan	907.64	1208.08	1526.60	825.77	854.50	1049.26	-81.87	-353.58	-477.34
3	Interest on Working Capital	289.50	263.52	332.12	272.20	228.89	270.90	-17.30	-34.63	-61.22
4	O&M Expenses	1675.06	1358.59	1688.97	1561.33	1563.63	1633.71	-113.74	205.04	-55.26
5	Return on Equity	1401.33	1481.31	1615.37	1398.44	1445.91	1690.72	-2.89	-35.39	75.34
6	Less Non-Tariff Income	25.30	25.50	29.92	4.63	7.17	18.52	-20.67	-18.33	-11.40
	<b>Aggregate AFC</b>	<b>5325.19</b>	<b>5529.58</b>	<b>6621.41</b>	<b>5119.44</b>	<b>5271.54</b>	<b>5972.36</b>	<b>-205.76</b>	<b>-258.04</b>	<b>-649.05</b>
7	Additional Interest on Pension Bonds	1068.56	1125.86	1189.46	1058.38	1160.11	1062.53	-10.18	34.25	-126.93
8	Water Charges	27.54	46.67	49.47	27.54	50.58	43.69	0.00	3.91	-5.78
	<b>Grand Total</b>	<b>6421.29</b>	<b>6702.10</b>	<b>7860.34</b>	<b>6205.36</b>	<b>6482.23</b>	<b>7078.58</b>	<b>-215.94</b>	<b>-219.87</b>	<b>-781.76</b>

4.17.2 The summary of variations in AFC claimed by TSGENCO in MTR and approved by the Commission is given in table below:

**Table 4.32: Summary of aggregate variation variation claimed and approved in MTR**

*Rs.in crore*

Sl. No.	Item Particulars	As claimed in MTR				Approved in MTR			
		2019-20	2020-21	2021-22	Total	2019-20	2020-21	2021-22	Total
1	Depreciation	234.07	-25.85	-102.07	106.15	-10.63	-57.80	-141.97	-210.40
2	Interest and Finance Charges on Loan	-30.85	-250.53	-329.29	-610.67	-81.87	-353.58	-477.34	-912.79
3	Interest on Working Capital	7.83	1.63	-36.64	-27.18	-17.30	-34.63	-61.22	-113.16
4	O&M Expenses	-20.20	378.87	159.03	517.70	-113.74	205.04	-55.26	36.04
5	Return on Equity	-41.07	67.53	73.36	99.82	-2.89	-35.39	75.34	37.06
6	Less Non-Tariff Income	-20.67	-18.33	-11.40	-50.40	-20.67	-18.33	-11.40	-50.40
	<b>Aggregate AFC</b>	<b>170.45</b>	<b>189.98</b>	<b>-224.21</b>	<b>136.22</b>	<b>-205.76</b>	<b>-258.04</b>	<b>-649.05</b>	<b>-1112.85</b>

Sl. No.	Item Particulars	As claimed in MTR				Approved in MTR			
		2019-20	2020-21	2021-22	Total	2019-20	2020-21	2021-22	Total
7	Additional Interest on Pension Bonds	-10.18	34.25	-126.93	<b>-102.86</b>	-10.18	34.25	-126.93	-102.86
8	Water Charges	0.41	3.91	-5.78	<b>-1.45</b>	0.00	3.91	-5.78	<b>-1.86</b>
	<b>Grand Total</b>	<b>160.68</b>	<b>228.14</b>	<b>-356.93</b>	<b>31.91</b>	<b>-215.94</b>	<b>-219.87</b>	<b>-781.76</b>	<b>-1217.57</b>

4.17.3 **Variations in Energy Charges:** Any variation in fuel prices on account of change in the GCV of coal or gas or liquid fuel shall be billed in accordance with the provisions under clause 21.10 and 21.11 of Regulation No.1 of 2019.

### Sharing of Gains/Losses

4.17.4 The Commission has approved the sharing of gains/losses in accordance with the relevant clauses of the Regulation No.1 of 2019 and detailed in table below:

**Table 4.33: Summary of approved sharing of gains/losses of MTR to the beneficiaries**

*Rs.in crore*

Sl. No.	Item Particulars	Variations in AFC	Sharing of Gains/Losses to	
			Generating Company	Beneficiaries
1	Depreciation	-210.40	-70.13	-140.27
2	<b>Interest and Finance Charges on Loan</b>	<b>-912.79</b>	<b>-271.48</b>	<b>-641.32</b>
	a) Due to change in Market rate	-98.37	0.00	-98.37
	b) Due to change in Capitalisation	-814.43	-271.48	-542.95
3	Interest on Working Capital	-113.16	-37.72	-75.44
4	O&M Expenses	36.04	24.03	12.01
5	Return on Equity	37.06	24.71	12.35
6	Less Non-Tariff Income	-50.40	0.00	-50.40
	<b>Aggregate AFC</b>	<b>-1112.85</b>	<b>-330.59</b>	<b>-782.26</b>
7	Additional Interest on Pension Bonds	-102.86	0.00	-102.86
8	Water Charges	-1.86	0.00	-1.86
	<b>Grand Total</b>	<b>-1217.57</b>	<b>-330.59</b>	<b>-886.98</b>

Note: Any variation in fuel prices on account of change in the GCV of coal or gas or liquid fuel shall be billed in accordance with the provisions under clause 21.10 and 21.11 of Regulation No.1 of 2019

4.17.5 The Commission directs TSGENCO to bill to the beneficiaries' viz., for passing through of gains/losses approved in this Order as per the AFC and other charges approved after truing-up in MTR for the period from FY 2019-20 to FY 2021-22.

## Chapter-5 Revised AFC for FY 2022-23 and FY 2023-24

### 5.1 REVISION OF AFC FOR FY 2022-23 TO FY 2023-24

#### **Petitioner's Submission**

- 5.1.1 TSGENCO has projected the revision of AFC for FY 2022-23 to FY 2023-24 as detailed below:

**Table 5.1: Revised AFC projected for FY 2022-23 to FY 2023-24**

Station	<i>Rs.in crore</i>	
	FY 2022-23	FY 2023-24
<b>Thermal</b>		
KTPS-O&M	0.00	0.00
KTPS-V	446.94	455.90
KTPS-VI	575.59	569.93
KTPS-VII	1386.58	1456.19
RTS-B	128.32	132.00
KTPP-I	499.59	420.37
KTPP-II	861.81	899.40
BTPS	1341.25	1722.96
<b>Hydel</b>		
Nagarjuna Complex	361.92	358.21
Srisaïlam LB	468.22	465.76
Small Hydel	56.56	61.38
Mini Hydel	10.82	11.13
Pochampad-II	11.24	11.60
Priyadarshini Jurala	122.70	115.97
Lower Jurala	295.02	290.80
Pulichintala	100.23	101.85
<b>Total</b>	<b>6666.77</b>	<b>7073.46</b>
Additional Pension liability	1108.67	1168.08
Water Charges	62.05	68.32
Non-tariff income(-)	32.30	32.30
<b>Grand Total</b>	<b>7805.19</b>	<b>8277.56</b>

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

- 5.1.2 The clause 3.12.6(c) of the Regulation No.1 of 2019 provides for modifications to the Aggregate Revenue Requirement and Tariffs for the remainder of the control period. The opening GFA projected by TSGENCO and approved by the Commission for FY 2022-23 and FY 2023-24 is summarised in the table below:

**Table 5.2: GFA projected and approved for FY 2022-23 to FY 2023-24**

Name of the Station	FY 2022-23		FY 2023-24	
	Projected	Approved	Projected	Approved
<b>Thermal Stations</b>				
KTPS-O&M	-	-	-	-

Name of the Station	FY 2022-23		FY 2023-24	
	Projected	Approved	Projected	Approved
KTPS-V	2269.88	2269.87	2276.86	2269.87
KTPS-VI	2534.60	2473.36	2535.79	2473.36
KTPS-VII	5022.80	5022.07	5521.10	5215.85
RTS-B	129.11	127.04	129.11	127.04
KTPP-I	2687.30	2548.83	2687.30	2548.83
KTPP-II	3779.74	3767.77	4112.16	3813.17
BTPS	6946.29	6946.29	9004.62	8025.57
<b>Hydel Stations</b>				
Nagarjuna Complex	1928.70	1920.80	1928.70	1920.80
Srisaillam LB	3394.83	3375.71	3394.83	3375.71
Small Hydel	122.65	121.79	131.00	130.14
Mini Hydel	31.59	31.23	31.59	31.23
Pochampad-II	30.09	29.74	30.09	29.74
Priyadarshini Jurala	705.66	690.68	705.66	690.68
Lower Jurala	1627.63	1627.47	1645.35	1645.19
Pulichintala	445.27	440.68	451.14	446.55
<b>Total</b>	<b>31656.14</b>	<b>31393.33</b>	<b>34585.30</b>	<b>32743.73</b>

- 5.1.3 Based on the True-up exercise done for FY 2019-20 to FY 2021-22 the Commission has approved the O&M expenses for FY 2022-23 to FY 2023-24. The component wise O&M expenses viz., Employee cost, R&M expenses approved by the Commission is summarised in the table below:

**Table 5.3: Components of O&M Expenses approved for FY 2022-23 and FY 2023-24**

*Rs.in crore*

Sl. No.	Name of the Station	FY 2022-23				FY 2023-24			
		Emp	R&M	A&G	O&M	Emp	R&M	A&G	O&M
1	KTPS-O&M	-	-	-	-	-	-	-	-
2	KTPS-V	142.91	35.79	11.81	<b>188.61</b>	148.66	37.80	12.07	<b>196.55</b>
3	KTPS-VI	142.91	36.41	11.81	<b>189.22</b>	148.66	36.08	12.07	<b>194.85</b>
4	KTPS-VII	366.71	25.89	14.78	<b>403.31</b>	396.07	31.84	61.97	<b>484.98</b>
5	RTS-B	75.52	9.88	5.98	<b>90.47</b>	78.57	10.02	6.11	<b>93.76</b>
6	KTPP-I	130.76	29.60	4.33	<b>163.04</b>	136.03	29.89	4.42	<b>168.64</b>
7	KTPP-II	148.12	29.32	4.86	<b>180.47</b>	154.09	32.80	4.96	<b>189.93</b>
8	BTPS	142.81	7.34	11.42	<b>159.96</b>	151.38	7.78	12.10	<b>169.55</b>
9	Nagarjuna Complex	84.31	9.35	7.65	<b>100.30</b>	89.37	9.91	7.82	<b>106.02</b>
10	Srisaillam LB	71.30	9.52	7.27	<b>87.20</b>	75.57	9.52	7.42	<b>91.59</b>
11	Small Hydel	35.36	1.87	0.88	<b>37.73</b>	36.79	2.02	0.90	<b>39.31</b>
12	Mini Hydel	6.00	0.32	0.15	<b>6.40</b>	6.24	0.32	0.15	<b>6.64</b>
13	Pochampad-II	5.89	0.31	0.15	<b>6.29</b>	6.13	0.31	0.15	<b>6.53</b>
14	Priyadarshini Jurala	25.22	1.69	1.40	<b>28.02</b>	26.73	1.69	1.43	<b>29.55</b>
15	Lower Jurala	25.86	2.87	1.68	<b>30.11</b>	27.42	2.92	1.78	<b>31.79</b>
16	Pulichintala	28.45	0.81	0.57	<b>29.53</b>	30.16	0.82	0.58	<b>31.25</b>
<b>Total</b>		<b>1432.13</b>	<b>200.97</b>	<b>84.74</b>	<b>1700.66</b>	<b>1511.87</b>	<b>213.71</b>	<b>133.93</b>	<b>1840.92</b>

- 5.1.4 Further, based on the True-up exercise done for FY 2019-20 to FY 2021-22, the Commission has determined the AFC for FY 2022-23 to FY 2023-24. The

details of revised AFC projected by TSGENCO and approved by Commission is detailed in table below:

**Table 5.4: Revised AFC projected and approved for FY 2022-23 to FY 2023-24**

*Rs.in crore*

Name of the Station	Depreciation		Interest and Finance Charges on Loan		Interest on Working Capital		O&M Expenses		Return on Equity		Total	
	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved	Claimed	Approved
<b>FY 2022-23</b>												
<b>Thermal</b>												
KTPS-O&M	-	-	-	-	-	-	-	-	-	-	-	-
KTPS-V	88.06	73.33	0.00	8.39	33.40	30.27	243.28	188.61	82.19	127.89	446.94	428.48
KTPS-VI	132.35	129.12	6.55	1.34	35.91	32.01	243.28	189.22	157.50	139.36	575.59	491.05
KTPS-VII	260.97	253.40	287.80	275.05	63.53	59.87	462.16	403.31	312.11	288.43	1386.58	1280.04
RTS-B	12.37	10.11	0.00	0.00	7.46	6.48	100.69	90.47	7.80	7.16	128.32	114.23
KTPP-I	138.55	131.41	0.00	1.09	33.02	33.26	177.36	163.04	150.66	143.61	499.59	472.42
KTPP-II	205.76	197.65	165.40	137.16	42.95	41.75	212.83	180.47	234.87	213.57	861.81	770.61
BTPS	350.57	329.05	636.09	398.79	70.89	63.34	161.57	159.96	122.12	406.16	1341.25	1357.30
<b>Hydel</b>												
Nagarjuna Complex	94.72	87.97	26.78	19.57	7.22	7.03	105.61	100.30	127.58	115.21	361.92	330.08
Srisaillam LB	80.20	86.43	61.33	56.28	8.49	8.41	93.64	87.20	224.56	202.47	468.22	440.80
Small Hydel	4.34	4.04	0.00	0.39	1.65	1.56	42.83	37.73	7.75	7.56	56.56	51.27
Mini Hydel	1.11	0.90	0.19	0.11	0.30	0.28	7.26	6.40	1.96	1.76	10.82	9.45
Pochampad-II	0.73	0.72	1.08	0.97	0.30	0.28	7.14	6.29	1.99	1.78	11.24	10.04
Priyadarshini Jurala	20.54	20.11	21.81	18.67	2.41	2.20	34.08	28.02	43.85	38.92	122.70	107.91
Lower Jurala	81.50	81.49	72.79	61.40	4.87	4.66	34.72	30.11	101.14	92.20	295.02	269.86
Pulichintala	11.35	11.24	24.88	22.40	2.06	1.99	32.48	29.53	29.45	26.61	100.23	91.77
Non-tariff income											32.30	32.30
<b>AFC FY 2022-23</b>											<b>6634.47</b>	<b>6193.01</b>
<b>Additional Interest on Pension Bonds</b>											<b>1108.67</b>	<b>1108.67</b>
<b>Water Charges</b>											<b>62.05</b>	<b>62.05</b>
<b>Total Charges</b>											<b>7805.19</b>	<b>7363.73</b>
<b>FY 2023-24</b>												
<b>Thermal</b>												
KTPS-O&M	-	-	-	-	-	-	-	-	-	-	-	-
KTPS-V	98.68	19.15	0.00	8.39	33.93	30.55	257.88	196.55	65.40	127.89	455.90	382.53
KTPS-VI	132.35	130.58	0.00	0.00	36.24	33.09	257.88	194.85	143.46	139.36	569.93	597.88
KTPS-VII	260.99	232.68	296.97	263.85	65.28	64.55	489.88	484.98	343.08	299.35	1456.19	1345.41
RTS-B	12.37	10.11	0.00	0.00	7.67	6.79	106.72	93.76	5.24	7.16	132.00	117.82
KTPP-I	78.19	74.16	0.00	0.00	32.21	33.46	188.01	168.64	121.97	143.61	420.37	419.87
KTPP-II	205.05	180.11	169.37	120.73	43.86	42.74	225.60	189.93	255.53	215.68	899.40	749.20
BTPS	350.57	300.23	622.77	420.94	76.67	66.11	171.26	169.55	501.69	463.05	1722.96	1419.87
<b>Hydel</b>												
Nagarjuna Complex	94.72	87.97	16.67	10.17	7.30	7.28	111.95	106.02	127.58	115.21	358.21	326.66
Srisaillam LB	80.20	86.43	53.19	47.51	8.57	8.66	99.24	91.59	224.56	202.47	465.76	436.67
Small Hydel	5.59	3.95	0.00	0.37	1.77	1.66	45.39	39.31	8.63	7.81	61.38	53.08
Mini Hydel	1.11	0.90	0.05	0.00	0.31	0.29	7.70	6.64	1.96	1.76	11.13	9.59
Pochampad-II	0.73	0.00	1.00	0.93	0.31	0.29	7.57	6.53	1.99	1.78	11.60	9.53
Priyadarshini Jurala	14.02	13.72	19.62	16.86	2.36	2.19	36.12	29.55	43.85	38.92	115.97	101.23
Lower Jurala	81.50	79.59	65.41	54.07	4.85	4.72	36.81	31.79	102.24	93.15	290.80	263.32
Pulichintala	11.35	10.89	24.11	21.67	2.13	2.09	34.42	31.25	29.84	26.97	101.85	92.88
Non-tariff income											32.30	35.99
<b>AFC FY 2023-24</b>											<b>7041.16</b>	<b>6189.53</b>
<b>Additional Interest on Pension Bonds</b>											<b>1168.08</b>	<b>1168.08</b>
<b>Water Charges</b>											<b>68.32</b>	<b>68.32</b>
<b>Total Charges</b>											<b>8277.56</b>	<b>7425.93</b>

## 5.2 APPLICABILITY

5.2.1 The Commission directs the Petitioner to recover/adjust the difference in revenue recoverable in accordance with the Tariff approved in this Order *vis-à-vis* the Tariff charged from April 2022. For FY 2023-24, the Generation Tariffs are applicable w.e.f. 01.04.2023.

### 5.3 COMMISSION'S DIRECTIVES

5.3.1 The Commission's earlier Directives and new Directives issued in this Order are enclosed at Appendix.

**This Order is corrected and signed on this the 23<sup>rd</sup> day of March, 2023.**

Sd/-  
(BANDARU KRISHNAIAH)  
MEMBER

Sd/-  
(M. D. MANOHAR RAJU)  
MEMBER

Sd/-  
(T. SRIRANGA RAO)  
CHAIRMAN

**//CERTIFIED COPY//**



## **Appendix Commission's Directives**

### **Earlier Directives**

1. Endeavour to finish all the future projects within stipulated timelines to prevent cost overruns.
2. To approach the Commission for approval with regard to renovation & modernisation expenditure for all the plants.
3. Maintain separate records and books of account for each unit of every power station.
4. Maintain the following with respect to capitalisation of fixed assets
  - a. Date of capitalisation/placed into service
  - b. Accumulated depreciation of each asset
  - c. Date of decapitalisation wherever applicable

### **New Directives**

5. **True-up for FY 2019-20 to FY 2021-22**

The Commission directs TSGENCO to bill to the beneficiaries' viz., TSDISCOMs for passing through of gains/losses approved in this Order as per the AFC and other charges approved after truing-up in MTR for the period from FY 2019-20 to FY 2021-22.

6. **Revised AFC for FY 2022-23 & 2023-24**

The Commission directs the Petitioner to recover/adjust the difference in revenue recoverable in accordance with the Tariff approved in this Order vis-à-vis the Tariff charged from April 2022. For FY 2023-24, the Generation Tariffs are applicable w.e.f. 01.04.2023.

7. **Scheme-wise Details of Capital Cost for New Stations**

The Commission directs TSGENCO to submit the proposal for final capital cost and revised tariff for BTPS after commissioning of the final unit. The Commission also directs TSGENCO to submit the proposal for determination of capital cost and Tariff for YTPS before its CoD as per the Regulation No.1 of 2019. TSGENCO shall submit the scheme-wise capitalisation for new plants, viz., KTPS VII, BTPS and YTPS with Financial Package, Time and Cost over-



run for each station along with proper quantification of the cost over-run, justification for the time over-run and Financial Package-wise undischarged liabilities as on COD of the respective plant while filing the MTR Petition.

**8. Auditor's Certificates for Completed Cost of KTPS VII and BTPS**

The Commission directs TSGENCO to submit the Auditor's Certificate for completed cost of KTPS VII and BTPS along with Financial Packages, IDC drawl, etc., while filing the MTR Petition.

**9. Installation of FGD**

The Commission directs TSGENCO to submit the details of FGD installation along with DPR, project cost, physical & financial progress of work, etc., in its End of Control Period Review petition for the consideration of the Commission.

**10. Cost of Captive Coal mined for KTPP**

The Commission directs TSGENCO to submit the detailed cost benefit analysis of the coal mined from the captive mines for KTPP and provide comparison of the cost reduction on operation of these captive mines along with the detailed cost break-up of the coal mined along with the MTR Petition.

**11. Liabilities on pension bonds**

The Commission directs TSGENCO to pursue with the Government of Telangana for favourable consideration for bearing the burden of additional interest on pension bonds.

# Annexure-I Public Notice

Newspaper clippings appeared in EENADU and NAMASTHE TELANGNA on  
15.12.2022

**గౌరవనీయు**  
**తెలంగాణ స్టేట్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్ (TSERC)**  
డి.నెం.11-4-660, 5వ అంతస్తు, సింగరేణి భవన్, రెడ్ హిల్స్, హైదరాబాద్- 500004 నమకంలో

**తెలంగాణ స్టేట్ పవర్ జనరేషన్ కార్పొరేషన్ లిమిటెడ్**  
విద్యుత్ సౌధ, హైదరాబాద్- 500082. ఫోన్: 040-23499181, ఫ్యాక్స్: 040-2349927

**బహిరంగ ప్రకటన**  
ఐ.పి.నెం.6/2021 మరియు ఐ.పి.నెం.78/2022లోని ఐ.ఎ.నెం.58/2022

1. యావన్తందికి ఇందుమూలముగా తెలియజేయునది ఏమనగా 2019లోని " జనరేషన్ టారిఫ్ నియమ నిబంధనలు" రెగ్యులేషన్ నెం.1లోని నిబంధనల క్రింద మరియు సెక్షన్ 62 క్రింద తెలంగాణ స్టేట్ పవర్ జనరేషన్ కార్పొరేషన్ లిమిటెడ్ (TSGENCO), తెలంగాణ స్టేట్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్ (TSERC) సమక్షంలో అర్జీలను దాఖలు చేసినది. ఈ అర్జీలు గౌరవనీయు కమిషన్ చే రికార్డులోకి తీసుకోబడినవి మరియు దిగువ వివరించబడిన నెంబర్లు కేటాయించబడినవి:

క్ర.సం.	ఫైలింగ్ వివరాలు	అర్జీ నెం.
1.	డిస్ట్రిబ్యూషన్ లైసెన్స్లకు సరఫరా చేయబడవల్సిన విద్యుత్ కొరకు 4వ నియంత్రణ వ్యవధి (FYs 2019-20 నుండి FY 2023-24) నిమిత్తం భద్రాద్రి ధర్మల్ పవర్ స్టేషన్ (బిటిపిఎస్) (4x270MW) యొక్క తుది (4వ) యూనిట్ యొక్క సిబ్బడి వరకు మూలధన వ్యయం మరియు సవరించిన టారిఫ్ ను నిర్ణయించుట.	ఐ.పి.నెం.6/2021 లోని ఐ.ఎ.నెం.58/2022
2.	4వ నియంత్రణ వ్యవధి (FYs 2019-20 నుండి FY 2023-24) నిమిత్తం ప్రస్తుత స్టేషన్ కొరకు FY 2022-23 నుండి FY 2023-24 కొరకు సవరించిన జనరేషన్ టారిఫ్ కొరకు మరియు FY 2019-20 నుండి FY 2021-22 కొరకు మధ్యకాలీన సమీక్ష (ట్రూ-అప్) యొక్క ఆమోదం	ఐ.పి.నెం. 78/2022

2. పైన తెలిపిన ఫైలింగ్ కాపీలు చీప్ ఇంజనీర్ /కోల్ అండ్ కమర్షియల్ కార్యాలయం, TSGENCO, యామ్ నెం.255, విద్యుత్ సౌధ, హైదరాబాద్ నందు లభిస్తాయి. అసక్తిగల వ్యక్తులు/ స్టేక్ హోల్డర్లు కార్యాలయ వేళల్లో సదరు ఫైలింగ్ ను సదరు కార్యాలయం వద్ద ఉచితంగా తనిఖీ చేసుకోవచ్చును/ చదువుకోవచ్చును మరియు నోట్ చేసుకోవచ్చును. ఈ ఫైలింగ్ యొక్క హార్డు కాపీని కూడా పోల్ కాపీయింగ్ ఛార్జీలను చెల్లించి పై కార్యాలయం నుండి పొందవచ్చును. అంతేగాక ఈ ఫైలింగ్ డౌన్ లోడ్ చేసుకునే ఫార్మేట్ లో [www.tsgenco.co.in](http://www.tsgenco.co.in) నందు కూడా లభిస్తాయి మరియు వీటిని [www.tserc.gov.in](http://www.tserc.gov.in) నందు చూడవచ్చును.

3. సదరు ఫైలింగ్ పై అక్షేపణలు/ సలహాలు ఏవేని ఉంటే, మద్దతుగా ఆధారాలతో చీప్ ఇంజనీర్ (కోల్ అండ్ కమర్షియల్) కార్యాలయం, TSGENCO, యామ్ నెం.255, విద్యుత్ సౌధ, హైదరాబాద్-500082 కు స్వయంగా లేదా రిజిస్టర్డ్ పోస్టు ద్వారా 12-1-2023 సా. 5 గం.లోగా చేరాలి పంపవలెను. దీని ఒక కాపీని పైన తెలిపిన చిరునామా వద్ద కమిషన్ సెక్రెటరీ, టీఎన్ఐఆర్ఐసికి కూడా దాఖలు చేయవలెను. అక్షేపణలు/ సలహాలు తగువిధంగా సంతకం చేయబడి ఉండవలెను మరియు సదరు అక్షేపణలు/ సలహాలను పంపే వ్యక్తులు/ స్టేక్ హోల్డర్ల హార్ని పేరు మరియు తపాలా చిరునామా, ఇమెయిల్ అడ్రెస్ మరియు కాంటాక్ట్ నెంబరు కలిగియుండవలెను. ఏదేని సంస్థ లేదా ఏదేని వినయోగదారుల కేటగిరీ తరఫున అక్షేపణలు/ సలహాలు దాఖలు చేయబడినట్లయితే, స్పష్టంగా పేర్కొనవలెను. అక్షేపణదారు స్వయంగా విచారణలో పాల్గొనదలచినచో అవినయంను కూడా స్పష్టంగా పేర్కొనవలెను.

4. సదరు అక్షేపణలు/ సలహాలకు ఈ క్రింది వివరాలను జతపరచవలెను.

అక్షేపణదారుని పేరు మరియు పూర్తి చిరునామాతోపాటు ఇమెయిల్ అడ్రెస్ మరియు కాంటాక్ట్ నెంబరు	TSGENCO యొక్క ఫైలింగ్ మీద అక్షేపణలు/ సలహాల సంక్షిప్త వివరాలు	TSGENCO కార్యాలయం వద్ద అందజేసిన అక్షేపణలు/ సలహాల యొక్క కాపీ మరియు రుజువుని జతపరిచారా (అవును/ లేదు)	అక్షేపణదారు స్వయంగా విచారణలో పాల్గొనదలచారా (అవును/ లేదు)

5. TSGENCO యొక్క ఫైలింగ్ సారాంశం దిగువ షెడ్యూలులో ఇవ్వబడినది.

6. ఈ విషయంలో తెలంగాణ స్టేట్ ఎలక్ట్రిసిటీ రెగ్యులేటరీ కమిషన్ 1-2-2023 (బుధవారం) ఉ.11.00 గం.నుండి టీఎన్ఐఆర్ఐసి యొక్క కోర్టు హాలు, 5వ అంతస్తు, సింగరేణి భవన్, రెడ్ హిల్స్, హైదరాబాద్ నందు బహిరంగ విచారణను నిర్వహించ దలచినది.  
ప్రదేశం: హైదరాబాద్  
చైర్మన్ అండ్ మేనేజింగ్ డైరెక్టర్  
తెలంగాణ స్టేట్ పవర్ జనరేషన్ కార్పొరేషన్ లిమిటెడ్  
తేదీ: 15-12-2022

**షెడ్యూలు**

TSGENCO యొక్క ఫైలింగ్ :

ఎ) డిస్ట్రిబ్యూషన్ లైసెన్స్లకు సరఫరా చేయబడవల్సిన విద్యుత్ కొరకు 4వ నియంత్రణ వ్యవధి (FYs 2019-20 నుండి FY 2023-24) నిమిత్తం భద్రాద్రి ధర్మల్ పవర్ స్టేషన్ (బిటిపిఎస్) (4x270MW) యొక్క తుది (4వ) యూనిట్ యొక్క సిబ్బడి వరకు మూలధన వ్యయం మరియు సవరించిన టారిఫ్ ను నిర్ణయించుట.  
పట్టిక 1: బిటిపిఎస్ యొక్క ప్రతిపాదిత సవరించిన స్థిర ఛార్జీలు దిగువ పట్టికలో ఇవ్వబడినవి. (యా.కోట్లలో)

క్ర. సం.	వివరం	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FYs 2019-24
1	22-3-2022వ తేదీనాటి జిటిఓ ద్వారా తాత్కాలికంగా ఆమోదించబడినవి	802.26	1904.84	1933.86	1894.18	6535.13
2	ప్రతిపాదిత సవరించిన స్థిర ఛార్జీలు	494.01	1365.85	1645.10	2049.68	5554.60

బి) 4వ నియంత్రణ వ్యవధి (FYs 2019-20 నుండి FY 2023-24) నిమిత్తం ప్రస్తుత స్టేషన్ కొరకు FY 2022-23 నుండి FY 2023-24 కొరకు సవరించిన జనరేషన్ టారిఫ్ కొరకు మరియు FY 2019-20 నుండి FY 2021-22 కొరకు మధ్యకాలీన సమీక్ష (ట్రూ-అప్) కొరకు.  
పట్టిక 2: FY 2019-20 నుండి FY 2021-22 కొరకు ప్రతిపాదిత ట్రూ-అప్ స్థిర ఛార్జీలు దిగువ పట్టికలో ఇవ్వబడినవి. (యా.కోట్లలో)

వివరం	FY 2019-20	FY 2020-21	FY 2021-22	FYs 2019-22
ఆమోదించబడినవి	6421.31	6702.10	7860.34	20983.75
వాస్తవమైనవి	6581.97	6930.26	7503.41	21015.64
వ్యత్యాసం+ / (-)	160.66	228.16	(-)356.93	31.89

▶ FY 2019-20 నుండి FY 2021-22 కొరకు యా.20983.75 కోట్ల ఆమోదిత స్థిర ఛార్జీల మీద వాస్తవ స్థిర ఛార్జీలు యా.21015.64 కోట్లు.  
▶ FY 2019-20 నుండి FY 2021-22 కొరకు ట్రూ-అప్ స్థిర ఛార్జీలు యా.31.89 కోట్లు.

పట్టిక 3: FY 2022-23 నుండి FY 2023-24 కొరకు ప్రక్షేపిత స్థిర ఛార్జీలలో వ్యత్యాసాలు దిగువ పట్టికలో ఇవ్వబడినవి. (యా.కోట్లలో)

వివరం	FY 2022-23	FY 2023-24	FYs 2022-24
ఆమోదించబడినవి	7912.62	7832.46	15745.08
ప్రక్షేపితమైనవి	7805.19	8277.56	16082.75
వ్యత్యాసం+ / (-)	(-)107.43	445.10	337.67

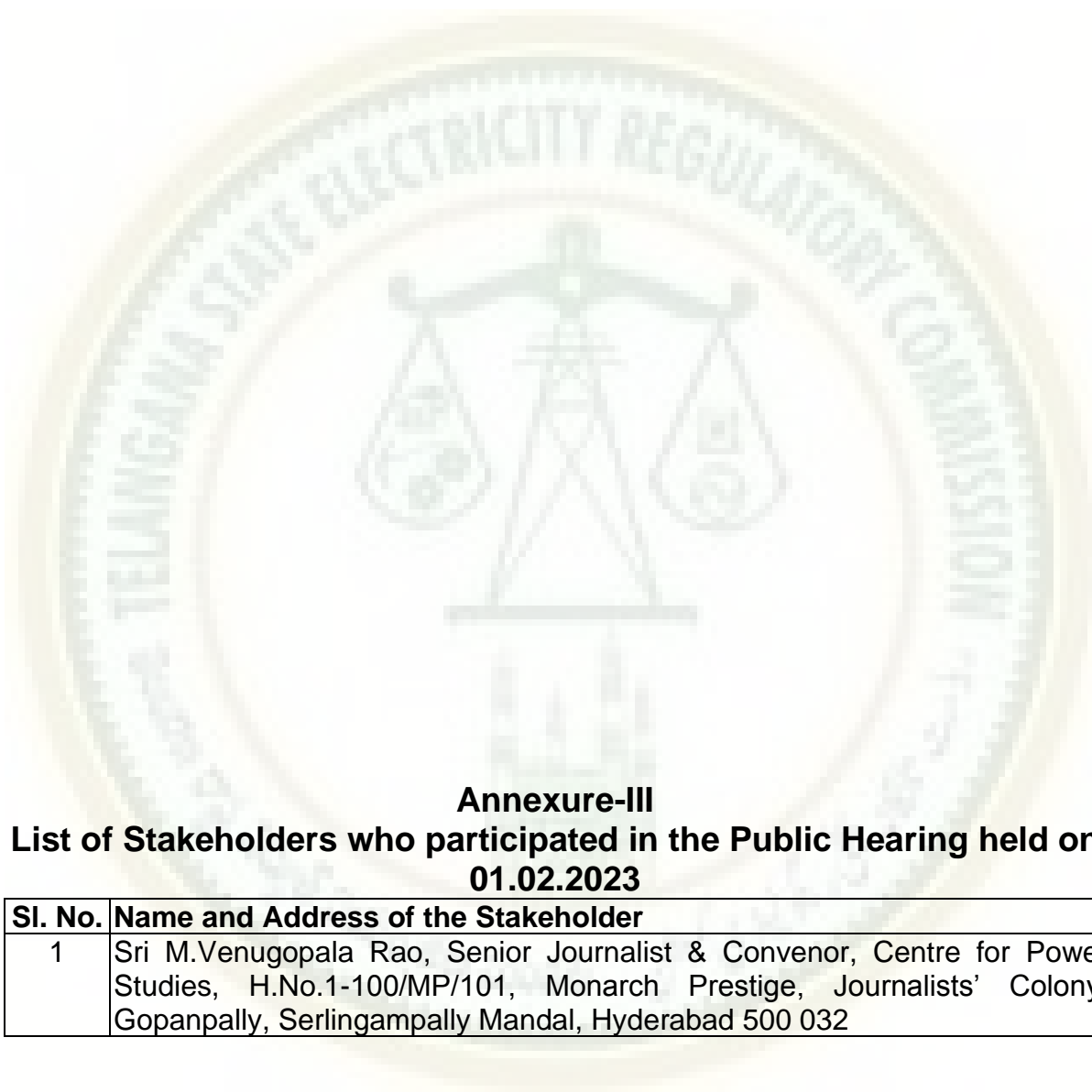
▶ FY 2022-23 నుండి FY 2023-24 కొరకు ప్రక్షేపిత స్థిర ఛార్జీలు యా.16,082.75 గా లెక్కిగట్టబడినవి.  
▶ మొత్తము స్థిర ఛార్జీలు (వాస్తవ మరియు ప్రక్షేపిత) ఆమోదించబడిన యా.36,728.83 కోట్లకు గాను యా.37,098.39 కోట్లు ఉండగ వ్యత్యాసం యా. 369.56 కోట్లు ఉన్నది.

Newspaper clippings appeared in THE HINDU, BUSINESS STANDARD and SIASAT (URDU) on 15.12.2022

<b>BEFORE THE HONOURABLE</b>						
<b>TELANGANA STATE ELECTRICITY REGULATORY COMMISSION (TSERC)</b>						
D.No. 11-4-660, 5th Floor, SINGARENI BHAVAN, RED HILLS, HYDERABAD-500 004.						
<b>TELANGANA STATE POWER GENERATION CORPORATION LIMITED</b>						
Vidyut Soudha, Hyderabad-500082. Phone :040-23499181 Fax:040-23499827						
<b>PUBLIC NOTICE</b>						
<b>I.A.No.58 of 2022 in O.P. No. 6 of 2021 &amp; O.P. No.78 of 2022</b>						
1. Notice is hereby given to all that the Telangana State Power Generation Corporation Limited (TSGENCO) has filed petitions before the Telangana State Electricity Regulatory Commission (TSERC) u/s 62 and under the provisions of "Terms and Conditions of Generation Tariff" Regulation No. 1 of 2019. These petitions were taken on record by the Hon'ble Commission and assigned the numbers as detailed below:						
Sl.No	Details of Filings	Petition No.				
1	For determination of revised tariff and capital cost up to COD of final (4th) unit of Bhadradi Thermal Power Station (BTPS) (4X270 MW) for the 4th control period (FYs 2019-20 to FY 2023-24) for the electricity supplied to distribution licensees.	I.A. No. 58 of 2022 in O.P. No. 6 of 2021.				
2	Approval of Mid-term review (true-up) for FY 2019-20 to FY 2021-22 and for revised generation tariff for FY 2022-23 and FY 2023-24 for the existing stations for 4th control period (FYs 2019-20 to FY 2023-24)	O.P.No. 78 of 2022.				
2. Copies of the referred filings are available in the Office of the Chief Engineer/ Coal & Commercial, TSGENCO, Room No. 255, Vidyut Soudha, Hyderabad. Interested person(s)/stakeholder(s) may inspect/ peruse said filings and take note thereof during the office hours at the said office at free of charge. A hard copy of these filings can be obtained from the above office on payment of photocopying charges. The filings are also made available on <a href="http://www.tsgenco.co.in">www.tsgenco.co.in</a> in downloadable format and the same may be accessed at <a href="http://www.tserc.gov.in">www.tserc.gov.in</a> .						
3. Objections/suggestions, if any, on the filings, together with supporting material may be sent to the Chief Engineer(Coal & Commercial), TSGENCO, Room No. 255, Vidyut Soudha, Hyderabad- 500 082 in person or through Registered Post so as to reach on or before 12.01.2023 by 5:00 pm. A copy of the same must also be filed with the Commission Secretary, TSERC at the address mentioned above. The objections/suggestions should be duly signed and should carry full name, postal address, e-mail id and contact number of the person(s)/stakeholder(s) sending objections/suggestions. If the objections/ suggestions are filed on behalf of any organization or any category of consumers, it should be clearly mentioned. If the objector also wants to be heard in person it may also be specifically mentioned.						
4. The objection/suggestion should accompany the following statement.						
Name & full address of the Objector along with e-mail id and contact number	Brief details of objections/ suggestion against filings of TSGENCO.	Whether copy of objections / suggestions & proof of delivery at TSGENCO's office enclosed (Yes/No)	Whether Objector wants to be heard in person (Yes/No)			
5. The gist of filings of TSGENCO are indicated in Schedule given below.						
6. In this matter the Telangana State Electricity Regulatory Commission intends to conduct a Public Hearing in the Court Hall of TSERC, 5th Floor, Singareni Bhavan, Red Hills, Hyderabad on 01.02.2023 (Wednesday) from 11.00 hrs onwards.						
Place: Hyderabad Date : 15.12.2022		<b>CHAIRMAN &amp; MANAGING DIRECTOR</b> Telangana State Power Generation Corporation Limited				
<b>SCHEDULE</b>						
Filings of TSGENCO:						
a) For determination of revised tariff and capital cost up to COD of final (4th) unit of Bhadradi Thermal Power Station (BTPS) (4X270 MW) for the 4th control period (FYs 2019-20 to FY 2023-24) for the electricity supplied to distribution licensees.						
Table 1: Proposed Revised fixed charges of BTPS are tabulated below. (Rs. In Crs)						
Sl.No.	Description	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24	FYs 2019-24
1	Provisionally approved vide GTO Dt: 22.03.2022	802.26	1904.84	1933.86	1894.18	6535.13
2	Proposed Revised Fixed Charges	494.01	1365.85	1645.10	2049.68	5554.60
b) For Mid-term review (true-up) for FY 2019-20 to FY 2021-22 and for revised generation tariff for FY 2022-23 and FY 2023-24 for the existing stations for 4th control period(FYs 2019-20 to FY 2023-24).						
Table 2: The proposed True-up Fixed Charges for the FY 2019-20 to FY 2021-22 are tabulated below. (Rs. In Crs)						
Description	FY 2019-20	FY 2020-21	FY 2021-22	FYs 2019-22		
Approved	6421.31	6702.10	7860.34	20983.75		
Actual	6581.97	6930.26	7503.41	21015.64		
Variation +/-(-)	160.66	228.16	(-)356.93	31.89		
▶ The Actual Fixed Charges for the FY: 2019-20 to FY: 2021-22 is of Rs.21015.64 Crs. against the approved Fixed Charges of Rs.20983.75 Crs.						
▶ The True-up Fixed Charges for the FY: 2019-20 to FY: 2021-22 is of Rs.31.89 Crs.						
Table 3: The variations in Projected Fixed charges for the FY 2022-23 to FY 2023-24 are tabulated below. (Rs. In Crs)						
Description	FY 2022-23	FY 2023-24	FYs 2022-24			
Approved	7912.62	7832.46	15745.08			
Projected	7805.19	8277.56	16082.75			
Variation +/-(-)	(-)107.43	445.10	337.67			
▶ The Projected fixed charges for the FY 2022-23 to FY 2023-24 worked out to Rs. 16,082.75 Crs.						
▶ The total Fixed Charges (Actual and Projected) is Rs. 37098.39 Crs against the approved of Rs. 36,728.83 Crs. and variation is Rs. 369.56 Crs.						

**Annexure-II**  
**Details of Stakeholder who submitted written Objections/  
Suggestions on Filings**

<b>Sl. No.</b>	<b>Name and Address of the Stakeholder</b>
1	Sri M.Venugopala Rao, Senior Journalist & Convenor, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Gopanpally, Serlingampally Mandal, Hyderabad 500 032



**Annexure-III**  
**List of Stakeholders who participated in the Public Hearing held on  
01.02.2023**

<b>Sl. No.</b>	<b>Name and Address of the Stakeholder</b>
1	Sri M.Venugopala Rao, Senior Journalist & Convenor, Centre for Power Studies, H.No.1-100/MP/101, Monarch Prestige, Journalists' Colony, Gopanpally, Serlingampally Mandal, Hyderabad 500 032