



ASSAM ELECTRICITY REGULATORY COMMISSION

(AERC)

TARIFF ORDER

June 27, 2024

**TRUE-UP for FY 2022-23,
APR for FY 2023-24,
& Revised ARR and Tariff for FY 2024-25**

FOR

**Assam Power Generation Corporation
Limited (APGCL)**

Petition No. 28/2023

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List of Abbreviations

A&G	Administrative and General
ABITA	Assam Branch of Indian Tea Association
ADB	Asian Development Bank
AEGCL	Assam Electricity Grid Corporation Limited
AERC	Assam Electricity Regulatory Commission
AFC	Annual Fixed Charges
AGCL	Assam Gas Company Limited
APC	Auxiliary Power Consumption
APDCL	Assam Power Distribution Company Limited
APGCL	Assam Power Generation Corporation Limited
APM	Administered Pricing Mechanism
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ASEB	Assam State Electricity Board
CAG/C&AG	Comptroller and Auditor General
CC	Combined Cycle
CERC	Central Electricity Regulatory Commission
COD	Date of Commercial Operation
CPI	Consumer Price Index
DTR	Distribution Transformer
EPC	Engineering Procurement and Construction
ERP	Enterprise Resource Planning
FAR	Fixed Asset Register
FINER	Federation of Industry & Commerce of North Eastern Region
FPA	Fuel Price Adjustment
FY	Financial Year
GAIL	Gas Authority of India Limited
GCV	Gross Calorific Value
GFA	Gross Fixed Assets
GoA	Government of Assam
GSHR	Gross Station Heat Rate
GT	Gas Turbine

HRSG	Heat Recovery Steam Generator
IoWC/IWC	Interest on Working Capital
kcal	kilo calorie
KLHEP	Karbi Langpi Hydro Electric Project
kW	kilo Watt
kWh	kilo Watt Hour
LED	Light Emitting Diode
LRPP	Lakwa Replacement Power Project
LTPS	Lakwa Thermal Power Station
MCLR	Marginal Cost of Funds based Lending Rate
MMBTU	Million Metric British Thermal Unit
MMSCMD	Million Metric Standard Cubic Meter per Day
MOPNG	Ministry of Petroleum and Natural Gas
MSHEP	Myntriang Small Hydro Electric Project
MU	Million Units
MW	Mega Watt
MYT	Multi Year Tariff
NAPAF	Normative Annual Plant Availability Factor
NRPP	Namrup Replacement Power Project
NTI	Non-Tariff Income
NTPS	Namrup Thermal Power Station
O&M	Operation and Maintenance
OC	Open Cycle
OEM	Original Equipment Manufacturer
OIL	M/s Oil India Limited
PAF	Plant Availability Factor
PGCIL	Power Grid Corporation of India Limited
PLF	Plant Load Factor
PoC	Point of Connection
R&M	Repairs and Maintenance
RoE	Return on Equity
SAC	State Advisory Committee
SBI	State Bank of India
SCM	Standard Cubic Meter

SHR	Station Heat Rate
SLDC	State Load Despatch Centre
TVS	Technical Validation Session
WHRU	Waste Heat Recovery Unit
WPI	Wholesale Price Index

ASSAM ELECTRICITY REGULATORY COMMISSION

Guwahati

Present

Shri K.S. Krishna, Chairperson

Shri S.N Kalita, Member

Shri A. Bhattacharyya, Member

Petition No. 28/2023

Assam Power Generation Corporation Limited (APGCL) - **Petitioner**

ORDER

(Passed on June 27, 2024)

- (1) APGCL filed its Petition for approval of Truing up for FY 2022-23, Annual Performance Review (APR) for FY 2023-24, Revised Aggregate Revenue Requirement (ARR) and determination of Tariff for FY 2024-25 for NTPS, LTPS, KLHEP, LRPP and NRPP as per the AERC (Terms and Conditions for determination of Multi-Year Tariff) Regulations, 2021 (MYT Regulations, 2021) on November 30, 2023. The same was registered as Petition No. 28/2023.
- (2) The Commission observed that there were a few inconsistencies in the Petition. The Commission sought additional data and clarifications on the Petitions vide letter dated December 14, 2023. The replies to the queries were submitted by APGCL on December 26, 2023.
- (3) The Commission held an Admissibility Hearing on December 14, 2023 and admitted the Petition (Petition No. 28/2023) vide Order dated December 15, 2023, subject to submission of additional information as sought for.

- (4) On admission of the Petition, in accordance with Section 64 of the Electricity Act, 2003, the Commission directed APGCL to publish a summary of the ARR and Tariff filings in local dailies to facilitate due public participation.
- (5) Accordingly, a Public Notice was issued by the APGCL inviting objections/suggestions from stakeholders to be submitted on or before January 12, 2024. The notice was published in six (6) leading newspapers of the State, as shown in the Table below:

Date	Name of Newspaper	Content Published
18.12.2023	The Assam Tribune	Public Notice in English
19.12.2023	Dainik Janambhumi	Public Notice in Assamese
19.12.2023	Dainik Jugasankha	Public Notice in English
19.12.2023	Badosa	Public Notice in English
19.12.2023	Thekar (Karbi)	Public Notice in English
19.12.2023	Purbanchal Prahari	Public Notice in English

- (6) A short small advertisement also published in two (2) newspapers stating that copy of the Petition is made available on the website, as shown in the Table below:

Date	Name of Newspaper	Content Published
20.12.2023	The Assam Tribune	Short Notice in English
20.12.2023	Dainik Janambhumi	Short Notice in English

- (7) A copy of the Petition and other relevant documents were also directed to be made available to the consumers and other interested Parties at the office of the Managing Director of APGCL. A copy of the Petition was also made available on the websites of the Commission and APGCL.
- (8) A Technical Validation Session (TVS) was conducted on January 08, 2024. The Commission sought more clarifications on the Petition from APGCL vide letter dated January 09, 2024. The replies to the second set of queries were submitted by APGCL on January 18, 2024.

- (9) The Petitions were also discussed in the 33rd Meeting of the State Advisory Committee (SAC) (constituted under Section 87 of the Electricity Act, 2003) held on January 10, 2024 at Bidyut Niyamak Bhawan, Six Mile, Guwahati.
- (10) The Commission received suggestions/objections from three (3) stakeholders on the Petitions filed by APGCL. The stakeholders were notified about the place, date and time of Hearing, to enable them to take part in the Hearing. A notice was also published in Newspapers inviting participation from the general public as well as the Respondents. The Hearing was held at Bidyut Niyamak Bhawan Six Mile, Guwahati on February 29, 2024 as scheduled. All stakeholders/respondents who participated in the Hearing were given the opportunity to express their views on the Petition. The details are discussed in the Chapters attached with this Order.
- (11) The Commission, now in exercise of its powers and functions vested under Sections 61, 62, 86 and 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf and taking into consideration the submissions made by the Petitioner, objections and suggestions received from stakeholders and all other relevant materials on record, has approved the True-up for FY 2022-23, APR for FY 2023-24, Revised ARR for FY 2024-25 and determined the tariff for FY 2024-25, as detailed in subsequent Chapters of this Order.
- (12) The Commission directs APGCL to publish a Public Notice intimating the revised Generation Tariff before the implementation of this Order, in English and Vernacular newspapers and on the website of APGCL.
- (13) The approved Generation Tariff shall be effective from April 01, 2024 and shall continue until replaced by any subsequent Order of the Commission. The under/over recovery in Generation Tariff for the months of April, May, and June 2024 on account of levy of Generation Tariff approved in the Tariff Order for FY 2023-24, shall be billed/adjusted equally in the bills of subsequent months in FY 2024-25 (July 2024 to March 2025) raised to APDCL.

(14) Accordingly, the Petition 28/2023 stands disposed of.

Sd/-
(A. Bhattacharyya)
Member, AERC

Sd/-
(S.N. Kalita)
Member, AERC

Sd/-
(K. S. Krishna)
Chairperson, AERC

1 INTRODUCTION

1.1 Constitution of the Commission

- 1.1.1 The Assam Electricity Regulatory Commission (hereinafter referred to as the AERC or the Commission) was established under the Electricity Regulatory Commissions Act, 1998 (14 of 1998) on February 28, 2001. The first proviso of Section 82(1) of the Electricity Act, 2003 (hereinafter referred as the Act or the EA, 2003) has ensured continuity of the Commission under the EA 2003.
- 1.1.2 The Commission is mandated to exercise its powers and functions vested under Sections 61, 62, 86 and 181 of the EA 2003 and all the other powers enabling it in this behalf, to determine the ARR and Tariff of Assam Power Generation Corporation Limited (APGCL).

1.2 Tariff related Functions of the Commission

- 1.2.1 Under Section 86 of the Act, the Commission has the following tariff related functions:
- a) To determine the tariff for electricity, wholesale, bulk or retail, as the case may be;
 - b) To regulate power purchase and procurement process of the distribution utilities including the price at which the power shall be procured from the generating companies, generating stations or from other sources for transmission, sale, distribution and supply in the State;
 - c) To promote competition, efficiency and economy in the activities of the electricity industry to achieve the objects and purposes of this Act.
- 1.2.2 Under Section 61 of the Act, in the determination of tariffs the Commission is guided by the following:
- a) The principles and methodologies specified by the Central Commission for determination of the tariff applicable to generating companies and transmission licensees;
 - b) That the electricity generation, transmission, distribution and supply are conducted on commercial principles;
 - c) That factors which would encourage efficiency, economical use of the resources, good performance, optimum investments, and other matters which the State commission considers appropriate for the purpose of this Act;
 - d) The interests of the consumers are safeguarded and at the same time, the

consumers pay for the use of electricity in a reasonable manner based on their customer category cost of supply;

- e) That the tariff progressively reflects the cost of supply of electricity at an adequate and improving level of efficiency and also gradually reduces cross subsidies;
- f) The National Electricity Plan formulated by the Central Government including the National Electricity Policy and Tariff Policy.

1.3 Background

1.3.1 APGCL is the successor corporate entity of erstwhile Assam State Electricity Board (ASEB) formed pursuant to the notification of the Government of Assam, notified under sub-sections (1), (2), (5), (6) and (7) of Section 131 and Section 133 of the EA 2003 (Central Act 36 of 2003), for the purpose of transfer and vesting of functions, properties, interests, rights, obligations and liabilities, along with the transfer of personnel of the Board to successor entities. APGCL is a Company incorporated with the main object of generation of electricity in the State of Assam and is a Generating Company under the various provisions of the Act.

1.3.2 APGCL owns and operates the generating stations previously owned by ASEB. APGCL started functioning as a separate entity from December 10, 2004.

1.4 Multi Year Tariff Regulations, 2021

1.4.1 The Commission, in exercise of the powers conferred under Section 61 read with Section 181(2) (zd) of the Act, notified the AERC (Terms and Conditions for determination of Multi Year Tariff) Regulations, 2021 (herein after referred as "MYT Regulations, 2021") on September 18, 2021. These Regulations are applicable for determination of Tariff for Generation, Transmission, SLDC, Wheeling and Retail Supply for the Control Period of three financial years from April 1, 2022 onwards up to March 31, 2025. These Regulations are applicable to all existing and future Generating Companies, Transmission Licensees and Distribution Licensees within the State of Assam.

1.4.2 Regulation 4.2 of the MYT Regulations, 2021, specifies the MYT framework for the Control Period from FY 2022-23 to FY 2024-25, as reproduced below:

"4.2 The Multi-Year Tariff framework shall be based on the following elements, for

calculation of Aggregate Revenue Requirement and expected revenue from tariff and charges for Generating Companies, Transmission Licensee, SLDC, Distribution Wheeling Business and Retail Supply Business:

(i) Before commencement of Control Period, a forecast of the Aggregate Revenue Requirement and expected revenue from existing tariff and charges shall be submitted by the applicant and approved by the Commission;

(ii) A detailed Capital Investment Plan for each year of the Control Period, shall be submitted by the applicant for the Commission's approval;

(iii) The applicant shall submit operating norms and trajectories of performance parameters for each year of the Control Period, for the Commission's approval;

(iv) The applicant shall submit the forecast of Aggregate Revenue Requirement and expected revenue from existing tariff for each year of the Control Period, and the Commission shall approve the tariff for Generating Companies, SLDC, Transmission Licensee, Distribution Wheeling Business and Retail Supply Business, for each year of the Control Period;

(v) In its tariff petition, a generating company shall submit information to support the determination of tariff for each generating station

(vi) Annual Performance review vis-à-vis the approved forecast and categorization of variation in performance as those caused by factors beyond the control of the applicant (uncontrollable items) shall be undertaken by the Commission;

(vii) True up of the past years based on audited annual accounts of the licensees and the Generation companies.

(viii) The mechanism for pass-through of approved gains or losses on account of uncontrollable items as specified by the Commission in these Regulations;

(ix) The mechanism for sharing of approved gains or losses arising out of controllable items as specified by the Commission in these Regulations;

(x) Tariff determination for Generating Companies, SLDC, Transmission Licensee and Distribution Wheeling Business and Retail Supply Business, for each financial year within the Control period based on the approved forecast. The tariff shall be

reviewed at the time of the true-up and annual performance review.

(xi) There will be no true-up of the controllable items except on account of Force Majeure events or on account of variations attributable to uncontrollable items. The variations in the controllable items, as defined in regulation 10, over and above the norms specified will be governed by incentive and penalty framework specified in these regulations.

(xii) The tariff determined by the Commission and the directions given in the MYT order shall be the quid pro quo and mutually inclusive. The tariff determined shall, within the time period specified in the order, be subject to the compliance of the directions by the generating company and the licensees to the satisfaction of the Commission. Non-compliance of directions given in the tariff order may also lead to invocation of the provisions of section 142 of the Act.

(xiii) The tariff determined by the Commission shall continue to operate till it is modified or revised by the Commission.”

1.5 Procedural History

- 1.5.1 APGCL filed the Petition for approval of Trueing up for FY 2022-23, APR for FY 2023-24, Revised ARR for FY 2024-25 and Tariff for FY 2024-25 as per MYT Regulations, 2021, on November 30, 2023. The same was registered as Petition No. 28/2023.
- 1.5.2 The Commission observed that there were a few inconsistencies in the Petition. The Commission sought additional data and clarifications on the Petitions vide letter dated December 14, 2023. The replies to the queries were submitted by APGCL on December 26, 2023.
- 1.5.3 The Commission held an Admissibility Hearing on December 14, 2023 and admitted the Petition (Petition No. 28/2023) vide Order dated December 15, 2023, subject to submission of additional information as sought for.
- 1.5.4 On admission of the Petition, in accordance with Section 64 of the Electricity Act, 2003, the Commission directed APGCL to publish a summary of the ARR and Tariff filings in local dailies to facilitate due public participation.
- 1.5.5 Accordingly, a Public Notice was issued by the APGCL inviting objections/suggestions from stakeholders to be submitted on or before January 12, 2024. The notice was published in six (6) leading newspapers of the State, as shown in the Table below:

Date	Name of Newspaper	Content Published
18.12.2023	The Assam Tribune	Public Notice in English
19.12.2023	Dainik Janambhumi	Public Notice in Assamese
19.12.2023	Dainik Jugasankha	Public Notice in English
19.12.2023	Badosa	Public Notice in English
19.12.2023	Thekar (Karbi)	Public Notice in English
19.12.2023	Purbanchal Prahari	Public Notice in English

1.5.6 A short small advertisement also published in two (2) newspapers stating that copy of the Petition is made available on the website, as shown in the Table below:

Date	Name of Newspaper	Content Published
20.12.2023	The Assam Tribune	Short Notice in English
20.12.2023	Dainik Janambhumi	Short Notice in English

1.5.7 A copy of the Petition and other relevant documents were also directed to be made available to the consumers and other interested Parties at the office of the Managing Director of APGCL. A copy of the Petition was also made available on the websites of the Commission and APGCL.

1.5.8 A Technical Validation Session (TVS) was conducted on January 08, 2024. The Commission sought more clarifications on the Petition from APGCL vide letter dated January 09, 2024. The replies to the second set of queries were submitted by APGCL on January 18, 2024.

1.5.9 The Petitions were also discussed in the 33rd Meeting of the State Advisory Committee (SAC) (constituted under Section 87 of the Electricity Act, 2003) held on January 10, 2024 at Bidyut Niyamak Bhawan, Six Mile, Guwahati.

1.5.10 The Commission received suggestion/objections from three (3) stakeholders on the Petitions filed by APGCL. The stakeholders were notified about the place, date and time of Hearing, to enable them to take part in the Hearing. A notice was also published in Newspapers inviting participation from the general public as well as the Respondents. The Hearing was held at Bidyut Niyamak Bhawan Six Mile, Guwahati on February 29, 2024 as scheduled. All stakeholders/respondents who participated in the Hearing were given the opportunity to express their views on the Petition. The details are discussed in the Chapters attached with this Order.

1.5.11 The Commission, now in exercise of its powers and functions vested under Sections 61, 62, 86 and 181 of the Electricity Act, 2003 and all other powers enabling it in this behalf and taking into consideration the submissions made by the Petitioner, objections and suggestions received from stakeholders and all other relevant materials on record, has approved the True-up for FY 2022-23, APR for FY 2023-24, and Revised ARR for FY 2024-25 and determined the tariff for FY 2024-25, as detailed in subsequent Chapters of this Order.

1.5.12 All the written representations submitted to the Commission and oral submissions made before the Commission in the Hearing and the responses of APGCL have been carefully considered while issuing this Tariff Order. The major issues raised by different consumers and consumer groups along with the response of APGCL and views of the Commission are elaborated in **Chapter 3** of this Order.

1.6 State Advisory Committee Meeting

1.6.1 The SAC meeting was convened on January 10, 2024 and members were briefed on the Tariff Petition of APGCL. The Minutes of the SAC meeting are appended to this Order as **Annexure 1**.

2 Summary of APGCL's Petition

2.1 Background

2.1.1 APGCL submitted the Petition on November 30, 2023 seeking approval for Truing up for FY 2022-23, APR for FY 2023-24, Revised ARR for FY 2024-25 and determination of Tariff for FY 2024-25 (Petition No.28/2023). The Generation Tariff is to be recovered from the Assam Power Distribution Company Limited (APDCL), who is the sole buyer of power from APGCL.

2.2 True-up for FY 2022-23

2.2.1 APGCL submitted the True-up for NTPS, LTPS, LRPP, KLHEP and NRPP for FY 2022-23. APGCL submitted that the True-up for FY 2022-23 is based on the audited accounts and in line with the provisions on true-up of various costs as specified under Regulation 10 of the MYT Regulations, 2021. The summary of ARR and Revenue Gap/(Surplus) claimed by APGCL for FY 2022-23 is shown in the following Table:

Table 1: True-up ARR for FY 2022-23 as submitted by APGCL (Rs. Crore)

Sl. No.	Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP	Total APGCL
I	POWER GENERATION (MU)						
	Gross Generation	192.85	540.52	475.78	505.41	442.23	2156.79
	Net Generation	181.90	498.82	473.40	487.72	420.11	2061.95
	Auxiliary Consumption, Loss %	5.68%	7.72%	0.50%	3.50%	5.00%	4.4%
II	Fixed Charges						
	O&M Expenditure	19.26	46.55	34.28	30.27	41.66	172.01
	Increase in AERC Filing Fees	0.10	0.10	0.00	0.10	0.00	0.30
	Interest & Finance Charges	0.02	0.22	11.82	2.32	47.91	62.29
	Interest on working Capital	5.28	14.97	3.81	11.54	12.11	47.71
	Depreciation	2.05	14.26	22.14	13.67	42.08	94.21
	Return on Equity	2.77	15.86	24.09	12.61	33.90	89.22
	Income taxes	2.09	6.38	1.51	5.26	4.24	19.48
	Special R&M	0.00	0.98	19.00	8.90	12.76	41.64
	Capacity Building	0.02	0.05	0.05	0.04	0.05	0.22
	<u>Less:</u> Other Income	-5.96	-14.61	-13.86	0.00	0.00	-34.43
III	Total Fixed Charges	25.64	84.76	102.85	84.71	194.70	492.65
IV	Fuel Cost	135.78	391.77	0.00	297.64	226.66	1051.86

Sl. No.	Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP	Total APGCL
V	Total Revenue Requirement	161.42	476.53	102.85	382.35	421.36	1544.51
VI	Generation Incentive for FY 2022-23	1.37		16.61			17.98
VII	Total Cost	162.80	476.53	119.45	382.35	421.36	1562.50
VIII	Revenue from Sale of Power	148.87	453.94	107.16	374.35	301.23	1385.55
IX	Revenue Gap (+) / Surplus(-)	13.93	22.60	12.29	8.00	120.13	176.94
X	Per unit tariff (Rs./kWh)	8.95	9.55	2.52	7.84	10.03	7.58

2.2.2 APGCL has claimed Revenue Gap of Rs. 176.94 Crore for FY 2022-23 in the true-up.

2.3 Summary of Revised Capital Investment Plan for FY 2023-24 and FY 2024-25

2.3.1 APGCL has proposed revised capital expenditure for FY 2023-24 and FY 2024-25 as given below:

Table 2: Revised Capital Investment Plan for FY 2023-24 and FY 2024-25 as submitted by APGCL (Rs. Crore)

	FY 2023-24			FY 2024-25		
	Equity	Loan	Grant	Equity	Loan	Grant
Existing Projects						
R&M Cost including Mandatory Spare – A						
NTPS		2.08			0.17	
LTPS		11.37			18.74	
KLHEP	0.25	5.87			35.00	
LRPP		0.00			7.70	
NRPP		0.00			2.90	
Sub Total – A	0.25	19.32			64.51	
ERP Implementation – B			17.49			4.63
Grand Total (A+B)	0.25	19.32	17.49		64.51	4.63

2.4 Annual Performance Review for FY 2023-24

2.4.1 APGCL has claimed the ARR after APR for FY 2023-24 based on its estimations, as detailed in the table below:

Table 3: ARR after APR for FY 2023-24 as submitted by APGCL (Rs. Crore)

Sl. No.	Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP	Total APGCL
I	POWER GENERATION (MU)						
	Gross Generation	138.23	453.33	311.90	509.94	536.00	1949.39
	Net Generation	128.92	423.57	310.34	492.09	509.20	1864.11
	Auxiliary Consumption, Loss %	6.74%	6.57%	0.50%	3.50%	5.0%	4.4%
II	Fixed Charges						
	Operation & Maintenance Expenditure	15.38	49.48	36.44	32.19	44.28	177.77
	Increase in AERC Tariff Filing Fees	0.10	0.10	0.00	0.10	0.00	0.30
	Interest & Finance Charges	0.05	0.45	10.57	1.43	44.34	56.84
	Interest on working Capital	3.42	13.17	3.74	11.37	10.12	41.83
	Depreciation	2.19	14.72	22.48	13.79	42.08	95.26
	Return on Equity	2.10	15.96	24.27	12.71	33.90	88.94
	Income taxes	0	0	0	0	0	0.00
	Special R&M	2.58	40.07	19.21	33.19	5.74	100.79
	Capacity Building	0.00	0.00	0.00	0.00	0.00	0.00
	Less: Other Income	-7.13	-9.22	-5.75	0.00	0.00	-22.09
III	Total Fixed Charges	18.68	124.74	110.96	104.78	180.46	539.64
IV	Fuel Cost	82.55	298.18		275.44	163.17	819.35
V	Total Revenue Requirement	101.24	422.92	110.96	380.22	343.64	1358.99
VI	Revenue from Sale of Power	85.15	291.66	72.51	262.57	285.16	997.06
VII	Revenue Gap (+) / Surplus (-)	16.09	131.26	38.45	117.65	58.48	361.94

2.4.2 APGCL submitted that it has not considered the Revenue Gap for FY 2023-24 in the tariff for FY 2024-25 since the figures for FY 2023-24 are estimated and subjected to True-up. APGCL further submitted that it shall consider the same at the time of True-up Petition for FY 2023-24.

2.5 Revised ARR at Effective capacity and Tariff for FY 2024-25

2.5.1 APGCL has submitted the revised ARR at Effective capacity and Tariff for FY 2024-25

as detailed in the Table below:

Table 4: Revised ARR at Effective Capacity and Tariff as submitted by APGCL (Rs. Crore)

Sl. No.	Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP	Total APGCL
I	POWER GENERATION (MU)						
	Gross Generation	113.88	425.74	390.00	519.40	732.69	2181.70
	Net Generation	108.76	402.32	388.05	501.22	696.05	2096.39
	Auxiliary Consumption, Loss %	4.50%	5.50%	0.5%	3.50%	5.0%	3.9%
II	Fixed Charges						
	Operation & Maintenance Expenditure	15.33	52.60	38.74	34.21	47.07	187.95
	Increase in AERC Tariff Filing Fees	0.10	0.10	0.00	0.10	0.00	0.30
	Interest & Finance Charges	0.06	0.70	10.64	0.63	39.99	52.03
	Interest on working Capital	2.92	12.57	3.53	11.52	13.27	43.81
	Depreciation	2.21	15.25	23.43	14.02	42.16	97.07
	Return on Equity	1.97	15.96	24.29	12.71	33.90	88.82
	Income taxes	0	0	0	0	0	0.00
	Special R&M	1.6	31	0	33.75	79.19	145.54
	Capacity Building	0	0	0	0	0	0.00
	<u>Less: Other Income</u>	-7.13	-9.22	-5.75	0.00	0.00	-22.09
III	Total Fixed Charges	17.06	118.97	94.88	106.95	255.58	593.45
IV	Fuel Cost	66.43	276.27		276.24	217.87	836.81
V	Total Revenue Requirement	83.49	395.23	94.88	383.19	473.45	1430.25
VI	Annual Fixed Charges	17.06	118.97	47.44	106.95	255.58	593.45
VII	Energy Charges (Rs/kWh)	6.11	6.87	1.22	5.51	3.13	4.21

2.6 Proposed Tariff for NTPS, LTPS, KLHEP, LRPP and NRPP for FY 2024-25

2.6.1 The following Table shows the Tariff proposed by APGCL for NTPS, LTPS, KLHEP, LRPP and NRPP for FY 2024-25:

Table 5: Revised ARR at Effective Capacity and Tariff as submitted by APGCL (Rs. Crore)

Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP
Annual fixed charges (Rs crore)	17.06	118.97	94.88	106.95	255.58
Monthly fixed charges (Rs crore)	1.42	9.91		8.91	21.30
Total Capacity Charges (Rs. Crore)			47.44		
Energy charge rate (Rs. / kWh)	6.11	6.87	1.22	5.51	3.13

3 Summary of Objections raised, Response of APGCL and Commission's Comments

3.1.1 The Commission received objections/suggestions from the following three (3) stakeholders on the Petitions filed by APGCL:

Sl. No.	Name of objector
1	Assam Branch of India Tea Association (ABITA)
2.	Federation of Industries and Commerce of North Eastern Region (FINER)
3	Consumer Advocacy Cell (CAC)

3.1.2 APGCL submitted its responses to the objections/ suggestions received from the above stakeholders.

3.1.3 The Commission considered the objections/suggestions received and notified the stakeholders to take part in the Hearing process by presenting their views in person before the Commission, if they so desired.

3.1.4 The Commission held Hearing at the Conference Hall of Assam Bidyut Niyamak Bhawan Six Mile, Guwahati on February 29, 2024.

3.1.5 The objectors attended the Hearing and submitted their views/suggestions. All the written representations submitted to the Commission and the oral submissions made before the Commission in the Hearing and the responses of APGCL have been carefully considered while issuing this Tariff Order.

3.1.6 The objections/suggestions made by the objectors and responses of the Petitioner are briefly dealt with in this Chapter. The major issues raised by the objectors are discussed below along with the response of APGCL and views of the Commission.

3.1.7 While all the objections /suggestions have been given due consideration by the Commission, only, major responses/ objections received on the Petitions and also those raised during the course of Hearing have been grouped and addressed issue wise, in order to avoid repetition.

Issue 1: Plant Availability Factor (PAF)

Stakeholders' Comments

ABITA requested the Commission to approve PAF according to the norms specified in the MYT Regulations, 2021. Variation in PAF due to uncontrollable factors may be permitted only under Regulation 10 and 2.1 (35) of the MYT Regulations, 2021 after detailed prudence check. Accordingly, the Commission is requested to allow recovery of fixed charges pro-rata to actual PAF achieved by each generating station.

FINER mentioned that the Commission vide MYT Order dated March 21, 2022 has approved the norms for each of the operational parameters as per MYT Regulations, 2021. Furthermore, in line with the MYT Regulations 2021, the parameters that are controllable in nature shall be governed by the norms approved by the Commission. The deviation on account of variation w.r.t. norms should not be given effect to in the tariff.

Response of APGCL

APGCL submitted that it has claimed the operating parameters as per norms under Regulations 48 and 50 of the MYT Regulations, 2021 for Thermal Generations Stations and Hydro Generating Stations, respectively. Further, APGCL has not claimed any relaxations on account of the high APC of its thermal stations. The higher APC of its thermal stations LTPS and NTPS is on account of their intrinsic issues, which have already been intimated to the Commission.

Commission's View

PAF have been calculated as per provisions of the MYT Regulations, 2021. The performance of APGCL and analysis of the Commission are discussed in the subsequent Chapters of this Order.

Issue 2: Plant Load Factor (PLF)

Stakeholders' Comments

ABITA mentioned that for FY 2022-23, APGCL has achieved lower than the approved PLF for LTPS and NRPP. The Commission is requested to allow incentive in accordance with the provisions of the MYT Regulations, 2021.

Response of APGCL

APGCL submitted that it has not claimed any incentive for LTPS and NRPP in the True-

up on account of PLF.

Commission's View

PLF has been calculated as per provisions of the MYT Regulations, 2021. The performance of APGCL and analysis of the Commission are discussed in the subsequent Chapters of this Order.

Issue 3: Gross Station Heat Rate (GSHR)

Stakeholders' Comments

ABITA requested the Commission not to pass on the performance inefficiencies of APGCL to the end consumers. APGCL has submitted reasons such as lower gas supply, evacuation constraints and aged unit/ auxiliaries that have led to higher than normative SHR. ABITA requested the Commission to consider the SHR as per approved norms for FY 2022-23 or actuals, whichever is lower.

Response of APGCL

APGCL submitted that it has claimed the normative SHR for NTPS based on running hours under Open Cycle (OC) and Combined Cycle (CC) mode of operation. In case of NRPP, the Open Cycle operation of the plant in FY 2022-23 was a Force Majeure event and beyond the control of APGCL.

Commission's Views

The Commission has approved GSHR as per norms specified in the MYT Regulations, 2021. The details are given in the relevant Chapters of this Order.

Issue 4: Gross Energy Production and Auxiliary Consumption

CAC submitted that claim of energy generation and auxiliary consumption have been made on normative basis rather than the actual target achieved. In some cases, actuals are higher than the Commission approved targets and, in some cases, actuals are lower. For energy generation and auxiliary consumption, the actual figures should be given with a head-wise comparison vis-a-vis the normative figures, in order to gauge the performance of the Utility for the year.

Secondly, if the plants have failed to meet the normative figure, the corrective steps to achieve the target need to be detailed.

ABITA submitted that APC is defined as a controllable parameter in the MYT Regulations, 2021. Therefore, ABITA requested the Commission to allow APC as per the norms specified in the MYT Regulations, 2021, else, unjustified increase in APC would burden the consumers with higher tariff.

Response of APGCL

APGCL submitted that it has claimed the operating parameters as per norms specified in Regulations 48 and 50 of the MYT Regulations, 2021 for Thermal Generations Stations and Hydro Generating Stations, respectively. Further, APGCL has not claimed any relaxation on account of the high APC of its thermal stations. The higher APC of its thermal stations LTPS and NTPS is on account of their intrinsic issues, which have already been intimated to the Commission.

Further, APGCL has submitted all the relevant data to the Commission. In case it has not been able to achieve normative parameters, reasons for the same have already been submitted in the Petition.

Commission's view:

For the purpose of truing up for FY 2022-23, auxiliary consumption has been approved as per norms specified in the MYT Regulations, 2021. The Commission has approved Gross Generation as per actuals.

The sharing of efficiency gains/losses has been done in accordance with the MYT Regulations, 2021. Thus, the impact of any inefficiency is not passed on to the consumers in full. The details are available in the relevant Chapters of this Order.

Issue 5: Fuel Price Hike and fuel cost of the plant

Stakeholders' Comments

CAC submitted that there is huge variation between the actual unit price and fuel cost of the plants, with respect to the approved fuel cost. APGCL should clarify the same.

Response of APGCL

APGCL submitted that it has claimed fuel cost as per norms and actual price of gas for FY 2022-23 and the details of the same have been submitted to the Commission.

Commission's View

The Commission has allowed the fuel price after necessary prudence check and in accordance with the MYT Regulations, 2021 as discussed in the relevant Chapters of this Order.

Issue 6: Depreciation

Stakeholders' Comments

ABITA and FINER requested the Commission to compute the depreciation based on actual capitalisation for FY 2022-23 in line with the provisions of the MYT Regulations, 2021 and the practice adopted in previous Tariff Orders.

Response of APGCL

APGCL submitted that it has submitted the detailed computation of depreciation to the Commission. APGCL further submitted that it has calculated depreciation as per the Audited Annual Accounts of APGCL for FY 2022-23 and as per the MYT Regulations, 2021.

Commission's View

The Commission has allowed the Depreciation after necessary prudence check and in accordance with the MYT Regulations, 2021 as discussed in the relevant Chapters of this Order.

Issue 7: Interest and Finance Charges

Stakeholders' Comments

ABITA submitted that APGCL has proposed Interest & Finance charges of Rs. 62.29 Crore as against approved amount of Rs. 74.63 Crore for FY 2022-23. ABITA requested the Commission to allow the Interest and Finance Charges as computed by ABITA in line with the methodology adopted by the Commission in previous Tariff Orders.

Response of APGCL

APGCL submitted that it has considered interest on loan capital on normative basis for FY 2022-23. It has considered normative loan portfolio and the repayment as equal to the depreciation for FY 2022-23. The interest rate has been considered based on the weighted average actual rate of interest rate applicable to APGCL for FY 2022-23.

Commission's View

The Commission has allowed the Interest and Finance charges after necessary prudence check and in accordance with the MYT Regulations, 2021 as discussed in the relevant Chapters of this Order.

Issue 8: Operation and Maintenance expenses

Stakeholders' Comments

ABITA submitted that APGCL has claimed O&M expenses in true-up based on the MYT Regulations, 2021 as there is no separate approval of Employee, A&G and R&M expenses.

ABITA requested the Commission to review the O&M expenses and actual numbers as per accounts, and correspondingly allow O&M Expense in the true-up of FY2022-23.

Response of APGCL

APGCL submitted that it has claimed the O&M expenses on normative basis as per the APR Order for FY 2022-23 and MYT Regulations, 2021 for all its stations except NRPP. Further, APGCL has submitted the detailed calculation to the Commission

APGCL requested the Commission to amend Regulation 51.2 (a) of the MYT Regulations, 2021 to allow the actual O&M cost of NRPP to be allowed at the time of True up after prudence check for FY 2021-22 and FY 2022-23 as it is a station based on Advance F-Class technology, which involves costlier maintenance and considering NRPP's employee cost. Further, APGCL has requested the Commission to consider the Trued-up O&M Cost of FY 2021-22 and FY 2022-23 for arriving at normative O&M Cost for FY 2023-24 after escalation. This is the standard practice adopted by the CERC and the Commission To determine normative O&M cost of a station.

Commission's View

The Commission has allowed O&M expenses after necessary prudence check and in accordance with the MYT Regulations, 2021. The details regarding computation of O&M expenses are discussed in the relevant Chapters of this Order.

Issue 9: Fuel Cost

Stakeholders' Comments

ABITA submitted that APGCL has claimed Rs. 1051.86 Crore towards fuel cost in true-up of FY 2022-23 as against Rs. 852.47 Cr. approved by the Commission in the Tariff Order of FY 2022-23. ABITA has reviewed the computations and submitted fuel cost of Rs. 809.01 Crore.

FINER submitted that the MYT Regulations, 2021 clearly distinguish the Controllable and Uncontrollable parameters. While Price of Gas and Calorific Value (GCV) are uncontrollable in nature which implies the cost of the same would be a pass through in tariff, the Heat Rate is Controllable in nature, which means the same would be driven by norms as approved by the Commission in the MYT Order.

Response of APGCL

APGCL submitted that it has claimed fuel cost as per norms and actual price of gas for FY 2022-23 and the details of the same have been submitted to the Commission.

Commission's View

The Commission has approved Fuel Cost based on approved performance parameters in this Order and GCV and fuel prices as submitted by APGCL for estimation of fuel cost in APR for FY 2023-24 and ARR for FY 2024-25. The details are discussed in the subsequent Chapters.

Issue 10: Non-Tariff Income

Stakeholders' Comments

ABITA submitted that APGCL has claimed Non-Tariff Income of Rs. 34.43 Crore. As per Accounts of FY 2022-23, the total income from other sources is Rs. 35.79 Crore. ABITA requested the Commission to check the prudence of numbers submitted by APGCL and audited accounts for FY 2022-23 and reduce this income from total cost to arrive at Annual Fixed Cost of APGCL.

Response of APGCL

As per audited accounts for FY 2022-23, total other income is Rs. 35.79 Crore. However, as per CAG report, same is overstated by Rs 1.36 Crore through wrong inclusion of advance received against 'Land Lease charges' and 'Local Area Development Fund Charges' pertaining to FY 2023-24 and hence, same has been deducted from above claim. Non-Tariff Income, thus considered and claimed totals to Rs 34.43 Crore. Copy of CAG Report with respect to above is provided at Annexure-15 of the Tariff Petition.

Commission's views

The Commission has noted the views of the respondents as well as replies of the Petitioner. The Commission has discussed the same in the relevant Chapter while allowing Non-Tariff Income.

Issue 11: Return on Equity

Stakeholders' Comments

FINER submitted that the Petitioner has claimed Return on Equity (RoE) for NTPS and LTPS amounting to Rs. 2.77 Crore and Rs. 15.86 Crore, respectively, based on the Effective Capacity. The Respondent requested the Commission to not allow addition to equity.

Response of APGCL

APGCL submitted that expenditure for ERP implementation and consultancy has been based on grants in FY 2022-23, FY 2023-24, and FY 2024-25. Govt. of Assam vide Financial Sanction No: FS/42_2021-22(I)_06 dated 31.12.2021 and Financial Sanction No: FS/pe_2023-24(I)_33 dated 12.10.2023 (attached at Annexure-11) had already approved conversion of all cumulative grant given to APGCL into equity as on 31.03.2021 and 31.03.2023, respectively. Hence, the expense amount of Rs 6.242 Cr incurred (previously grant) for ERP implementation and consultancy in FY 2022-23 has been converted to equity and accordingly, plant-wise return on equity on the same for NTPS, LTPS, KLHEP and LRPP has been claimed in FY 2022-23 True-Up petition.

Commission's views

The Commission has allowed the Return on Equity after necessary prudence check and in accordance with the MYT Regulations, 2021 as discussed in the relevant Chapters of this Order.

Issue 12: Interest on Working Capital

Stakeholders' Comments

ABITA mentioned that APGCL has proposed Interest on Working Capital (IoWC) of Rs. 47.74 Crore as against Rs. 41.43 Crore approved in the Tariff Order of FY 2022-23.

FINER pleaded that the allowable IoWC for NTPS and LTPS should be allowed proportionate to the effective capacity, therefore, allowable IoWC for all the 5 plants is Rs. 35.96 Crore.

Response of APGCL

APGCL submitted that it has claimed normative IoWC considering the fuel cost, O&M expense, maintenance spares, receivables, and the interest rate as per MYT Regulations 2021.

Commission's views

The Commission has allowed the IoWC after necessary prudence check and in accordance with the MYT Regulations, 2021 as discussed in the relevant Chapters of this Order.

4 Truing up of ARR for FY 2022-23

4.1 Methodology for Truing Up

- 4.1.1 The Commission approved the ARR for existing Generating Stations, viz., NTPS, LTPS, KLHEP, LRPP and NRPP for FY 2022-23 vide Order dated March 21, 2022.
- 4.1.2 APGCL has submitted the Truing-up Petition for FY 2022-23 based on audited Annual Accounts and provisions of MYT Regulations, 2021. APGCL has sought true-up for FY 2022-23, with the Revenue Gap/(Surplus) to be recovered from APDCL during FY 2024-25.
- 4.1.3 The Commission approves the cost parameters through approval of the ARR at the beginning of the year, keeping in view the data available at that point of time. The cost approvals for each of the items are based on projection of expenses and revenue before beginning of the year and the provisions of MYT Regulations, 2021. The projections might vary over the course of the year.
- 4.1.4 The actual cost/values for certain elements/parameters may vary as against the approved cost during the year due to various controllable and uncontrollable factors. The Generating Company may end up with higher or lower expenditure, as the case may be, at the end of the year as against the approved cost.
- 4.1.5 The Commission analyses the actual expenditure for the previous year/years based on the audited Annual Accounts of the Generating Company and allows/disallows the recovery of the actual expenditure through the ensuing year's tariff, subject to prudence check.
- 4.1.6 In the present Chapter, the Commission has carried out Truing up for FY 2022-23 for existing Generating Stations, i.e., NTPS, LTPS, KLHEP, LRPP and NRPP based on the submissions of APGCL, audited Annual Accounts for FY 2022-23 and provisions of the MYT Regulations, 2021. Apart from the audited Accounts, APGCL, in its additional submission, submitted Station-wise reconciliation of expenses claimed in the Petition with audited Accounts for FY 2022-23 and the same has been considered for Truing up purposes.
- 4.1.7 In this Chapter, the Commission has analysed all the elements of actual expenditure and revenue of APGCL for FY 2022-23 and undertaken the truing-up of expenses and revenue in accordance with Regulation 9.1 of the MYT Regulations, 2021. The Commission has approved the sharing of gains and losses on account of controllable

factors between APGCL and its sole beneficiary, viz., APDCL, in accordance with MYT Regulations, 2021.

4.2 Installed and Effective Capacity of FY 2022-23

4.2.1 APGCL submitted the following installed and effective capacity for FY 2022-23.

Table 6: Installed and Effective Capacity for FY 2022-23 (MW)

Station	Installed Capacity (MW)	Revised Installed Capacity	No. of Units	Units Available for Generation & Capacity in MW
NTPS	119.5	36.91	3	GT U#2 (17MW), GT U#3 (15 MW) & WHRU U#6 (9 MW)
LTPS	142.2	97.2	4	5,6,7(20 MW Each),8 (37.20 MW-WHRU)
KLHEP	100	100	2	1 (50), 2(50)
LRPP	69.755	69.755	7	1-7 (9.965 each)
NRPP	98.4	98.4	2	1(62.25), 2(36.15)

Commission's Analysis

4.2.2 The Commission has verified the decommissioning of Units, based on documentary evidence submitted by APGCL. In response to the Commission's query, APGCL submitted that NTPS only operates either GT U#2 or U#3 at a time along with WHRU U#6. The Commission in its Tariff Order dated March 21, 2022 also allowed the same. The relevant part is reproduced below:

"7.2.5 The Commission has considered that after commissioning of NRPP, only Unit 2 (21 MW) or Unit 3 (21 MW) and Unit 6 (22.50 MW) of NTPS would remain operational based on availability of gas."

4.2.3 However, APGCL in FY 2022-23 had surplus gas available with it after operating one GT Unit (Unit 2) along with WHRU Unit, so, it has operated the standby Unit 3 also whenever surplus gas was available with it. APGCL also submitted that all Units in NTPS have been derated in FY 2022-23 (GT Unit 2 has been derated from 21 MW to 17 MW, GT Unit 3 has been derated from 21 MW to 15 MW and Unit 6 WHRU has been derated from 22.5 MW to 9 MW). However, the Commission notes that APGCL has primarily operated only 1 GT unit. Also, the Commission had already decided that

APGCL would operate only one GT Unit. Hence, for computation of Tariff, the Commission considers maximum capacity from date of capacity deration to be 26 MW only. Accordingly, the Commission considers effective capacity of NTPS for FY 2022-23 as weighted average maximum capacity approved for the time period (43.5 MW from April 1, 2022 to 29 June, 2022 and 26 MW from June 30, 2022 to March 31, 2023.) The Commission has thus, computed the effective capacity for FY 2022-23 based on the same. The effective capacity considered by the Commission is as below:

Table 7: Installed and Effective Capacity considered by Commission for FY 2022-23 (MW)

Station	Installed Capacity (MW)	No. of Units	Units Available for Generation & Capacity in MW	Effective Capacity considered by Commission for FY 2022-23
NTPS	119.5	3	GT U#2 (17MW), GT U#3 (15 MW) & WHRU U#6 (9 MW)	30.32
LTPS	142.2	4	5,6,7(20 MW Each),8 (37.20 MW-WHRU)	97.20
KLHEP	100	2	1 (50), 2(50)	100.00
LRPP	69.755	7	1-7 (9.965 each)	69.755
NRPP	98.4	2	1(62.25), 2(36.15)	98.40

4.2.4 The Commission has accordingly reduced the fixed cost derived after Truing-up of FY 2022-23 to the extent of effective capacity with respect to the installed capacity of each of the above Stations, in subsequent section of this Chapter.

4.3 Plant Availability Factor (PAF)/Capacity Index

4.3.1 The Actual PAF/Capacity Index for NTPS, LTPS, KLHEP, LRPP and NRPP for FY 2022-23, as submitted by APGCL are shown in the Table below:

Table 8: Actual PAF/Capacity Index as submitted by APGCL

Station	Actual
NTPS	69.30%
LTPS	67.11%
KLHEP	71.07%

Station	Actual
LRPP	88.98%
NRPP	52.19%

4.3.2 APGCL submitted that as per Regulation 48.1 of the MYT Regulations, 2021, the Normative Plant Availability factor is 50% for NTPS and LTPS and 85% for LRPP and NRPP.

4.3.3 KLHEP and NRPP have achieved lower than normative availability. For NRPP, APGCL mentioned that the 36.15 MW ST Unit of NRPP got damaged due to a fire incident in the STG building on 22.03.2022. APGCL also requested the Commission to consider the fire incident in the STG building as “Force Majeure Event” as per Regulation 2 (35) under the provisions of Regulation 114 “Power to Relax” of the MYT Regulations, 2021, and allow full fixed cost for NRPP for FY 2022-23, APGCL thus, requested the Commission to consider normative claimed availability of 85% for NRPP and allow full fixed cost recovery in FY 2022-23.

4.3.4 APGCL submitted that the low Plant Availability of KLHEP in FY 2022-23 is mainly due to the Major Overhauling of Unit-2 of KLHEP. In view of this, APGCL requested the Commission to consider the Major Overhauling period of 78 days for Unit-2 of KLHEP in FY 2022-23 and allow the revised Plant Availability Factor of 81.81%.

Commission’s Analysis

4.3.5 In accordance with Regulations 48.1 and 50.1 of the MYT Regulations, 2021, the Target PAF / Capacity Index for recovery of full Fixed Charges are 50% for NTPS and LTPS, and 85% for KLHEP. For LRPP and NRPP, the Regulation specifies the normative availability of 85%.

4.3.6 The Commission has considered the PAF/Capacity Index as per SLDC Certificate for the purpose of Truing up. The Commission notes the actual availability for NTPS, LTPS, LRPP, NRPP and KLHEP as 69.30%, 67.11%, 71.07%, 88.98%, and 52.19%, respectively.

4.3.7 The Commission notes APGCL has considered higher than actual PAF for NRPP and KLHEP. APGCL has claimed that PAF was lower in NRPP due to a fire incident in the STG building on 22.03.2022. APGCL has submitted the work for restoration of the STG unit was awarded to the OEM on 13.09.2022 with a completion period of 6 months. The Commission notes APGCL has taken larger than required time for restoration

purpose, and requested the Commission to consider the same under 'Force Majeure'.. APGCL has not been able to demonstrate that the circumstances were 'not within the reasonable control of APGCL and which could not have been prevented, and which was an unavoidable accident'. Hence, the Commission is of the view that the present situation does not qualify under 'Force Majeure'. The Commission has also directed APGCL, in previous communication, to restore the same expeditiously. However, APGCL has failed to do the same. The Commission also does not find it a fit case for using its 'power to relax' for giving the necessary relief to APGCL. Hence, the delay of restoration of works in NRPP cannot be termed 'uncontrollable' or 'Force Majeure' in nature is therefore attributable to APGCL.

4.3.8 Based on the above analysis, the Commission has considered the actual availability of NRPP as 52.19%, as certified by SLDC for FY 2022-23.

4.3.9 As regards PAF of for KLHEP, SLDC has certified 71.07% against APGCL's claim of 81.81%. The additional claim of availability of 10.74% is due to the Major Overhauling of Unit-2 of KLHEP. APGCL has claimed that it took 78 days for major Overhauling of Unit-2 of KLHEP, which resulted in availability loss for the petitioner. However, the Commission in Section 4.6.3 of the MYT Order dated March 01, 2019 had ruled that the planned shutdown for Major Overhaul should not take more than 25 days as per industry practice. Therefore, major overhauling of unit-2 should not have impacted more than 25 days. Hence, the Commission is of the opinion that delay of more than 25 days for major overhauling cannot be termed 'uncontrollable' in nature, and is therefore attributable to APGCL.

4.3.10 Based on the above analysis, the Commission has considered the actual availability of KLHEP as 71.07%, as certified by SLDC for FY 2022-23.

4.3.11 The Commission has approved the actual PAF/Capacity Index for FY 2022-23 as shown in the following Table:

Table 9: PAF/Capacity Index as approved by the Commission for FY 2022-23

Station	Target Availability/Capacity Index (NAPAF) (%)	Approved (%)
NTPS	50%	69.30%
LTPS	50%	67.11.%
KLHEP	85%	71.07%
LRPP	85%	88.98%

Station	Target Availability/Capacity Index (NAPAF) (%)	Approved (%)
NRPP	85%	52.19%

4.3.12 Regulation 52.1 (b) of the MYT Regulations, 2021 specifies that recovery of fixed charges below the level of NAPAF shall be on pro-rata basis. As the actual PAF/Capacity Index for NRPP and KLHEP are lower than NAPAF, the reduction of fixed charges for NRPP and KLHEP have been considered in subsequent Sections.

4.3.13 Actual availability of other Generating Stations is higher than normative, hence, full recovery of fixed charges for FY 2022-23 is allowed for these Stations.

4.4 Plant Load Factor (PLF)

4.4.1 APGCL submitted that as per Regulation 48.2 of the MYT Regulations, 2021, the Normative PLF for FY 2022-23 is 50% and 66% for NTPS and LTPS, respectively. Against this, the actual PLF has been 58.91% and 61.99.% for NTPS and LTPS, respectively.

4.4.2 Regulation 50 of the MYT Regulations, 2021 specifies design energy for KLHEP as 44.5% for FY 2022-23. The actual PLF for FY 2022-23 has been 54.31%;

4.4.3 In case of LRPP, Regulation 48.2 of the MYT Regulations, 2021 specifies the Normative PLF for Gas Engine as 90%. The normative PLF for NRPP, which is a Gas-based plant is 85%. The actual PLF for LRPP and NRPP has been 84.35% and 52.19%, respectively.

Commission's Analysis

4.4.4 The Commission has computed the actual PLF for each of the stations of APGCL considering the gross generation as certified by SLDC and the effective capacity of APGCL during FY 2022-23.

4.4.5 The Commission, therefore, approves the actual PLF of 72.62% for NTPS, 63.48% for LTPS, 54.31% for KLHEP, 82.71% for LRPP, and 51.30% for NRPP for FY 2022-23, after truing up.

4.4.6 As per Regulation 48.2(i) of the MYT Regulations 2021, the target PLF for eligibility of incentive is 50% for NTPS and 66% for LTPS. As per Regulation 48.2 (ii) of the MYT Regulations 2021, the target PLF for eligibility of incentive is 90% for LRPP and 85%

for NRPP. The Commission notes that actual PLF for LTPS, LRPP and NRPP for FY 2022-23 is lower than normative; hence, they are not eligible for generation incentive.

4.4.7 The generation of NTPS and KLHEP is more than Normative PLF/design energy; hence, they are eligible for incentive.

4.5 Auxiliary Consumption

4.5.1 APGCL submitted the actual Auxiliary Consumption for FY 2022-23 and Auxiliary Consumption approved by the Commission in the Tariff Order dated March 21, 2022 as shown in the following Table:

Table 10: Auxiliary Consumption for FY 2022-23 as submitted by APGCL

Sl. No.	Station	Tariff Order dated March 21, 2022	Actual submitted by APGCL
1	NTPS	4.50%	5.68%
2	LTPS	5.50%	7.72%
3	KLHEP	0.50%	0.50%
4	LRPP	3.50%	1.58%
5	NRPP	5.00%	3.24%

4.5.2 APGCL submitted that the Auxiliary Consumption of NTPS and LTPS are higher than the approved Auxiliary Consumption in FY 2022-23. APGCL has submitted that it has lost 2.28 MU and 11.98 MU of net Generation due to higher auxiliary consumption.

4.5.3 In case of KLHEP the actual Auxiliary Consumption has been at par with the normative Auxiliary Consumption specified in the Regulations. In case of KLHEP and LRPP, the actual Auxiliary Consumption has been lower than the normative Auxiliary Consumption as specified in the Regulations.

Commission's Analysis

4.5.1 The Commission notes that actual Auxiliary Consumption for NTPS and LTPS are higher than the approved norms. APGCL, in its Petition, has submitted that it has lost 2.28 MU and 11.98 MU of net generation respectively due to higher auxiliary consumption than normative value.

4.5.2 For the purpose of truing up, the Commission has approved the Auxiliary Consumption for FY 2022-23 at the same level as approved in the Tariff Order dated March 21, 2022.

As Auxiliary Consumption is a controllable parameter, the sharing of gains/losses on account of Auxiliary Consumption has been undertaken in subsequent Section in this Chapter.

4.5.3 The Auxiliary Consumption approved by the Commission for the Truing Up of FY 2022-23 is shown in the Table below:

Table 11: Auxiliary Consumption (%) as approved by the Commission in the truing up for FY 2022-23

Sl. No.	Station	Tariff Order dated March 21 2022	Approved after Truing up
1	NTPS	4.50%	4.50%
2	LTPS	5.50%	5.50%
3	LRPP	3.50%	3.50%
4	KLHEP	0.50%	0.50%
5	NRPP	5.00%	5.00%

4.6 Gross Generation and Net Generation

4.6.1 The actual Gross Generation and Net Generation submitted by APGCL for FY 2022-23 is shown in the following Table:

Table 12: Actual Gross and Net Generation for FY 2022-23 as submitted by APGCL (MU)

Sl. No.	Station	Actual Gross Generation	Actual Net Generation
1	NTPS	192.85	181.90
2	LTPS	540.52	498.82
3	LRPP	505.41	487.72
4	NRPP	442.23	420.11
	Total Thermal	1681.01	1588.55
4	KLHEP	475.78	473.40
	Total APGCL	2156.79	2061.95

Commission's Analysis

4.6.2 The Commission notes that actual Gross Generation and Net Generation submitted by APGCL for FY 2022-23 corresponds to the Gross and Net Generation as certified by SLDC.

4.6.3 For truing up purpose, the Commission has approved the actual Gross Generation as per SLDC Certificate. The Net Generation has been approved after applying the Auxiliary Consumption approved for truing up.

4.6.4 The Gross Generation and Net Generation approved by the Commission for FY 2022-23 is shown in the following Table:

Table 13: Gross and Net Generation for FY 2022-23 as approved by the Commission

Sl. No.	Station	Gross Generation (MU)	Net Generation (MU)
1	NTPS	192.85	184.18
2	LTPS	540.52	510.79
3	LRPP	505.41	487.72
4	NRPP	442.23	420.11
	Total Thermal	1,681.01	1,602.80
4	KLHEP	475.78	473.40
	Total APGCL	2,156.79	2,076.20

4.7 Station Heat Rate (SHR)

4.7.1 APGCL submitted that the Commission in the Tariff Order dated March 21, 2022 had approved SHR for NTPS, LTPS, LRPP and NRPP as shown in the following Table:

Table 14: Station Heat Rate (kcal/kWh) for FY 2022-23 approved by the Commission

Sl. No.	Station	Open Cycle	Closed Cycle	GSHR
1	NTPS	4300	3900	
2	LTPS with WHRU	3900	3200	
3	LRPP	-	-	2150
4	NRPP	2927	1951	

4.7.2 The actual SHR was 4914.93 kcal/kWh for NTPS, 2394 kcal/kWh for LTPS, 2131.24

kcal/kWh for LRPP, and 2841.41 for NRPP, as submitted by APGCL in its Petition.

Commission's Analysis

4.7.3 The Commission notes that actual SHR for NTPS is higher than the approved norms for FY 2022-23. APGCL submitted that this is because of part loading of Units on account of lower gas supply and vintage of the plant and equipment. However, the arrangement of gas is the responsibility of APGCL, hence, the relaxation in normative SHR on account of lower supply of gas cannot be allowed.

4.7.4 Regulation 47.4 provides for weighted average SHR for NTPS, LTPS, LRPP and NRPP based on its operation in Open Cycle (OC) and Closed Cycle (CC) mode.

4.7.5 As regards major overhauling and planned shutdown, the Commission in Section 4.6.3 of the MYT Order dated March 01, 2019 had ruled as under:

“The Commission is of the view that the planned shutdown for Major Overhaul should not take more than 25 days as per industry practice. APGCL has also considered outage of 25 days for Major Overhaul in its proposal for FY 2019-20. Accordingly, impact of the same is passed through, by revising the normative SHR to 3248 kcal/kwh, by considering 25 days of operation under Open Cycle and 340 days of operation under Closed Cycle”

4.7.6 In line with the above ruling, the Commission has considered the planned shutdown of 25 days for NTPS and NRPP during FY 2022-23 and has accordingly computed the SHR considering its operation in OC mode in line with the Regulations.

4.7.7 The Commission has considered the SHR for LTPS and LRPP same as submitted by APGCL. Being a controllable factor, the sharing of gains/losses has been computed in a subsequent Section of this Chapter.

4.7.8 The SHR approved by the Commission for NTPS, LTPS, LRPP and NRPP in the truing up for FY 2022-23 is shown in the following Table:

Table 15: Station Heat Rate (kcal/kWh) for FY 2022-23 as approved by the Commission

Sl. No.	Station	Tariff Order dated March 21, 2022	Actual submitted by APGCL	Approved after Truing up
1	NTPS	3900	4020	3927
2	LTPS with WHRU	3200	3200	3200
3	LRPP	2150	2150	2150

Sl. No.	Station	Tariff Order dated March 21, 2022	Actual submitted by APGCL	Approved after Truing up
4	NRPP	1951	2927	2018

**Note: The SHR is approved by the Commission after considering the open cycle and closed cycle operating days.*

4.8 Fuel Cost

4.8.1 APGCL submitted that the Commission in the Tariff Order dated March 21, 2022, had approved Fuel Cost of Rs. 46.43 Crore for NTPS, Rs. 115.74 Crore for LTPS, Rs. 98.87 Crore for LRPP and Rs 87.24 Crore for NRPP. As against this, APGCL has claimed fuel cost of Rs. 135.78 Crore for NTPS, Rs. 391.77 Crore for LTPS, Rs. 297.64 Crore for LRPP and Rs 226.66 Crore for NRPP.

Commission's Analysis

4.8.2 The Commission has verified the actual fuel price and GCV of fuels from the actual fuel bills submitted by APGCL. Based on the detailed scrutiny of the fuel bills, the Commission has considered the actual price of fuel and GCV for NTPS, LTPS, NRPP and LRPP.

4.8.3 The Commission has computed the weighted average price of gas and weighted average GCV of gas for NTPS, LTPS, LRPP and NRPP based on actual month-wise quantity of gas received, month-wise GCV of gas received and month-wise fuel cost.

4.8.4 The Commission observed that there is no change in the weighted average GCV of LTPS, LRPP, NTPS and NRPP as compared to the average GCV submitted by APGCL in its Petition. The gas prices are also in line with the gas prices submitted by APGCL for FY 2022-23 for NTPS, LTPS, LRPP and NRPP.

4.8.5 The actual weighted average GCV and actual landed price of gas considered by the Commission for truing up of fuel cost is shown in the Table below:

Table 16: Actual Weighted Average GCV and Landed Price of Gas for FY 2022-23 considered by the Commission

Station	Wt. Avg. Gross Calorific Value of Gas (kcal/SCM)		Wt. Avg. Landed Price of Gas (Rs. /1000 SCM)	
	As submitted	As considered by	As submitted	As considered

	by APGCL	Commission	by APGCL	by Commission
NTPS	9220.72	9220.72	16146.26	16146.26
LTPS	9853.02	9853.02	22317.28	22317.28
LRPP	9217.11	9217.11	25247.21	25247.21
NRPP	9220.72	9220.72	16146.25	16146.25

4.8.6 The Commission has tried up the Fuel Cost based on the approved performance parameters and actual fuel price and GCV for FY 2022-23. The Commission has approved the Gross Generation for NTPS, LTPS, LRPP and NRPP as discussed in earlier Section of this Chapter. The fuel cost for different thermal stations corresponding to approved generation has been computed based on the approved performance parameters as shown in the following Table:

Table 17: Normative Fuel Cost for FY 2022-23 as computed by the Commission

Sr. No.	Particulars	Derivation	Unit	NTPS	LTPS	LRPP	NRPP
1	Gross Generation	A	MU	192.86	540.52	505.41	442.23
2	Heat Rate	B	kcal/kWh	3,927.40	3,200.00	2,150.00	2,017.85
3	GCV of gas	C	kcal/SCM	9,220.72	9,853.02	9,217.11	9,220.72
4	Overall Heat	D=AxB	G. cal.	7,57,418.20	17,29,670.40	10,86,622.90	8,92,343.41
5	Gas consumption	E=D/C	M. SCM	82.14	175.55	117.89	96.78
6	Price of Gas	F	Rs./1000 SCM	16,146.25	22,317.28	25,247.21	16,146.25
7	Total cost of Gas	G=ExF/100	Rs. Crore	132.63	391.77	297.64	156.26
	Total Cost			132.63	391.77	297.64	156.26

4.8.7 On the above basis, the approved normative Fuel Cost and actual Fuel Cost for FY 2022-23 for different thermal stations corresponding to actual gross generation are given in the Table below:

Table 18: Fuel Cost approved by the Commission in truing up for FY 2022-23 (Rs. Crore)

Station	Fuel Cost submitted by APGCL	Normative Fuel Cost approved by Commission
NTPS	135.78	132.63
LTPS	391.77	391.77
LRPP	297.64	297.64
NRPP	226.66	156.26

4.8.8 The sharing of efficiency gains and losses on account of fuel cost has been discussed in a subsequent Section of this Chapter.

4.9 Incentive for Generation

4.9.1 APGCL submitted that the target PLF of NTPS was 50% for claiming incentive as per the MYT Regulations, 2021. Actual PLF achieved considering effective installed capacity of 36.91 MW was 58.91% for FY 2022-23. Therefore, APGCL claimed the incentive at a rate of 50 paise for NTPS amounting to Rs 1.375 Crore.

4.9.2 APGCL submitted that Regulation 54.6 of the MYT Regulations, 2021 specifies that for a hydro power station, if the actual saleable energy in a year exceeds Design Energy, the Energy Charge for such energy is billed equal to the lowest variable charges of the Central Sector thermal power generating stations in the North-Eastern Region.

4.9.3 For the FY 2022-23, APGCL has claimed towards secondary charge for KLHEP as mentioned in below table.

Table 23: Secondary Charge of KLHEP for FY 2022-23

Sl. No.	Station	Capacity of KLHEP	Month	Cumulative Design Energy (net of Aux. Consumption)	Cumulative Actual Energy Sent out	Excess over D.E. eligible for incentive	Secondary Charge Rate (Rs/kWh)	Secondary charge (Rs. Cr)
	A	B	C	D	E	F	G	H= F x G/10
1	KLHEP	100	Apr-22	9	12	0.00		0.00
2			May-22	28	46	0.00		0.00
3			Jun-22	73	102	0.00		0.00
4			Jul-22	140	162	0.00		0.00
5			Aug-22	214	228	0.00		0.00
6			Sep-22	286	293	0.00		0.00
7			Oct-22	330	358	0.00		0.00
8			Nov-22	351	401	13.13	1.95	2.56
9			Dec-22	366	428	26.38	1.95	5.14
10			Jan-23	377	446	18.40	1.94	3.57
11			Feb-23	382	459	13.37	1.94	2.60
12			Mar-23	388	473	14.07	1.94	2.73
						85.35		16.61

Commission's Analysis

4.9.4 As per regulation 53 of the MYT Regulations 2021, incentive is payable for actual energy generation in excess of ex-bus energy corresponding to target PLF. The target PLF of NTPS is 50% for claiming incentive as per the MYT Regulations 2021. Actual PLF achieved considering effective installed capacity of 30.32 MW was 72.62% for FY 2022-23. Therefore, Commission approves Rs 2.75 Crore as incentive for over achieving w.r.t. the normative PLF.

4.9.5 As per the MYT Regulations, 2021, Hydro Generating Stations are eligible for Incentive on account of higher Generation than Design Energy and on account of higher Capacity Index than normative Capacity Index.

4.9.6 The Commission notes that actual Net Generation of KLHEP for FY 2022-23 is 473.40 MU, which is higher than Net Design Energy of 388.05 MU. Hence, KLHEP is eligible for secondary Charge Incentive on account of higher generation. The Commission has verified the claimed lowest variable charges of the central sector thermal power generating stations in the northeast region, which is Rs. 1.94/kWh. Therefore, Commission approves Rs 16.58 Crore as incentive for KLHEP.

4.10 O&M Expenses

4.10.1 As against the normative O&M expenses, the actual O&M expenses and APGCL's claim for O&M expenses for FY 2022-23 are as shown in the Table below:

Table 19: O&M expenses for FY 2022-23 as claimed by APGCL (Rs. Crore)

Station	Approved normative O&M expenses in March 21, 2022	Approved O&M expenses at effective capacity in March 21, 2022	Claim for True-up
NTPS	42.24	15.38	19.26
LTPS	42.88	29.31	46.55
KLHEP	33.31	33.31	34.28
LRPP	30.27	30.27	30.27
NRPP	22.90	22.90	41.66

4.10.2 The Station-wise details of actual O&M expenses (excluding O&M expenses of Rs 1.39 Crore for MSHEP, Capacity Building of Rs. 0.22 Crore, and special R&M of Rs. 41.64 Crore) claimed for FY 2022-23 by APGCL are given in the Table below:

Table 20: Details of Actual O&M expenses claimed by APGCL for FY 2022-23 (Rs. Crore)

Station	Total
NTPS	15.76
LTPS	43.32
KLHEP	33.10
LRPP	28.63
NRPP	41.66

Commission's Analysis

- 4.10.1 In the Tariff Order dated March 21, 2022, the Commission had approved O&M Expenses for FY 2022-23 on normative basis as specified in Regulation 51.1 of MYT Regulations, 2021. In the Tariff Order, the Commission had computed normative O&M expenses for FY 2022-23 by computing base O&M Expense for FY 2021-22 based on average of O&M Expense of FY 2018-19 to FY 2020-21, which were escalated to arrive at FY 2021-22 figures. Then escalation factor equal to average of last three years CPI and WPI inflation considered in the ratio of 60:40 (i.e., 5.25%) was applied on base O&M Expenses for FY 2021-22 to determine the O&M expenses for FY 2022-23.
- 4.10.2 APGCL, in its Petition in Case No. 03 of 2022, has prayed for amendment in Regulation 51.2(a) of the MYT Regulations, 2021. APGCL, in its justification, stated that the new NRPP plants have Advanced F Class machines. APGCL submitted that these Machines require extra care and precautions for sustaining high level of availability of the station and maintain higher efficiency. Therefore, APGCL prayed to the Commission to escalate the figures of FY 2021-22 to arrive at the new figure for the MYT Control Period from FY 2022-23 to FY 2024-25. The Commission ruled that the figures submitted by APGCL are estimated and in the absence of actual O&M Cost which has been audited, it is not prudent to revise the norms only on the basis of submission of APGCL.
- 4.10.3 APGCL has now submitted the actual O&M Cost of NRPP for true up purposes and requested the Commission to consider its actual O&M Cost as normative O&M cost for FY 2022-23, i.e., allow the actual O&M cost for NRPP without any sharing of efficiency gains/losses.
- 4.10.4 The Commission is of the opinion that minimum 3 years data on actual O&M Cost is required for considering revision in normative O&M Norms. The Commission is of the opinion that without actual trend analysis of O&M Cost it will not be prudent to revise the O&M Norms of NRPP. Hence, the Commission shall consider revision in the O&M norms of NRPP, while framing the MYT Regulations for the next Control Period, based on actual audited data for 3 years to be submitted by APGCL with all due justification.
- 4.10.5 The Commission notes that the actual O&M Cost of NRPP is considerably higher than the normative O&M Cost. However, the Commission also notes that APGCL has incurred Rs. 30.20 Crore O&M Expense in NRPP in FY 2021-22 for a total of 259 days of operation. The Commission observes that APGCL has claimed lesser O&M Expense compared to FY 2021-22 on per day cost basis. Hence, the Commission

allows the entire actual O&M Cost of NRPP to be passed through to the consumer as a one-time relief granted to it for this year only. APGCL is directed to continue to practice thrift and minimise its O&M Cost in all its plants.

4.10.6 In the Petition, APGCL submitted the reconciliation statement of O&M expenses claimed in the Petition with respect to the expenses reflecting in its Audited Accounts. APGCL has claimed O&M expenses of Rs. 162.47 Crore after excluding O&M expenses of MSHEP of Rs. 1.39 Crore, Capacity Building of Rs. 0.21 Crore, and special R&M of Rs. 41.64 Crore, which are included in the Audited Accounts of FY 2022-23. APGCL has claimed Special R&M under separate head in the Petition.

4.10.7 APGCL further submitted that the O&M expenses claimed in each of the Stations is on the basis of actual expenses booked in Trial Balance of each individual station. Further, the common Employee Expenses, A&G Expenses, and R&M Expenses are allocated between stations on the basis of installed capacity.

4.10.8 The Commission notes that APGCL has incurred Rs. 1.11 Crore in contribution to charities. The Commission is of the opinion that such expenditure should not be passed on to the consumer and should be incurred by APGCL from its profit. The Commission has disallowed the same from actual O&M Expense in proportion to the expense approved in the respective plants. The Commission also notes that APGCL has claimed capacity building charges separately from O&M Expense though no such expense was approved by the Commission separately in MYT Order. Hence, the Commission considers the same in Actual O&M Expense of APGCL. The Commission has also disallowed some Special R&M Expenses, which have been undertaken by APGCL without prior approval of the Commission. Such disallowed Special R&M Expenses have hence, been added to the Actual O&M Expenses for sharing of Gains/Losses.

4.10.9 Accordingly, the Commission, after scrutiny of the O&M expenses, approves the actual O&M expenses in the True-up Petition as shown in the Table below:

Table 21: Actual O&M Expenses approved for FY 2022-23 (Rs. Crore)

Station	Tariff Order dated March 21, 2022	Actual amount claimed by APGCL for True up of FY 2022-23	Actual approved by the Commission after true-up
NTPS	42.24	15.76	15.64
LTPS	42.88	43.32	43.00
KLHEP	33.31	33.10	44.00

Station	Tariff Order dated March 21, 2022	Actual amount claimed by APGCL for True up of FY 2022-23	Actual approved by the Commission after true-up
LRPP	30.27	28.63	28.42
NRPP	22.90	41.66	41.35
Total	171.60	162.47	172.41

4.10.10 The Commission has considered the normative O&M expenses for FY 2022-23 by escalating the base O&M Expense of FY 2021-22 with average of last 3 years CPI and WPI inflation (from FY 2019-20 to FY 2021-22) considered in the ratio of 60:40 for existing Old stations of NTPS, LTPS and KLHEP. For LRPP, O&M Norms fixed in MYT Regulations, 2021 has been used to work out Normative O&M Expense for FY 2022-23.

4.10.11 For NRPP, the actual O&M expenses have been considered, as explained above. The following Table shows the normative O&M expenses approved for FY 2022-23:

Table 22: Normative O&M Expenses approved for FY 2022-23 (Rs. Crore)

Station	Normative O&M Expenses approved in True-up	Normative O&M Expenses approved for effective capacity
NTPS	54.82	13.91
LTPS	62.62	42.80
KLHEP	33.43	33.43
LRPP	30.27	30.27
NRPP	41.35	41.35

4.10.12 The Commission has considered the above actual O&M expenses (excluding Special R&M) and Normative O&M expenses for effective capacity for computation of sharing of (Gains)/Losses on account of O&M expenses, which is a controllable factor as specified in the Regulations.

4.11 Capitalisation

4.11.1 The following Table shows the Station-wise Capitalisation as claimed by APGCL for

FY 2022-23 in its True-up Petition:

Table 23: Capitalisation claimed for FY 2022-23 (Rs. Crore)

Station	Capitalisation claimed by APGCL
NTPS	3.09
LTPS	19.59
KLHEP	6.02
LRPP	5.64
NRPP	0.13
Total	34.47

Commission's Analysis

4.11.2 The Commission has scrutinized the amount of capitalisation claimed by APGCL against each of the stations. On query from the Commission, APGCL has not been able to substantiate the capitalisation of Rs. 12.28 Crore spread across the Stations. The scheme-wise capitalisation approved by the Commission against the scheme-wise data submitted by APGCL in reply to the Commission's queries, is shown in the Table below:

Table 24: Scheme-wise Capitalisation approved for FY 2022-23 (Rs. Crore)

Sl. No.	Particulars of Scheme	Capitalisation provided in response to query	Capitalisation Considered by the Commission
	NTPS		
1	100 W LED Street Light/bay light (complete set) with separate clamps & pipe bend fitting etc.	10.00	10.00
2	Procurement of 100 HP BCW pump motor for Unit No. 6	4.20	4.20
3	ERP	280.00	280.00
	Sub-Total	294.20	294.20
	LTPS		

Sl. No.	Particulars of Scheme	Capitalisation provided in response to query	Capitalisation Considered by the Commission
1	New and Updated Human Machine Interface (HMI) System along with installation & commissioning charges	131.40	131.40
2	Upgradation of main Battery Bank along with Charger, Cables, MS Stand & other accessories	65.00	65.00
3	ERP	626.00	626.00
	Sub-Total	822.40	822.40
	KLHEP		
1	Spare for Inspection & Repairing of KLHEP Units	40.00	0.00
2	ERP	644.00	602.00
	Sub-Total	684.00	602.00
	LRPP		
1	Water supply pipeline and reservoir for the newly constructed multistorey building at LTPS	9.00	9.00
2	ERP	449.00	449.00
	Sub-Total	458.00	458.00
	Total	2258.6	2176.6

4.11.3 The Commission, hence, approves the following Station-wise capitalisation for FY 2022-23:

Table 25: Capitalisation approved for FY 2022-23 (Rs. Crore)

Station	Capitalisation claimed by APGCL	Capitalisation approved by Commission
NTPS	3.09	2.94
LTPS	19.59	8.22
KLHEP	6.02	6.02

Station	Capitalisation claimed by APGCL	Capitalisation approved by Commission
LRPP	5.64	4.58
NRPP	0.13	0.00
Total	34.47	21.77

4.12 Funding of Capitalisation

4.12.1 APGCL submitted that the capitalisation of NTPS, LTPS, KLHEP, LRPP and NRPP is funded entirely through loans. However, APGCL has also claimed equity addition against the capitalisation, which were supposed to be funded by grant by APGCL for FY 2022-23 for some of the stations. APGCL has claimed capitalisation against ERP implementation and consultancy, which were funded through grant that has been converted to equity through Government of Assam's Financial Sanction No: FS/42_2021-22(I)_06 dated 31.12.2021 and Financial Sanction No: FS/pe_2023-24(I)_33 dated 12.10.2023. Hence, APGCL has claimed that the Capitalisation of Rs 6.242 Crore incurred (previously grant) for ERP implementation and consultancy in FY 2022-23 has been converted to equity and accordingly, plant-wise return on equity on the same for NTPS, LTPS, KLHEP and LRPP have been claimed in FY 2022-23 True-Up Petition.

Commission's Analysis

4.12.2 The Commission has considered the funding of approved Capitalisation through loans for NTPS, LTPS, KLHEP, LRPP and NRPP as submitted by APGCL. The Commission has considered the funding of 'ERP implementation and consultancy' related capitalisation from Grants as envisaged in the Tariff Order at the time of approval. The following Table shows the funding of capitalisation approved for FY 2022-23:

Table 26: Funding of Capitalisation approved for FY 2022-23 (Rs. Crore)

Station	Capitalisation approved by Commission	Loan	Equity	Grant
NTPS	2.94	0.14	0.00	2.80
LTPS	8.22	1.96	0.00	6.26
KLHEP	6.02	0.00	0.00	6.02
LRPP	4.58	0.09	0.00	4.49
NRPP	0.00	0.00	0.00	0.00

Station	Capitalisation approved by Commission	Loan	Equity	Grant
Total	21.76	2.19	0.00	19.56

4.13 Depreciation

4.13.1 APGCL submitted that it has computed the Depreciation as per MYT Regulations, 2021 and considering Capital Cost of the asset admitted by the Commission with 10% salvage value. The depreciation on grants has been subtracted. The Table below summarizes the plant-wise Depreciation claimed by APGCL in the True-up for FY 2022-23:

Table 27: Details of Depreciation claimed by APGCL for FY 2022-23 (Rs. Crore)

Station	Particulars	Approved as per Order March 21, 2022	Claim for True Up
NTPS	Depreciation	1.37	2.05
	Less: Depreciation on grant funded assets	0.10	0.00
	Net Depreciation	1.28	2.05
	Net Depreciation for Effective Capacity	0.47	
LTPS	Depreciation	18.97	14.26
	Less: Depreciation on grant funded assets	2.50	0.00
	Net Depreciation	16.47	14.26
	Net Depreciation for Effective Capacity	11.26	
KLHEP	Depreciation	24.10	22.14
	Less: Depreciation on grant funded assets	2.53	0.00
	Net Depreciation	21.56	22.14
LRPP	Depreciation	13.73	13.67
	Less: Depreciation on grant funded assets	11.04	0.00
	Net Depreciation	2.69	13.67
NRPP	Depreciation	36.27	42.08
	Less: Depreciation on grant funded assets	0.00	0.00
	Net Depreciation	36.27	42.08

Commission's Analysis

4.13.2 For the purpose of Truing up, the Commission has considered the approved Station-wise closing GFA of FY 2021-22 as the opening GFA for FY 2022-23. The Commission has considered the actual capitalisation for NTPS, LTPS, KLHEP LRPP and NRPP based on the Capitalisation approved for FY 2022-23.

4.13.3 The Commission has computed depreciation as per scheduled rates specified in the MYT Regulations, 2021. As per Regulation 33 of the MYT Regulations, 2021, the total depreciation during the life of the asset shall not exceed 90% of the original cost of asset. The Commission has computed the depreciation separately for assets added under each asset head in each year. The Commission has disallowed the depreciation in excess of 90% of the original cost of asset under different asset heads.

4.13.4 In line with the approach adopted in the previous Orders and as specified in Regulation 33 of the MYT Regulations, 2021, the Commission has not considered the depreciation on assets funded through grants or capital subsidy, for FY 2022-23.

4.13.5 The station-wise depreciation approved by the Commission in the True-up for FY 2022-23 is shown in the following table:

Table 28: Depreciation for FY 2022-23 as approved by the Commission (Rs. Crore)

Station	Particulars	Tariff Order dated March,21 2022	APGCL's Petition	Approved after True up
NTPS	Depreciation	1.37	2.05	1.47
	Less: Depreciation on assets funded by Grants	0.10	0.00	0.10
	Net Depreciation	1.28	2.05	1.37
LTPS	Depreciation	18.97	14.26	18.81
	Less: Depreciation on assets funded by Grants	2.50	0.00	2.45
	Net Depreciation	16.47	14.26	16.36
KLHEP	Depreciation	24.10	22.14	23.80

Station	Particulars	Tariff Order dated March,21 2022	APGCL's Petition	Approved after True up
	Less: Depreciation on assets funded by Grants	2.53	0.00	0.87
	Net Depreciation	21.56	22.14	22.97
LRPP	Depreciation	13.73	13.67	13.85
	Less: Depreciation on assets funded by Grants	11.04	0.00	8.75
	Net Depreciation	2.69	13.67	5.10
NRPP	Depreciation	36.27	42.08	34.01
	Less: Depreciation on assets funded by Grants	0.00	0.00	0.00
	Net Depreciation	36.27	42.08	34.01

4.13.6 The detailed Station-wise computation of depreciation for NTPS, LTPS, LRPP, KLHEP and NRPP has been provided in **Annexure 2**.

4.14 Interest on Loan Capital

4.14.1 APGCL submitted that it has computed the Interest on long-term Loan for FY 2022-23 on normative basis. APGCL has considered the normative loan portfolio and the repayment has been considered equal to the depreciation for FY 2022-23. The interest rate has been considered equal to the weighted average actual interest rate applicable to APGCL at the beginning of FY 2022-23.

4.14.2 Accordingly, APGCL has claimed the Interest and Finance Charges of Rs. 62.44 Crore for FY 2022-23, as shown in the following Table:

Table 29: Interest Charges as submitted by APGCL for FY 2022-23 (Rs. Crore)

Station	Particulars	Tariff Order dated March,21 2022	Claim for True Up
NTPS	Net Normative Opening Loan	0.00	0.00
	Addition of normative loan during the year	0.66	3.09
	Normative Repayment during the year	1.28	2.05
	Net Normative Closing Loan	0.00	1.04
	Avg. Normative Loan	0.00	0.52

Station	Particulars	Tariff Order dated March,21 2022	Claim for True Up
	Interest Rate	10.93%	10.18%
	Interest on Loan Capital	0.00	0.05
	Add: Bank Charges	0.00	0.02
	Net Interest on Loan Capital	0.00	0.07
	Net Interest on Loan Capital for Effective Capacity	0.00	0.02
LTPS	Net Normative Opening Loan	0.00	0.00
	Addition of normative loan during the year	13.67	19.59
	Normative Repayment during the year	16.47	14.26
	Net Normative Closing Loan	0.00	5.32
	Avg. Normative Loan	0.00	2.66
	Interest Rate	10.93%	10.18%
	Interest on Loan Capital	0.00	0.27
	Add: Bank Charges	0.00	0.05
	Net Interest on Loan Capital	0.00	0.32
	Net Interest on Loan Capital for Effective Capacity	0.00	0.22
KLHEP	Net Normative Opening Loan	153.46	123.72
	Addition of normative loan during the year	19.40	6.02
	Normative Repayment during the year	21.56	22.14
	Net Normative Closing Loan	151.30	107.60
	Avg. Normative Loan	152.38	115.66
	Interest Rate	10.93%	10.18%
	Interest on Loan Capital	16.66	11.78
	Add: Bank Charges	0.00	0.05
	Net Interest on Loan Capital	16.66	11.82
LRPP	Net Normative Opening Loan	24.43	26.83
	Addition of normative loan during the year	0.65	5.64
	Normative Repayment during the year	2.68	13.67
	Net Normative Closing Loan	22.40	18.80
	Avg. Normative Loan	23.42	22.82
	Interest Rate	10.93%	10.18%
	Interest on Loan Capital	2.56	2.32

Station	Particulars	Tariff Order dated March,21 2022	Claim for True Up
	Add: Bank Charges	0.00	0.00
	Net Interest on Loan Capital	2.56	2.32
NRPP	Net Normative Opening Loan	476.05	491.52
	Addition of normative loan during the year	0.00	0.13
	Normative Repayment during the year	36.27	42.08
	Net Normative Closing Loan	439.79	449.56
	Avg. Normative Loan	457.92	470.54
	Interest Rate	10.93%	10.18%
	Interest on Loan Capital	50.05	47.91
	Add: Bank Charges	0.00	0.00
	Net Interest on Loan Capital	50.05	47.91

Commission's Analysis

4.14.3 In the Tariff Order dated March 21, 2022, the Commission approved the Interest on Loan Capital on normative basis as per Regulation 35 of the MYT Regulations, 2021. In the said Order, the Commission has approved the Station-wise Interest on loan capital by considering the Station-wise normative loan.

4.14.4 The normative loan outstanding for FY 2022-23 has been considered equal to closing normative loan approved in the true-up for FY 2021-22. The loan addition has been considered equal to debt portion of capitalized works as approved by the Commission in this Order. The loan repayment has been considered equivalent to depreciation approved in this Order.

4.14.5 The Commission has scrutinised the actual loan details and actual interest amount as submitted by APGCL. The Commission has considered weighted average rate of interest of 10.18% for the purpose of truing up.

4.14.6 The interest on loan capital approved by the Commission after true-up for FY 2022-23 is shown in the following Table:

Table 30: Interest on Loan Capital for FY 2022-23 as approved by the Commission (Rs. Crore)

Station	Particulars	Tariff Order March 21, 2022	APGCL's Petition	Approved after Truing up
NTPS	Net Normative Opening Loan	0.00	0.00	0.00
	Addition of normative loan during the year	0.66	3.09	0.14
	Normative Repayment during the year	1.28	2.05	1.37
	Net Normative Closing Loan	0.00	1.04	0.00
	Interest Rate	10.93%	10.18%	10.18%
	Interest on Loan Capital	0.00	0.05	0.00
	Interest and Finance Charges	0.00	0.02	0.02
	Total Interest Expenses	0.00	0.07	0.02
LTPS	Net Normative Opening Loan	0.00	0.00	0.00
	Addition of normative loan during the year	13.67	19.59	1.96
	Normative Repayment during the year	16.46	14.26	16.36
	Net Normative Closing Loan	0.00	5.32	0.00
	Interest Rate	10.93%	10.18%	10.18%
	Interest on Loan Capital	0.00	0.27	0.00
	Interest and Finance Charges	0.00	0.05	0.05
	Total Interest Expenses	0.00	0.32	0.05
KLHEP	Net Normative Opening Loan	153.46	123.72	123.71
	Addition of normative loan during the year	19.40	6.02	0.00
	Normative Repayment during the year	21.56	22.14	22.93
	Net Normative Closing Loan	151.30	107.60	100.78
	Interest Rate	10.93%	10.18%	10.18%
	Interest on Loan Capital	16.66	11.78	11.43
	Interest and Finance Charges	0.00	0.05	0.05
	Total Interest Expenses	16.66	11.82	11.47
LRPP	Net Normative Opening Loan	24.43	26.83	26.70
	Addition of normative loan during the year	0.65	5.64	0.09
	Normative Repayment during the year	2.68	13.67	5.10
	Net Normative Closing Loan	22.40	18.80	21.69
	Interest Rate	10.93%	10.18%	10.18%

Station	Particulars	Tariff Order March 21, 2022	APGCL's Petition	Approved after Truing up
	Interest on Loan Capital	2.56	2.32	2.46
	Interest and Finance Charges	0.00	0.00	0.00
	Total Interest Expenses	2.56	2.32	2.46
NRPP	Net Normative Opening Loan	476.05	419.52	491.52
	Addition of normative loan during the year	0.00	0.13	0.00
	Normative Repayment during the year	36.27	42.08	34.01
	Net Normative Closing Loan	439.79	449.56	457.51
	Interest Rate	10.93%	10.18%	10.18%
	Interest on Loan Capital	50.05	47.91	48.31
	Interest and Finance Charges	0.00	0.00	0.00
	Total Interest Expenses	50.05	47.91	48.31

4.15 Return on Equity (RoE)

4.15.1 APGCL submitted that the Commission in the Tariff Order dated March 21, 2022 approved RoE separately for each Generating Station for FY 2022-23.

4.15.2 APGCL has claimed Equity addition in FY 2022-23 of Rs. 0.87 Crore in NTPS, Rs. 1.95 Crore in LTPS, Rs. 2.01 Crore in KLHEP, Rs. 1.40 Crore in LRPP and Rs. 0.13 Crore due to conversion of GOA Grant to APGCL into Equity.

4.15.3 APGCL has claimed the RoE of Rs. 8.97 Crore for NTPS, Rs. 23.20 Crore for LTPS, Rs. 24.09 Crore for KLHEP, Rs 12.61 Crore for LRPP and Rs 33.90 Crore for NRPP.

Commission's Analysis

4.15.4 The Commission has approved the RoE in accordance with Regulation 33 of the MYT Regulations, 2018.

4.15.5 The Commission has considered the opening Equity for each Station equal to the closing Equity approved in the Truing-up of FY 2021-22. The addition to Equity has been considered same as the equity approved in funding of capitalisation, as elaborated in this Chapter.

4.15.6 The Commission notes that it has pending grant to be converted to Equity subject to the ceiling of equity being 30% of GFA of the power station. The Commission has

computed the addition to equity due to conversion of Grant as provided in **Annexure 4A**.

4.15.7 The Commission has considered the rate of Return on Equity at 15.5% as specified in Regulation 34 of the MYT Regulations, 2021.

Table 31: Return on Equity approved by the Commission for FY 2022-23 (Rs. Crore)

Station	Particulars	Approved as per Order dt. March 21 2022	Claim for True Up	Approved after True-Up
NTPS	Opening Equity	55.00	57.42	57.42
	Addition during year	0.00	0.87	(0.73)
	Closing Equity	55.00	58.29	56.69
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	8.53	8.97	8.84
LTPS	Opening Equity	143.08	148.69	148.69
	Addition during year	0.00	1.95	(3.66)
	Closing Equity	143.08	150.64	145.03
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	22.18	23.20	22.76
KLHEP	Opening Equity	68.65	154.42	154.42
	Addition during year	0.00	2.01	(6.45)
	Closing Equity	68.65	156.43	147.97
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	10.64	24.09	23.44
LRPP	Opening Equity	15.74	80.63	80.63
	Addition during year	0.00	1.40	(14.78)
	Closing Equity	15.74	82.03	65.85
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	2.44	12.61	11.35
NRPP	Opening Equity	218.69	218.69	218.69
	Addition during year	0.00	0.13	0.00
	Closing Equity	218.69	218.82	218.69
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	33.90	33.91	33.90

4.16 Interest on Working Capital (IoWC)

4.16.1 APGCL submitted that the Commission in the Tariff Order dated March 21, 2022 approved IoWC of Rs. 23.00 Crore for FY 2022-23. APGCL has claimed normative IoWC of Rs. 47.71 Crore for FY 2022-23 in accordance with MYT Regulations, 2021. APGCL has considered the interest rate of 11.53%.

4.16.2 APGCL has claimed IoWC of Rs. 5.28 Crore for NTPS, Rs. 14.97 Crore for LTPS, Rs. 3.81 Crore for KLHEP, Rs 11.54 Crore for LRPP, and Rs 47.71 Crore for NRPP.

Commission's Analysis

4.16.3 The Commission has computed IoWC in accordance with Regulation 37 of the MYT Regulations, 2021. For computation of working capital requirement, the Commission has considered the normative fuel cost and normative O&M Expenses.

4.16.4 Regulation 37.1 (d) specifies the rate of IoWC to be considered equivalent to normative interest rate of three hundred (300) basis points above the average State Bank of India (SBI) Marginal Cost of Lending Rate (MCLR) (One-Year Tenor).

4.16.5 The average SBI MCLR for FY 2022-23 was 7.80%. Hence, the Commission has accordingly considered the interest rate of 10.80% (7.80% +3.00%) for computation of IoWC. The IoWC approved by the Commission after true-up for FY 2022-23 is shown in the following Table:

Table 32: IoWC as approved by the Commission for FY 2022-23 (Rs. Crore)

Station	Particulars	Approved as per Order of March 21 2022	Claim for True Up	Approved after True up
NTPS	Fuel Cost for one month	3.78	11.32	7.61
	O&M Expenses for one month	3.52	1.60	4.57
	Maintenance Spares-30% of O&M	12.67	5.78	16.45
	Receivables for two months	16.09	27.13	24.80
	Total Working Capital Requirement	36.06	45.83	53.43
	Rate of interest	10.00%	11.53%	10.80%
	Interest on Working capital	3.61	5.28	5.77
LTPS	Fuel Cost for one month	9.64	32.65	25.71
	O&M Expenses for one month	3.57	3.88	5.22

Station	Particulars	Approved as per Order of March 21 2022	Claim for True Up	Approved after True up
	Maintenance Spares-30% of O&M	12.86	13.96	18.79
	Receivables for two months	34.87	79.42	75.66
	Total Working Capital Requirement	60.96	129.91	125.38
	Rate of interest	10.00%	11.53%	10.80%
	Interest on Working capital	6.10	14.97	13.54
KLHEP	O&M Expenses for one month	2.78	2.86	2.79
	Maintenance Spares-30% of O&M	5.00	10.28	5.02
	Receivables for two months	16.47	19.91	17.87
	Total Working Capital Requirement	24.25	33.05	25.67
	Rate of interest	10.00%	11.53%	10.80%
	Interest on Working capital	2.42	3.81	2.77
LRPP	Fuel Cost for one month	7.91	24.80	25.49
	O&M Expenses for one month	2.52	2.52	2.52
	Maintenance Spares-30% of O&M	9.08	9.08	9.08
	Receivables for two months	28.41	63.73	62.39
	Total Working Capital Requirement	47.92	100.13	99.48
	Rate of interest	10.00%	11.53%	10.80%
	Interest on Working capital	4.79	11.54	10.74
NRPP	Fuel Cost for one month	7.27	18.89	21.57
	O&M Expenses for one month	1.91	3.47	3.45
	Maintenance Spares-30% of O&M	6.87	12.50	12.40
	Receivables for two months	39.31	70.23	50.20
	Total Working Capital Requirement	55.36	105.08	87.62
	Rate of interest	10.00%	11.53%	10.80%
	Interest on Working capital	5.54	47.71	9.46

4.17 Capacity Building

4.17.1 APGCL submitted that the Commission had approved 'Nil' Capacity Building expenses for its employees for FY 2022-23 in the Tariff Order dated 21st March, 2022.

4.17.2 APGCL has claimed Capacity Building Expenses of Rs. 0.20 Crore, i.e., Rs. 0.02 Crore

for NTPS, Rs 0.05 Crore for LTPS and KLHEP, Rs 0.04 Crore for LRPP and 0.05 Crore for NRPP in the Truing-up for FY 2022-23.

Table 33: Capacity building Expenses submitted by APGCL for Truing-up of FY 2022-23 (Rs. Crore)

Station	Approved in Tariff Order dated March 21, 2022	APGCL Submission
NTPS	0.00	0.02
LTPS	0.00	0.05
KLHEP	0.00	0.05
LRPP	0.00	0.04
NRPP	0.00	0.05
Total	0.00	0.22

Commission's Analysis

4.17.3 APGCL submitted the detailed list of activities undertaken by APGCL for capacity building during FY 2022-23 and claimed Capacity Building expenses of Rs. 0.22 Crore, in addition to O&M Expenses.

4.17.4 In the Tariff Order dated March 21, 2022, the Commission had rejected APGCL's request for allowing Capacity Building expense as a separate item in the ARR. APGCL has to incur these expenses as part of its O&M Expenses.

4.17.5 Hence, the Commission disallows the Capacity Building expenses as a separate expense in the true-up for FY 2022-23, but has considered the same as part of actual O&M Expenses.

4.18 Special R&M Expenses

4.18.1 APGCL submitted that Special R&M works were undertaken in FY 2022-23 as shown in the Table below:

Table 34: Special R&M Expenses incurred by APGCL in FY 2022-23 (Rs. Crore)

Sl. No.	Work Name	Actual Claim for FY 2022-23	Remarks
1	Overhauling of LTPS Unit -7 in FY 2020-21	0.98	Part amount claimed. Balance amount will be claimed in FY 2023-24
2	Capital Overhauling of 50MW Francis type Fuji make Generator Turbine Unit-II – KLHEP	Rs. 11.14 Crore for procurement and Rs. 0.00 Crore (execution)	The work was proposed in two FYs. Procurement of spares was proposed in one FY and execution of the work was proposed in the other FY. Accordingly, Rs. 15.10 Crore of work was approved for FY 2020-21 for procurement of spares and Rs. 12.00 Crore was approved for FY 2022-23 for execution of the work. Major Overhauling of Unit-2 was delayed due to a delay in the execution of Major Overhauling of Unit-1 of KLHEP (due to Covid-19 outbreak) and the issue of replacement of the runner of Unit-2. Major Overhauling Work of Unit-2 started on 13.01.2023 and was completed on 05.08.2023. With respect to Procurement and execution works, balance amount will be claimed in True Up of FY 2023-24
3	Replacement of Runner of U#2	3.03	The replacement was done with refurbished runner as the delivery period of a new runner was very high. The refurbished runner for Unit-2 was received at site on 27.12.2022. Major Overhauling Work of Unit-2 started on 13.01.2023 and completed on 05.08.2023 including the work of replacement of the runner.
4	Additional Capital Investment for Renovation work of damaged assets due to Landslide for KLHEP Plant	4.83	The landslide related works of KLHEP is ongoing from FY 2021-22. The Commission approved Rs. 3.92 Crore for part completion of this work in the True-up of FY 2021-22 as Special R&M. Now, APGCL is claiming Rs. 4.83 Crore for this work in the True-up of FY 2022-23 as Special R&M. Balance amount will be claimed in the next True-up. Total estimate for the work was Rs.12.00 Crore and was submitted in the APR of FY 2021-22 due to emergency nature of the work as Special R&M for KLHEP and was

Sl. No.	Work Name	Actual Claim for FY 2022-23	Remarks
			also considered by the Commission in the APR Order for FY 2021-22
5	Overhauling of Gas Engine units and Turbocharger of LRPP	8.90	Part amount claimed. Balance amount will be claimed in FY 2023-24
6	Special R&M for Combustion Inspection of the GT Unit of NRPP	12.76	Part amount claimed. Balance amount will be claimed in FY 2023-24

Commission's Analysis

- 4.18.2 The Commission observed that Special R&M has been claimed by APGCL in FY 2022-23 against various expenses done in all its Power stations.
- 4.18.3 In LTPS, overhauling of Unit -7 of LTPS for Rs. 0.98 Crore has been incurred against approved work of Rs. 15 Crore, with balance expense being claimed in FY 2023-24.
- 4.18.4 In KLHEP, for Capital Overhauling of 50 MW Francis type Fuji make GT of Unit II, Rs. 3.03 Crore has been incurred against approval of Rs. 8 Crore for replacement of Runner of Unit #2.
- 4.18.5 In LRPP, Special R&M Works of Rs. 8.90 Crore have been done for Overhauling of Gas Engine Units and Turbocharger against approved expense of Rs. 32.72 Crore. the balance expense is claimed in FY 2023-24.
- 4.18.6 In NRPP, Special R&M of Rs. 12.76 Crore has been done for Combustion Inspection of GT Unit.
- 4.18.7 The Commission observes that for Capital Overhauling of 50 MW Francis type Fuji make GT Unit II in KLHEP, APGCL has claimed that Rs. 15.10 Crore has been approved in FY 2020-21 for procurement of spares and Rs. 12 Crore has been approved in FY 2022-23 for execution of work under Special R&M. However, the Commission had approved Rs. 12 Crore for execution of work for FY 2022-23 only in

KLHEP. No such approval for procurement of spares was approved in Tariff Order of FY 2020-21. Hence, Rs. 11.14 Crore claimed in FY 2022-23 for procurement of spares is not allowed under Special R&M but has been allowed under actual O&M Expenses. The balance Special R&M of Rs. 7.86 Crore has been approved by the Commission, out of the total claim of Rs. 19 Crore.

4.18.8 The Commission further notes that Combustion Inspection of GT Unit of NRPP was not approved under Special R&M in APR of FY 2022-23 undertaken in Tariff Order for FY 2023-24, though the same was prayed for by APGCL. The Commission has perused the detailed justification submitted by APGCL for this work in FY 2022-23 and has approved the expense of Rs. 12.76 Crore under Special R&M. However, the Commission finds it surprising that APGCL neither envisaged nor claimed such Special R&M, which is linked to the operational running hours, in the original Tariff Petition for FY 2022-23. APGCL is directed to ensure that all such Special R&M linked to operational running hours based on OEM recommendations are prayed for in the original Tariff Petition for that year, rather than being submitted at the time of APR or true-up.

4.18.9 The Commission notes that all other Work claimed in Special R&M has been approved in earlier years, with some of the works being claimed partially in True up of FY 2022-23 and balance to be carried out in later years. The Commission approves the works as per the claim of APGCL for FY 2022-23. The Commission however, directs APGCL to execute the Special R&M in time-bound manner so that no cost overrun takes place. Further, it is seen that most often, APGCL undertakes bulk of the Special R&M approved for a year in subsequent years only. APGCL has sought and received approval for the Special R&M based on the justification that the Special R&M is necessary for a particular year, but does not undertake the Special R&M in that year. This is not acceptable, and the Commission may be constrained to disallow Special R&M not undertaken in the year for which it has been originally approved.

4.18.10 The Commission has approved Rs 0.98 Crore for overhauling of Unit 7 of LTPS. The Commission has also approved the claim of APGCL for LRPP Rs 8.90 Crore (Overhauling of Gas engine).

4.19 Non-Tariff Income

4.19.1 APGCL submitted that the Commission in the Tariff Order dated March 21, 2022 approved Non-Tariff Income (NTI) of Rs. 22.09 Crore. As per audited accounts for FY 2022-23, total other income is Rs. 35.79 Crore. However, as per CAG Report, same is

overstated by Rs 1.36 Crore through wrong inclusion of advance received against 'Land Lease charges' and 'Local Area Development Fund Charges' pertaining to FY 2023-24 and hence, same has been deducted from above claim. Non-Tariff income thus, considered and claimed is Rs 34.43 Crore. The Station-wise Non-Tariff Income submitted by APGCL is shown in the following Table:

Table 35: Non-Tariff Income as claimed by APCGL in True-up for FY 2022-23 (Rs. Crore)

Station	Approved as per MYT Order dt. March 21, 2022	True up Petition for FY 2022-23
NTPS	7.13	5.96
LTPS	9.22	14.61
KLHEP	5.75	13.86
LRPP	0.00	0.00
NRPP	0.00	0.00
Total	22.09	34.43

Commission's Analysis

4.19.2 As per audited accounts for FY 2022-23, total Other Income is Rs. 35.79 Crore. However, APGCL has submitted that as per CAG Report, the Other Income is overstated by Rs 1.36 Crore, and has deducted this amount from above claim, which thus totals to Rs 34.43 Crore. Therefore, the Commission has approved the amount of Rs 34.43 Crore against Non-Tariff Income.

4.19.3 However, as the amount of Rs. 1.36 Crore pertains to FY 2023-24 and the Accounts of FY 2022-23 have already been finalised, APGCL shall be adjusting this excess amount of NTI against the NTI in the Accounts of FY 2023-24. As the Commission has already adjusted this amount in the true-up of FY 2022-23 itself, APGCL is directed to ensure that while filing the true-up Petition for FY 2023-24, the NTI considered does not factor in the deduction of Rs. 1.36 Crore carried out in the Accounts of FY 2023-24.

4.20 Income Tax

4.20.1 APGCL has claimed Income Tax of Rs. 19.48 Crore for FY 2022-23 as per Audited Accounts. APGCL submitted that it has determined the annual tax claim to be payable

to Income Tax Department at Rs. 19.48 Crore. However, the final tax payment will be done based on the amount determined under the tax audit.

Commission's Analysis

4.20.2 Regulation 36 of the MYT Regulations, 2021 provides for reimbursement of actual Income Tax paid on the basis of documentary evidence submitted at the time of truing up for each year of the Control Period.

4.20.3 The Commission has verified the actual Income Tax paid with Tax Challan and TDS Statement submitted by APGCL. The Commission allows the income tax of Rs 19.48 crore for FY 2022-23 as per the MYT Regulations, 2021.

4.21 Impact of AERC (Payment of Fees etc.) Regulations, 2020

4.21.1 APGCL has claimed increase in Tariff filing fees of Rs. 0.10 Crore for NTPS, LTPS and LRPP.

Commission's Analysis

4.21.2 The Commission allows the increase in Tariff Filing fees of Rs 0.10 Crore for NTPS, LTPS and LRPP, respectively, consequential to notification of the AERC (Payment of Fees etc.) Regulations, 2020, as approved in the MYT Order.

4.22 Sharing of Gains and Losses

4.22.1 Regulation 10.2 of the MYT Regulations, 2021 specifies the controllable factors for Generating Stations and Regulation 12 specifies the treatment of sharing of gain or loss on account of such controllable factors. APGCL, in its Petition, did not submit the computation of (gains)/losses in accordance with the MYT Regulations, 2021. In reply to the Commission's query in this regard, APGCL submitted the computation for the same. The Commission has discussed the treatment of each controllable factor as under:

O&M Expenses

4.22.2 APGCL, in its replies to queries, has submitted the sharing of (Gains)/Losses on account of O&M Expenses as shown in the following Table:

Table 36: Sharing of (Gains)/Losses for O&M Expenses submitted by APGCL for FY 2022-23 (Rs. Crore)

Particulars	Revised Normative	Actual Claim	Gain/ (Loss)	Increase in Terminal benefits	Sharing of Gains/ (losses)
	A	B	C=A-B	D	e= d + c/3
NTPS	16.93	19.26	(2.32)		(0.77)
LTPS	42.80	46.55	(3.74)		(1.25)
KLHEP	33.43	34.28	(0.85)		(0.28)
LRPP	30.27	30.27	0.00		0.00
NRPP	22.90	41.66	(18.76)		(6.25)
Total	146.34	172.01	(25.68)	0	(8.56)

4.22.3 The sharing of (Gains)/Losses approved by the Commission on account of O&M Expenses is shown in the following Table:

Table 37: Sharing of (Gains)/Losses for O&M Expenses approved by the Commission for FY 2022-23 (Rs. Crore)

Particulars	Revised Normative at Full capacity	Revised Normative at effective capacity	Actual	(Gains)/ Losses	Sharing of (Gains)/Losses
NTPS	54.82	13.91	15.64	1.74	0.58
LTPS	62.62	42.80	43.00	0.20	0.07
KLHEP	33.43	33.43	44.00	10.56	3.52
LRPP	30.27	30.27	28.42	(1.85)	(0.62)
NRPP	41.35	41.35	41.35	-	0.00
Total	222.49	161.77	172.41	10.65	3.55

Fuel Cost

4.22.4 APGCL, in its replies to queries, has submitted the sharing of (Gains)/Losses on account of performance parameters and Fuel Cost, as shown in the following Table:

Table 38: Sharing of (Gains)/Loss on account of Fuel Parameters as submitted by APGCL in the True-up for FY 2022-23 (Rs. Crore)

Station	Normative Cost	Actual Cost	Gain/ (Loss)	Sharing of Gains/ (losses)
	A	B	C= A-B	D=C/3
NTPS	135.78	165.98	(30.20)	(10.07)
LTPS	391.77	293.10	98.68	32.89
LRPP	297.64	295.05	2.60	0.87
NRPP	226.66	220.03	6.63	2.21
Total	1051.86	974.15	77.71	25.90

4.22.5 Sharing of (gains)/losses approved by the Commission on account of performance parameters and Fuel Cost in the True-up for FY 2022-23 is shown in the Table below:

Table 39: Sharing of (Gains)/Loss on account of Fuel Parameters as approved by the Commission in the True-up for FY 2022-23 (Rs. Crore)

Station	Normative Cost	Actual Cost	(Gains)/ Losses	Sharing of (Gains)/ Losses	Net Entitlement
NTPS	132.63	165.98	33.35	11.12	143.75
LTPS	391.77	293.10	(98.68)	(32.89)	358.88
LRPP	297.64	295.05	(2.60)	(0.87)	296.78
NRPP	156.26	220.03	63.77	21.26	177.52

Auxiliary Consumption

4.22.6 APGCL, in its replies to queries, has submitted the sharing of (Gains)/Losses on account of Auxiliary Consumption, as shown in the following Table:

Table 40: Sharing of (Gain)/Loss on account of Auxiliary Consumption as submitted by APGCL in the True-up for FY 2022-23

Station	Net Normative Generation (MU)	Net Actual Generation (MU)	ECR (Rs./kWh)	(Gains)/ Losses (MU)	(Gains)/ Losses (Rs. Crore)	Sharing of (Gains)/ Losses
	A	B	C=(Fuel Cost)*10/B	D=B-A	E=D*B	F=E/3
NTPS	184.18	181.90	9.12	(2.28)	(20.80)	(6.93)
LTPS	510.79	498.82	5.88	(11.98)	(70.36)	(23.45)
LRPP	487.72	497.40	5.93	9.68	57.42	19.14
NRPP	420.11	427.41	5.15	7.29	37.54	12.51
Total	1602.80	1606.02		2.72	3.79	1.26

4.22.7 The sharing of (gains)/losses on account of Auxiliary Consumption approved in the True-up for FY 2022-23 is shown in the Table below:

Table 41: Sharing of (Gain)/Loss on account of Auxiliary Consumption as approved by the Commission in the True-up for FY 2022-23

Station	Net Normative Generation (MU)	Net Actual Generation (MU)	ECR (Rs./kWh)	(Gains)/ Losses (MU)	(Gains)/ Losses (Rs. Crore)	Sharing of (Gains)/ Losses
NTPS	184.18	181.90	7.20	2.28	1.64	1.09
LTPS	510.79	498.82	7.67	11.98	9.18	6.12
LRPP	487.72	497.40	6.10	(9.68)	(5.91)	(3.94)
NRPP	420.11	427.41	3.72	(7.29)	(2.71)	(1.81)

4.22.8 The total sharing of Gains and Losses for FY 2022-23 has been summarised in the following Table:

Table 42: Total Sharing of (Gain)/Loss approved by the Commission in the True-up for FY 2022-23 (Rs. Crore)

Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP
(Gains)/ Losses passed to beneficiary for O&M Expenses	0.58	0.07	3.52	(0.62)	0.00
(Gains)/ Losses passed to beneficiary for Fuel Cost	11.12	(32.89)		(0.87)	21.26
(Gains)/Losses passed to beneficiary for Auxiliary Consumption	1.09	6.12		(3.94)	(1.81)
Grand Total	12.79	(26.70)	3.52	(5.42)	19.45

4.23 Reduction in Annual Fixed Charges

4.23.1 As discussed earlier, the actual PAF for KLHEP, LRPP and NRPP is lower than the normative PAF, hence, the Annual Fixed Charges have been disallowed on pro-rata basis as shown in the following Table:

Table 43: Reduction of Fixed Costs approved by the Commission in True-up for FY 2022-23 (Rs. Crore)

Particulars	PAF (%) - Normative	PAF (%) – Actual	AFC	Allowable AFC	Disallowed AFC
NTPS	50.00%	69.30%	12.64	12.64	-
LTPS	50.00%	67.11%	69.67	69.67	-
KLHEP	85.00%	71.07%	89.55	74.88	(14.68)
LRPP	85.00%	88.98%	59.77	59.77	-
NRPP	85.00%	52.19%	184.03	112.99	(71.03)

4.24 Summary of True-up for FY 2022-23

4.24.1 The summary of true-up for FY 2022-23 is shown in the following Table:

Table 44: True-up ARR for Existing Generating Stations for FY 2022-23 as approved by the Commission (Rs. Crore)

Sr. No.	Particulars	NTPS			LTPS			KLHEP			LRPP		
		Tariff Order dated March 21, 2022	APGCL's Petition	Approved after Truing up	Tariff Order dated March 21, 2022	APGCL's Petition	Approved after Truing up	Tariff Order dated March 21, 2022	APGCL's Petition	Approved after Truing up	Tariff Order dated March 21, 2022	APGCL's Petition	Approved after Truing up
A	Annual Fixed Charges												
1	O&M expenses	42.24	19.26	54.82	42.88	46.55	62.62	33.31	34.28	33.43	30.27	30.27	30.27
2	Increase in AERC Filing fees	0.10	0.10	0.10	0.10	0.10	0.10	-	-	-	0.10	0.10	0.10
3	Interest on Loans	-	0.02	0.02	-	0.22	0.05	16.65	11.82	11.47	2.56	2.32	2.46
4	Interest on WC	3.61	5.28	5.77	6.10	14.97	13.54	2.42	3.81	2.77	4.79	11.54	10.74
5	Depreciation	1.28	2.05	1.37	16.47	14.26	16.36	21.56	22.14	22.93	2.69	13.67	5.10
6	Return on Equity	8.53	2.77	8.84	22.18	15.86	22.76	10.64	24.09	23.44	2.44	12.61	11.35
7	Income Tax	0	2.09	2.09	0	6.38	6.38	0	1.51	1.51	-	5.26	5.26
8	Special R&M Expenses	2.58	-	-	15.00	0.98	0.98	20.00	19.00	7.86	32.72	8.90	8.90
9	Capacity Building	0	0	0	0	0.05	0	0	0.05	0	-	0.04	-
10	Less: Non-Tariff Income	7.13	5.96	-5.96	9.22	14.61	-14.61	5.75	13.86	-13.86	0.00	0.00	0.00
11	Fixed Cost	51.19	25.63	67.06	93.51	84.76	108.18	98.85	102.85	89.55	75.58	84.70	74.19
B	Fuel Cost	46.43	135.78	132.63	115.74	391.77	391.77	-	-	-	94.87	297.64	297.64
C	Total ARR	97.62	161.42	199.69	209.25	476.54	499.96	98.85	102.85	89.55	170.45	382.35	371.83
D	Incentive for Generation	-	1.38	2.75			-		16.61	16.58	-	-	-
E	Sharing of (Gains)/ Losses	-	-	12.79			(26.70)		-	3.52	-	-	(5.42)
F	Reduction in Fixed Cost on Account of PAF	-	-	-			-		-	(14.68)	-	-	-
G	Net ARR	97.62	162.79	215.23	209.25	476.54	473.25		119.46	94.98	170.45	382.35	366.41

Sr. No.	Particulars	NRPP		
		Tariff Order dated March 21, 2022	APGCL's Petition	Approved after Truing up
A	Annual Fixed Charges			
1	O&M expenses	22.90	41.66	41.35
2	Increase in AERC Tariff filing fees	-	-	
3	Interest on Loans	50.05	47.91	48.31
4	Interest on WC	5.54	12.11	9.46
5	Depreciation	36.27	42.08	34.01
6	Return on Equity	33.90	33.91	33.90
7	Income Tax	-	4.24	4.24
8	Special R&M Expenses	-	12.76	12.76
9	Capacity Building	-	0.05	-
10	Less: Non-Tariff Income	-	-	-
11	Fixed Cost	148.65	194.72	184.03
B	Fuel Cost	87.24	226.66	156.26
C	Total ARR	235.88	421.38	340.28
D	Incentive for Generation	-	-	-
E	Sharing of (Gains)/ Losses	-	-	19.45
F	Reduction in Fixed Cost on Account of PAF	-	-	(71.03)
G	Net ARR	235.88	421.38	288.70

4.25 Net ARR for Effective Capacity

4.25.1 The Commission has considered the Net ARR computed on the effective capacity of NTPS and LTPS based on the actual retirement of Units as submitted by APGCL.

4.25.2 The Commission has considered the effective capacity of 30.32 MW for NTPS. Further, Unit 1,2,3 & 4 of LTPS are de-commissioned, hence, the effective capacity has been considered as 97.20 MW for LTPS. Accordingly, the Commission has computed the Net ARR at effective capacity.

4.25.3 The following Table shows the Net ARR of NTPS and LTPS to be considered for FY 2022-23 after adjusting for effective capacity:

Table 45: True-up ARR for Existing Generating Stations for FY 2022-23 as approved by the Commission at Effective Capacity (Rs. Crore)

Particulars	NTPS	LTPS
Total Fixed Cost Approved on Installed Capacity	72.92	121.71
Reduction of Fixed cost due to Decommissioning	54.42	38.52
Total Fixed Cost approved at effective Capacity	18.50	83.20
Add: AERC Filing Fees	0.10	0.10
Add: Special R&M	-	0.98
Less: Non-Tariff Income	5.96	14.61
Total Fixed Cost approved for effective capacity	12.64	69.67
Add: Fuel Cost	132.63	391.77
Add: Sharing of (gains)/loss	12.79	(26.70)
Add: Reduction in Fixed Cost on Account of PAF	-	-
Add: Incentive for Generation	2.75	-
Net ARR approved for effective capacity	158.06	434.74

4.26 Revenue from Sale of Power

4.26.1 APGCL submitted the Station-wise revenue from sale of power for FY 2022-23 as shown in the Table below, as per Audited Accounts:

Table 46: Revenue from Sale of Power as claimed by APGCL (Rs. Crore)

Particulars	Approved as per TO of March 2022			As per Account				Amount Claim for True Up
	Annual Fixed Charge	Fuel Charge	Net Approved ARR	Fixed/ Capacity charges	Variable charges	Incentive	Total Revenue	
NTPS	15.81	46.43	62.23	15.84	131.65	1.38	148.87	148.87
LTPS	65.78	115.74	181.52	65.76	388.18		453.94	453.94
KLHEP	98.85	0.00	98.85	41.28	49.28	16.61	107.16	107.16
LRPP	75.58	94.87	170.45	75.60	298.75		374.35	374.35
NRPP	148.65	87.24	235.88	148.68	152.55		301.23	301.23
MSHEP				0.00	12.27		12.27	
Total	404.67	344.28	748.95	347.16	1032.69	17.98	1397.83	1385.55
Total without MSHEP	404.67	344.28	748.95	347.16	1020.42	17.98	1385.55	1385.55

Commission's Analysis

4.26.2 The Commission has considered the actual revenue of Rs. 1385.55 Crore in the true-up for FY 2022-23 based on the Audited Accounts.

5 Annual Performance Review for FY 2023-24

5.1 Methodology for Annual Performance Review

5.1.1 The Commission had approved the revised ARR for FY 2023-24 for existing Generating Stations in the Tariff Order dated March 29, 2023.

5.1.2 Regulation 9.3 of the MYT Regulations, 2021 specifies that the Commission shall undertake the APR and True-up for the respective years of the Control Period from FY 2022-23 to FY 2024-25, as reproduced below:

*“9.3 The scope of **the annual review** and True up shall be a comparison of the actual performance of the Generating Company or Transmission Licensee or SLDC or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise the following...*

*...**Annual Performance Review: a comparison of the performance targets estimated to be achieved for the current financial year (based on 6 months actual data) with the approved forecast for that financial year including adjusting trajectories of uncontrollable if needed....”(Emphasis Added)***

5.1.3 APGCL submitted the APR Petition for FY 2023-24, supported by actual information available till September 2023 and estimated values for the next six months.

5.1.4 From the above said Regulation, the main objective of the APR is to compare the performance targets for FY 2023-24 vis-à-vis forecast approved in the Tariff Order for FY 2023-24. The Revenue Gap/(Surplus) arising out of APR for FY 2023-24 shall not be passed on to the beneficiaries, and the same shall be considered at the time of Truing-up only.

5.1.5 In the present Chapter, the Commission has analysed the revised estimation of all the components of ARR vis-à-vis values approved in the Tariff Order for FY 2023-24. The Commission has computed the Revenue Gap/(Surplus) as an indication of the performance in FY 2023-24. No sharing of (gains)/losses has been undertaken at this stage and the same shall be considered at the time of Truing up for FY 2023-24.

5.2 Installed and Effective Capacity of FY 2023-24

5.2.1 APGCL submitted the following installed and effective capacity for FY 2023-24.

Table 47: Installed and Effective Capacity for FY 2023-24

Station	Installed Capacity (MW)	No. of Units	Units Available for Generation & Capacity in MW	Effective Capacity (Approved in Tariff Order dt. 29 March 2023)	Effective Capacity (Actual)
NTPS	119.50	3	GT U#2 (17MW), GT U#3 (15 MW) & WHRU U#6 (9 MW)	41.00	27.74
LTPS	142.20	4	5,6,7(20 MW Each),8 (37.20 MW-WHRU)	97.20	97.20
KLHEP	100.00	2	1 (50), 2(50)	100.00	100.00
LRPP	69.76	7	1-7 (9.965 each)	69.76	69.76
NRPP	98.40	2	1(62.25), 2(36.15)	98.40	98.40

5.2.2 The Commission has noted that in the case of NTPS, only 1 GT (either Unit 1 having 17 MW or Unit 2 having 15 MW) is available at any point in time along with WHR Unit 6 of 9 MW. Hence, maximum capacity available at any time cannot be higher than 26 MW in NTPS for FY 2023-24. Hence, the Commission for tariff purposes, considers effective capacity of NTPS as 26 MW for FY 2023-24.

5.2.3 The Commission has considered the effective capacity for FY 2023-24 as submitted by APGCL for other Stations. The Commission has accordingly reduced the fixed cost derived after APR of FY 2023-24 to the extent of effective capacity with respect to the installed capacity of each of the above Stations in subsequent sections of this Chapter.

5.2.4 The impact of reduction of fixed cost with respect to effective capacity can be seen only in NTPS and LTPS as some of their Units have been decommissioned till date. There is no impact of reduction in fixed cost due to effective capacity for KLHEP, LRPP and NRPP as none of their Units are decommissioned/proposed to be decommissioned in FY 2023-24.

5.3 Plant Availability Factor (PAF)/Capacity Index

5.3.1 APGCL submitted that as per Regulation 48.1 of the MYT Regulations, 2021, the Normative Plant Availability factor for recovery of full fixed charges is 50% for NTPS and LTPS. It is expected that NTPS and LTPS will achieve the normative plant availability factor based on 6 months actual value.

- 5.3.2 Further, Regulation 50 of the MYT Regulations, 2021 specifies normative PAF for KLHEP as 85% for FY 2023-24. It is expected that KLHEP will not be able to achieve the normative plant availability factor based on 6 months actual values. APGCL has estimated plant availability factor of 74.35% for KLHEP for FY 2023-24.
- 5.3.3 APGCL submitted that Commission had approved NAPAF of 85% for LRPP for FY 2023-24 in its Order of March 2023. It is expected that LRPP will be able to achieve the normative plant availability factor based on 6 months actual value.
- 5.3.4 APGCL submitted that the Commission had approved NAPAF of 85% for NRPP for FY 2023-24 in its Order of March 2023. It is expected that NRPP will not be able to achieve the normative plant availability factor based on 6 months actual value. APGCL expects to achieve plant availability factor of 78.36% for NRPP for FY 2023-24.
- 5.3.5 APGCL requested the Commission to approve the revised estimated Availability for FY 2023-24 as shown in the Table below:

Table 48: Availability as submitted by APGCL for FY 2023-24

Sl. No.	Station	Tariff Order dated March 29, 2023	Apr-Sept (actual)	Oct-March (estimated)	Estimated total
1	NTPS	50.00%	66.44%	50.00%	50.00%
2	LTPS	50.00%	61.45%	50.00%	50.00%
3	KLHEP	85.00%	63.69%	85.00%	74.35%
4	LRPP	85.00%	91.70%	85.00%	85.00%
5	NRPP	85.00%	71.72%	85.00%	78.36%

Commission's Analysis

- 5.3.6 In accordance with the MYT Regulations, 2021, APGCL shall be eligible to recover full fixed charges if NAPAF is achieved as specified in MYT Regulations, 2021. Accordingly, the Commission approves NAPAF for FY 2023-24 as per MYT Regulations, 2021, as shown in the following Table:

Table 49: Target PAF/Capacity Index for recovery of full fixed Charges

Station	Target Availability/Capacity Index (%)
NTPS	50%
LTPS	50%
KLHEP	85%

Station	Target Availability/Capacity Index (%)
LRPP	85%
NRPP	85%

5.4 Plant Load Factor (PLF)

5.4.1 APGCL submitted that Regulation 48.2 of the MYT Regulations, 2021 specifies the Normative Plant Load Factor for NTPS as 50%. The Commission had approved the same for NTPS in its Order of March 2023. It is expected that NTPS will be able to achieve the normative Plant Load Factor based on 6 months actual value. As per MYT Regulations, 2021, NAPLF for availing incentive for LTPS is specified as 66% for FY 2023-24. APGCL has estimated NAPLF of 60.57% for FY 2023-24.

5.4.2 APGCL submitted that as per Regulation 50.1 of the MYT Regulations, 2021, normative PLF for KLHEP as 44.5%. It is expected that KLHEP will be able to achieve the normative PLF based on 6 months actual value.

5.4.3 APGCL submitted that as per Regulation 48.2(b) of the MYT Regulations, 2021, the Commission had approved PLF of 90% and 85% for incentive for LRPP and NRPP, respectively. APGCL expects that LRPP and NRPP will not be able to achieve the normative PLF based on 6 months actual value. The approved and estimated PLF for different Stations of APGCL are shown in the table below:

Table 50: Plant Load Factor submitted by APGCL for FY 2023-24

Sl. No.	Station	Tariff Order dated March 29, 2023	Apr-Sep (actual)	Oct-March (estimated)	Estimated total
1	NTPS	50.00%	60.95%	50.00%	55.48%
2	LTPS	66.00%	55.13%	66.00%	60.57%
3	KLHEP	44.50%	47.21%	44.50%	44.50%
4	LRPP	90.00%	81.89%	90.00%	85.94%
5	NRPP	85.00%	71.01%	85.00%	78.01%

Commission's Analysis

5.4.4 APGCL shall be eligible for incentive only if actual PLF is higher than NAPLF specified in the MYT Regulations, 2021. For the purpose of APR, the Commission has considered Gross Generation and PLF for FY 2023-24 as submitted by APGCL.

However, the incentive shall be allowed with respect to NAPLF specified in the MYT Regulations, 2021.

5.5 Auxiliary Consumption

- 5.5.1 APGCL submitted that the Auxiliary Consumption of NTPS and LTPS is estimated to be higher than the approved Auxiliary Consumption in FY 2023-24 due to part loading of Units resulting from low/non-availability of gas, which is an uncontrollable factor.
- 5.5.2 APGCL submitted that as per Regulation 50.1 of the MYT Regulations, 2021, the normative Auxiliary Consumption is 0.50% for KLHEP. APGCL expects that KLHEP will achieve the auxiliary consumption within normative value.
- 5.5.3 APGCL expected that LRPP and NRPP will achieve the auxiliary consumption at par with the normative value.
- 5.5.4 APGCL estimated the Auxiliary Consumption of 6.74% for NTPS, 6.57% for LTPS, 0.50% for KLHEP, 3.50% for LRPP, and 5.00% for NRPP in the APR of FY 2023-24.

Commission's Analysis

- 5.5.5 The Commission notes that there is a variation in Auxiliary Consumption estimated by APGCL based on actual performance of H1 of FY 2023-24 vis-à-vis Auxiliary Consumption approved in the Tariff Order dated March 29, 2023 for FY 2023-24. The Commission is of the view that the availability of gas in the required quantity and at desired pressure is the responsibility of APGCL only, and no relaxation can be given on account of lower gas availability or lower gas pressure.
- 5.5.6 The Commission considers the Auxiliary Consumption for existing Generating Stations as per MYT Regulations, 2021, for the purpose of APR, as shown in the following Table:

Table 51: Auxiliary Consumption considered by the Commission for FY 2023-24

Sl. No.	Station	Tariff Order dated March 29, 2023	Estimated by APGCL	Approved for APR
1	NTPS	4.50%	6.74%	4.50%
2	LTPS	5.50%	6.57%	5.50%
3	KLHEP	0.50%	0.50%	0.50%
4	LRPP	3.50%	3.50%	3.50%
5	NRPP	5.00%	5.00%	5.00%

5.6 Gross Generation and Net Generation

5.6.1 The Gross Generation and Net Generation estimated by APGCL for FY 2023-24 is shown in the following Table:

Table 52: Gross and Net Generation as submitted by APGCL for FY 2023-24

Sl. No.	Station	Gross Generation (MU)	Net Generation (MU)
1	NTPS	138.23	128.92
2	LTPS with WHRU	453.33	423.57
3	KLHEP	311.90	310.34
4	LRPP	509.94	492.09
5	NRPP	536.00	509.20

Commission's Analysis

5.6.2 For the purpose of APR, the Commission has considered the gross generation for FY 2023-24 as submitted by APGCL. The Commission has also considered the Net Generation after considering the approved auxiliary consumption of the respective plants in the APR of FY 2023-24.

5.6.3 The Commission has computed the Net Generation based on above estimated Gross Generation and approved Auxiliary Consumption for FY 2023-24. The Gross Generation and Net Generation approved by the Commission in the APR for FY 2023-24 are shown in the following Table:

Table 53: Gross Generation and Net Generation considered by the Commission in the APR for FY 2023-24

Sl. No.	Station	Gross Generation (MU)	Net Generation (MU)
1	NTPS	138.23	132.01
2	LTPS	453.33	428.40
3	LRPP	509.94	492.09
4	NRPP	536.00	509.20
4	Total Thermal	1637.50	1,561.70
5	KLHEP	311.90	310.34
6	Total APGCL	1949.40	1,872.04

5.7 Station Heat Rate

- 5.7.1 APGCL submitted that as per Regulation 48.4 of the MYT Regulations, 2021, the Normative SHR is 3900 kcal/kWh for FY 2023-24 for NTPS in combined cycle (CC) mode of operation. APGCL has considered the same for FY 2023-24.
- 5.7.2 As per Regulation 48.4 of the MYT Regulations, 2021, the normative SHR is 3200 kcal/kWh for FY 2022-23 for LTPS in CC mode of operation. The actual SHR of LTPS in the first six (6) months has been lower than normative. APGCL has considered SHR at actual for the first 6 months and normative for rest of the year.
- 5.7.3 APGCL submitted that the SHR of LRPP in the first six (6) months has been lower than the normative. APGCL has considered SHR at actual for the first 6 months and normative for rest of the year.
- 5.7.4 As per the MYT Order dated 21st March 2022, the Commission has fixed SHR for both the open cycle and closed cycle mode for NRPP. In the Petition, APGCL has considered the combined cycle mode only for FY 2023-24.
- 5.7.5 The SHR approved by the Commission and as submitted by APGCL for FY 2023-24 is shown in the following Table:

Table 54: Gross Station Heat Rate (kcal/kWh) as projected by APGCL for FY 2023-24

Sl. No.	Station	Tariff Order dated March 29, 2023/ MYT Regulations, 2021	APGCL's submission
1	NTPS	3900	3900
2	LTPS	3200	3200
3	LRPP	2150	2150
4	NRPP	1988(CC), 2927(OC)*	1988

*As per submission of APGCL

Commission's Analysis

- 5.7.6 The Commission observed that the SHR claimed for NTPS and normative SHR specified in the Regulations are same. For the purpose of APR, the Commission has considered the Normative SHR of NTPS.
- 5.7.7 The Commission observed that the SHR claimed for LTPS and LRPP is at par with the normative SHR specified in the Regulations. For the purpose of APR, the Commission has considered the Normative SHR of LTPS and LRPP. For NRPP, the Commission has considered the approved normative figure of Combined Cycle mode as per the

Tariff Order dated March 29, 2023. The Commission shall compute the sharing of losses/(gains) on account of higher/lower SHR with respect to the normative at the time of Truing-up of FY 2023-24.

5.7.8 The following Table shows the SHR approved by the Commission in the APR of FY 2023-24:

Table 55: Gross Station Heat Rate (kcal/kWh) considered in APR for FY 2023-24

Sl. No.	Station	Tariff Order dated March 29, 2023	APGCL's submission	Approved in APR
1	NTPS	3900	3900	3900
2	LTPS	3200	3200	3200
3	LRPP	2150	2150	2150
4	NRPP	1951	1988	1951

5.8 Fuel Cost

5.8.1 APGCL submitted that as per Regulation 10 of the MYT Regulations, 2021, Fuel Price and GCV are uncontrollable items. The actual Fuel Price and GCV are shown in the table below:

Table 56: Actual Plant-wise GCV and Price as submitted by APGCL for FY 2023-24

Sl. No.	Station	Wtd. Avg. GCV of gas (kcal/SCM)	Actual Wtd. Avg. Price of gas (Rs./1000 SCM) (Apr-Sep)	Estimated Wtd. Avg. Price of gas (Rs./1000 SCM) (Oct-Mar)	Wtd. Avg. Price of gas (Rs./1000 SCM)
1	NTPS	9251.70	14496.79	13838.27	14167.53
2	LTPS	9854.15	20527.80	19982.85	20255.32
3	LRPP	9246.32	23586.66	22872.58	23229.62
4	NRPP	9251.70	14496.79	13838.27	14167.53

5.8.2 APGCL submitted that for H1 of FY 2023-24, it has considered the weighted average GCV and price of gas on the basis of actuals, while for projecting fuel cost of H2 of FY 2023-24, the actual fuel price for October 2023 has been considered.

5.8.3 Accordingly, APGCL estimated the fuel cost of Rs. 82.55 Crore for NTPS for FY 2023-

24, as shown in the following Table:

Table 57: Total Fuel Cost for NTPS for FY 2023-24 as submitted by APGCL (Rs. Crore)

Particulars	Unit	Approved as per Order of March 29, 2023	April - Sep (Actual)	Oct -March (Estimated)	FY 2023-24 (Estimated)
Gross Generation	MU	179.58	77.49	60.74	138.23
Heat Rate	kcal/kWh	3900	4668.19	3900.00	3900.00
GCV of gas	kcal/SCM	9251.93	9251.70	9251.70	9251.70
Overall Heat	G. cal.	700362	361732.58	236889.82	539096.26
Gas consumption	M. SCM	75.70	39.10	25.61	58.27
Price of Gas	Rs./1000 SCM	6072.89	14496.79	13838.27	14167.53
Total cost of Gas	Rs. Crore	45.97	56.68	35.43	82.55

5.8.4 Similarly, APGCL estimated the fuel cost of Rs. 298.18 Crore for LTPS and Rs. 275.44 Crore for LRPP for FY 2023-24 as shown in the following Tables:

Table 58: Total Fuel Cost for LTPS for FY 2023-24 as submitted by APGCL (Rs. Crore)

Particulars	Unit	Approved as per Order of March 29, 2023	April - Sep (Actual)	Oct -March (Estimated)	FY 2023-24 (Estimated)
Gross Generation	MU	425.74	240.46	212.87	453.33
Heat Rate	kcal/kWh	3200	2535.57	3200.00	3200.00
GCV of gas	kcal/SCM	9959.34	9854.15	9854.15	9854.15
Overall Heat	G. cal.	1362368	609706.25	681177.60	1450652.80
Gas consumption	M. SCM	136.79	61.87	69.13	147.21
Price of Gas	Rs./1000 SCM	8078.42	20527.80	19982.85	20255.32
Total cost of Gas	Rs. Crore	110.51	127.01	138.13	298.18

Table 59: Total Fuel Cost for LRPP for FY 2023-24 as submitted by APGCL (Rs. Crore)

Particulars	Unit	Approved as per Order of March 29, 2023	April - Sep (actual)	Oct - March (estimated)	FY 2023-24 (estimated)
Gross Generation	MU	519.40	250.24	259.70	509.94
Heat Rate	kcal/kWh	2150	2146.40	2150.00	2150.00
GCV of gas	kcal/SCM	9235.46	9246.32	9246.32	9246.32
Overall Heat	G. cal.	1116710	537110.97	558350.41	1096362.97
Gas consumption	M. SCM	120.91	58.09	60.39	118.57
Price of Gas	Rs./1000 SCM	9944.57	23586.66	22872.58	23229.62
Total cost of Gas	Rs. Crore	120.25	137.01	138.12	275.44

5.8.1 Similarly, APGCL estimated the fuel cost of Rs. 163.17 Crore for NRPP for FY 2023-24 as shown in the following Tables:

Table 63: Total Fuel Cost for NRPP for FY 2023-24 as submitted by APGCL (Rs. Crore)

Particulars	Unit	Approved as per Order of March 21, 2022	April - Sep (Actual)	Oct - March (Estimated)	FY 2023-24 (Estimated)
Gross Generation	MU	732.69	304.24	231.76	536.00
Heat Rate	kcal/kWh	1951	2403.33	1988.00	1988.00
GCV of gas	kcal/SCM	9251.93	9251.70	9251.70	9251.70
Overall Heat	G. cal.	1429478.19	731195	460732.42	1065566.21
Gas consumption	M. SCM	154.50	79.03	49.80	115.18
Price of Gas	Rs./1000 SCM	6072.89	14496.79	13838.27	14167.53
Total cost of Gas	Rs. Crore	93.83	114.57	68.91	163.17

Commission's Analysis

5.8.2 The Commission, in the Tariff Order dated March 29, 2023, had approved the Fuel Cost for NTPS, LTPS, LRPP and NRPP for FY 2023-24 based on approved

performance parameters and latest GCV and price of Fuels available at that time.

5.8.3 For the purpose of APR, the Commission has adopted the same approach and approves the Fuel Cost based on approved performance parameters in this Order and latest fuel price and GCV.

5.8.4 The Commission has verified the weighted average GCV and price of gas as per fuel bills submitted by APGCL for the period from April 2023 to September 2023. The Commission observed that the GCV and fuel price is in line with the submission of APGCL for H1 of FY 2023-24. Accordingly, the Commission has considered the GCV and fuel prices as submitted by APGCL for estimation of fuel cost in APR of FY 2023-24.

5.8.5 The GCV and landed price of gas considered by the Commission for projection of fuel cost is shown in the following Table:

Table 60: GCV and Landed Price of Gas for FY 2023-24 considered by the Commission

Station	Particulars	Approved for APR
NTPS	GCV of Gas (kcal/SCM)	9,251.70
	Price of Gas (Rs. /1000SCM)	14,167.53
LTPS	GCV of Gas (kcal/SCM)	9,854.15
	Price of Gas (Rs. /1000SCM)	20,255.32
LRPP	GCV of Gas (kcal/SCM)	9246.32
	Price of Gas (Rs. /1000SCM)	23,229.62
NRPP	GCV of Gas (kcal/SCM)	9,251.70
	Price of Gas (Rs. /1000SCM)	14,167.53

5.10.1 The Commission has estimated the fuel cost for NTPS, LTPS, LRPP and NRPP based on approved performance parameters and GCV of gas and landed price of gas as discussed in the above Section. The fuel cost provisionally approved by the Commission for NTPS, LTPS, LRPP and NRPP for FY 2023-24 for APR purposes is shown in the following Table:

Table 61: Fuel Cost considered by the Commission in APR for FY 2023-24

Sl. No	Particulars	Unit	NTPS	LTPS	LRPP	NRPP
1	Gross Generation	MU	138.23	453.33	509.94	536.00
2	Heat Rate	kcal/kWh	3,900.00	3,200.00	2150.00	1951.00
3	Overall Heat	Giga cal.	9,251.70	9,854.15	9,246.32	9,251.70
4	GCV of gas	kcal/SCM	5,39,097.00	14,50,656.00	10,96,371.00	10,45,736.00
5	Gas consumption	M. SCM	58.27	147.21	118.57	113.03
6	Price of Gas	Rs./1000 SCM	14,167.53	20,255.32	23,229.62	14,167.53
7	Total Cost of Gas	Rs. Crore	82.55	298.18	275.44	160.14

5.11 O&M Expenses

5.11.1 APGCL submitted that the Commission, in the Tariff Order dated March 29, 2023, had approved O&M expenses of Rs. 58.28 Crore for NTPS, Rs 66.57 Crore for LTPS, Rs. 35.54 Crore for KLHEP, Rs. 32.19 Crore for LRPP and Rs 24.34 Crore for FY 2023-24, which works out to a total of Rs. 216.92 Crore.

5.11.2 Based on the effective capacity, APGCL claimed the O&M Expenses of Rs. 15.38 Crore for NTPS, Rs. 49.48 Crore for LTPS, Rs. 36.44 Crore for KLHEP, Rs. 32.19 Crore for LRPP, and Rs 44.28 Crore, which works out to a total of Rs. 177.77 Crore.

5.11.3 In addition to the above, APGCL has claimed amount of Rs. 0.10 Crore each for NTPS, LTPS and LRPP towards increase in AERC Tariff Filing Fees.

Commission's Analysis

5.11.4 The Commission in the Tariff Order dated March 29, 2023 has computed O&M expenses on normative basis as per MYT Regulations, 2021 for FY 2023-24. The Commission had considered an escalation of 6.30% approved values of FY 2022-23.

5.11.5 The Commission in the APR for FY 2023-24 has computed the normative O&M Expenses in accordance with Regulation 51 of the MYT Regulations, 2021. The normative O&M expenses approved in the True-up of FY 2022-23 have been escalated by 6.40% (last 3-year average of CPI and WPI in the ratio of 60:40) to compute the normative O&M expenses for FY 2023-24 as shown in the table below:

Table 62: Normative O&M expenses for FY 2023-24 considered in APR (Rs. Crore)

Station	Approved as per Order of March 29, 2023	APGCL's Submission (Effective capacity)	Approved Normative O&M (Full capacity)
NTPS	58.28	15.38	58.33
LTPS	66.57	49.48	66.62
KLHEP	35.54	36.44	35.57
LRPP	32.19	32.19	32.21
NRPP	24.34	44.28	24.36

5.11.6 The O&M expenses for LRPP have been estimated based on the O&M norm of Rs. 46.18 Lakh/MW, which has been derived after escalating O&M norm of Rs. 43.40 Lakh/MW considered in Truing-up of FY 2022-23 by 6.40% (last 3-year average of CPI and WPI in the ratio of 60:40) as per the MYT Regulations, 2021. The total O&M expenses for LRPP works out to Rs 32.21 Crore for FY 2023-24.

5.11.7 The O&M expenses for NRPP have been estimated based on the O&M norm of Rs. 24.76 Lakh/MW, which has been derived after escalating O&M norm of Rs. 23.27 Lakh/MW specified for FY 2022-23 in the MYT Regulations, 2021 by 6.40% (last 3-year average of CPI and WPI in the ratio of 60:40) as per the MYT Regulations, 2021. The total O&M expenses for NRPP works out to Rs 24.36 Crore for FY 2023-24.

5.11.8 In addition to above, the Commission has approved amount of Rs. 0.10 Crore for NTPS, LTPS and LRPP towards increase in AERC Tariff Filing Fees as submitted by APGCL (shown separately in ARR Tables in subsequent sections).

5.12 Capital Expenditure and Capitalisation

5.12.1 APGCL has claimed the following Capital Expenditure and Capitalisation in the APR for FY 2023-24:

Table 63: Capital Expenditure and Capitalisation as submitted by APGCL for FY 2023-24 (Rs. Crore)

Station	Particulars	APGCL's submission
NTPS	Capital Expenditure	4.56
	Capitalisation	4.56
LTPS	Capital Expenditure	16.93

Station	Particulars	APGCL's submission
	Capitalisation	16.93
KLHEP	Capital Expenditure	11.83
	Capitalisation	11.83
LRPP	Capital Expenditure	3.75
	Capitalisation	3.75
NRPP	Capital Expenditure	0.00
	Capitalisation	0.00

Commission's Analysis

5.12.2 The Commission in the Tariff Order dated March 29, 2023 had approved the capital expenditure and capitalisation for the existing generating stations for FY 2023-24. The Commission has analysed the revised Capex plan submitted by APGCL in its Petition. The Work-wise approval for the revised capital expenditure plan is provided in **Annexure 3**. For the purpose of the APR, the Commission has provisionally considered the Capital Expenditure and Capitalisation as considered in Annexure 3 for NTPS, LTPS, KLHEP, LRPP and NRPP. The Commission shall however, revisit the Capital Expenditure for approval at the time of Truing-up of FY 2023-24 based on actual after prudence check.

Table 64: Capital Expenditure and Capitalisation as considered by the Commission for FY 2023-24 (Rs. Crore)

Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP
Capital Expenditure	4.56	14.83	11.83	3.75	0.00
Capitalisation	4.56	14.83	11.83	3.75	0.00

5.12.3 As regards the funding of Capitalisation for NTPS, LTPS, KLHEP, LRPP and NRPP, the Commission has considered funding of ERP implementation and consultancy from grant and rest of the approved capitalisation from debt as claimed by APGCL in the APR Petition for FY 2023-24. The following Table shows the funding of above capitalisation as considered by the Commission:

Table 65: Funding of Capitalisation as considered by the Commission for FY 2023-24 (Rs. Crore)

Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP
Loan	2.08	9.28	6.12	0.00	0.00
Equity	0.00	0.00	0.00	0.00	0.00
Grant	2.48	5.55	5.71	3.75	0.00
Total Capitalisation	4.56	14.83	11.83	3.75	0.00

5.13 Depreciation

5.13.1 APGCL submitted the Depreciation considering Capital Cost of the asset admitted by the Commission with 10% salvage value. Also, depreciation on grants has been subtracted. APGCL submitted the Depreciation of Rs. 2.19 Crore for NTPS, Rs. 14.72 Crore for LTPS, Rs. 22.48 Crore for KLHEP, Rs. 13.79 Crore for LRPP, and Rs 42.08 Crore for NRPP for FY 2023-24.

Commission's Analysis

5.13.2 The Commission has considered the opening GFA for FY 2023-24 equivalent to the closing GFA for FY 2022-23 as approved in this Order. The Commission has computed depreciation as per scheduled rates specified in the MYT Regulations, 2021.

5.13.3 As per Regulation 33 of the MYT Regulations, 2021, the total depreciation during the life of the asset shall not exceed 90% of the original cost of Asset. The Commission has computed the depreciation separately for assets added under each asset head in each year. The Commission has disallowed the depreciation in excess of 90% of the original cost of asset under different asset heads.

5.13.4 Further, in accordance with Regulation 33 of the MYT Regulations, 2021, the Commission has not considered the depreciation on assets funded through grants or capital subsidy for FY 2023-24.

5.13.5 The depreciation provisionally approved in the APR for FY 2023-24 is given in the Table below:

Table 66: Station-wise depreciation considered for APR for FY 2023-24 (Rs. Crore)

Station	Particulars	Approved as per Order of March 29, 2023	APGCL's submission	Approved after APR
NTPS	Depreciation	1.45	2.19	1.57
	Less: Depreciation on assets funded by Grants	0.02	0.00	0.12
	Net Depreciation	1.43	2.19	1.44
LTPS	Depreciation	20.22	14.72	19.43
	Less: Depreciation on assets funded by Grants	0.58	0.00	2.72
	Net Depreciation	19.64	14.72	16.71
KLHEP	Depreciation	24.36	22.48	23.95
	Less: Depreciation on assets funded by Grants	0.57	0.00	1.24
	Net Depreciation	23.79	22.48	22.71
LRPP	Depreciation	13.75	13.79	13.84
	Less: Depreciation on assets funded by Grants	11.08	0.00	9.16
	Net Depreciation	2.67	13.79	4.68
NRPP	Depreciation	37.50	42.08	34.01
	Less: Depreciation on assets funded by Grants	-	-	-
	Net Depreciation	37.50	42.08	34.01

5.13.6 The detailed Station-wise computation of depreciation for NTPS, LTPS, KLHEP, LRPP and NRPP has been provided at **Annexure 2**.

5.14 Interest on Loan Capital

5.14.1 APGCL submitted that it has computed the Interest on long-term loan on normative basis for FY 2023-24. The Petitioner has considered the normative loan portfolio and the repayment is considered equal to the depreciation for FY 2023-24. The interest rate has been considered as the expected weighted average rate of interest for FY 2023-24. APGCL has claimed the Interest on Loan of Rs. 0.23 Crore for NTPS, Rs. 0.66 Crore for LTPS, Rs. 10.57 Crore for KLHEP, Rs. 1.43 Crore for LRPP, and Rs 44.34 Crore for NRPP for FY 2023-24.

Commission's Analysis

5.14.2 In the Tariff Order dated March 29, 2023, the Commission has approved Interest and finance charges on normative basis for FY 2023-24 as per MYT Regulations, 2021. For the APR, the Commission has considered the same approach and provisionally approved the Interest and finance charges on normative basis.

5.14.3 The closing net normative loan for FY 2022-23 as approved in this Order has been considered as opening net normative loan for FY 2023-24. The addition of loan has been considered equal to debt portion of capitalised works as approved in this Order. The loan repayment has been considered equivalent to Depreciation approved in this Order. As per MYT Regulations, 2021, weighted average rate of interest shall be computed based on actual outstanding loan as on April 1, 2023. The Commission has computed the weighted average interest rate of 10.35% for FY 2023-24.

5.14.4 The Interest on loan capital provisionally approved by the Commission for FY 2023-24 is shown in the following Table:

Table 67: Interest on Loan Capital considered for APR for FY 2023-24 (Rs. Crore)

Station	Particulars	Approved as per Order of March 29, 2023	APGCL Submission	Approved in APR
NTPS	Net Normative Opening Loan	0.84	1.04	0.00
	Addition of normative loan during the year	0.94	4.56	2.08
	Normative Repayment during the year	1.43	2.19	1.44
	Net Normative Closing Loan	0.35	3.41	0.63
	Interest Rate	11.64%	10.35%	10.35%
	Interest on Loan Capital	0.07	0.23	0.03
	Add: Bank Charges	0.00	0.00	0.00
	Total Interest on Loan	0.07	0.23	0.03
LTPS	Net Normative Opening Loan	0.00	5.32	0.00
	Addition of normative loan during the year	12.31	16.92	9.28
	Normative Repayment during the year	19.64	14.72	16.71
	Net Normative Closing Loan	0.00	7.53	0.00

Station	Particulars	Approved as per Order of March 29, 2023	APGCL Submission	Approved in APR
	Interest Rate	11.64%	10.35%	10.35%
	Interest on Loan Capital	0.00	0.66	0.00
	Add: Bank Charges	0.00	0.00	0.00
	Total Interest on Loan	0.00	0.66	0.00
KLHEP	Net Normative Opening Loan	113.94	107.60	100.78
	Addition of normative loan during the year	17.25	11.58	6.12
	Normative Repayment during the year	23.79	22.48	22.71
	Net Normative Closing Loan	107.40	96.69	84.20
	Interest Rate	11.64%	10.35%	10.35%
	Interest on Loan Capital	12.88	10.57	9.57
	Add: Bank Charges	0.00	0.00	0.00
	Total Interest on Loan	12.87	10.57	9.57
LRPP	Net Normative Opening Loan	24.28	18.80	21.69
	Addition of normative loan during the year	0.7	3.75	0.00
	Normative Repayment during the year	2.67	13.79	4.68
	Net Normative Closing Loan	22.31	8.76	17.01
	Interest Rate	11.64%	10.35%	10.35%
	Interest on Loan Capital	2.71	1.43	2.00
	Add: Bank Charges	0.00	0.00	0.00
		Total Interest on Loan	2.71	1.43
NRPP	Net Normative Opening Loan	454.03	449.56	457.51
	Addition of normative loan during the year	0.00	0.00	0.00
	Normative Repayment during the year	37.50	42.08	34.01
	Net Normative Closing Loan	416.53	407.48	423.51
	Interest Rate	11.64%	10.35%	10.35%
	Interest on Loan Capital	50.67	44.34	45.59
	Add: Bank Charges	0.00	0.00	0.00

Station	Particulars	Approved as per Order of March 29, 2023	APGCL Submission	Approved in APR
	Total Interest on Loan	50.67	44.34	45.59

5.15 Return on Equity (RoE)

5.15.1 APGCL submitted the RoE at the rate of 15.5% in accordance with the MYT Regulations, 2021. APGCL submitted that the actual Tax paid is being claimed separately. APGCL estimated RoE of Rs. 9.04 Crore for NTPS, Rs. 23.35 Crore for LTPS, Rs. 24.27 Crore for KLHEP, Rs. 12.71 Crore for LRPP, and Rs 33.90 Crore for NRPP for FY 2023-24 for the purpose of APR.

Commission's Analysis

5.15.2 The Commission has approved the RoE in accordance with Regulation 34 of the MYT Regulations, 2021. The Commission has not considered any addition of equity for capitalised works as approved in this Order. However, the Commission notes there are some grants, which are yet to be converted to equity. The same have been converted subject to the normative ceiling of 30% of GFA. The detailed computation of allowable equity addition due to such conversion of grant in FY 2023-24 is provided in **Annexure – 4 B**. Therefore, the approved RoE at 15.50% is shown in the Table below:

Table 68: Return on Equity considered by the Commission for FY 2023-24 (Rs. Crore)

Station	Particulars	Approved as per Order of March 29, 2023	APGCL's submission	Approved in APR
NTPS	Opening Equity	57.42	58.29	56.69
	Additional during Year	0.00	0.00	0.88
	Closing Equity	57.42	58.29	57.57
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	8.90	9.04	8.86
LTPS	Opening Equity	148.69	150.64	145.03
	Additional during Year	0.00	0.00	2.47

Station	Particulars	Approved as per Order of March 29, 2023	APGCL's submission	Approved in APR
	Closing Equity	148.69	150.64	147.50
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	23.05	23.35	22.67
KLHEP	Opening Equity	154.42	156.43	147.97
	Additional during Year	0.00	0.25	1.81
	Closing Equity	154.42	156.68	149.78
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	23.94	24.27	23.08
LRPP	Opening Equity	80.63	82.03	65.85
	Additional during Year	0.00	0.00	1.37
	Closing Equity	80.63	82.03	67.23
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	12.50	12.71	10.31
NRPP	Opening Equity	218.69	218.69	218.69
	Additional during Year	0.00	0.00	0.00
	Closing Equity	218.69	218.69	218.69
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	33.90	33.90	33.90

5.16 Interest on Working Capital (IoWC)

5.16.1 APGCL submitted that the Commission in Tariff Order dated March 29, 2023 had approved IoWC of Rs.26.64 Crore for FY 2023-24. As against this, APGCL has estimated IoWC of Rs. 41.83 Crore for FY 2023-24 based on the revised parameters. APGCL has considered the Rate of Interest of 11.53%, which is equal to the normative interest rate of three hundred (300) basis points above the average SBI MCLR (One-Year Tenor) prevalent during the last available six months.

Commission's Analysis

5.16.2 The Commission has computed IoWC in accordance with Regulation 37 of the MYT Regulations, 2021. For computation of working capital requirement, the Commission has considered the fuel cost and O&M Expenses on normative basis.

5.16.3 The rate of Interest has been considered equivalent to normative interest rate of three hundred (300) basis points above the average SBI MCLR (One-year tenor) prevalent during the last available six months for the determination of tariffs, i.e, interest rate has been considered as 11.53%.

5.16.4 For the purpose of APR, IoWC provisionally approved by the Commission for FY 2023-24 is shown in the following Table:

Table 69: Interest on Working Capital considered for APR for FY 2023-24 (Rs. Crore)

Station	Particulars	Approved as per order of March 29, 2023	APGCL's submission	Approved in APR
NTPS	Fuel Cost for one month	3.83	6.88	5.67
	O&M Expenses for one month	4.86	1.28	4.86
	Maintenance Spares-30% of O&M	17.48	4.61	17.50
	Receivables for two months	18.96	16.87	23.22
	Total Working Capital Requirement	45.13	29.65	51.24
	Rate of interest	10.58%	11.53%	11.53%
	Interest on Working capital	4.77	3.42	5.91
LTSP	Fuel Cost for one month	9.21	24.85	23.34
	O&M Expenses for one month	5.55	4.12	5.55
	Maintenance Spares-30% of O&M	19.97	14.84	19.99
	Receivables for two months	37.77	70.49	70.90
	Total Working Capital Requirement	72.50	114.30	119.78
	Rate of interest	10.58%	11.53%	11.53%
	Interest on Working capital	7.67	13.17	13.81
KLHEP	O&M Expenses for one month	2.96	3.04	2.96
	Maintenance Spares-15% of O&M	5.33	10.93	5.34
	Receivables for two months	14.45	18.49	15.85
	Total Working Capital Requirement	22.74	32.46	24.15
	Rate of interest	10.58%	11.53%	11.53%
	Interest on Working capital	2.41	3.74	2.79
LRPP	Fuel Cost for one month	10.02	22.95	23.38
	O&M Expenses for one month	2.68	2.68	2.68
	Maintenance Spares-30% of O&M	9.66	9.66	9.66
	Receivables for two months	30.90	63.37	62.39

Station	Particulars	Approved as per order of March 29, 2023	APGCL's submission	Approved in APR
	Total Working Capital Requirement	53.26	98.66	98.12
	Rate of interest	10.58%	11.53%	11.53%
	Interest on Working capital	5.63	11.37	11.32
NRPP	Fuel Cost for one month	7.82	13.60	18.24
	O&M Expenses for one month	2.03	3.69	2.03
	Maintenance Spares-30% of O&M	7.30	13.28	7.31
	Receivables for two months	41.06	57.27	62.14
	Total Working Capital Requirement	58.21	87.85	89.72
	Rate of interest	10.58%	11.53%	11.53%
	Interest on Working capital	6.16	10.12	10.34

5.17 Non-Tariff Income

5.17.1 APGCL submitted that the Commission had approved Non-Tariff Income of Rs. 22.09 Crore for FY 2023-24 in the Tariff Order dated March 29, 2023. APGCL submitted the Non-Tariff Income of Rs. 7.13 Crore for NTPS, Rs. 9.22 Crore for LTPS, and Rs. 5.75 Crore for KLHEP, totalling to Rs. 22.09 crore.

Commission's Analysis

5.17.2 For the purpose of APR, the Commission provisionally approves the non-tariff income for FY 2023-24 same as approved in the true-up for FY 2022-23, as shown in the following Table:

Table 70: Non-Tariff Income considered for APR for FY 2023-24 (Rs. Crore)

Station	Tariff Order dated March 29, 2023	APGCL's submission	Approved in APR
NTPS	6.58	7.13	5.96
LTPS	26.97	9.22	14.61
KLHEP	11.84	5.75	13.86
LRPP	0.00	0.00	0.00
NRPP	0.00	0.00	0.00
Total	45.39	22.09	34.43

5.18 Other Expenses

5.18.1 Special R&M Expenses

APGCL submitted that the Commission has approved Special R&M Schemes of Rs. 35.42 Crore for FY 2023-24 in the Tariff Order dated March 29, 2023. APGCL submitted that it has revised the Special R&M Schemes to be undertaken in FY 2023-24. The details of the same are provided below:

Table 71: Revised Special R&M Schemes for FY 2023-24 (Rs. Lakh)

Sl. No.	Description of Works	Approved by Commission	Revised Proposed	Remarks
		FY 2023-24	FY 2023-24	
	NTPS			
1	Procurement of overseas spares for major overhauling of 2 nos. W 301 Gas Turbine Unit used in GT #2 & #3	0	168	Work is under process. Delay is due to long procurement lead time.
2	Procurement of spares for major overhauling of WHT#6	0	90	PO to be placed shortly. Delay is due to extension in tendering process.
3	Overhauling of Steam Turbine Unit 6 (Execution Part) excluding procurement of spares	80	0	Tender is under process. Execution delayed due to delay in procurement of spares as stated at Sl.1 above.
	LTPS			
1	Overhauling of LTPS Unit-7	0	1402	Overhauling of GT Unit#7 started on 12.03.2023 and was completed on 29.05.2023. Delay in overhauling work was due to rectification work of Bleed valve problem, Diesel engine failed to disengage, PMG supply trouble and High vibration in generator rear bearing problem.
2	Major Inspection works of Gas Turbine Unit # 5	145	145	Tender under process
3	Overhauling of Generator and Exciter of GT Unit # 5	100	100	Tender under process

Sl. No.	Description of Works	Approved by Commission	Revised Proposed	Remarks
		FY 2023-24	FY 2023-24	
4	Procurement of spares for Major inspection of Gas Turbine Unit # 5.	2360	2360	Tender under process
	KLHEP			
1	Capital Overhauling of 50MW Francis type Fuji make Generator Turbine Unit-II	0	Rs. 3.96 Crore for Procurement and Rs. 12 Crore for execution	The work was proposed in two FYs. Procurement of spares was proposed in one FY and execution of the work was proposed in the other FY. Accordingly, work was approved in FY 2020-21 for Rs. 15.10 Crore for procurement of spares and in FY 2022-23 for Rs. 12.00 Crore for execution of the work. Major Overhauling of Unit-2 was delayed due to a delay in the execution of Major Overhauling of Unit-1 of KLHEP (due to Covid-19 outbreak) and the issue of replacement of the runner of Unit-2. Major Overhauling Work of Unit-2 started on 13.01.2023 and was completed on 05.08.2023. With respect to Procurement and execution works, balance amounts will be claimed in FY 2023-24 True Up
2	Landslide related works	0	325	The landslide related works of KLHEP is ongoing from FY 2021-22. The Commission has already approved Rs. 3.92 Crore for part completion of this work in the True-up of FY 2021-22 as Special R&M. Now, APGCL has claimed Rs. 4.83 Cr for this work in the True-up of FY 2022-23 as Special R&M. Balance amount is being claimed in APR and also will be claimed in the next True-up. Total Estimate for the work was Rs. 12.00 Crore and was submitted in the APR of FY 2021-22 due to emergency nature of the work as Special R&M for KLHEP and was also Considered by the

Sl. No.	Description of Works	Approved by Commission	Revised Proposed	Remarks
		FY 2023-24	FY 2023-24	
				Commission in the APR Order for FY 2021-22.
	LRPP			
1	Overhauling of Gas Engine units and Turbocharger of LRPP	0	2382	Part amount of Rs 8.9 Crore claimed in FY 2022-23. Balance amount of Rs. 23.82 Crore being claimed in APR of FY 2023-24
2	48,000 Running Hours Turbocharger Maintenance	777	777	PO has been issued to Wartsila on 17.08.2023. Expected time of completion is March'24
3	Procurement of Special measuring instruments for Electrical Maintenance Works	160	160	Tender already floated; PO will be issued by end of November 2023
	NRPP			
1	Special R&M for Combustion Inspection of the GT Unit of NRPP	0	574	Balance amount claimed in FY 2023-24 after Rs 12.76 Crore claimed in True Up of FY 2022-23.

Commission's Analysis

5.18.2 As regards NTPS, the Commission has provisionally approved the Special R&M of Rs. 2.58 Crore for FY 2023-24 as claimed by APGCL for overhauling of Unit 2 of NTPS gas turbine and overhauling of WHRU 6. The Commission notes that these works have been approved for FY 2022-23, however, due to delay, APGCL will incur the same in FY 2023-24. APGCL should complete the Special R&M works in the same year in which they were envisaged and approved by the Commission, else, the Commission may be constrained to disallow such Special R&M expenses being carried out in subsequent years. Hence, APGCL is directed to execute the Special R&M as per their approval without any delay.

5.18.3 As regard LTPS, for overhauling of LTPS Unit 7, the Commission has considered Rs. 14.02 Crore in FY 2023-24 as the same is the balance expense against the work, which was supposed to be completed in FY 2022-23. However, as observed by the Commission in the true-up of FY 2022-23, APGCL should complete the Special R&M works in the same year in which they were envisaged and approved by the

Commission, else, the Commission may be constrained to disallow such Special R&M expenses being carried out in subsequent years.

5.18.4 As regards KLHEP, the Commission has considered the amount of Rs 12 Crore as approved in the Tariff Order dated March 21, 2022 for capital overhauling of KLHEP GT Unit II. The Commission notes that though APGCL has claimed Rs. 15.10 Crore has been approved by the Commission in the Tariff Order of FY 2020-21; no such work was approved under Special R&M for KLHEP in the Tariff Order of FY 2020-21. Hence, the Commission will consider the balance portion of this work under actual O&M Expenses rather than Special R&M expenses, in the true up of FY 2023-24.

5.18.5 The Commission has conducted detailed assessment of the Special R&M claimed against mandatory Combustion Inspection of NRPP. The Commission notes that the expense claimed is mandatory, in the absence of which, the performance of the plant may suffer. Hence, after considering the detailed justification submitted separately by APGCL, the Commission allows the same under Special R&M expenses.

5.18.6 Hence, the Commission considers Special R&M expenses in the APR of FY 2023-24 as shown in the Table below:

Table 72: Plant-wise Special R&M approved for FY 2023-24

Station	Approved as per order of March 29, 2023	Amount claimed in APR	Approved in APR
NTPS	0.8	2.58	2.58
LTPS	26.05	40.07	40.07
KLHEP	0	19.21	15.25
LRPP	9.37	33.19	33.19
NRPP	0	5.74	5.74
Total	35.42	100.79	96.83

5.19 Summary of APR for FY 2023-24

5.19.1 The summary of station-wise ARR after APR for FY 2023-24 is shown in the following Table:

Table 73: ARR for Existing Generation Stations for FY 2023-24 considered by the Commission

Sr. No.	Particulars	NTPS			LTPS			KLHEP			LRPP			NRPP		
		Tariff Order dated March 29 2023	APGCL's Submission	Approved in APR	Tariff Order dated March 29 2023	APGCL's Submission	Approved in APR	Tariff Order dated March 29 2023	APGCL's Submission	Approved for APR	Tariff Order dated March 29 2023	APGCL's Submission	Approved in APR	Tariff Order dated March 29 2023	APGCL's Submission	Approved in APR
A	Annual Fixed Charges															
1	O&M Expenditure	58.28	15.38	58.33	66.57	49.48	66.62	35.54	36.44	35.57	32.19	32.19	32.21	24.34	44.28	24.36
2	Increase in AERC Tariff Filing Fees	0.10	0.10	0.10	0.10	0.10	0.10	-	-	-	0.10	0.10	0.10			
3	Interest & Finance Charges	0.07	0.05	0.03	-	0.45	-	12.88	10.56	9.57	2.71	1.43	2.00	50.66	44.34	45.59
4	Interest on working Capital	4.77	3.42	5.91	7.67	13.17	13.81	2.41	3.74	2.79	5.63	11.37	11.32	6.16	10.12	10.34
5	Depreciation	1.43	2.19	1.44	19.64	14.72	16.71	23.79	22.48	22.71	2.67	13.79	4.68	37.50	42.08	34.01
6	Return on Equity	8.90	2.10	8.86	23.05	15.96	22.67	23.94	24.25	23.08	12.50	12.71	10.31	33.90	33.92	33.90
7	Income taxes	0	-	-	0	-	-	0	-	-	-	-	-	-	-	-
8	Special R&M	0.80	2.58	2.58	26.05	40.07	40.07	-	19.21	15.25	9.37	33.19	33.19	0	5.74	5.74
9	Less: Other Income	-6.58	-7.13	-5.96	-26.97	-9.22	-14.61	-11.84	-5.75	-13.86	0.00	0.00	0.00	-	-	-
10	Total Fixed Charges	67.77	18.68	71.28	116.11	124.72	145.38	86.72	110.93	95.10	65.16	104.78	93.81	152.55	180.48	153.94
11	Fuel Cost	45.97	82.55	82.55	110.51	298.18	298.18	-	-	-	120.24	275.44	275.44	93.83	163.17	160.14
12	Total Revenue Requirement	113.74	101.23	153.84	226.61	422.91	443.56	86.72	110.93	95.10	185.41	380.22	369.26	246.38	343.65	314.08

5.20 Net ARR for Effective Capacity

5.20.1 The Commission has considered the Net ARR computed on the effective capacity of NTPS and LTPS based on the actual retirement of Units as submitted by APGCL.

5.20.2 The Commission has considered the effective capacity of 26 MW for NTPS on account of retirement of Units 1,4 and 5. Further, the effective capacity of LTPS has been considered at 97.20 MW. Accordingly, the Commission has computed the Net ARR at effective capacity.

5.20.3 The Commission has computed the Net ARR for APR of FY 2023-24 after adjusting for effective capacity for NTPS and LTPS, as shown in the following Table:

Table 74: APR for Existing Generating Stations for FY 2023-24 as approved by the Commission at Effective Capacity (Rs. Crore)

Particulars	NTPS	LTPS
Total Fixed Cost approved on installed capacity	74.57	119.82
Reduction in fixed cost due to Decommissioning	58.35	37.92
Total Fixed Cost approved at effective Capacity	16.22	81.90
Add: Increase in AERC Filing Fees	0.10	0.10
Add: Special R&M	2.58	40.07
Less: Non-Tariff Income	5.96	14.61
Total Fixed Cost approved for effective capacity	12.94	107.46
Add: Fuel Cost	82.55	298.18
Net ARR approved for effective capacity	95.49	405.65

5.21 Revenue from Sale of Power

5.21.1 APGCL has estimated total Revenue from Sale of Power in the APR of FY 2023-24 as Rs. 997.06 Crore for NTPS, LTPS, KLHEP, LRPP and NRPP, respectively. The revenue projected by APGCL is based on the actual revenue earned during H1 of FY 2023-24 and revenue estimated in H2 of FY 2023-24. APGCL has also considered the adjustments made in fuel purchase bills during H1 of FY 2023-24.

Commission's Analysis

5.21.2 For the purpose of APR for FY 2023-24, the Commission has considered the revenue from Fixed Charges equal to Fixed Charges approved by the Commission for FY 2023-24 in the Tariff Order dated March 29, 2023. Accordingly, the Commission has

considered the revenue from Fixed Charges of Rs. 19.52 Crore for NTPS, Rs. 79.10 Crore for LTPS, Rs. 43.36 Crore for KLHEP, Rs. 65.16 Crore for LRPP, and Rs. 152.55 Crore for NRPP, which works out to total revenue from Fixed Charges of Rs. 359.69 Crore for FY 2023-24.

5.21.3 As regards the revenue from Energy Charges, the Commission has considered energy charge per unit as approved in Tariff Order dated March 29, 2023 for each of the stations. The Commission has, based on the net generation considered in APR of FY 2023-24, computed the energy charges to be recovered in FY 2023-24. Accordingly, revenue from Energy Charges works out to Rs. 374.79 Crore for FY 2023-24. The total FPA claim of Rs. 269.86 Crore by APGCL, has also been considered.

5.21.4 Thus, the Commission has worked out revenue of Rs. 1004.34 Crore for FY 2023-24 for the purpose of APR.

5.22 Revenue Gap/(Surplus) for FY 2023-24

5.22.1 APGCL has estimated Revenue Gap of Rs. 361.90 Crore for FY 2023-24. APGCL submitted that since the figures for FY 2023-24 are estimated and are subject to True-up, it has not considered the Revenue Gap/(Surplus) for recovery during FY 2024-25, as the same shall be considered at the time of True-up of FY 2023-24.

Commission's Analysis

5.22.2 For computation of Revenue Gap/(Surplus), the Commission has considered the ARR at effective capacity for NTPS and LTPS as derived in the previous Section of this Chapter. For KLHEP, LRPP and NRPP entire fixed costs have been considered for computation of Revenue Gap/(Surplus).

5.22.3 Accordingly, the Commission has computed the Revenue Gap/(Surplus) for FY 2023-24 as shown in the following Table:

Table 75: Revenue Gap/Surplus after APR for FY 2023-24 (Rs. Crore)

Sr. No.	Particulars	Approved in APR
1	ARR for NTPS	95.49
2	ARR for LTPS	405.65
3	ARR for KLHEP	95.10
4	ARR for LRPP	369.26
5	ARR for NRPP	314.08
5	Combined ARR	1,279.58

Sr. No.	Particulars	Approved in APR
6	Less: Revenue from sale of Power	1,004.34
7	Revenue Gap/(Surplus)	275.24

5.22.4 The APR reveals a Revenue Gap of Rs. 275.24 Crore for FY 2023-24. It is only indicative in the absence of Audited Annual Accounts for FY 2023-24. Hence, this is not carried forward. It will be considered only after Truing up process for FY 2023-24, after the Audited Annual Accounts are made available.

6 Revised ARR for FY 2024-25

6.1 Introduction

6.1.1 This Chapter deals with the determination of revised ARR for FY 2024-25 in accordance with the provisions of MYT Regulations, 2021 based on analysis of submissions made by APGCL.

6.1.2 APGCL has filed Petitions for approval of revised ARR for FY 2024-25 for existing stations, i.e., NTPS, LTPS, LRPP, NRPP and KLHEP. The Commission has determined the Station-wise revised ARR for NTPS, LTPS, LRPP, NRPP and KLHEP for FY 2024-25 in accordance with the MYT Regulations, 2021 as discussed in subsequent sections of this Chapter.

6.2 Effective Capacity for FY 2024-25

Table 76: Effective Installed Capacity for Existing Generating Stations

Station	Installed Capacity	Units Operational	Capacity of Units (MW)	Total Capacity (MW)
NTPS	119.50	2	GT U#2 (17 MW), WHRU U#6 (9 MW)	26.00
LTPS	142.20	4	5,6,7 (20 MW Each), 8 (37.20 MW-WHRU)	97.20
KLHEP	100.00	2	1 (50), 2(50)	100.00
LRPP	69.76	7	1-7 (9.965 each)	69.76
NRPP	98.40	2	1(62.25), 2(36.15)	98.40

6.3 Plant Availability Factor (%)

6.3.1 APGCL, in its Petition, has submitted the Availability for existing Stations for FY 2024-25 as shown in the following Table:

Table 77: Plant Availability factor as projected by APGCL for FY 2024-25

Station	Tariff Order dated March 21, 2022	Projected by APGCL
NTPS	50%	50%
LTPS	50%	50%
KLHEP	85%	85%

Station	Tariff Order dated March 21, 2022	Projected by APGCL
LRPP	85%	85%
NRPP	85%	85%

Commission's Analysis

6.3.2 Regulations 48.1 and 50.1 of the MYT Regulations, 2021 specifies the NAPAF for recovery of full fixed charges, as 50% for both NTPS and LTPS, and 85% for KLHEP, LRPP, and NRPP.

Table 78: Plant Availability factor as approved by Commission for FY 2024-25

Station	Tariff Order dated March 21, 2022	Approved by Commission
NTPS	50%	50.00%
LTPS	50%	50.00%
KLHEP	85%	85.00%
LRPP	85%	85.00%
NRPP	85%	85.00%

6.4 Plant Load Factor (%)

6.4.1 APGCL projected the PLF (%) for existing Stations for FY 2024-25 as shown in the following Table:

Table 79: Plant Load Factor (%) as projected by APGCL

Station	Tariff Order dated March 21, 2022	APGCL's Submission
NTPS	50.00 %	50.00 %
LTPS	66.00 %	66.00 %
KLHEP	44.50%	44.50%
LRPP	90.00 %	90.00 %
NRPP	85.00%	85.00%

Commission's Analysis

6.4.2 The MYT Regulations, 2021 specifies the Normative PLF for availing Incentive as

50% for NTPS, 66% for LTPS, 44.50% for KLHEP, 90% for LRPP, and 85% for NRPP. Hence, the Commission approves PLF for Incentive for NTPS, LTPS, KLHEP, LRPP and NRPP as specified in the MYT Regulations, 2021. The incentive for Thermal Stations shall be computed at time of Truing up for FY 2024-25.

6.4.3 As regards KLHEP, MYT Regulations, 2021 specifies that in case the actual saleable energy in a year exceeds $\{DE \times (100 - AUX) * (100 - FEHS) / 10000\}$ MWh, the Energy Charge for the energy in excess of the above shall be billed equal to the lowest variable charges of the central sector thermal power generating stations in the North-Eastern Region. Accordingly, the incentive for actual energy generated over and above Design Energy shall be computed for KLHEP at time of Truing up.

6.4.4 For the purpose of projection of Generation, the Commission has considered the PLF as projected by APGCL.

6.5 Auxiliary Consumption (%)

6.5.1 APGCL submitted the Auxiliary Consumption for existing Stations for FY 2024-25 as per MYT Regulations, 2021, as shown in the following Table:

Table 80: Auxiliary Consumption as projected by APGCL

Station	Tariff Order dated March 21, 2022	APGCL's Submission
NTPS	4.50%	4.50%
LTPS	5.50%	5.50%
KLHEP	0.50%	0.50%
LRPP	3.50%	3.50%
NRPP	5.00%	5.00%

Commission's Analysis

6.5.2 Regulation 48.3 (a) & (b) of the MYT Regulations, 2021 specifies the Auxiliary Consumption of 4.50% for NTPS, 5.50% for LTPS, 3.50% for LRPP, and 5.00% for NRPP. Further, Regulation 50.1 of MYT Regulations, 2021 specifies the Auxiliary Consumption of 0.50% for KLHEP.

6.5.3 Accordingly, the Commission approves the Auxiliary Consumption as specified in the MYT Regulations, 2021.

6.6 Gross Generation and Net Generation

6.6.1 APGCL projected the Gross Generation and Net Generation for existing Generating Stations for FY 2024-25 as shown in the following Table:

Table 81: Gross Generation and Net Generation as projected by APGCL for FY 2024-25

Station	Gross Generation (MU)		Net Generation (MU)	
	Tariff Order dated 21 March 2022	APGCL's Submission	Tariff Order dated 21 March 2022	APGCL's Submission
NTPS	195.09	113.88	186.31	108.76
LTPS	425.74	425.74	402.32	402.32
KLHEP	390.00	390.00	388.05	388.05
LRPP	519.40	519.40	501.22	501.22
NRPP	732.69	732.69	696.06	696.06

Commission's Analysis

6.6.2 It is observed that APGCL has considered Gross Generation based on the effective capacity of the plants. Accordingly, the Gross Generation as proposed by APGCL for NTPS, LTPS, LRPP, KLHEP and NRPP is considered. The Commission has considered net generation after considering the Normative Auxiliary Consumption approved in ARR for FY 2024-25.

6.6.3 The Commission has computed the Net Generation based on above estimated Gross Generation and approved Auxiliary Consumption for FY 2024-25. The Gross Generation and Net Generation approved by the Commission for FY 2024-25 is shown in the following Table:

Table 82: Gross and Net Generation as approved by Commission for FY 2024-25

Station	Gross Generation (MU)	Net Generation (MU)
NTPS	113.88	108.76
LTPS	425.74	402.32
KLHEP	390.00	388.05
LRPP	519.40	501.22
NRPP	732.69	696.05

Station	Gross Generation (MU)	Net Generation (MU)
Total	2,181.70	2,096.40

6.7 Station Heat Rate

6.7.1 APGCL, in its Petition, has projected SHR for existing Stations for FY 2024-25 as shown in the following Table:

Table 83: Station Heat Rate (kcal/kWh) as submitted by APGCL for FY 2024-25

Station	Tariff Order dated March 21 2022	APGCL's Submission
NTPS	3900	3900
LTPS	3200	3200
LRPP	2150	2150
NRPP	1951	1988

Commission's Analysis

6.7.2 The Commission has approved the SHR for NTPS, LTPS and LRPP as per MYT Regulations, 2021. Accordingly, the Commission approves SHR of 3900 kcal/kWh for NTPS, 3200 kcal/kWh for LTPS, and 2150 kcal/kWh for LRPP for FY 2024-25. As per Tariff Order dated 21 March 2022, the Commission has approved SHR of 1951 kcal/kWh for NRPP.

6.8 Fuel Cost

6.8.1 APGCL has considered the following GCV and gas price for projecting fuel cost for FY 2024-25. APGCL has considered the gas price as notified for October 2023 for projecting fuel cost for FY 2024-25:

Table 84: GCV and Landed Price of Gas for FY 2024-25 claimed by APGCL

Station	Wt. Avg. Gross Calorific Value of Gas (kcal/SCM)	Wt. Avg. Price of Gas (Rs./1000 SCM)
NTPS	9251.70	13838.27
LTPS	9854.15	19982.90
LRPP	9246.32	22872.58

Station	Wt. Avg. Gross Calorific Value of Gas (kcal/SCM)	Wt. Avg. Price of Gas (Rs./1000 SCM)
NRPP	9251.70	13838.27

6.8.2 Based on the above GCV and gas prices, APGCL has projected the fuel cost for FY 2024-25 as shown in the following Table:

Table 85: Projected Landed Cost of Gas for FY 2024-25 as calculated by APGCL (Rs. Crore)

Particulars	Unit	NTPS	LTPS	LRPP	NRPP
Gross Generation	MU	113.88	425.74	519.40	732.69
Heat Rate	kcal/kWh	3900.00	3200.00	2150.00	1988.00
Overall Heat	G. cal.	9251.70	9854.15	9246.32	9251.70
GCV of gas	kcal/SCM	444132.00	1362355.20	1116700.82	1456580.56
Gas consumption	M. SCM	48.01	138.25	120.77	157.44
Price of Gas	Rs. /1000 SCM	13838.27	19982.90	22872.58	13838.27
Total cost of Gas	Rs. Crore	66.43	276.27	276.24	217.87

Commission's Analysis

6.8.3 In the MYT Order, the Commission had approved the Fuel Cost for NTPS, LTPS, LRPP, and NRPP for FY 2024-25 based on approved performance parameters and latest GCV and price of fuels available at that time. For the purpose of approving the fuel cost for FY 2024-25, the Commission has adopted the same approach and approves the Fuel cost based on performance parameters approved in this Order and latest fuel price and GCV.

6.8.4 The Commission has considered the GCV of gas as submitted by APGCL. The price of natural gas produced by OIL from their nomination fields (non-subsidised PPAC), shall be subject to ceiling of US\$6.50/MMBTU on GCV basis for that period. APM Natural Gas (subsidized) from nominated field has been considered at 60% of APM Natural Gas Non-Subsidized from nominated field. Thus, the price of gas for NTPS is considered at US\$3.90/MMBTU (60% of US\$6.50/MMBTU). For LTPS and LRPP, APGCL submitted that APM Nominated Non-subsidy Gas Price is US\$6.5/MMBTU,

while the Nominated subsidised GAIL price is US\$3.90/MMBTU (i.e., 60% of US\$6.5/MMBTU), and the Non-Nominated AGCL Price is US\$6.7/MMBTU (US\$0.2/MMBTU addition on PPAC price of US\$6.50/MMBTU). The Commission broadly agrees with the approach adopted by APGCL. However, the Commission notes that no justification has been submitted by APGCL for considering the price of Gas from AGCL as US\$0.2/MMBTU higher than PPAC price. Hence, for computation of Tariff, the Commission has considered the price of Gas from AGCL at US\$6.5/MMBTU, i.e., same as PPAC Price.

6.8.5 Hence, the Commission considers Wt. avg GCV and Price of Gas as shown in the following Table:

Table 86: GCV and Landed Price of Gas for FY 2024-25 considered by the Commission

Station	Submitted by APGCL		Considered by the Commission	
	Wt. Avg. Gross Calorific Value of Gas (kcal/SCM)	Wt. Avg. Price of Gas (Rs./1000 SCM)	Wt. Avg. Gross Calorific Value of Gas (kcal/SCM)	Wt. Avg. Price of Gas (Rs./1000 SCM)
NTPS	9251.70	13838.27	9251.70	13838.27
LTPS	9854.15	19982.90	9854.15	19,846.15
LRPP	9246.32	22872.58	9246.32	22872.58
NRPP	9251.70	13838.27	9251.70	13838.27

6.8.6 Any variation in the Gas prices shall be passed through under the FPPPA mechanism.

6.8.7 The Commission has approved the fuel cost for NTPS, LTPS, LRPP and NRPP based on approved Performance parameters, GCV of gas and landed price of gas. The fuel cost approved by the Commission for NTPS, LTPS, LRPP and NRPP for FY 2024-25 is shown in the following Table:

Table 87: Fuel Cost approved by the Commission for FY 2024-25

Sl. No.	Particulars	Unit	NTPS	LTPS	LRPP	NRPP
1	Gross Generation	MU	113.88	425.74	519.40	732.69
2	Heat Rate	kcal/kWh	3,900.00	3,200.00	2,150.00	1,951.00

Sl. No.	Particulars	Unit	NTPS	LTPS	LRPP	NRPP
3	GCV of gas	kcal/SCM	9,251.70	9,854.15	9,246.32	9,251.70
4	Overall Heat	G. cal.	4,44,132	13,62,355.20	11,16,700.82	14,29,471.17
5	Gas consumption	M. SCM	48.01	138.25	120.77	154.51
6	Price of Gas	Rs. /1000 SCM	13,838.27	19,846.15	22,872.58	13,838.27
7	Total Cost of Gas	Rs. Crore	66.43	274.38	276.24	213.81

6.9 O&M Expenses

6.9.1 APGCL has claimed O&M expenses for FY 2024-25 as Rs. 15.33 Crore for NTPS, Rs 52.60 Crore for LTPS, Rs. 38.74 Crore for KLHEP, Rs. 34.21 Crore for LRPP, and Rs 47.07 Crore for NRPP.

Commission's Analysis

6.9.2 The Commission in the Tariff Order dated March 21, 2022 has approved O&M Expenses on normative basis as per the MYT Regulations, 2021 for FY 2024-25. The Commission has computed normative O&M expenses by applying escalation factor applicable for FY 2024-25 (average of preceding 3 year's CPI and WPI inflation indices taken in 60:40 ratio as per MYT Regulations, 2021), i.e., 6.09%, on normative O&M Expenses for FY 2023-24 as approved in the APR, as shown in the following Table:

Table 88: Normative O&M Expenses for FY 2024-25 (Rs. Crore)

Station	Tariff Order dated March 21, 2022 considering full capacity	APGCL's Submission (effective capacity)	Normative O&M Approved by the Commission (full capacity)
NTPS	46.79	15.33	61.88
LTPS	47.50	52.60	70.68
KLHEP	36.90	38.74	37.74
LRPP	33.54	34.21	34.17
NRPP	25.37	47.07	25.85

6.10 Capital Expenditure and Capitalisation

6.10.1 APGCL submitted that the Commission in the Tariff Order dated March 21, 2022 has approved the Capital Investment Plan for FY 2024-25. APGCL has revised the schemes and corresponding outlay of the generating stations for FY 2024-25 and has claimed the following Capital Expenditure in the ARR for FY 2024-25:

Table 89: Capital Expenditure plan as submitted by APGCL for FY 2024-25 (Rs. Crore)

Station	Particulars	Tariff Order dated 21 March 2022	APGCL's submission
NTPS	Capital Expenditure	1.13	0.82
	Capitalisation	1.13	0.82
LTPS	Capital Expenditure	9.68	20.19
	Capitalisation	9.68	20.19
KLHEP	Capital Expenditure	13.10	36.49
	Capitalisation	13.10	36.49
LRPP	Capital Expenditure	0.30	8.74
	Capitalisation	0.30	8.74
NRPP	Capital Expenditure	5.05	2.90
	Capitalisation	5.05	2.90

Commission's Analysis

6.10.2 The Commission in the Tariff Order dated March 21, 2022 had approved the capital expenditure and capitalisation for the existing generating stations. APGCL has submitted revised Capital Expenditure plan for FY 2024-25. The Commission notes that many projects have been added for capital spares, Renovation and Modernization of Plants. In some approved works, estimated expenses have been increased from that approved in the MYT Order.

6.10.3 **The Commission notes that APGCL plans to increase Capital Expenditure in FY 2024-25 drastically due to taking up a number of new projects. The Commission also notes that Board approval has not been submitted for many of these Capital expenditure Projects. The Commission is of the view that approval of these new Capital Schemes without detailed assessment would not be prudent. Moreover, the Board of APGCL has to first review the necessity and prudence of these Schemes, and only after the Board approval can the Schemes even be considered for evaluation by the Commission. Hence, the Commission directs**

APGCL to approach the Commission in separate proceedings with all relevant information for in-principle approval of these new projects with detailed justification for not proposing these projects in MYT Petition, justification for taking up these Schemes now, Board approval for the Schemes, detailed cost estimation with cost breakup, and cost benefit analysis of the project.

6.10.4 The Work wise approval of Capital Expenditure Schemes is provided in **Annexure 3**. For the purpose of the ARR, the Commission provisionally considers the Capital Expenditure and Capitalisation as summarised in the following Table:

Table 90: Capital Expenditure and Capitalisation as considered by the Commission for FY 2024-25 (Rs. Crore)

Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP
Capital Expenditure	0.77	8.78	26.09	1.49	0.00
Capitalisation	0.77	8.78	26.09	1.49	0.00

6.10.5 The Commission notes that APGCL has considered all capitalisation to be funded from Debt. For the purpose of ARR, the Commission has considered the funding of Capitalisation for NTPS, LTPS, KLHEP, LRPP and NRPP as per MYT Order, as shown in the following Table:

Table 91: Funding of Capitalisation as considered by the Commission (Rs. Crore)

Particulars	NTPS	LTPS	KLHEP	LRPP	NRPP
Loan	0.12	7.33	24.60	0.45	0.00
Equity	0.00	0.00	0.00	0.00	0.00
Grant	0.65	1.45	1.49	1.04	0.00
Total Capitalisation	0.77	8.78	26.09	1.49	0.00

6.11 Depreciation

6.11.1 APGCL submitted that it has projected the depreciation in accordance with MYT Regulations, 2021, and based on approved GFA and proposed capital additions during FY 2024-25. APGCL has not considered the depreciation on assets funded through Grants/Subsidies as per Regulation 33 of MYT Regulations, 2021.

6.11.2 APGCL projected the Depreciation of Rs. 2.21 Crore for NTPS, Rs. 15.25 Crore for LTPS, Rs. 23.43 Crore for KLHEP, Rs. 14.02 Crore for LRPP, and 42.16 Crore for

NRPP for FY 2024-25.

Commission's Analysis

6.11.3 The Commission has considered the opening GFA for FY 2024-25 equivalent to the closing GFA for FY 2023-24 as approved in this Order. The Commission has computed depreciation as per scheduled rates specified in the MYT Regulations, 2021.

6.11.4 As per Regulation 33 of the MYT Regulations, 2021, the total depreciation during the life of the asset shall not exceed 90% of the original cost of Asset. The Commission has computed the depreciation separately for assets added under each asset head in each year. The Commission has disallowed the depreciation in excess of 90% of the original cost of asset under different asset heads.

6.11.5 Further, in line with the approach adopted in the Tariff Order and as specified in Regulation 33 of the MYT Regulations, 2021, the Commission has not considered the depreciation on assets funded through Grants/ capital subsidy, for FY 2024-25.

Table 92: Depreciation for FY 2024-25 as approved by the Commission (Rs. Crore)

Station	Particulars	Tariff Order dated March 21, 2022	APGCL's Submission	Approved by Commission
NTPS	Depreciation	1.4	2.21	1.68
	Less: Depreciation on assets funded by Grants	0.1	0.00	0.13
	Net Depreciation	1.30	2.21	1.54
LTSP	Depreciation	17.09	15.25	16.62
	Less: Depreciation on assets funded by Grants	2.15	0.00	2.28
	Net Depreciation	14.93	15.25	14.34
KLHEP	Depreciation	23.96	23.43	24.29
	Less: Depreciation on assets funded by Grants	2.39	0.00	1.26
	Net Depreciation	21.58	23.43	23.03
LRPP	Depreciation	13.73	14.02	13.76
	Less: Depreciation on assets funded by Grants	11	0.00	9.07

Station	Particulars	Tariff Order dated March 21, 2022	APGCL's Submission	Approved by Commission
	Net Depreciation	2.74	14.02	4.68
NRPP	Depreciation	36.27	42.16	34.01
	Less: Depreciation on assets funded by Grants	0	0.00	0.00
	Net Depreciation	36.27	42.16	34.01

6.11.6 The Station-wise computation of Depreciation is provided in **Annexure 2** to this Order.

6.12 Interest on Loan

6.12.1 APGCL has computed the Interest on loan as per the methodology specified in the MYT Regulations, 2021. APGCL submitted that the opening normative loan as on April 1, 2024 has been taken as the base and the additions during the period have been considered to arrive at the normative loan for FY 2024-25. APGCL estimated the Interest on Loan of Rs. 0.28 Crore for NTPS, Rs. 1.03 Crore for LTPS, Rs. 10.64 Crore for KLHEP, Rs. 0.63 Crore for LRPP, and Rs 39.99 Crore for NRPP.

Commission's Analysis

6.12.2 In the MYT Order, the Commission has approved Interest and finance charges on normative basis for FY 2024-25 as per Regulation 35 of the MYT Regulations, 2021. For the ARR, the Commission has considered the same approach and approved the Interest and finance charges on normative basis.

6.12.3 The closing net normative loan for FY 2023-24 as approved in this Order has been considered as opening net normative loan for FY 2024-25. The addition of loan has been considered equal to debt portion of capitalised works as approved in this Order. The loan repayment has been considered equivalent to Depreciation approved in this Order. As per MYT Regulations, 2021, weighted average rate of interest shall be computed based on actual outstanding loan as on 1st of April. Since FY 2024-25 is yet to commence, the Commission has considered the weighted average interest rate of 10.35% for FY 2024-25, i.e., same as considered in the APR for FY 2023-24.

6.12.4 The Interest on loan capital approved by the Commission for FY 2024-25 is shown in the following Table:

Table 93: Interest on Loan Capital for FY 2024-25 as approved by the Commission (Rs. Crore)

Station	Particulars	Tariff Order dated March 21, 2022	APGCL's Submission	Approved by Commission
NTPS	Net Normative Opening Loan	0.00	3.41	0.63
	Addition of normative loan during the year	0.44	0.82	0.12
	Normative Repayment during the year	1.30	2.21	1.54
	Net Normative Closing Loan	0.00	2.02	0.00
	Interest Rate	10.79%	10.31%	10.35%
	Interest on Loan Capital	0.00	0.28	0.03
LTPS	Net Normative Opening Loan	0	7.53	0.00
	Addition of normative loan during the year	5.88	20.19	7.33
	Normative Repayment during the year	14.93	15.25	14.34
	Net Normative Closing Loan	0.00	12.46	0.00
	Interest Rate	10.79%	10.31%	10.35%
	Interest on Loan Capital	0.00	1.03	0.00
KLHEP	Net Normative Opening Loan	144.51	96.69	84.20
	Addition of normative loan during the year	11.75	36.49	24.60
	Normative Repayment during the year	21.58	23.43	23.03
	Net Normative Closing Loan	134.68	109.75	85.77
	Interest Rate	10.79%	10.31%	10.35%
	Interest on Loan Capital	15.06	10.64	8.80
LRPP	Net Normative Opening Loan	20.21	8.76	17.01
	Addition of normative loan during the year	0.3	8.74	0.45
	Normative Repayment during the year	2.74	14.02	4.68

Station	Particulars	Tariff Order dated March 21, 2022	APGCL's Submission	Approved by Commission
	Net Normative Closing Loan	17.77	3.48	12.78
	Interest Rate	10.79%	10.31%	10.35%
	Interest on Loan Capital	2.05	0.63	1.54
NRPP	Net Normative Opening Loan	403.52	407.48	423.51
	Addition of normative loan during the year	0.00	2.90	0.00
	Normative Repayment during the year	36.27	42.16	34.01
	Net Normative Closing Loan	367.25	368.22	389.50
	Interest Rate	10.79%	10.31%	10.35%
	Interest on Loan Capital	41.57	39.99	42.07

6.13 Return on Equity

6.13.1 APGCL has computed the RoE on average equity for the year at rate of return of 15.5% as per the MYT Regulations, 2021. APGCL has projected RoE of Rs. 9.04 Crore, Rs. 23.35 Crore, Rs. 24.29 Crore, Rs. 12.71 and Rs 33.90 Crore for NTPS, LTPS, KLHEP, LRPP, and NRPP, respectively, for FY 2024-25.

Commission's Analysis

6.13.2 The Commission has approved the RoE in accordance with Regulation 34 of the MYT Regulations, 2021. The Commission has not considered any addition of equity for capitalised works as approved in this Order. However, the Commission notes there has been some grants, which are yet to be converted to equity. The same would be converted subject to the normative ceiling of 30% of GFA. The detailed computation of allowable equity addition due to such conversion of grant in FY 2024-25 is provided in **Annexure – 4 C**. The approved RoE at 15.50% is shown in the Table below:

Table 94: Return on Equity for FY 2024-25 as approved by the Commission (Rs. Crore)

Station	Particulars	Tariff Order dated March 21 2022	APGCL Submission	Approved by the Commission
NTPS	Opening Equity	55.00	58.29	57.57
	Closing Equity	55.00	58.29	58.94
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	8.53	9.04	9.03
LTPS	Opening Equity	143.08	150.64	147.50
	Closing Equity	143.08	150.64	151.95
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	22.18	23.35	23.21
KLHEP	Opening Equity	68.65	156.68	149.78
	Closing Equity	68.65	156.68	153.33
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	10.64	24.29	23.49
LRPP	Opening Equity	15.74	82.03	67.23
	Closing Equity	15.74	82.03	68.35
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	2.44	12.71	10.51
NRPP	Opening Equity	218.69	218.69	218.69
	Closing Equity	218.69	218.69	218.69
	Rate of Return	15.50%	15.50%	15.50%
	Return on Equity	33.90	33.90	33.90

6.14 Interest on Working Capital (IoWC)

6.14.1 APGCL has computed the IoWC as per provisions of the MYT Regulations, 2021 for existing generating Stations for FY 2024-25, and has considered the rate of interest as 11.53%. APGCL has projected IoWC of Rs. 2.92 Crore for NTPS, Rs. 12.57 Crore for LTPS, Rs 3.53 Crore for KLHEP, Rs. 11.52 Crore for LRPP, and Rs 13.27 Crore for NRPP for FY 2023-24.

Commission's Analysis

6.14.2 The Commission has computed IoWC in accordance with Regulation 37 of the MYT Regulations, 2021. Rate of Interest has been considered equal to the normative

interest rate of three Hundred (300) basis points above the average SBI MCLR (One-Year Tenor) prevalent during the last available 6 months for the determination of tariff, which works out to 11.53%.

6.14.3 IoWC approved by the Commission for FY 2024-25 is shown in the following Table:

Table 95: Interest on Working Capital for FY 2024-25 as approved by the Commission (Rs. Crore)

Station	Particulars	Tariff Order dated March 21, 2022	APGCL's Estimation	Approved by Commission
NTPS	Fuel Cost for one month	3.78	5.54	5.54
	O&M Expenses for one month	3.90	1.28	5.16
	Maintenance Spares-30% of O&M	14.04	4.60	18.56
	Receivables for two months	16.59	13.91	23.46
	Total Working Capital Requirement	38.31	25.33	52.71
	Rate of interest	10.00%	11.53%	11.53%
	Interest on Working capital	3.83	2.92	6.08
LTPS	Fuel Cost for one month	9.64	23.02	22.86
	O&M Expenses for one month	3.96	4.38	5.89
	Maintenance Spares-30% of O&M	14.25	15.78	21.20
	Receivables for two months	37.29	65.87	67.95
	Total Working Capital Requirement	65.14	109.06	117.91
	Rate of interest	10.00%	11.53%	11.53%
	Interest on Working capital	6.51	12.57	13.60
KLHEP	O&M Expenses for one month	3.07	3.23	3.14
	Maintenance Spares-15% of O&M	5.53	11.62	5.66
	Receivables for two months	13.44	15.81	13.63
	Total Working Capital Requirement	22.04	30.66	22.44
	Rate of interest	10.00%	11.53%	11.53%

Station	Particulars	Tariff Order dated March 21, 2022	APGCL's Estimation	Approved by Commission
	Interest on Working capital	2.20	3.53	2.59
LRPP	Fuel Cost for one month	7.91	23.02	23.02
	O&M Expenses for one month	2.79	2.85	2.85
	Maintenance Spares-30% of O&M	10.06	10.26	10.25
	Receivables for two months	29.08	63.86	62.05
	Total Working Capital Requirement	49.84	100.00	98.17
	Rate of interest	10.00%	11.53%	11.53%
	Interest on Working capital	4.98	11.52	11.32
NRPP	Fuel Cost for one month	7.27	18.16	17.82
	O&M Expenses for one month	2.01	3.92	2.15
	Maintenance Spares-30% of O&M	7.23	14.12	7.75
	Receivables for two months	38.80	78.91	59.96
	Total Working Capital Requirement	55.30	115.11	87.68
	Rate of interest	10.00%	11.53%	11.53%
	Interest on Working capital	5.54	13.27	10.11

6.15 Impact of AERC (Payment of Fees, etc.) Regulations, 2020

6.15.1 APGCL submitted that the Commission has notified the new AERC (Payment of Fees, etc.) Regulations, 2020, which has led to an increase in the Filing Fees of APGCL payable to AERC. In this regard, APGCL has claimed Rs 0.30 Crore for NTPS, LTPS and LRPP for FY 2024-25.

Commission's Analysis

6.15.2 The Commission has allowed additional expenses for Petition Filing fees of Rs. 0.30 Crore for NTPS, LTPS and LRPP for FY 2024-25.

6.16 Other Expenses

6.16.1 Special R&M Expenses

6.16.1.1 APGCL claimed the following Special R&M expenses to be incurred in FY 2024-25:

Table 96: Special R&M Expenses claimed by APGCL in FY 2024-25 (Rs. Crore)

Sl. No.	Description of Works	Approved	Revised	Remarks
NTPS				
1	Overhauling of Steam Turbine Unit 6 (Execution Part) excluding procurement of spares		80	Tender is under process. Execution delayed due to delay in procurement of spares
2	Overhauling of Gas Turbine Unit 2 (Execution Part) excluding procurement of spares	80	80	
LTPS				
1	Procurement of spares for Major inspection of Gas Turbine Unit 6	2600	2600	
2	Overhauling of LTPS Gas Compressor U#7		500	<p>Spares procured in part.</p> <p>APGCL submitted for approval of the work through additional submission to the MYT Petition for FY 2022-25, Review Petition for the same, and in the Tariff Petition for FY 2023-24. The Commission stated in the APR Order for FY 2022-23 that it would take a decision on final approval of this work during the true-up.</p> <p>As the work was of important nature, APGCL has already procured part spares by arranging fund of Rs. 3.50 Crore. APGCL still needs to procure some additional spares for the work and execute the service part with an estimated amount of Rs. 1.50 Crore. APGCL is submitting for appraisal of</p>

Sl. No.	Description of Works	Approved	Revised	Remarks
				the work in the ARR for FY 2024-25 for an amount of Rs. 5.00 Crore for the whole work and will submit the details of the actual expenditure at the time of True-up after completion of the work as stated by the Commission in the Tariff Order of FY 2023-24.
	LRPP			
1	16,000 and 48,000 Running Hours Maintenance	3375	3375	
	NRPP			
1	HGPI for GT Unit of NRPP		7919	As per the directive of the Commission, APGCL has submitted the details along with the DPR and cost benefit analysis for the work along with Tariff Petition for FY 2024-25

Commission's Analysis:

6.16.1.2 The Commission is of the view that Special R&M has been allowed by the Commission in order to improve the performance parameters of the stations. Deferment of Special R&M would affect the performance of the plant. However, the Commission has not been allowing any relaxation in norms on account of performance parameters in its Tariff Orders as claimed by APGCL, therefore, the impact of deterioration of performance parameters due to deferment of Special R&M shall be to APGCL's account. Also, APGCL has claimed Rs. 5 Crore in Special R&M for Capital spares for Overhauling of LTPS Gas Compressor of Unit 7. The Commission notes that APGCL has not submitted any specific Board approval for these spares. The Commission is of the view that the Special R&M schemes can be considered by the Commission only after the Board approval. Also, only the expense that is essential for efficient operation of the plant may be allowed under this expense head.

6.16.1.3 The Commission also notes that APGCL has prayed for HGPI for GT unit of NRPP under Special R&M. The Commission notes that no specific Board approval for HGPI has been submitted by APGCL, The Commission also notes that APGCL has also not finalised whether Long Term Service Agreement (LTSA) of NRPP would be done.

Also, the Commission notes that the expense is not for FY 2024-25 but for FY 2025-26 hence, it should not be considered for FY 2024-25. The Commission recommends to finalise the projected mandatory expenses for this by the time of next MYT Petition to be submitted in November 2024 and claim the same under O&M expense.

6.16.1.4 The Special R&M approved by the Commission for NTPS, LTPS, LRPP as provided below:

Description of Works	Approved by Commission in MYT Order	Claimed by APGCL	Approved by the Commission
NTPS			
Overhauling of Steam Turbine Unit 6 (Execution Part) excluding procurement of spares.		0.80	0.80
Overhauling of Gas turbine Unit 2 (Execution Part) excluding procurement of spares	0.80	0.80	0.80
Total	0.80	1.60	1.60
LTPS			
Procurement of spares for Major inspection of Gas Turbine unit # 6	26.00	26.00	26.00
Overhauling of LTPS Gas Compressor U#7		5.00	0.00
Total	26.00	31.00	26.00
LRPP			
16,000 and 48,000 Running Hours Maintenance	33.75	33.75	33.75
Total	33.75	33.75	33.75
NRPP			
HGPI for GT Unit of NRPP		79.19	0.00
Total	0.00	79.19	0.00
Grand Total	60.55	145.54	61.35

6.16.1.5 The Commission has thus, considered Special R&M of Rs. 1.6 Crore for NTPS, Rs. 26.00 Crore for LTPS, and Rs. 33.75 Crore for LRPP in ARR of FY 2024-25.

6.17 Non-Tariff Income

6.17.1 APGCL has projected the Non-Tariff Income for existing Generating stations for FY 2024-25 as Rs. 7.13 Crore for NTPS, Rs. 9.22 Crore for LTPS, Rs. 5.75 Crore for KLHEP, and Rs. 0.00 Crore for LRPP and NRPP.

Commission's Analysis

6.17.2 For the purpose of ARR, the Commission provisionally approves the Non-Tariff Income for FY 2024-25 same as approved in the true-up for FY 2022-23 as shown in the following Table:

Table 97: Other Income approved for FY 2024-25 (Rs. Crore)

Station	Approved in Tariff Order dated 21 March 2022	APGCL's Estimation	Approved by the Commission
NTPS	7.13	7.13	5.96
LTPS	9.22	9.22	14.61
KLHEP	5.75	5.75	13.86
LRPP	0.00	0.00	0.00
NRPP	0.00	0.00	0.00

6.18 Summary of ARR for FY 2024-25

6.18.1 Based on the above analysis, the station-wise ARR approved for FY 2024-25 for existing Stations is summarised in the Table below:

Sr. No.	Particulars	NTPS			LTPS			KLHEP			LRPP			NRPP		
		Tariff Order dated March 21, 2022	APGCL's Submission	Approved in APR	Tariff Order dated March 21, 2022	APGCL's Submission	Approved in APR	Tariff Order dated March 21, 2022	APGCL's Submission	Approved for APR	Tariff Order dated March 21, 2022	APGCL's Submission	Approved in APR	Tariff Order dated March 21, 2022	APGCL's Submission	Approved in APR
A	Annual Fixed Charges															
1	Operation & Maintenance Expenditure	46.79	15.33	61.88	47.50	52.60	70.68	36.90	38.74	37.74	33.54	34.21	34.17	25.37	47.07	25.85
2	Increase in AERC Tariff Filing Fees	0.10	0.10	0.10	0.10	0.10	0.10	-	-	-	0.10	0.10	0.10			
3	Interest & Finance Charges	-	0.06	0.03	-	0.70	-	15.06	10.64	8.80	2.05	0.62	1.54	41.57	39.99	42.07
4	Interest on working Capital	3.83	2.92	6.08	6.51	12.57	13.60	2.20	3.53	2.57	4.98	11.52	11.32	5.53	13.27	10.11
5	Depreciation	1.30	2.21	1.54	14.93	15.25	14.34	21.58	23.43	23.03	2.74	14.02	4.68	36.27	42.16	34.01
6	Return on Equity	8.53	1.97	9.03	22.18	15.96	23.21	10.64	24.25	23.49	2.44	12.71	10.51	33.90	33.92	33.90
7	Special R&M	0.80	1.60	1.60	26.00	31.00	26.00	-	-	-	33.75	33.75	33.75	0	79.19	0
8	Less: Other Income	-7.13	-7.13	-5.96	-9.22	-9.22	-14.61	-5.75	-5.75	-13.86	0.00	0.00	0.00	-	-	-
9	Total Fixed Charges	54.22	17.06	74.31	108.01	118.97	133.32	80.63	94.84	81.78	79.60	106.93	96.08	142.63	255.61	145.93
10	Fuel Cost	46.43	66.43	66.43	115.74	276.27	274.38	-	-	-	94.87	276.24	276.24	87.24	217.87	213.81
11	Total Revenue Requirement	100.65	83.49	140.74	223.75	395.23	407.69	80.63	94.84	81.78	174.47	383.17	372.31	229.87	473.48	359.75

6.19 Net ARR for Effective Capacity

6.19.1 The Commission has considered the Net ARR computed on the effective capacity of NTPS and LTPS as stated earlier. The Commission has considered the effective capacity of 26 MW for NTPS on account of Unit 2 (or Unit 3) and Unit 6 being operational in FY 2024-25 due to commissioning of NRPP. Further, the effective capacity of LTPS has been considered as 97.20 MW.

6.19.2 Accordingly, the Commission has computed the Net ARR for NTPS and LTPS at effective capacity, as shown in the Table below:

Table 98: ARR for Existing Generating Stations for FY 2024-25 as approved by the Commission at Effective Capacity (Rs. Crore)

Particulars	NTPS	LTPS
Total Fixed Cost approved on installed capacity	78.57	121.83
Deduction of Fixed cost due to Decommissioning	61.47	38.55
Total Fixed Cost approved at effective Capacity	17.09	83.27
Add: AERC Filing Fees	0.10	0.10
Add: Special R&M	1.60	26.00
Less Non-Tariff Income	5.96	14.61
Total Fixed Cost approved for effective capacity	12.83	94.76
Add: Fuel Cost	66.43	274.38
Net ARR approved for effective capacity	79.27	369.14

7 Tariff for FY 2024-25

7.1 Cumulative Revenue Gap/(Surplus) and Net ARR for recovery

7.1.1 APGCL has computed the cumulative Revenue Gap/(Surplus) after True-up of FY 2022-23, without carrying cost, as Rs. 176.94 Crore.

Commission's Analysis

7.1.2 For computation of cumulative past Revenue Gap/(Surplus) for recovery, the Commission has considered the Revenue Gap/(Surplus) after truing up of FY 2022-23 approved in this Order along with carrying/holding cost. No Revenue Gap/(Surplus) arising out of APR of FY 2023-24 has been proposed to be recovered through tariff in FY 2024-25, in accordance with the MYT Regulations, 2021.

7.1.3 The Commission has computed the cumulative Revenue Gap/(Surplus) as shown in the following Table:

Table 99: Revenue Gap/(Surplus) for FY 2022-23 as approved by the Commission (Rs. Crore)

Particulars	Submitted by APGCL	Approved after Truing up
Truing up for FY 2022-23		
ARR for NTPS*	162.79	158.06
ARR for LTPS*	476.54	434.74
ARR for KLHEP	119.46	94.98
ARR for LRPP	382.35	366.41
ARR for NRPP	421.38	288.70
Combined ARR	1,562.52	1,342.89
Revenue from Sale of Power	1,385.55	1,385.55
Revenue Gap/(Surplus)	176.96	(42.67)
Carrying /(holding) cost for FY 2022-23 @ 10.79%		(2.30)
Carrying /(holding) cost for FY 2023-24 @11.53%		(4.92)
Carrying /(holding) cost for FY 2024-25 @ 11.53%		(2.46)
Total	-	(9.69)
Cumulative Revenue Gap/(Surplus) along with Carrying/(Holding) Cost	176.96	(52.35)

Note: *Considering effective capacity

7.1.4 The Commission approves the Revenue Surplus of Rs. 52.35 Crore arising out of Truing up for FY 2022-23, including the holding cost. This amount is to be refunded to APDCL in 9 equal monthly instalments starting from July 2024, viz., Rs 5.82 Crore per month during FY 2024-25, as adjustments in the monthly bill.

7.2 Fixed Charges and Energy Charges for FY 2024-25 for NTPS, LTPS, LRPP and NRPP

7.2.1 APGCL has proposed the Generation Tariff for NTPS and LTPS as shown in the following Table:

Table 100: Proposed Generation tariff as submitted by APGCL (Rs. Crore)

Station	Particulars	FY 2024-25
NTPS	Annual Fixed Charges (Rs. Crore)	17.06
	Monthly Fixed Charges (Rs. Crore)	1.42
	Energy Charges (Rs. /kWh)	6.11
LTPS	Annual Fixed Charges (Rs. Crore)	118.97
	Monthly Fixed Charges (Rs. Crore)	9.91
	Energy Charges (Rs. /kWh)	6.82
KLHEP	Annual Fixed Charges (Rs. Crore)	47.43
	Monthly Fixed Charges (Rs. Crore)	3.95
	Energy Charges (Rs. /kWh)	1.22
LRPP	Annual Fixed Charges (Rs. Crore)	106.93
	Monthly Fixed Charges (Rs. Crore)	8.91
	Energy Charges (Rs. /kWh)	5.51
NRPP	Annual Fixed Charges (Rs. Crore)	255.61
	Monthly Fixed Charges (Rs. Crore)	21.30
	Energy Charges (Rs. /kWh)	3.13

Commission's Analysis

7.3.1 The Commission has determined the Tariff for FY 2024-25 for NTPS, LTPS, LRPP and NRPP as under:

Annual Fixed Charges

7.3.2 In earlier Chapter, the Commission has determined the Annual Fixed Charges for NTPS, LTPS, LRPP and NRPP. Regulation 48.1 and 48.2 of the MYT Regulations, 2021 specifies that the NAPAF for full recovery of Annual Fixed Charges shall be 50% for both NTPS and LTPS and 85% for LRPP and NRPP, respectively.

7.3.3 The Fixed Charges for NTPS, LTPS, LRPP and NRPP as approved by the Commission for FY 2024-25 is shown in the following Table:

Table 101: Fixed Charges as approved for FY 2024-25 by the Commission (Rs. Crore)

Generating Station	Annual Fixed Charges	Monthly Fixed Charges
NTPS	12.83	1.07
LTPS	94.76	7.90
LRPP	96.08	8.01
NRPP	145.93	12.16

7.3.4 However, in the event of actual Availability for the year, computed in accordance with Regulation 48.1 of the MYT Regulations, 2021, being less than the Normative Availability, the Fixed Charges shall be proportionately adjusted as per the MYT Regulations, 2021.

Energy Charges

7.3.5 The Commission has determined the Energy Charges (on energy sent-out basis) for NTPS, LTPS and LRPP as shown in the following Table:

Table 102: Energy Charges for FY 2024-25 approved by the Commission (Rs. Crore)

Station	Particulars	FY 2024-25
NTPS	Fuel Cost (Rs. Crore)	66.43
	Net Generation (MU)	108.76
	Energy Charges (Rs. /kWh)	6.11
LTPS	Fuel Cost (Rs. Crore)	274.38
	Net Generation (MU)	402.32
	Energy Charges (Rs. /kWh)	6.82
LRPP	Fuel Cost (Rs. Crore)	276.24
	Net Generation (MU)	501.22

Station	Particulars	FY 2024-25
	Energy Charges (Rs. /kWh)	5.51
NRPP	Fuel Cost (Rs. Crore)	213.81
	Net Generation (MU)	696.05
	Energy Charges (Rs. /kWh)	3.07

7.5 Capacity Charges and Energy Charge Rate for KLHEP

7.5.1 APGCL has proposed the tariff for KLHEP as shown in the following Table:

Table 103: Proposed Generation tariff for KLHEP as submitted by APGCL

Station	Particulars	FY 2024-25
KLHEP	Capacity Charges (Rs. Crore)	47.43
	Energy Charges (Rs. /kWh)	1.22

Commission's Analysis

7.5.2 Regulation 50.1 of the MYT Regulations 2021 specifies the computation of Capacity Charges and Energy Charges for Hydro Generating Stations. The Commission has determined the Capacity Charges and Energy Charges for KLHEP for FY 2024-25 based on the applicable AFC and projected Availability as under:

Table 104: Capacity Charges and Energy Charges approved by the Commission for KLHEP for FY 2024-25

Particulars	Amount
Annual Fixed Charge (Rs. Crore)	81.78
Capacity Charges (Rs. Crore)	40.89
Design Energy (MU)	390.00
Auxiliary Consumption (%)	0.50%
Net Design Energy (MU)	388.05
Energy Charge Rate (Rs. /kWh)	1.05

7.5.3 The Capacity Charges shall be charged for calendar month on monthly basis as per Regulation 52.1 and 52.2 of MYT Regulations, 2021.

7.6 Generation Tariff for FY 2024-25

7.6.1 The Commission approves the Generation Tariff for FY 2024-25 as shown in the following Table:

Table 105: Generation Tariff for FY 2024-25 approved by the Commission

Station	Particulars	FY 2024-25
NTPS	Annual Fixed Charges (Rs. Crore)	12.83
	Monthly Fixed Charges (Rs. Crore)	1.07
	Energy Charges (Rs. /kWh)	6.11
LTPS	Annual Fixed Charges (Rs. Crore)	94.76
	Monthly Fixed Charges (Rs. Crore)	7.90
	Energy Charges (Rs. /kWh)	6.82
LRPP	Annual Fixed Charges (Rs. Crore)	96.08
	Monthly Fixed Charges (Rs. Crore)	8.01
	Energy Charges (Rs. /kWh)	5.51
KLHEP	Capacity Charges (Rs. Crore)	40.89
	Monthly Capacity Charges (Rs. Crore)	3.41
	Energy Charge Rate (Rs. /kWh)	1.05
NRPP	Annual Fixed Charges (Rs. Crore)	145.93
	Monthly Fixed Charges (Rs. Crore)	12.16
	Energy Charges (Rs. /kWh)	3.07

7.6.2 Since, the Commission has determined Station-wise Generation Tariff for FY 2024-25, the billing shall be done for each station separately on monthly basis in accordance with the provisions of MYT Regulations, 2021.

7.7 Applicability of Tariff

7.7.1 The approved Generation tariff for FY 2024-25 shall be effective from April 1, 2024 and shall continue until replaced/modified by an Order of the Commission. The under/over recovery in Generation Tariff for the months of April, May, and June 2024 on account of levy of Generation Tariff approved in the Tariff Order for FY 2023-24, shall be billed/adjusted equally in the bills of subsequent months in FY 2024-25 (July 2024 to March 2025) raised to APDCL.

Sd/-

(A. Bhattacharyya)

Member, AERC

Sd/-

(S.N. Kalita)

Member, AERC

Sd/-

(K. S. Krishna)

Chairperson, AERC

8 Directives

The Commission issued certain directives to APGCL in the past Tariff Orders, with an objective of attaining operational efficiency and streamlining the flow of information, which would be beneficial to the sector and the Petitioner, both in the short-term and long-term.

As regards the directives issued by the Commission, APGCL has submitted the report to the Commission on compliance of directives issued in the Tariff Order dated 21st March, 2022. The Commission has reviewed the compliance of directives submitted by APGCL and the status is as follows:

Status of Directives issued in the Tariff Order dated 29th March, 2023

Directive 1: Completion of Projects

The Commission directs APGCL to complete the new and ongoing projects on time. The Commission also directs APGCL to set up their ongoing Solar Plants on Time.

Status:

The status of ongoing projects has been submitted to the Commission.

Directive 2: Procurement of Gas

APGCL should continue to pursue with its gas suppliers/ transporter to obtain the contracted quantum of gas on a regular basis. The issue of gas should be pursued with the concerned ministry of GOI in consultation with the state Government.

Status:

Correspondence with OIL (Oil India Ltd.) regarding the supply of contracted quantity as well as supply of additional gas for the new Projects has been made and requested to forward the proposal to MoPNG (Ministry of Petroleum and Natural Gas) for allocation etc.

Directive 3: Fixed Asset Register

The Commission directs APGCL that Fixed Asset Register should be updated every year, and these should be duly certified by Chartered Accountant. APGCL is directed to maintain Fixed Asset Register at their end and submit to the Commission as and when asked during tariff proceedings.

Status:

APGCL updates its FAR regularly and is ready to submit to the Commission whenever asked

for.

Directive 4: Energy Audit of LTPS and NTPS

The Commission directs APGCL to conduct an energy Audit of LTPS and NTPS with the help of NIT Silchar.

Status:

A report was submitted along with 1st Quarter compliance of directives for FY 2022-23 as per the directives of the Commission.

Directive 5: Overhauling of Units

Commission observes that the Overhauling of units are never completed on time as proposed by APGCL. The Commission directs APGCL to complete the overhauling of units as per scheduled otherwise the Commission may not allow the expenditure in future.

Status:

APGCL is putting all-out effort to complete the Special R&M works approved in the Tariff Order for the FY 2022-23 within stipulated time period.

However, the overhauling is dependent on factors like running hours, commercial availability of parts of machinery, etc., so sometimes it may differ from the stipulated time frame. APGCL has submitted the detailed justification of overhauling period to the Commission. Moreover, for hydro power plant, the time required to complete the overhauling of units for different utilities have been submitted.

Directive 6: Solar Storage/ Pump Storage

The Commission directs APGCL to initiate action for installation of solar/pump storage facilities to suit the demand.

Status:

APGCL has floated a tender of engagement of consultant for preparation of PFR (Pre-feasibility Report) and DPR of pumped storage projects in Assam.

Directive 7: Board approval of Special R&M/Capital Projects/Schemes/Works

The Commission directs APGCL to submit approval of the board or any other competent authority for all Special R&M/ Capital Projects/Schemes/ Works proposed to be undertaken by the Petitioner. The Commission also directs APGCL to approach the Commission separately for its projects, which were not included in the capital investment plan approved in the MYT Order.

Status:

New Special R&M/ Capital Projects/Schemes/Works proposed will be submitted to the Commission in the Tariff Petition for Revised ARR & determination of tariff for FY 2024-25.

New Directives:

The Commission hereby issues the following directives to APGCL:

Directive 1: Completion of Projects

The Commission directs APGCL to complete the new and ongoing projects on time. The Commission also directs APGCL to set up their ongoing Solar Plants on time.

Directive 2: Procurement of gas

APGCL should continue to pursue with its gas suppliers/ transporter to obtain the contracted quantum of gas on a regular basis. The issue of gas should be pursued with the concerned ministry of GOI in consultation with the State Government.

Directive 3: Fixed Asset Register

The Commission directs APGCL that Fixed Asset Register should be updated every year, and these should be duly certified by Chartered Accountant. APGCL is directed to maintain Fixed Asset Register at their end and submit to the Commission as and when asked during tariff proceedings.

Directive 4: Undertaking Special R&M in time-bound manner

The Commission observes that APGCL undertakes bulk of the Special R&M approved for a year in subsequent years only. APGCL has sought and received approval for the Special R&M

based on the justification that the Special R&M is necessary for a particular year, but does not undertake the Special R&M in that year. APGCL is directed to execute the Special R&M in time-bound manner so that no cost overrun takes place.

Directive 5: Special R&M linked to the operational running hours

The Commission notes that APGCL is praying for routine maintenance expenses that are linked to running hours of the plant in the APR or True up of the plant for that year.

APGCL is directed to ensure that all such Special R&M linked to operational running hours based on OEM recommendations are prayed for the original Tariff Petition for that year, rather than being submitted at the time of APR or true-up.

Directive 6: Unit-wise detailed breakup of Capex and Special R&M in new control period

APGCL is directed to submit Unit wise detailed breakup of Capex and Special R&M envisaged in the MYT Petition for the next Control Period in its Capital Investment Plan (CIP) and Special R&M plan.

APGCL is further directed to submit its CIP and Special R&M Plan with Board approval of individual scheme envisaged, detailed justification, and cost benefit analysis of the scheme.

Directives 7: Solar Storage/ Pump Storage

The Commission directs APGCL to initiate action for installation of solar/pump storage facilities to suit the demand.

Further, APGCL is directed to submit the status of compliance of above Directives to the Commission at the end of each quarter. The Commission will review the status in the month following the end of the quarter.

Sd/-
(A. Bhattacharyya)
Member, AERC

Sd/-
(S.N Kalita)
Member, AERC

Sd/-
(K.S. Krishna)
Chairperson, AERC

Annexure 1 - Minutes of the 33rd Meeting of the State Advisory Committee

Venue: AERC Conference Hall.

Day/Dated: Wednesday, 10th January 2024

List of members/special invitees: At Annexure-1 (Enclosed)

The 33rd Meeting of the State Advisory Committee (SAC) was chaired by the Hon'ble Chairperson, AERC, Kumar Sanjay Krishna, IAS, (Retd.).

At the onset, Hon'ble Chairperson, AERC welcomed all members and invitees. In the welcome address, the Hon'ble Chairperson, AERC highlighted that the fuel and power purchase cost accounts for more than 90% of the Aggregate Revenue Requirement (ARR) of APDCL. Therefore, this cost needs to be contained in order to bring down the power tariff. More than 70% of the installed generating capacity of APGCL is natural gas based. In the tariff Order for this ongoing year i.e. FY 2023-24, the gas price was fixed as US \$ 2.90 /MMBTU keeping in mind the declining trend of international gas prices during January- March, 2023. However, gas price was fixed at US \$6.5 / MMBTU since 8th April, 2023 even for the gas produced from ONGC/OIL fields. With increase in gas price, the generation cost of APGCL and the power purchase cost of APDCL has increased. Although, most of the factors affecting power purchase cost is uncontrollable, still the Company must focus on reducing the cost to the extent possible.

Hon'ble Chairperson, AERC also emphasized on the matter that in the recent tariff petitions, APDCL merged the ongoing FPPPA and have requested the Commission not to increase the tariff any further. However, the Company has shown a deficit of over Rs 1400 Crore in the true up which they have requested the Commission to allow along with carrying cost which amounts to Rs 1766 Crore. Shri Krishna informed that APDCL has requested that this amount may be allowed to be recovered through a suitable mechanism without creating any regulatory asset.

Concluding his address, the Hon'ble Chairperson called upon the SAC members to actively participate and to offer their suggestions on the adjustment of the true -up gap of Rs. 1766 Crore.

The important points raised by the members during the discussions that followed are briefly recorded below.

Brief presentation on Action Taken Report of AEGCL, APGCL and APDCL

A brief presentation by Mr. Jayjeet Bezbaruah, Deputy Director (GEN PPA, P&P) on action taken report of APDCL and APGCL which was noted by the members.

Agenda Item No 2 & 3: Brief presentation by APDCL on the Power position of the State by MD, APDCL and Discussions

Shri Rakesh Kumar, MD, APDCL apprised the SAC on the power scenario of the state. MD, APDCL informed that since reform the peak demand has reached 2540 MW, maximum demand met is 2413 (in the month of September, 2023) and average daily consumption is 36.95 MU. MD, APDCL also informed the SAC on the Power Purchase Planning of APDCL which includes Long Term Planning through Power Purchase Agreements, Day Ahead Planning, and Real Time Balancing through Power Exchange. Shri Kumar further informed the SAC of the present steps taken by APDCL to meet the demand, which include several short, medium and long duration contracts in MoP's DEEP Portal as well as in IEX. The members were also informed regarding future tie ups with upcoming generators such as PTC (Nikacchu, Bhutan), NLC (Ghatampur, UP), APGCL (Lower Kopili), NHPC(Suwansiri), SECI, NTPC (Talcher) and APDCL (Solar). In matter of RPO Compliance, MD, APDCL stated that there has been a deficit in RPO compliance especially in terms of Wind RPO due to non-availability of wind power in the region.

SAC Members mentioned that a disparity has been observed in terms of Energy sales and purchase from approved (as seen from the True-up of 2022-23).

Further, among various sources for power purchase, the variation in %age price hike is diverse with significant hikes for APGCL, AGBPP, etc. whereas reduction for OTPC. Further, even among various Coal-based or Hydel sources, the semblance is not found in the %age price hikes. Hence, SAC members recommended that the break up and analysis of Energy cost may be done by APDCL. Further, it is seen that optimum utilization of the available generation capacity has not been done for which AI based technological solutions may be adopted. SAC Members further observed that power has been purchased from the exchange at high cost during peak, which has been exported at lower cost, resulting in losses. Thus, SAC members recommended that proper Power Purchase Planning and practical Power procurement should be done, which necessitates the monitoring with all the 3 companies, viz., APDCL, AEGCL, and APGCL. Further, no semblance between unit prices of fuel and price hikes has also not been observed for the generating plants under APGCL, which may be due to the impact of

heat rate in the normative calculation. Hence, for maximum clarity, the SAC members recommended that the actual values should also be incorporated in the petition along with normative values so that a comparative statement can be obtained for the actual values achieved by the utility against the values approved by the Commission. SAC Members also recommended that the same may be incorporated in the petitions of all the utilities. The deviations in achieving targets may be analysed using advanced technological tools such as AI, specialized software available.

SAC Members also recommended that since a major portion of power procurement is from natural gas-based generators, to reduce the impact of yearly hikes in gas prices, diversion of portfolio for natural gas may be explored. Also, APDCL may carry out a comparative study of their AT&C losses against other distribution companies that have minimal losses. MD, APDCL clarified that a direct comparison of APDCL with other utilities like TATA Power, Adani Power, etc. cannot be drawn as the commercial and industrial load is much lower in Assam resulting in a low HT: LT consumer mix ratio. Hence, the AT&C losses are much higher. Shri S. Sharma, SAC Member mentioned that increasing the LT connection upper limit from 25kVA to 30kVA has further added to the ratio being even higher and APDCL may take it up with the Hon'ble Commission. SAC members also recommended that a long-term (preferably five years) loss reduction plan be chalked out and presented to the SAC.

SAC Members further mentioned that the wind RPO trajectory is quite high which is not practical for Assam and requested AERC to consider the possibility of compensating the wind RPO with other RE sources. The Hon'ble Member (Technical), AERC clarified the RPO is in line with the MoP Rules.

Agenda Item No 4 & 5: Presentations on the Tariff Petitions by the utilities & Discussions

Presentation by APDCL

MD, APDCL informed that in True Up for FY 2022-23, the net revenue gap is Rs. 1904.17 Cr which has been brought about due to an exorbitant hike in Natural Gas Price (Effective price of \$ 7.34/MMBTU against earlier approved price of \$ 2.90/MMBTU) and the consistently high price of power in the market resulting in a significant increase in power purchase cost for APDCL. MD, APDCL mentioned that 24% of the total power procured by APDCL is from gas-based stations, which explains the impact of the rise in gas prices on the power purchase cost for APDCL. The distribution loss is 16.22%

against the approved 15%. Also, APDCL received a government subsidy of around Rs 346.40 Cr.

MD, APDCL further informed that in APR for FY 2023-24, the distribution loss of 15.80% against the approved loss of 14.75%. There is also a massive increase in Power cost of Rs 2520.31 Cr mainly due to persistently high natural gas prices and high market prices. MD, APDCL also mentioned that the compliance of RPO obligations also adds up to the increase in power purchase cost. MD, APDCL informed that the net gap in APR is around Rs 1170.19 Cr.

MD, APDCL also informed that in ARR the cumulative revenue requirement for FY 2023-24 is Rs 13,191.66 Cr and the ACoS to recover the entire cumulative amount shall be Rs. 12.35 per kWh for FY 2024-25. MD, APDCL submitted that the effective ABR prevailing at present over the approved level of ACoS is Rs. 9.31 per unit (without Government subsidy) and recovery of the entire amount will lead to increase of existing retail tariff by 33% on the prevailing rate on average. Hence, MD, APDCL proposed to continue the prevailing tariff structure (with applicable FPPPA) and requested the commission to allow a suitable mechanism to recover the dues pertaining to true up petition with carrying cost without creating any regulatory assets.

SAC Members mentioned that for reduction of losses voltage level should be ideally above 33kV. The members enquired whether any study has been carried out in coordination with AEGCL for reducing technical shortcomings and optimized use of Substations and recommended that advanced technological tools may be used for the purpose.

SAC Members also mentioned that a huge impact has been observed in the tariff in terms of RoE, where the percentage claimed is 14% in case of APDCL and 15.5% in case of APGCL and AEGCL which is much higher than the GoI benchmark of 10%. SAC Members requested the Commission to look into the matter. Also, a significant impact in terms of RoE has been observed due to conversion of grants to equity for APDCL. Same has been observed in case of AEGCL and APGCL as well. SAC Members noted that the burden of this conversion is being passed on to the consumers which defies the very purpose why funds were earlier given as grants to reduce cost and provide benefit to the consumers by way of lower tariff. Hence, SAC members suggested that the matter may be taken up with the State Government. The Hon'ble Chairperson assured that the matter shall be taken up with the Government and requested the Additional Secretary, DoP, GoA to make a note of the same.

SAC Members further enquired whether there is a shortage of manpower in APDCL at present, especially lineman, meter readers, etc. and the same may be taken up with the GoA. MD, APDCL clarified that APDCL is currently operational at optimum manpower level including outsourced manpower. New recruitments are being done for the new substations coming up under various schemes. SAC Members recommended that pragmatic manpower assessment may be done and training programs, etc. should be implemented right from the circle level. The Hon'ble Member (Technical), AERC stated that the implementation of ERP has resulted in a gradual reduction in manpower cost, which is in line with the directive of the Commission, and the same was confirmed by MD, APDCL.

SAC Members enquired about the parameter "Revenue with Approved tariff including targeted subsidy" in the petition of APDCL. APDCL clarified that this revenue is including the levy of FPPPA which is a major component. SAC Members also enquired about the parameter "Other Income" in the petition of APDCL. MD, APDCL clarified that it pertains to the past bills/receivables by APDCL, which are gradually being collected through the Smart Prepaid Meters and also on account of seasonal export at improved market rates. SAC Members also enquired whether the Smart Prepaid Meters can be used for Rooftop Solar Plants to which MD, APDCL confirmed in the affirmative.

SAC Members also requested not to increase FPPPA significantly so as to provide reasonable tariff in order to encourage more industrial establishments in Assam and improve the HT/LT ratio.

SAC Members enquired about the proposed timeline from the upcoming Neyveli generating plant which is supposed to supply power at around Rs. 4.52/unit. MD, APDCL informed that the 1st unit is expected around March, 2024 and the 2nd unit is expected after 6 months. SAC Members further enquired if any steps had been taken for requesting CERC/GoI for reduction in the cost of power from BTPS as compared to other coal-based plants. APDCL informed that proposal was placed under NLCPR funding, but the same was not approved by Ministry of Finance, GoI. However, alternate arrangement with switchover of coal block, spread out of depreciation, etc. has resulted in reduction of cost of power from the station.

SAC Members further recommended APDCL to prepare and present the roadmap of the next 5 years and analysis of consumer service rating, billing efficiency, consumer satisfaction, performance-based assessment of APDCL manpower etc. in the next SAC meeting. The Electricity Ombudsman enquired about the reasons for huge numbers of

billing arrears. MD, APDCL clarified that the issues of billing arrears are being taken care of with smart meters and proper monitoring. MD, APDCL informed that APDCL ranks 4th on DISCOM performance and as per consumer service rating APDCL has improved its rating from category C last year to category B+ this year. With the installation of smart meters, AT&C losses have reduced in such areas to a minimum of ~7%, billing efficiency is almost 92% and collection efficiency is 100%. MD, APDCL further informed that a detailed analysis shall be presented in the next SAC meeting.

Presentation by AEGCL

A PowerPoint presentation was made by Shri Debajyoti Das, MD, AEGCL on the salient features of Tariff petition submitted by AEGCL and SLDC. Important points of the discussion are noted below

In True-up for FY 2022-23, AEGCL has shown ARR of Rs.604.59 Crore and a gap of Rs. 144.14 Crore. For SLDC, in True-Up, ARR of Rs. 7.84 Crore and gap of Rs. 1.34 Crore is shown.

In APR for FY 2023-24, AEGCL has shown ARR of Rs.662.91 Crore and a marginal gap of Rs. 4.03 Crore. For SLDC, in APR for FY 2023-24, ARR of Rs. 10.39 Crore and gap of Rs. 0.29 Crore is shown.

In ARR for FY 2024-25, AEGCL has shown ARR of Rs.719.11 Crore and a gap of Rs 190.94 Crore. SLDC has shown ARR of Rs. 15.25 Crore with a gap of Rs. 7.90 Crore. SLDC has also requested for a separate revenue item for Back-up SLDC of Rs. 3.00 Crore.

AEGCL has submitted a transmission loss of 3.31% for True-up against the approved loss of 3.27%. AEGCL has projected a loss of 3.28% in ARR for FY 2024-25. AEGCL has a projected transmission charge of Rs.0.71 Rs./kwh and SLDC charge of Rs. 174.27/MW/Day for FY 2024-25.

SAC Members observed that as stated in earlier meetings, a load centre was proposed in Rangia by installing 200 MVA transformers at Rangia GSS, AEGCL. SAC members enquired whether a proper load flow study has been done in the matter, what is the current status of action taken by AEGCL and whether any co-ordination meeting has been conducted with APDCL for planning evacuation of power. MD, AEGCL informed the SAC that the LOA has already been issued for procurement of one no. of 200 MVA transformer at Rangia GSS and the same is expected to arrive at site around April, 2024. Shri Das also stated the load flow study has already been carried out. MD, AEGCL further stated that though several discussions have taken place at field level with APDCL

officials, a co-ordination meeting for the evacuation plan has not yet been done. SAC Members suggested that regular co-ordination meetings may be convened between AEGCL, APDCL and APGCL for better functioning of all the three utilities.

MD, AEGCL also informed with the load flow study software PSSE is currently in use in AEGCL which enables carrying out the load flow studies. The SAC members enquired whether study has been carried out for the new proposed 400kV Substation coming up in Rangia. Hon'ble Member (Technical), AERC clarified that proper load flow studies for all upcoming projects have been carried out which have been vetted by CEA as well as GoI, only after which approval as well as funding for the projects have been received. Hon'ble Member also directed AEGCL to develop a strong commercial team for proper studies and adequate planning. Hon'ble Member also raised concern regarding the PGCIL feeder of 500m evacuating supply from NTPC, Bongaigaon to AEGCL, for which huge amount of transmission charges are being incurred. The matter has come to light in several earlier instances and recommended early action on part of AEGCL to address the issue.

SAC Members further highlighted that the Transmission Loss is still on the higher side and efforts should be made with proper analysis to bring down the loss and resolve lower voltage issues with measures such as parallel operation of transformers, operationalization of Capacitor Banks, etc. SAC Members suggested that the action plan for addressing loss minimization and resolution of lower voltage issues at 33kV level may be presented by AEGCL. SAC Members also recommended to carry out analysis of actual against the approved in addition to the normative, as stated earlier. SAC Members also pointed out that ERS (Emergency Restoration System) should be established, however, the same was not procured by AEGCL in the year 2022-23 even after approval of the Commission. It was suggested that efficient manpower planning needs to be carried out for AEGCL also.

Further, SAC Members enquired whether the BST (Bulk Supply Tariff) is sufficient to pay the pensioners. AEGCL clarified that there remains a deficit which is provisioned by the GoA in the annual budget for AEGCL. SAC Members further recommended that AEGCL should show proper utilization of the pension corpus fund (if created), its utilization and how it plans to mitigate deficits in the next SAC meeting.

Presentation by APGCL

A Power Point Presentation by Shri. Bibhu Bhuyan, MD, APGCL on approval of True up for FY 2022-23, Revised Capex Plan for FY 2023-24 to FY 2024-25, Petition for Annual

Performance Review for FY 2023-24 and Revised ARR for FY 2024-25.

MD, APGCL brought to notice of SAC that APGCL has been rated in A++ category against the earlier A rating. Shri Bhuyan reiterated that the generating plants of APGCL are mostly gas based and due to the exorbitant hike in natural gas prices the cost of power in each generating station of APGCL increased significantly and this has an impact in consumer retail Tariff. MD, APGCL also apprised the Committee regarding a proposal for a Pump Storage Hydro Plant. He further stated that the initial study has been taken up and 3 nos. of sites have been identified in Karbi Anglong, of which one site shall be finalized after completion of the studies and in-principle approval has been obtained from the State Government. Shri Bhuyan also mentioned that GT unit 3 (15MW) of NTPS is proposed to be operated for the purpose of Merchant Sale of Power in FY 2024-25.

In the True Up for the FY 2022-23, APDCL has shown a Net Revenue of Rs. 1385.55 Cr and actual revenue gap of Rs. 176.94 Cr. The Gross generation is 2156.79 MU. The presentation also depicted the rising trend in gas price which has increased almost 380% from September, 2021 to September, 2023.

During the presentation, SAC Members expressed concern that in the case of Auxiliary consumption in the True Up especially for LTPS a significant rise has been observed against the approved figure. SAC Members requested APGCL to carry out an analysis in this matter. MD, APGCL clarified that analysis has been carried out and it has been observed that the scope of reduction of the auxiliary consumption is low as the gas pressure itself is very low. The supply from AGCL has not improved even after implanting gas booster facility. SAC Members requested the Commission to look into the matter.

SAC Members further expressed concern that a disparity in fuel price hikes has been observed throughout the various generating plants of APGCL in several parameters. To this, the MD, APGCL clarified that this is observed mainly due to the different sources of fuel supply. SAC Members further stated that the petition depicts only the normative values against the approved values for the True Up. However, the SAC members reiterated that the actual values should also be incorporated in the petition along with the normative values. Further, the matter for conversion of grant to equity which has resulted in increase in equity in several plants of APGCL, should be taken up with the State Government.

SAC Members also recommended that in the context of high gas price, the state government may be approached for considering a reduction in the VAT to 5%, which is

currently being charged at 14.5%. The reduction in 9.5%, if approved, will result in significant reduction in the gas price and hence on the overall tariff. The Hon'ble Chairperson, AERC recommended that the Additional Secretary, DoP, Assam may take up the matter with the State Government.

SAC Members also enquired about the proposed timeline for the revival of LTPS. MD, APGCL informed the SAC that work is in progress and the plant is likely to start generating power from the mid of 2025.

The Hon'ble Chairperson thanked the members for their participation and insights in the meeting and directed the utilities, APDCL, AEGCL and APGCL to make presentations in the next SAC meeting on the points requested by the members during the course of the discussions. Hon'ble Chairperson once again requested the SAC members to offer their ideas & suggestions for adjustment of the gap of Rs 1766 Cr as per APDCL petitions, even at a later date.

Sd/-

Secretary,

Assam Electricity Regulatory Commission

List of members, special invitees, and officers present in the meeting of the 33rd SAC

Members

1. Kumar Sanjay Krishna, IAS (Retd), Chairperson, AERC
2. Shri Satyendra Nath Kalita, Member (Technical), AERC
3. Shri Alokeshwar Bhattacharyya, Member (Law), AERC
4. Shri Narsing Pawar, Secretary (Finance)
5. Shri S. M. Z. Chistie, Additional Secretary Power (E)
6. Shri Nikunja Borthakur, Sr. CGM NRL
7. Shri Subodh Sharma, Consumer Activist
8. Shri Arin Bordoloi, Ex GM NTPC
9. Shri Abhijit Barooah, Ex-Chairman, CII Assam Branch
10. Shri Sanjay Bagchi, ABITA
11. Shri Deepakananda Bharali, Ex. GM IOC
12. Dr. Jaideep Baruah, Director, AEDA
13. Shri Kumud Medhi, Secretary, NESSIA
14. Shri Dilip. Kr. Sarma, Ex. Executive Director, PGCIL
15. Shri Sauresh Agarwala, Power Committee, FINER

SPECIAL INVITEES

1. Shri Maninder Singh, IAS(Retd.), Chairman, AEGCL
2. Shri Rakesh Kumar, IAS, Managing Director, APDCL
3. Shri Bibhu Bhuyan, Managing Director, APGCL
4. Shri Debajyoti Das, Managing Director, AEGCL
5. Shri J. N. Baruah, AASSIA
6. Shri Badan D. Barman, G.S, AASSIA

OFFICERS FROM APDCL, AEGCL & APGCL

1. Shri B. Basumatary, CGM, AEGCL
2. Shri Deepanjali Das, GM (PP&EM), APDCL
3. Shri Chinmoy kr. Bordoloi, GM, (TRC), APDCL
4. Shri F Hashmi DGM, AEGCL
5. Shri Pinkey Deb, DGM (AUDIT), APGCL
6. Shri Aklantika Saikia , DGM APGCL
7. Shri Debasish Paul , AGM (F&A) , AEGCL

8. Shri Dipmoni Nath, AM , AEGCL
9. Shri T.G. Basumatary, Special Executive Officer, APGCL
10. Shri Bidyut Das, Consultant

OFFICERS FROM AERC

1. Shri Manoj Kumar Deka, IAS (Retd). Secretary
2. Smt. Panchamrita Sharma, Joint Director (Tariff &RA)
3. Shri Nipen Deka, Joint Director (Engg)
4. Shri Jayjeet Bezbaruah, Deputy Director (GEN PPA, P&P)
5. Smt. Jharna Devi, Deputy Director (Engg)
6. Shri Kishore Rajkumar, Assistant Director (IT& RIM)
7. Smt. Punam Rabha, Assistant Director (Tariff)
8. Shri A.N Dev Choudhury, Consultant (Tariff)

Annexure 2- Station Wise Depreciation

Depreciation for NTPS (Rs. Crore)

Sr. No	Particulars	FY 2022-23			FY 2023-24			FY 2024-25		
		Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation
1	Land	9.71	-	-	9.71	-	-	9.71	-	-
2	Building	11.18	-	0.09	11.18	-	0.00	11.18	-	0.00
3	Hydraulic works	0.04	-	0.00	0.04	-	0.00	0.04	-	0.00
4	Other civil works	26.23	0.12	0.95	26.35	-	0.95	26.35	-	0.95
5	Plant & machinery- Gas	97.85	-	0.18	97.85	2.08	0.23	99.92	0.16	0.29
6	Lines & cables	1.95	-	0.10	1.95	-	0.10	1.95	-	0.10
7	Vehicle	0.45	-	-	0.45	-	-	0.45	-	-
8	Furniture	1.33	0.33	0.03	1.66	-	0.04	1.66	-	0.04
9	Other office equipment	1.73	2.49	0.12	4.22	2.48	0.24	6.70	0.61	0.29
10	Roads on land belonging to others	0.00	-	-	0.00	-	-	0.00	-	-
11	Capital spares at Generating Stations	41.46	-	-	41.46	-	-	41.46	-	-
12	Total	191.92	2.94	1.47	194.86	4.56	1.57	199.41	0.77	1.68

Depreciation for LTPS (Rs. Crore)

Sr. No.	Particulars	FY 2022-23			FY 2023-24			FY 2024-25		
		Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation
1	Land	4.75	-	-	4.75	-	-	4.75	-	-
2	Building	32.21	-	1.08	32.21	0.67	1.09	32.88	0.28	1.10
3	Hydraulic works	0.00	-	-	0.00	-	-	0.00	-	-
4	Other civil works	41.34	0.09	1.45	41.43	1.31	1.47	42.74	0.07	1.49
5	Plant & machinery- Gas	294.32	5.67	15.69	299.99	7.98	16.05	307.97	7.80	13.02
6	Lines & cables	9.29	-	0.49	9.29	-	0.49	9.29	-	0.49
7	Vehicle	0.24	-	-	0.24	-	-	0.24	-	-
8	Furniture	0.63	0.00	0.01	0.64	-	0.01	0.64	-	0.01
9	Other office equipment	0.39	2.46	0.10	2.86	4.86	0.32	7.72	0.63	0.50
10	Roads on land belonging to others	0.00	-	-	0.00	-	-	0.00	-	-
11	Capital spares at Generating Stations	114.93	-	-	114.93	-	-	114.93	-	-
12	Total	498.11	8.22	18.81	506.33	14.83	19.43	521.16	8.78	16.62

Depreciation for KLHEP (Rs. Crore)

Sr. No.	Particulars	FY 2022-23			FY 2023-24			FY 2024-25		
		Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation
1	Land	4.40	-	-	4.40	-	-	4.40	-	-
2	Building	16.72	-	0.58	16.72	-	0.58	16.72	-	0.58
3	Hydraulic works	161.15	-	8.58	161.15	1.25	8.61	162.40	1.18	8.61
4	Other civil works	99.42	-	3.43	99.42	-	3.43	99.42	1.79	3.46
5	Plant & machinery	172.47	0.01	9.27	172.49	4.87	9.40	177.35	22.06	9.86
6	Lines & cables	31.71	-	1.72	31.71	-	1.72	31.71	-	1.72
7	Vehicle	0.29	-	-	0.29	-	-	0.29	-	-
8	Furniture	0.13	-	0.01	0.13	-	0.01	0.13	-	0.01
9	Other office equipment	0.14	6.01	0.20	6.15	5.71	0.19	11.86	1.07	0.04
10	Roads on land belonging to others	0.28	-	0.01	0.28	-	0.01	0.28	-	0.01
11	Capital spares at Generating Stations	18.76	-	-	18.76	-	-	18.76	-	-
12	Total	505.48	6.02	23.80	511.49	11.83	23.95	523.32	26.09	24.29

Depreciation for LRPP (Rs. Crore)

Sr. No	Particulars	FY 2022-23			FY 2023-24			FY 2024-25		
		Openin g GFA	Additio n of GFA	Depreciatio n	Openin g GFA	Additio n of GFA	Depreciatio n	Openin g GFA	Additio n of GFA	Depreciatio n
1	Land	-	-	-	-	-	-	-	-	-
2	Building	-	1.07	0.02	1.07	-	-	1.07	-	-
3	Hydraulic works	-	-	-	-	-	-	-	-	-
4	Other civil works	24.36	0.07	0.82	24.44	-	0.81	24.44	0.08	0.82
5	Plant & machinery- Gas	243.55	-	12.90	243.55	-	12.90	243.55	1.24	12.94
6	Lines & cables	-	-	-	-	-	-	-	-	-
7	Vehicle	-	-	-	-	-	-	-	-	-
8	Furniture	-	0.04	0.00	0.04	-	-	0.04	-	-
9	Other office equipment	-	3.40	0.11	3.40	3.75	0.12	7.15	0.18	0.01
10	Roads on land belonging to others	-	-	-	-	-	-	-	-	-
11	Capital spares at Generating Stations	-	-	-	-	-	-	-	-	-
12	Total	267.92	4.58	13.85	272.50	3.75	13.84	276.25	1.49	13.76

Depreciation for NRPP (Rs. Crore)

Sr. No	Particulars	FY 2022-23			FY 2023-24			FY 2024-25		
		Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation	Opening GFA	Addition of GFA	Depreciation
1	Land	-	-	-	-	-	-	-	-	-
2	Building	149.83	-	5.00	149.83	-	5.00	149.83	-	5.00
3	Hydraulic works	-	-	-	-	-	-	-	-	-
4	Other civil works	81.31	-	2.72	81.31	-	2.72	81.31	-	2.72
5	Plant & machinery- Gas	478.87	-	25.28	478.87	-	25.28	478.87	-	25.28
6	Lines & cables	-	-	-	-	-	-	-	-	-
7	Vehicle	-	-	-	-	-	-	-	-	-
8	Furniture	0.08	-	0.00	0.08	-	0.00	0.08	-	0.00
9	Other office equipment	0.06	-	0.00	0.06	-	0.00	0.06	-	0.00
10	Roads on land belonging to others	-	-	-	-	-	-	-	-	-
11	Capital spares at Generating Stations	18.81	-	0.99	18.81	-	0.99	18.81	-	0.99
12	Total	728.96	-	34.01	728.96	-	34.01	728.96	-	34.01

Annexure 3- Capital Investment Plan

Capital Investment Plan for NTPS (Rs. Lakh)

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
A	Electro-mechanical Work of NTPS							
1	100W LED Street Light/bay light (complete set) with separate clamps & pipe bend fitting etc.	10.00		10.00		10.00		
2	30 M high Mast Lighting System (complete set)	12.00	12.00		17.00		12.00	Provisionally allowed as per approved. When true up reason for escalation to be submitted
3	Renovation of damaged sludge removing system of water clariflocculation system at Dillighat water Intake for the purpose of better water treatment	12.00		16.15		16.15		Rs 12 lakhs approved in FY 2022-23 and FY 2023-24 each. Total amount claimed in FY 2023-24. Order placed, to be completed by March'24. Allowed as total expenditure claimed is less than approved
4	Supply, installation & commissioning of sulphuric Acid dilution tank at DM Plant	-		9.50		9.50		
5	Renovation of damaged drinking water supply pipeline from D.M. plant to WHP residential colony & officers' colony at pahar line	-		12.00		12.00		

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
6	Construction of dedicated 2 (two) nos. of 33 KV APGCL Bay at 220 KV GSS, AEGCL, Namrup			160.00		160.00		
7	ERP	62.00	63.00	248.00	65.00	248.00	65.00	APGCL had explained that ERP approval was taken for only LOT 1 as the cost for that was available. As in the MYT it was proposed for all the lots, the revised cost based on actual is to be approved.
	Total	96.00	75.00	455.65	82.00	455.65	77.00	

Capital Investment Plan for LTPS (Rs. Lakh)

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
	Electro-mechanical Work of LTPS							
1	Replacement of Fill Packs of 03 cells of Cooling Tower	0		170		170		
2	Overhauling of PBFP with mandatory spares	140		140		140		
3	Overhauling of Cooling Water Pumps (CWP) along with supply of spares.	0	35	100	0	35		Cost overrun. Limited to approved. Detail justification for cost overrun to be provided in true up.
4	Replacement of Battery Bank, Charger Panel and DCDB Panel for GT unit #5, #6 and #7.		150		150		150	
5	Condensate Extractor Pump Overhauling	0		50		50		
6	Replacement of critical MOVs with new & servicing of the remaining MOVs & servicing of Mechanical Valves	0		100		21		According to Board approval
7	Procurement of auxiliary's motors and field instruments for 4RDS2 Dresser-Rand Gas Compressor units #6, # 7 and #8			73.33		73.33		
8	Procurement of spares for 4RDS2 Dresser-Rand Gas Compressor # 6,7 & 8.			78.00		78.00		
9	Procurement of Spares for Combustion Inspection of GT unit # 5 & 6	0		35		35		
10	Servicing of Diverter Damper (DD) Complete & its actuator gearbox along with supply of spares	40			40		40	
11	Procurement of a new Silica analyser for SWAS.	12			12		12	
12	Major Overhauling of 7.5MVA 132/3.3kv Station transformer 1&2.	20			20		20	

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
13	Major overhauling of Generator transformer ,30 MVA 11/132KV of GT unit #5 and #6along with oil filtration	25			25		25	
14	Renovation of Air Conditioning system of Phase-II Power Control Room	50		50		50		
15	Procurement of Inlet Air filter for 20 MW frave-V Gas Turbine # 6 & 7- 01 set	15		15		15		
16	Field Instruments of C&I		10		10		10	
17	Procurement of Intake Pump		25		25		25	
18	Up-gradation of illumination system of WHRP.		10		10		10	
19	Procurement, erection, testing and commissioning of High Mast Tower for illumination in the entire Ph-II Power House and switchyard area.4 (Four) Nos		60		60		60	
20	Procurement of spares for Ingersoll rand Instrument Air Compressor # 1, 2 & 3		5		5		5	
21	Procurement of fan blade Assembly for 4DRS2 Dresser-Rand Heat exchanger of Gas Compressor #6,7 or 8. (02 set)		35		35		35	
22	Inspection servicing and maintenance of 4RDS2 Gas compressor #8 by OEM Dresser-Rand		10		10		10	
23	Procurement of one 500KVA 33/0.4kV transformer.		7.7		7.7		7.7	
24	Procurement of Transformer oil filtration machine		35.2		35.2		35.2	
25	Procurement of one 2.5 MVA 33/11 KV Transformer.		35		35		35	
26	Procurement of Switchyard and Colony equipment for renovation and upgradation of existing old system		30		30		30	

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
27	Procurement of upgraded lubricating system for gas compressors (Xperlube System)			-	125		125	
28	Revamping of Existing Natural Gas & water coolers of GC-6, 7, 8			100	200	88	0	Board approval submitted for work approved of 88 Lac only. Hence, only that amount is approved in tariff.
29	Control & instrumentation related capital spares			-	198.67		0	Board approval of the works not provided.
30	Gas compressor #6,7, 8 & 9 related capital spares			-	473.05		0	
31	Starting Diesel Engine for GT 5, 6 & 7 related capital spares			-	34.19		0	
32	Instrument Air Compressor related capital spares			-	20.24		0	
33	High pressure BFP related capital spares			-	155.6		0	
34	Raw Water Pump related capitalspares			-	5.37		0	
35	Intake Water capital spares			-	71.58		0	
	Civil Work of LTPS	0						
36	Layout of LTPS Plant with supply of all proper drawings	0		6		6		
37	Deep tube well water supply system inside the power plant at LTPS, Maibella (Including boring, supplying, and fitting of pump set up with all pipeline and fittings, construction of filter chamber and supply of all filter materials.) newly constructed multi storied building inside LTPS residential colony.	0		55		30		According to Board approval
38	Construction of paver block road from main road in front of army canteen to newly constructed multi storied building inside LTPS residential colony.			35		25		cost escalation. No justification provided. Taken same as approved. APGCL to justify cost escalation during true up

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
39	Roof treatment of cooling water pump house panel room of WHRP at power plant of LTPS	0		0.78		0.78		
40	Repairing of Switchyard stored at power plant at LTPS	0		8.8		8		cost escalation. No justification provided. Taken same as approved. APGCL to justify cost escalation during true up
41	Renovation of children park and construction of surrounding drain along with cover slabs at LTPS, LTPS residential colony.	0		20		20		
42	Repairing of quarters at LTPS residential colony.				15		15	
43	Repairing of quarters at LTPS residential colony.	30		23.7	30	23.7	30	
44	Renovation of water supply pipelines and all fittings at LTPS residential colony and Power Plant	10		10		10		
45	Repairing of water pump house building, development of surrounding areas of water supply system of LTPS	7		7		7		
46	Supplying of filter chamber material of LTPS	8		7.24		7.24		
47	Development of boundary walls around LTPS Colony	20		20		20		
48	Renovation of Hostel at LTPS	15			15		15	
49	Providing of boundary fencing for the residential quarters of LTPS	20		17.88	20	0	37.88	Capitalisation to be done in FY 2024-25
50	Repairing of Administrative office building of LTPS	15		15		15		
51	ERP	139	140	555	145	555	145	APGCL had explained that ERP approval was taken for only LOT 1 as the cost for that was available. As in the MYT it was proposed for all the lots, the revised cost based on actual is to be approved.
	Total	566.00	587.90	1692.73	2018.60	1483.05	877.78	

Capital Investment Plan for KLHEP (Rs. Lakh)

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakh						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
1	Spare for Inspection & Repairing of KLHEP units	40	40	40	40	40	40	
2	Replacement of Broken Cable Tray in 220 KV Switchyard area.	20	20		60		20	not allowed due to no progress. To come in true up with actual amount in 2024-25
3	Marshalling Panel for 21MVA GT	-		61.4		61.4		
4	3-Phase,750KVA, 11/0.43KV Transformer used as Unit Auxiliary Transformer (UAT)	-		20.5		20.5		
5	Design, Supply and installation& Commissioning of extension in the existing 33 KV outdoor Switchyard for Power evacuation from 13.5 MW MSHEP and Station auxillary power supply to 2X50 MW KLHEP Powerhouse and Project Area	-			250		250	
6	Silent 500KVA DG set for	65		90		90		
7	Mobile crane with 360 base rotational and lifting capacity of 20 Ton	180		180		180		

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakh						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
8	Renovation and Refurbishment of 130T EOT Crane with control system.	60			60		60	
9	Replacement of all 2X50 Mw Generator Control and Relay Panel	350.00			350		350	
10	Replacement of all 2X50 Mw Generator Control and Relay Panel	150			150		150	
11	Design, Supply and installation & Commissioning Bay Extension in the existing 220KV KLHEP Switchyard for ideal Charging of 16 MVA Bharat Bijlee make 220/33KV transformer.		100		100		100	
12	Roof Top Solar Power For KLHEP		95	95		95		
13	Upgradation of Transformer capacity and substation at KLHEP Lengery		75		75		75	

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakh						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
14	Roof leakage treatment, Boundary wall and fencing, painting of penstock pipes, checking of penstock welding joints etc	40		40		40		
15	Chain link fencing around the premises, repairing of old civil store at Amtreng etc	20			20		20	
16	Colony road, quarter repairing, construction of new multi storey residential building etc	170			170		170	
17	Security barrack, staircase or permanent foot bridge, hydraulic oil for powerpack, painting of radial gates, drain at quarry no. 1&2 etc	150			150		150	
18	Painting of powerhouse, maintenance of anchor blocks and saddles etc	35		35		35		
19	Boundary wall around the premises, repairing of old electromechanical store etc	50			50		50	

Sl.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakh						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
20	New water supply system, water treatment plant etc	50		50		50		
21	Water supply system for valve house, beautification valve house etc		15		15		15	
22	Construction of new watch tower at electromechanical store etc		10		10		10	
23	ERP	143	144	571	149	571	149	
24	Procurement of 3 Nos of Generator Transformers				1000		1000	
25	Emergency Capital Spares				1000			Board approval not accorded. At this point, this scheme is not allowed
	Total	1523	499	1182.9	3649	1182.9	2609	

Capital Investment Plan for LRPP (Rs. Lakh)

SI.No.	Approved Schemes	Revised CIP in Tariff Order dated March 29, 2023		Proposed by APGCL		Approved by Commission		Remarks
		In Rs. Lakhs						
		FY 24	FY 25	FY 24	FY 25	FY 24	FY 25	
1	Deep tube well water supply system for to support the river water supply system at LTPS, Maibella. (Including boring, supplying and fitting of pump set up with all pipeline and fittings)	35			35		35	
2	Development and repairing of roads inside LTPS residential colony.	10	10		10		10	
3	Electrical related capital spares				65.95		0	Board approval for the above spare acquisition not provided.
4	Gas Engine related capital spares				443.37		0	Board approval for the above spare acquisition not provided.
5	Capital spares Black Start Diesel Engine Generator				1.34		0	Board approval for the above spare acquisition not provided.
6	Other capital mandatory spares				214.4		0	Board approval for the above spare acquisition not provided.
7	ERP	94	101	375	104	375	104	
	Total	139	111	375	874.06	375	149	

Annexure 4A- Equity Addition and Grant Conversion approved (Rs. Crore) during FY 2022-23

Particulars		NTPS	LTPS	KLHEP	LRPP	Total
A	Grant conversion claimed by APGCL for FY 2022-23	2.80	6.26	6.02	4.49	19.57
B	Total grant conversion accepted by Commission in previous years	10.21	50.84	42.42	167.88	271.36
C	Approved grant conversion in FY 22	2.42	5.61	42.42	54.66	105.11
D	Total grant conversion remaining (B-C)	7.79	45.23	0.00	113.23	166.25
E	Balance grant conversion to be considered in FY 23 (A+D)	10.59	51.49	6.02	117.72	185.82
	Normative Equity:					
F	Approved opening GFA for FY 2022-23	191.92	498.11	505.48	267.92	1463.42
F1	Grant remaining in GFA for FY 2022-23	2.95	14.66	12.23	48.41	78.26
F2	Opening GFA of FY 2022-23 excluding Grant (F-F1)	188.97	483.45	493.24	219.50	1385.16
G	Normative Equity (F2 x 30%)	56.69	145.03	147.97	65.85	439.03
H	earlier equity	57.42	148.69	154.42	80.63	441.16
I	Actual equity after conversion (E+H)	68.01	200.18	160.44	198.35	626.98
J	Recomputed Equity after converting grant to Equity subject to normative cap (Min of G and I)	56.69	145.03	147.97	65.85	415.55
L	Equity Addition Approved in opening equity (J-H)	-0.73	-3.66	-6.45	-14.78	-25.61

Annexure 4B- Equity Addition and Grant Conversion approved (Rs. Crore) during FY 2023-24

Particulars		NTPS	LTPS	KLHEP	LRPP	Total
A	Grant conversion claimed by APGCL for FY 2023-24	0.00	0.00	0.00	0.00	0.00
B	Total Grant conversion accepted by Commission in previous years	10.59	51.49	6.02	117.72	185.82
C	Approved Grant conversion in FY 23	-0.73	-3.66	-6.45	-14.78	-25.61
D	Total Grant conversion remaining (B-C)	11.32	55.15	12.47	132.49	211.43
E	Balance grant conversion to be considered in FY 24 (A+D)	11.32	55.15	12.47	132.49	211.43
	Normative Equity:					
F	i. Approved Opening GFA for FY 2023-24	194.86	506.33	511.49	272.50	1485.18
F1	Grant remaining in GFA for FY 2023-24	2.95	14.66	12.23	48.41	78.26
F2	Opening GFA of FY 2023-24 excluding Grant (F-F1)	191.91	491.67	499.26	224.08	1406.93
G	ii. Normative Equity (F2 x 30%)	57.57	147.50	149.78	67.23	445.55
H	earlier equity	56.69	145.03	147.97	65.85	415.55
I	Actual equity after conversion (E+H)	68.01	200.18	160.44	198.35	626.98
J	Recomputed Equity after converting grant to Equity subject to normative cap (Min of G and I)	57.57	147.50	149.78	67.23	422.08
L	Equity Addition Approved in opening equity (J-H)	0.88	2.47	1.81	1.37	6.53

Annexure 4C- Equity Addition and Grant Conversion approved (Rs. Crore) during FY 2024-25

Particulars		NTPS	LTPS	KLHEP	LRPP	Total
A	Grant conversion claimed by APGCL for FY 2024-25	0.00	0.00	0.00	0.00	0.00
B	Total grant conversion accepted by Commission in previous years	11.32	55.15	12.47	132.49	211.43
C	Approved grant conversion in FY 24	0.88	2.47	1.81	1.37	6.53
D	Total grant conversion remaining (B-C)	10.44	52.68	10.66	131.12	204.90
E	Balance grant conversion to be considered in FY 25 (A+D)	10.44	52.68	10.66	131.12	204.90
	Normative Equity:					
F	i. Approved Opening GFA for FY 2024-25	199.41	521.16	523.32	276.25	1520.14
F1	Grant remaining in GFA for FY 2024-25	2.95	14.66	12.23	48.41	78.26
F2	Opening GFA of FY 2024-25 excluding Grant	196.47	506.50	511.09	227.83	1441.89
G	ii. Normative Equity (F2 x 30%)	58.94	151.95	153.33	68.35	456.04
H	earlier equity	57.57	147.50	149.78	67.23	422.08
I	Actual equity after conversion (E+H)	68.01	200.18	160.44	198.35	626.98
J	Recomputed Equity after converting grant to Equity subject to normative cap (Min of G and I)	58.94	151.95	153.33	68.35	432.57
L	Equity Addition Approved in opening equity (J-H)	1.37	4.45	3.55	1.13	10.49