

# **Order**

**On**

**Approval of Business Plan and Multi  
Year Tariff Petition**

**For**

**M/s Sravanthi Energy Pvt Ltd.**

**For**

**Third Control Period  
(FY 2019-20 to FY 2021-22)**

**February 27, 2019**

**Uttarakhand Electricity Regulatory Commission**

**Vidyut Niyamak Bhawan, Near I.S.B.T., P.O. Majra**

**Dehradun - 248171**

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**Before**

**UTTARAKHAND ELECTRICITY REGULATORY COMMISSION**

**Petition No.: 74 of 2018**

**And**

**Petition No.: 75 of 2018**

**In the Matter of:**

Petition filed by M/s Sravanthi Energy Pvt. Ltd. for determination of Multi Year Tariff for third Control Period from FY 2019-20 to FY 2021-22, APR of FY 2018-19 and truing-up of FY 2017-18.

**AND**

**In the Matter of:**

Petition filed by M/s Sravanthi Energy Pvt. Ltd. for approval of Business Plan for third Control Period from FY 2019-20 to FY 2021-22.

**In the Matter of:**

M/s Sravanthi Energy Pvt. Ltd.

LG Floor, 136, Rider House, Sector-44,

Gurgaon, Haryana-122002

...Petitioner

**AND**

**In the Matter of:**

Uttarakhand Power Corporation Ltd.

Urja Bhawan, Kanwali Road, Dehradun

...Respondent

**Coram**

**Shri Subhash Kumar    Chairman**

**Date of Order: February 27, 2019**

Section 64(1) read with Section 61 and 62 of the Electricity Act, 2003 (hereinafter referred to as "the Act") requires the Generating Companies and the Licensees to file an application for determination of tariff before the Appropriate Commission in such manner and along with such fee

as may be specified by the Appropriate Commission through Regulations.

In accordance with the relevant provisions of the Act, the Commission had notified Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Tariff) Regulations, 2015 (hereinafter referred to as "UERC Tariff Regulations, 2015") for the second Control Period from FY 2016-17 to FY 2018-19 and Uttarakhand Electricity Regulatory Commission (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2018 (hereinafter referred to as "UERC Tariff Regulations, 2018") for the third Control Period from FY 2019-20 to FY 2021-22, specifying therein terms, conditions and norms of operation for licensees, generating companies and SLDC. The Commission had issued the Order on approval of Business Plan and Multi Year Tariff dated October 24, 2017, for the period from FY 2016-17 (i.e. from COD dated 20.11.2016 to 31.03.2017) to FY 2018-19. Subsequently, the Commission vide its order dated 21.03.2018 approved the ARR for FY 2018-19 for Phase 1 of the Petitioner's plant. In compliance with the provisions of the Act and Regulations 8(1) and Regulation 10(1) of UERC Tariff Regulations, 2018, M/s Sravanthi Energy Pvt. Ltd. (hereinafter referred to as "M/s SEPL" or "the Petitioner" or "the Generator") filed separate Petitions for approval of its Business Plan (Petition No. 75 of 2018 hereinafter referred to as the "Business Plan Petition") and Multi Year Tariff Petition (Petition No. 74 of 2018 hereinafter referred to as the "MYT Petition") for the third Control Period from FY 2019-20 to FY 2021-22 on 30.11.2018. The Petitioner, in its Business Plan Petition, has submitted the Capital Investment Plan, Financing Plan and trajectory of performance parameters for the third Control Period. Further, through the MYT Petition, the Petitioner has submitted the detailed calculations of its projected Aggregate Revenue Requirement for the third Control Period from FY 2019-20 to FY 2021-22 as per the UERC Tariff Regulations, 2018. Through the MYT Petition, the Petitioner has also requested for true up of FY 2017-18 based on the audited accounts in accordance with UERC Tariff Regulations, 2015.

The MYT Petition filed by the Petitioner had certain infirmities/deficiencies. The Commission, accordingly, vide its letter no. UERC/6/TF-497/2018-19/2018/1234 dated 06.12.2018 directed the Petitioner to rectify the said infirmities in the Petition and submit certain additional information necessary for admission of the Petition. M/s SEPL vide its submission dated 21.12.2018 removed the critical deficiencies. Based on the submission dated 21.12.2018 made by M/s SEPL, the Commission provisionally admitted the Petition for further processing subject to the condition that M/s SEPL shall furnish any further information/clarifications as deemed necessary by the

Commission during the analysis of the Petition, failing which the Commission may proceed to dispose of the matter as it deems fit based on the information available with it.

This Order, accordingly, relates to the Business Plan Petition and the MYT Petition filed by M/s SEPL for approval of Business Plan, determination of Aggregate Revenue Requirement (ARR) and MYT for the third Control Period from FY 2019-20 to FY 2021-22 and Annual Performance Review for FY 2018-19, alongwith Truing up for FY 2017-18, and is based on the original as well as the subsequent submissions made by M/s SEPL during the course of the proceedings and the relevant findings contained in the Tariff Order dated 24.10.2017 and Order dated 21.03.2018 issued by the Commission.

Tariff determination being the most vital function of the Commission, it has been the practice of the Commission to elaborate in detail the procedure and to explain the underlying principles in determination of tariffs. Accordingly, in the present Order also, in line with the past practices, the Commission has tried to elaborate the procedure and principles followed by it in determining the ARR of the generator. The Aggregate Revenue Requirement of M/s SEPL is recoverable from the beneficiary, i.e. UPCL. It is the endeavour of the Commission, to issue Tariff Orders for M/s SEPL concurrently with the issue of Order on retail tariffs for UPCL, so that UPCL is able to honour the payment liability towards generation charges of M/s SEPL. For the sake of convenience and clarity, this Order has further been divided into following Chapters:

- Chapter 1 - Background and Procedural History.
- Chapter 2 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Business Plan for the third Control Period from FY 2019-20 to FY 2021-22.
- Chapter 3 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Truing up for FY 2017-18.
- Chapter 4 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2018-19.
- Chapter 5 - Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on MYT for third Control Period.

## 1 Background and Procedural History

M/s SEPL is a company incorporated under the Companies Act, 1956. M/s SEPL is a generating company falling within the definition under sub-section 28 of Section 2 of the Electricity Act, 2003 (hereinafter referred to as the “Act”) and has implemented a 428 MW gas based CCPP on build, own and operate basis in two phases of 214 MW (225 MW ISO) each, comprising of two gas turbine generator (GTG), each having a gross output of about 71.5 MW at site conditions, two heat recovery steam generators (HRSG) and one common steam turbine generator (STG) of about 71 MW capacity in both phases.

The name plate capacity of the gas based Power Station is 450 MW (ISO condition) in two phases of 225 MW (ISO) each, which comprises of two GTGs, each having a gross output of about 76 MW, and one common steam turbine generator (STG) of about 73 MW in both phases. However, at site conditions the power plant will have a gross capacity of 428 MW in two phases of 214 MW each. The Project is designed to use natural gas/Re-gassified Liquefied Natural gas (R-LNG) as the main fuels for power generation.

The Petitioner due to shortage of gas fuel allocation could not commission its plant which remained stranded for considerable duration until the Scheme for utilization of gas based power generation capacity was implemented by the Ministry of Power, Government of India vide OM No. 4/2/2015 – Th-1 dated 27.03.2015 (the “Scheme”). Subsequently, Power System Development Fund Support Agreement (PSDF Support Agreement) dated 30.04.2016 was signed between Government of India and the Petitioner and other agreements were executed pursuant to the requirements under the scheme.

The Petitioner had executed a PPA on long term basis for sale of 214 MW on gross capacity basis with the State licensee, i.e. UPCL and had achieved commercial operation of CCPP of Phase 1 comprising of two gas turbine and one steam turbine on 20.11.2016. The Petitioner had filed a Petition for determination of tariff for supply of power from its 214 MW Gas based Combined Cycle Power Plant (hereinafter referred to as “the Project”) to UPCL from COD, i.e. 20.11.2016 to 31.03.2017 and for remaining two years of the second Control Period from FY 2017-18 to FY 2018-19. On the request of the Petitioner for grant of provisional tariff,



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the Commission based on the information submitted by the Petitioner and the comments received from UPCL had approved a provisional tariff of Rs. 4.70 per unit (exclusive of PSDF support) to be recovered by the Petitioner from UPCL till determination of final tariff by the Commission.

Subsequently, the Commission vide its Tariff Order dated 24.10.2017 approved the Business Plan and Multi Year Tariff of M/s SEPL for contracted capacity from 20.11.2016 to 31.03.2017 and for the remaining two years of the second Control Period from FY 2017-18 to FY 2018-19. The Commission, in the approval of Business Plan, approved the Capital Expenditure Plan, Capitalisation Plan, and Trajectory of the performance parameters and, in the approval of MYT, approved the Aggregate Revenue Requirement for each year of the Control Period from FY 2016-17 to FY 2018-19. Subsequently, the Commission had carried out the True up of FY 2016-17 and approved the Aggregate Revenue Requirement for FY 2018-19 vide Tariff Order dated 21.03.2018.

In accordance with the provisions of the Act and Regulations 8(1) and Regulation 10(1) of UERC Tariff Regulations, 2018, the Generating Companies are required to submit the Petition for approval of Business Plan and MYT Petition for determination of Aggregate Revenue Requirement for third control period, latest by November 30, 2018. M/s SEPL in compliance to the Regulations submitted the Petition for approval of Business Plan and MYT Petition for determination of ARR for the third Control Period from FY 2019-20 to FY 2021-22 alongwith the true up of expenses for FY 2017-18 based on the audited books of accounts, on November 30, 2018.

The Commission vide its letter no. UERC/6/TF/497/2018-19/2018/1234 dated 06.12.2018 asked the Petitioner to submit certain relevant information in accordance with the Tariff Regulations, 2015 for the true-up of FY 2017-18. M/s SEPL was directed to rectify the said infirmities alongwith certain other deficiencies in the Petition and was also required to submit additional information necessary for admission of the Petition. M/s SEPL vide its submission dated 21.12.2018 removed the critical deficiencies. Based on the submission dated 21.12.2018 made by M/s SEPL, the Commission provisionally admitted the Petition on 24.12.2018.

Meanwhile, based on the scrutiny of the Petition submitted by M/s SEPL and replies submitted by the Petitioner, the Commission sought certain additional information/clarifications from the Petitioner from time to time which were necessary for the purpose of finalizing this Tariff Order.

In order to provide transparency to the process of tariff determination and give UPCL an opportunity to submit their objections/suggestions/comments on the proposals of M/s Sravanthi Energy Pvt. Ltd., the Commission sent a copy of the tariff proposals to UPCL vide letter no. UERC/6/TF-497/2018-19/2018/1344 dated 24.12.2018.

However, the Commission has not received any objections/suggestions/comments from UPCL in this regard till the date of Order.

The submissions made by M/s SEPL in the Petition as well as additional submissions have been discussed by the Commission at appropriate places in the Order along with the Commission's views on the same.

## **2 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Business Plan for third Control Period from FY 2019-20 to FY 2021-22**

### **2.1 Statutory Requirement**

The Commission had notified UERC Tariff Regulations, 2015 on 10.09.2015 in accordance with the provisions of the Act. The above Regulations are applicable for determination of Tariff for the second Control Period from FY 2016-17 to FY 2018-19. Further, the Commission has notified the UERC Tariff Regulations, 2018 on 14.09.2018 applicable for the third Control Period from FY 2019-20 to FY 2021-22.

### **2.2 Multi-year Framework**

As regards the Multi Year Tariff Framework, Regulation 4 of UERC Tariff Regulations, 2018 specifies as follows:

#### ***"4. Multi Year Framework***

*The Multiyear tariff framework shall be based on the following:-*

- a) Business plan submitted by the applicant for the entire control period for the approval of the Commission prior to the beginning of the control period;*
- b) Applicant's forecast of expected ARR for each year of the control period, based on reasonable assumptions and financial & operational principles/parameters laid down under these Regulations submitted alongwith the MYT petition for determination of Aggregate Revenue Requirement and Tariffs for first year of the control period;*
- c) Review of control period ending on 31.03.2019 shall also be taken up alongwith the ARR/Tariff petition for the first year of ensuing control period;*
- d) Trajectory for specific parameters as may be stipulated by the Commission based on submissions made by the Licensee, actual performance data of the Applicants and performance achieved by similarly placed utilities;*
- e) Annual review of performance shall be conducted vis-à-vis the approved forecast and categorization of variations in performance into controllable factors and uncontrollable factors;*

- f) *Sharing of excess profit or loss due to controllable and uncontrollable factors as per provisions of these Regulations."*

## **2.3 Business Plan for the third Control Period**

Regarding Business Plan, Regulation 8 of UERC Tariff Regulations, 2018 specifies as follows:

### **"8. Business Plan**

- (1) *An Applicant shall submit, under affidavit and as per the UERC Conduct of Business Regulations as amended from time to time, a Business Plan by November 30<sup>th</sup>, 2018, for the Control Period of three (3) financial years from April 1, 2019 to March 31, 2022;*
- a) *The Business Plan for the Generating Company shall be for the entire control period and shall, interalia, contain:*
- (i) *Capital investment plan, which shall include details of the investments planned by the Generating Company for existing stations alongwith its cost-benefit analysis, yearly phasing of capital expenditure alongwith the source of funding, financing plan and corresponding capitalisation schedule. This plan shall be commensurate with R&M schemes and proposed efficiency improvements for various plants of the company;*
  - (ii) *The capital investment plan shall show separately, on-going projects that will spill over into the years under review, and new projects (along with justification) that will commence in the years under review but may be completed within or beyond the tariff period;*
  - (iii) *The Generating Company shall submit plant-wise details of the capital structure and cost of financing (interest on debt and return on equity), after considering the existing market conditions, terms of the existing loan agreements, risks associated in generation business and creditworthiness;*
  - (iv) *Details related to major shut down of machines, if any;*
  - (v) *Trajectory of performance parameters*
- ...
- (2) *The Applicant shall also submit the details in respect of its manpower planning for the Control Period as part of Business Plan.*
- (3) *The Commission shall scrutinize and approve the business plan after following the due*

*consultation process."*

In accordance with Regulation 8 of the UERC Tariff Regulations, 2018, M/s SEPL submitted the Business Plan for the third Control Period from FY 2019-20 to FY 2021-22. M/s SEPL in its Business Plan Petition and subsequent submissions has submitted the trajectory of Performance parameters, Capitalization Plan and Financing Plan for the third Control Period from FY 2019-20 to FY 2021-22. The Petitioner's submissions and the Commission's analysis on approval of Business Plan submitted by M/s SEPL for the third Control Period from FY 2019-20 to FY 2021-22 are detailed below:

### 2.3.1 Proposed Additional Capitalisation

With regard to additional capitalisation, the Petitioner has proposed the following additional capitalisation for the third Control Period from FY 2019-20 to FY 2021-22:

**Table 2.1: Additional Capitalisation proposed for the third Control Period**

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	Claimed under head
Land	-	-	-	-
Civil Works	-	-	-	-
Plant & Machinery (Transmission Line)	-	-	-	-
Plant & Machinery (Spares)	15.60	-	-	Regulation 22(1)(c)
Furniture and Fixtures	-	-	-	-
Office Equipment & Others	-	-	-	-
Computers	-	-	-	-
Vehicles	-	-	-	-
<b>Total</b>	<b>15.60</b>	<b>-</b>	<b>-</b>	<b>-</b>

With regard to Additional capitalisation, Regulation 22 of UERC Tariff Regulations, 2018 specifies as follows:

#### ***"22. Additional Capitalisation and De-capitalisation***

*(1)The following capital expenditure within the original scope of work actually incurred or projected to be incurred after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

- a) Undischarged liabilities;*
- b) Works deferred for execution;*
- c) Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 21(11);*

- d) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- e) *On account of change in law.*

*Provided that the details included in the original scope of work along with estimates of expenditure, deferred liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.*

*(2) The capital expenditure of the following nature actually incurred after the cut-off date may be admitted by the Commission, subject to prudence check:*

- a) *Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- b) *Change in law;*
- c) *Works deferred for execution within the original scope of work;*
- d) *Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- e) *Any additional capital expenditure which has become necessary for efficient operation of generating station or transmission system as the case may be. The claim shall be substantiated with the technical justification duly supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level;*
- f) *In case of hydro generating stations, any additional expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company), including due to geological surprises, after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;*

*Provided that additional capitalisation on this account would only be allowed if appropriate and adequate insurance cover was available at the time of occurrence of natural calamities referred to above;*

- g) *In case of transmission and distribution system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard, equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission or distribution system:*
- h) *In case of replacement of any asset/equipment (e.g. transformer, circuit breaker, C.T.,P.T. etc.) on account of non-performance/failure of the same, the following approach shall be adopted:*
- (i) In case of non-performance/failure of assets/equipment, it shall be sent to Store for assessment to check whether it is repairable or not at zero cost;*
  - (ii) In case the asset is repairable, then such asset/equipment shall not be retired from Books of Assets.*
  - (iii) Provided, proper tracking should be available for the material like location, asset number etc.*
  - (iv) In case the asset is not repairable, then following process shall be carried out:*
    - The asset is retired from the Books of Assets, at depreciated value.*
    - Transfer the failed assets/equipments from failed to scrap material.*
    - Dismantle it into of scrap inventory like iron, brass etc.*
    - Build up scrap inventory.*

*Provided, exercise of dismantling of scrap inventory and build-up of scrap inventory shall be done simultaneously. Dismantled scrap value would be decided on the basis of last scrap sale value. Control Account (Dismantling) will be expense account. Difference of Control account, i.e. either profit or loss shall be booked accordingly.*
  - (v) In case a new asset/equipment is issued, then it will be issued at weighted average cost and capitalized respectively, and accordingly, new asset would be created and corresponding entries shall be done in the Books of Accounts.*

*(3) In case of de-capitalisation of assets of a generating company or the distribution licensee or the*

*transmission licensee or SLDC, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place, duly taking into consideration the year in which it was capitalised."*

Further, cut-off date has been defined under Regulation (3)(19) of UERC Tariff Regulations, 2018 as follows:

*"'Cut-off Date' means 31<sup>st</sup> March of the year closing after two years of the year of commercial operation of whole or part of the project, and in case the whole or part of the project is declared under commercial operation in the last quarter of a year, the cut-off date shall be 31<sup>st</sup> March of the year closing after three years of the year of commercial operation;*

*Provided that the cut-off date may be extended by the Commission if it is proved on the basis of documentary evidence that the capitalization could not be done within the cut-off date for reasons beyond the control of the project developer;"*

In the present Petition, the plant of the Petitioner was put under commercial operation w.e.f. 20.11.2016. Accordingly, as per aforesaid definition, the cut-off date of the plant works out to 31.03.2019 and proposed expenditure claimed for the third Control Period is beyond the cut off date and, accordingly, cannot be governed under Regulation 22(1) of the UERC Tariff Regulations, 2018.

The Petitioner submitted that it has not considered any initial spares at the time of CoD and has requested the Commission to allow it to undertake the capitalization of balance capital expenditure on spares, which is less than 4% of capital cost as allowed under Regulation 21(11) of UERC Tariff Regulations, 2018, that it plans to procure in FY 2019-20.

With regard to additional capitalisation on account of initial spares, the Commission vide its Tariff Order dated 24.10.2017 on approval of the Business Plan and Tariff Petition of the Petitioner for the Control Period from FY 2016-17 to FY 2018-19, and vide Tariff Order dated 21.03.2018 on Truing up for FY 2016-17, APR for FY 2017-18 and ARR for FY 2018-19 had decided to consider the additional capitalisation at the time of truing up of the respective years based on the actual expenditure as per the audited accounts and subject to ceiling limit specified under the Regulations. Further, as mentioned earlier, the proposed additional capitalisation falls after the cut-



off date, hence, the Petitioner will be required to justify the additional capitalisation, if any, in accordance with Regulation 22(2) of the UERC Tariff Regulations, 2018 duly substantiated with the technical justification and supported by the documentary evidence like test results carried out by an independent agency in case of deterioration of assets, report of an independent agency in case of damage caused by natural calamities, obsolescence of technology, up-gradation of capacity for the technical reason such as increase in fault level alongwith the purchase orders, bills/vouchers for the said work.

Accordingly, the Commission at this stage doesn't find any reason to approve any additional capitalisation for the third Control Period. The Commission will review the additional capitalisation, if any, based on the audited accounts at the time of truing up in accordance with the UERC Tariff Regulations, 2018 after prudence check.

### **2.3.2 Financing Plan**

The Petitioner submitted that the capital expenditure to be incurred in FY 2019-20 is to be financed entirely through debt. As mentioned above, the Commission has not considered any additional capitalisation for the third Control Period. However, based on the actual admissible additional capitalization and actual financing, truing up will be done for the purpose of determination of Tariff.

### **2.3.3 Major shutdown plan for the plant**

#### **2.3.3.1 Maintenance plan**

The Petitioner submitted that the availability of a generating unit is dependent on the outages considered for the unit, both forced and planned. The well thought & planned maintenance Program will result in the maximum equipment availability and optimization of maintenance costs. The forced outages are minimized by having a robust maintenance plan, the planned outages are necessary for the smooth functioning of the unit with improved reliability & availability. Either or all the following is included in an outage:

- Schedule preventive measures as per OEM's recommendation.
- Audit history & diagnostic based maintenance .
- Overall operational constraints.
- Technological up-gradation.
- Performance improvement measures.

- Statutory compliances.
- Life sustenance, extension, enhancement actions.

The proposed outage plan for the project during the Control Period is shown in the Tables below:

**Table 2.2: Maintenance schedule for FY 2019-20**

Month	Gas Turbine-1 / HRSG -1		Steam Turbine -1		Gas Turbine-2 / HRSG -2	
	Details	Outage Hours	Details	Outage Hours	Details	Outage Hours
Apr-19	---	0	---	0	---	0
May-19	---	0	ST is in part load operation or 50% MCR for 36 hrs	0	Offline water wash, intake air filter replacement.	32
Jun-19	Offline water wash, intake air filter replacement.	32	ST is in part load operation or 50% MCR for 36 hrs	0	---	0
Jul-19	---	0	---	0	---	0
Aug-19	---	0	---	0	---	0
Sep-19	---	0	---	0	---	0
Oct-19	1. GT - 1 Offline water wash 2. Intake air filters replacement. 3. Honeywell DCS up gradation. 4. 220 KV switch yard maintenance.	144	Governor control valves replacement, ESV maintenance, Thrust bearing temp probe replacement	144	1. Offline water wash. 2. Intake air filters replacement. 3. HRSG - 2 modification work, 4. Honeywell DCS up gradation, 5. 220 KV switchyard maintenance	144
Nov-19	---	0	---	0	---	0
Dec-19	---	0	---	0	---	0
Jan-20	---	0	ST is in part load operation or 50% MCR for 28 hrs	0	Offline water wash, intake air filter replacement.	24
Feb-20	---	0	---	0	---	0
Mar-20	1. GT-1 Hot Gas Path Inspection and Minor Generator Inspection for 15 days as per OEM 2. GT - 1 Evaporative Cooling system installation 3. HRSG -1 modification work 4. Intake air filter replacement 5. HRSG-1: Hydro test and IBR statutory inspection	360	ST is in part load operation or 50% MCR for 304 hrs	0	HRSG - 2: Hydro test and IBR statutory inspection	60
<b>Yearly</b>		<b>536</b>		<b>144</b>		<b>260</b>

**Table 2.3: Maintenance schedule for FY 2020-21**

Month	Gas Turbine-1/ HRSG -1		Steam Turbine - 1		Steam Turbine - 1	
	Details	Outage Hours	Details	Outage Hours	Details	Outage Hours
Apr-20	---	0	---	0	---	0
May-20	---	0	ST is in part load operation or 50% MCR for 36 hrs	0	Offline water wash, intake air filter replacement.	32
Jun-20	Offline Water wash	32	ST is in part load operation or 50% MCR for 36 hrs	0	---	0
Jul-20	---	0	---	0	---	0
Aug-20	---	0	ST is in part load operation or 50% MCR for 364 hrs	0	1. GT-2 Hot Gas Path Inspection and Minor Generator Inspection as per OEM for 15 days 2. GT - 2 Evaporative Cooling system installation	360
Sep-20	Offline water wash, intake air filter replacement.	32	ST is in part load operation or 50% MCR for 36 hrs	0	---	0
Oct-20	---	0	---	0	---	0
Nov-20	---	0	ST is in part load operation or 50% MCR for 28 hrs	0	Offline water wash, intake air filter replacement.	24
Dec-20	---	0	---	0	---	0
Jan-21	Offline water wash, intake air filter replacement.	24	ST is in part load operation or 50% MCR for 28 hrs	0	---	0
Feb-21	---	0	---	0	---	0
Mar-21	---	0	ST is in part load operation or 50% MCR for 28 hrs	0	Offline water wash, intake air filter replacement	24
<b>Yearly</b>		<b>88</b>		<b>0</b>		<b>440</b>

**Table 2.4: Maintenance schedule for FY 2021-22**

Month	Gas Turbine-1 / HRSG -1		Steam Turbine - 1		Gas Turbine-2 / HRSG -2	
	Details	Outage Hours	Details	Outage Hours	Details	Outage Hours
Apr-21	---	0	---	0	---	0
May-21	Offline water wash, intake air filter replacement.	32	ST is in part load operation or 50% MCR for 36 hrs	0	---	0
Jun-21	---	0	---	0	---	0
Jul-21	---	0	ST is in part load operation or 50% MCR for 36 hrs	0	Offline water wash, intake air filter replacement.	32
Aug-21	---	0	---	0	---	0
Sep-21	Offline water wash, intake air filter replacement Inspection and ST Under Inspection period and to avoid OC Operation	144	ST Minor Inspection and Corrective maintenance work.	144	ST +Under Inspection period and to avoid OC Operation	144
Oct-21	---	0	---	0	---	0
Nov-21	---	0	ST is in part load operation or 50% MCR for 28 hrs	0	Offline water wash, intake air filter replacement.	24
Dec-21	---	0	---	0	---	0
Jan-22	---	0	---	0	---	0
Feb-22	1. Offline water wash 2. Intake air filter replacement 3. HRSG-1: Hydro test and IBR statutory inspection	60	ST is in part load operation or 50% MCR for 64 hrs	0	---	0
Mar-22	---	0	ST is in part load operation or 50% MCR for 64 hrs	0	1. Offline water wash 2. Intake air filter replacement 3. HRSG-2: Hydro test and IBR statutory inspection	60
<b>Yearly</b>		<b>236</b>		<b>144</b>		<b>260</b>

### 2.3.3.2 Trajectory of Performance Parameters

The Petitioner submitted that in the light of maintenance schedule planned for Phase 1 as detailed above, the plant is expected to follow the trajectory of performance parameters as detailed in the Table given below:

**Table 2.5: Trajectory of performance parameters**

Duration Number of days	Unit	1st Apr 2019 to 31st Mar 2020	1st Apr 2020 to 31st Mar 2021	1st Apr 2021 to 31st Mar 2022
		366	365	365
Installed capacity	MW	214	214	214
Aux. (Normative)	%	2.50%	2.50%	2.50%
Availability (Normative)	%	85%	85%	85%
Gross Generation Normative	MU	1593.44	1593.44	1593.44
Auxiliary Consumption	MU	39.84	39.84	39.84
Net Generation Normative	MU	1553.60	1553.60	1553.60

The Commission has noted the submission made by the Petitioner for maintenance schedule and corresponding shutdown hours of its plant and the Commission has accepted the same. However, the Petitioner is directed to have proper communication well in advance with both the Distribution Licensee as well Transmission Licensee in the State so as to avoid any dispute that may occur due to disturbance in the demand/supply of power of Distribution Licensee and also due to the transmission capacity constraint or any other related issues with Transmission Licensee.

**In this regard, the Commission would like to advise the Petitioner and the Respondent to finalise the said Maintenance plan amongst them so as to ensure that supply position in the State is not impacted because of the same and submit the same to the Commission within two months from the date of Order.**

In addition to details pertaining to Phase 1 of the Petitioner's project that got commissioned on 20.11.2016, the Petitioner has also furnished certain details regarding expected COD, financial parameters etc. related to Phase 2 of its project of equal capacity. The Petitioner requested before the Commission to approve the evacuation of power by LILO at Kashipur-Mahuakheraganj 220 kV Transmission line for Phase 2 of the project, as the Petitioner intends to sell power from Phase 2 to the State of Uttarakhand. The Petitioner further submitted before the Commission to direct PTCUL to allow them to feed power into PTCUL transmission system through this transmission line on long term basis as per the requirement of the PPA to avoid CTU Charges on UPCL, in case the PPA is executed for the relevant capacity.

In this regard, the Commission is of the view that, as currently no PPA exists between UPCL and the Petitioner for purchase of power by UPCL from Phase 2 of the Petitioner's project, therefore, the matters related to Phase 2 are not relevant with respect to the current Business Plan Petition filed by the Petitioner and, accordingly, the Commission is not expressing any view on the same in the current Order.

### 3 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Truing up for FY 2017-18

Regulation 12 of the UERC Tariff Regulations, 2015 specifies as follows:

*"12. Annual Performance Review*

*(1) Under the multi-year tariff framework, the performance of the Generating Company or Transmission and Distribution Licensees or SLDC, shall be subject to an Annual Performance Review.*

*(2) The Applicant shall under affidavit and as per the UERC (conduct of Business) Regulations 2004 make an application for Annual Performance Review by November 30th of every year;*

*...*

*(3) The scope of the Annual Performance Review shall be a comparison of the performance of the Applicant with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise of following:*

*a) A comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenue subject to prudence check including pass through of impact of uncontrollable factors;*

*b) Categorisation of variations in performance with reference to approved forecast into factors within the control of the applicant (controllable factors) and those caused by factors beyond the control of the applicant (un-controllable factors).*

*c) Revision of estimates for the ensuing financial year, if required, based on audited financial results for the previous financial year;*

*d) Computation of the sharing of gains and losses on account of controllable factors for the previous year*

*..."*

In its present filings, the Petitioner has submitted the data relating to its expenses and revenues for FY 2017-18 based on the audited accounts and has, accordingly, requested the Commission to carry out the truing up for FY 2017-18 alongwith the sharing of gains and losses. The Petitioner submitted that the Tariff formats submitted by it are based on the actual position of the capitalisation and the revenue expenditure as per the books of accounts.

### **3.1 Impact of Sharing of Gains and Losses on account of Controllable Factors for FY 2017-18.**

Regulation 14 of the UERC Tariff Regulations, 2015 specifies as follows:

***"14. Sharing of Gains and Losses on account of Controllable factors:***

*The approved aggregate gain and loss to the Applicant on account of controllable factors shall be dealt with in the following manner:*

- (a) 1/3rd of such gain or loss shall be passed on as a rebate or allowed to be recovered in tariffs over such period as may be specified in the Order of the Commission;*
- (b) The balance amount of such gain or loss may be utilized or absorbed by the Applicant."*

The UERC Tariff Regulations, 2015 requires a comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenues subject to prudence check including pass through of impact of uncontrollable factors.

O&M expenses comprises of the major portion of AFC of M/s SEPL and are within the control of the Petitioner and, moreover, in accordance with UERC Tariff Regulations, 2015 these are controllable expenses. Similarly, in accordance with the UERC Tariff Regulations, 2015, the variation in working capital requirements is also a controllable factor. However, as discussed in Tariff Order dated 24.10.2017, the interest on working capital (IWC) was not included in the annual fixed charges (AFC) allowable to the Petitioner based on the Petitioner's submission that it intends to forego the same in case UPCL does not charge rebate on their energy bills. Further as discussed in Tariff Order dated 21.03.2018, based on the Petitioner's submission that it is willing to forego the IWC for FY 2016-17, the same was not considered by the Commission for the purposes of truing up of FY 2016-17. However, M/s SEPL in the current Petition has requested the Commission to include the working capital interest as part of AFC in the current Order as the same was incurred on account of delayed payment made by UPCL. The same has been dealt with by the Commission in the subsequent Paras of this Order. Further, the capital related expenses like interest on loans, depreciation etc. has been treated as uncontrollable and, hence, no sharing of losses or gains for the same has been carried out.

Accordingly, the Commission has worked out the trued up (surplus)/gap of the Petitioner after sharing of gains and losses as per the provisions of UERC Tariff Regulations, 2015.

### **3.1.1 Physical Parameters**

#### **3.1.1.1 NAPAF**

The Commission vide its Order dated 20.07.2016 on approval of PPA for the Petitioner's plant approved the definition of NAPAF, as per Regulation 54 of the UERC Tariff Regulations, 2015, as follows:

*“Normative Availability” or “Target Availability” Or Normative Annual Plant Availability Factor (NAPAF) shall mean Eighty Five (85%) Availability of aggregate Contracted Capacity at the Delivery Point on Contract Year Basis. However UPCL may vary the Availability Factor on monthly basis as required by UPCL but maintaining the NAPAF at 85% yearly basis.”*

The Commission in its Tariff Order dated 24.10.2017 for the purpose of computation of saleable energy of the Petitioner's plant considered the NAPAF of 85% in accordance with the UERC Tariff Regulations, 2015. Moreover, as the Petitioner's plant was covered under the PSDF scheme during FY 2016-17, therefore, during the currency of the Scheme, NAPAF and actual PAFAM in respect of the Petitioner's plant will not have any implication since the recovery of the AFC was allowed in accordance with the ceiling rate provided under the Scheme.

The Petitioner in the current Petition has not sought any deviation from the NAPAF approved by the Commission and, accordingly, the Commission is of the view that the NAPAF of 85% approved in the Tariff Order dated 24.10.2017 for second Control Period shall continue to be applicable without any change for FY 2017-18.

#### **3.1.1.2 Energy Generation and Saleable Primary Energy**

The Commission in its MYT Order dated 24.10.2017 on approval of Business Plan and Multi Year Tariff for the second Control Period from FY 2016-17 to FY 2018-19 had approved the Design Energy based on the contracted capacity of 214 MW. Further, in accordance with Regulation 47(4)(i) of the Tariff Regulations, 2015, auxiliary consumption of 2.5% has been considered. Accordingly, applying the PLF of 85% as discussed hereto above and reducing the auxiliary power, the saleable energy works out as 1553.61 MU for FY 2017-18.

M/s SEPL in its Petition has submitted the actual saleable energy for FY 2017-18 as 1041.02 MU that in turn translates to Plant Load Factor of 57%. However, the Petitioner submitted that the Plant Availability Factor, i.e. the period for which the plant was available for generation of power (irrespective of the actual generation) was 85% for FY 2017-18. However, during the year, the actual



Gross Generation was 1062.52 MUs and the Plant Load Factor which is determined based on output was 57%. The Petitioner submitted that this was primarily due to restrictions imposed by Uttarakhand Power Corporation Ltd (UPCL) on power offtake due to which the loss in gross generation of power during FY 2017-18 was 556.49 MUs. The Petitioner further submitted that if the loss of generation is taken into account then the PLF shall resume its normal levels of 85%. The Petitioner further submitted that, similarly, for Year to Date (April-Sept 2018), the actual Gross Generation of Power has been 368.18 MUs and the Plant Load Factor was 39% and if units not generated due to back-down are considered then the PLF shall resume its normal levels of 85% and match up the Normative Plant Availability Factor.

The Commission analysed the submissions made by M/s SEPL in this regard and observed that, based on the provisionally verified declared capacity by SLDC, the generator's plant availability was more than 85% during the FY 2017-18. M/s SEPL has also not sought any deviation in the approved design energy for FY 2017-18. Accordingly, the Commission decides to consider the design energy and saleable primary energy for FY 2017-18 as approved in the Tariff Order dated 24.10.2017 for the Petitioner's plant.

### 3.1.2 Financial Parameters

#### 3.1.2.1 Capital Cost

With regard to the Capital Cost of the 225 MW CCPP (Phase 1) of M/s SEPL on the date of its Commercial Operation (COD), the Commission in its Tariff Order dated 24.10.2017 had approved the Capital Cost as on COD as Rs. 1192.41 Crore as follows.

**Table 3.1: Approved Capital Cost for Phase 1 of M/s SEPL as on COD (Rs. Crore)**

Particulars	Approved
Freehold Land	4.08
Civil Works	101.37
Plant & Machinery	1085.07
Other Fixed Assets	
- Vehicle	0.50
- Furniture & Fixture, Office Equipments etc.	1.14
- Computers	0.26
<b>Total Capital Cost</b>	<b>1192.41</b>

Further, financing of the approved capital cost of Phase 1 of the Power Station as on COD has been considered in line with the Tariff Order dated 24.10.2017 and is shown in the Table below:

**Table 3.2: Financing for Phase 1 as on COD (Rs. Crore)**

Particulars	Approved (Rs. in Crore)	Percentage (%)
Debt	857.31	71.90
Equity	335.10	28.10
<b>Total Capital Structure</b>	<b>1192.41</b>	<b>100.00</b>

Further, the Commission, vide its Tariff Order dated 21.03.2018 had approved the Opening GFA and Nil additional capitalisation during FY 2016-17 for Phase 1 of the Petitioner's plant. Accordingly, the Commission has considered the approved closing capital cost of FY 2016-17, i.e. Rs. 1192.41 as opening capital cost for the purpose of truing up of FY 2017-18.

### 3.1.2.2 Additional Capitalisation and De-capitalisation

Regulation 22 of UERC Tariff Regulations, 2015 specifies as under:

*“(1) The following capital expenditure within the original scope of work actually incurred or projected to be incurred after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:*

- a) Undischarged liabilities;*
- b) Works deferred for execution;*
- c) Procurement of initial capital spares within the original scope of work, subject to the provisions of Regulation 21(11);*
- d) Liabilities to meet award of arbitration or for compliance of the order or decree of a court; and*
- e) On account of change in law.*

*Provided that the details included in the original scope of work along with estimates of expenditure, deferred liabilities and the works deferred for execution shall be submitted along with the application for determination of tariff.*

*(2) The capital expenditure of the following nature actually incurred after the cut-off date may be admitted by the Commission, subject to prudence check:*

- a) Liabilities to meet award of arbitration or for compliance of the order or decree of a court;*
- b) Change in law;*
- c) Works deferred for execution within the original scope of work;*
- d) Any liability for works admitted by the Commission after the cut-off date to the extent of discharge of such liabilities by actual payments;*
- e) Any additional capital expenditure which has become necessary for efficient operation of generating station or transmission system as the case may be. The claim shall be*

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

f) In case of hydro generating stations, any additional expenditure which has become necessary on account of damage caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company), including due to geological surprises, after adjusting for proceeds from any insurance scheme, and expenditure incurred due to any additional work which has become necessary for successful and efficient plant operation;

Provided that additional capitalisation on this account would only be allowed if appropriate and adequate insurance cover was available at the time of occurrence of natural calamities referred to above;

g) In case of transmission and distribution system any additional expenditure on items such as relays, control and instrumentation, computer system, power line carrier communication, DC batteries, replacement of switchyard, equipment due to increase of fault level, emergency restoration system, insulators cleaning infrastructure, replacement of damaged equipment not covered by insurance and any other expenditure which has become necessary for successful and efficient operation of transmission or distribution system:

Provided that, any additional expenditure on acquiring minor items/assets like tools and tackles, furniture, air-conditioners, voltage stabilizers, refrigerators, coolers, fans, washing machines, heat convectors, mattresses, carpets, etc. brought after the cutoff date shall not be considered for additional capitalization for determination of tariff w.e.f. 01.04.2016.

h) In case of replacement of any asset/equipment (e.g. transformer, circuit breaker, C.T., P.T. etc.) on account of non-performance/failure of the same, the following approach shall be adopted:

(i) In case of non-performance/failure of assets/equipment, it shall be sent to Store for assessment to check whether it is repairable or not at zero cost;

(ii) In case the asset is repairable, then such asset/equipment shall not be retired from Books of Assets.

Provided, proper tracking should be available for the material like location, asset number

etc.

(iii) In case the asset is not repairable, then following process shall be carried out:

- The asset is retired from the Books of Assets, at depreciated value.
- Transfer the failed assets/equipments from failed to scrap material.
- Dismantle it into of scrap inventory like iron, brass etc.
- Build up scrap inventory.

Provided, exercise of dismantling of scrap inventory and build-up of scrap inventory shall be done simultaneously. Dismantled scrap value would be decided on the basis of last scrap sale value. Control Account (Dismantling) will be expense account. Difference of Control account, i.e. either profit or loss shall be booked accordingly.

(iv) In case a new asset/equipment is issued, then it will be issued at weighted average cost and capitalized respectively, and accordingly, new asset would be created and corresponding entries shall be done in the Books of Accounts.

(3) In case of de-capitalisation of assets of a generating company or the distribution licensee or the transmission licensee or SLDC, as the case may be, the original cost of such asset as on the date of de-capitalisation shall be deducted from the value of gross fixed asset and corresponding loan as well as equity shall be deducted from outstanding loan and the equity respectively in the year such de-capitalisation takes place, duly taking into consideration the year in which it was capitalised.”

Regulation 24(5) of UERC Tariff Regulations specifies as under:

“(5) Any expenditure incurred or projected to be incurred on or after 1.4.2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the matter specified in Regulation 22 and 23 of these Regulations.”

The Petitioner vide its submission dated 17.01.2019 has claimed an additional capitalisation of Rs. 0.88 Crore for FY 2017-18 in accordance with Regulation 22 of UERC Tariff Regulations, 2015 as detailed in the Table below:

**Table 3.3: Additional Capitalisation claimed for FY 2017-18**

S.No.	Particulars	Amount (Rs. Crore)
1.	Plant & Machinery	0.18
2.	Vehicles	0.59
3.	Furniture & Fixtures, Office Equipments etc.	0.04
4.	Computers	0.07
<b>Total</b>		<b>0.88</b>

Further, the Petitioner has also claimed a de-capitalization of Rs. 0.09 Crore for FY 2017-18 on account of vehicle sold during the year.

The Commission analysed the claims of the Petitioner and observed that the value of assets capitalised as per the audited financial statements of FY 2017-18 submitted by the Petitioner is Rs. 0.87 Crore. Hence, the Commission, accordingly, approves the additional capitalisation of Rs. 0.87 Crore as against the Petitioner's claim of Rs. 0.88 Crore for FY 2017-18. The Commission also approves the de-capitalisation of Rs. 0.09 Crore as claimed by the Petitioner for the purpose of truing up of FY 2017-18.

Accordingly, based on the above discussion, the details of the trued up capital cost allowed for FY 2017-18 is as follows:

**Table 3.4: Trued up Capital Cost for FY 2017-18 (Rs. Crore)**

Particulars	Opening GFA as on 01.04.2017	Additional Capitalisation approved for FY 2017-18	Closing GFA as on 31.03.2017
Freehold Land	4.08	-	4.08
Civil Works	101.37	-	101.37
Plant & Machinery	1085.07	0.18	1085.25
Vehicles	0.50	*0.50	1.00
Furniture & Fixtures, Office equipments etc.	1.14	0.04	1.18
Computers	0.26	0.06	0.32
<b>Total</b>	<b>1192.41</b>	<b>0.78</b>	<b>1193.19</b>

*\* After considering de-capitalisation of Rs. 0.09 Crore*

### 3.1.2.3 Capital Structure

Regulation 24 of UERC Tariff Regulations, 2015 specifies as under:

“ ...

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2016 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall service in the matter specified in Regulation 22 and 23 of these Regulations.

(6) In case of Generating Company, Transmission Licensee, Distribution Licensee, or SLDC where investments have been made prior to 1.4.2016, Debt: Equity Ratio shall be as approved by the Commission in the previous Orders.”

The Commission has considered the Debt-Equity Ratio of 71.90:28.10 for capital cost as on 01.04.2017 which was approved in the Tariff Order dated 21.03.2018 while approving the truing up for FY 2016-17. Further, with regard to additional capitalisation claimed for FY 2017-18, the

Petitioner submitted that the expenses for the procurement of assets were done out of the revenues of the Company. Accordingly, the Commission has considered the financing of additional capitalisation incurred for FY 2017-18 in the ratio of 70:30. Further, the de-capitalisation has been considered in the Debt-Equity ratio as on 01.04.2017, i.e. 71.90:28.10.

Capital structure for the capital cost as on 01.04.2017 and additional capitalisation for FY 2017-18 is as follows:

**Table 3.5: Detail of Financing of Allowed Capital Cost for FY 2017-18**

Particular	Opening as on 01.04.2017		Added during the year	Closing as on 31.03.2018	
	(Rs. Crore)	%		(Rs. Crore)	(Rs. Crore)
Debt	857.31	71.90	0.54	857.85	71.90
Equity	335.10	28.10	0.24	335.34	28.10
<b>Total</b>	<b>1192.41</b>	<b>100.00</b>	<b>0.78</b>	<b>1193.19</b>	<b>100.00</b>

### 3.1.2.4 Depreciation

Regulation 28 of the UERC Tariff Regulations, 2015 specifies as follows:

***“28. Depreciation***

*(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

*Provided that depreciation shall not be allowed on assets funded through Consumer Contribution and Capital Subsidies/Grants.*

*(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.*

...

*(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix - II to these Regulations.*

....”

The Petitioner has claimed depreciation of Rs. 71.40 Crore for FY 2017-18 based on the actual expenditure capitalised in its books of account, which is higher than the capital expenditure allowed by the Commission as on COD vide its Order dated 24.10.2017 and further additional capitalisation approved from COD till FY 2017-18.

The Commission has calculated the weighted average rate of depreciation of 5.10% by

applying the depreciation rates as specified in Appendix-II of UERC Tariff Regulations, 2015. Accordingly, the Commission has worked out the depreciation of Rs. 60.87 Crore against the admissible average GFA of Rs. 1192.80 Crore for FY 2017-18 by applying the weighted average rate of depreciation of 5.10%.

Based on the above discussed approach, the summary of depreciation as approved in MYT Order dated 24.10.2017, claimed by the Petitioner and as approved now by the Commission for FY 2017-18 after truing up is shown in the Table given below:

**Table 3.6: Depreciation approved for FY 2017-18 (Rs. Crore)**

Particular	Approved in Tariff Order dated 24.10.2017 for FY 2017-18	Claimed by Petitioner	Approved after truing up for FY 2017-18
Depreciation	60.78	71.40	60.87

### 3.1.2.5 Return on Equity (RoE)

Regulation 26 of the UERC Tariff Regulations, 2015 specifies as follows:

***"26. Return on Equity***

*(1) Return on equity shall be computed on the equity base determined in accordance with Regulation 24.*

*Provided that, Return on Equity shall be allowed on account of allowed equity capital for the assets put to use at the commencement of each financial year.*

*(2) Return on equity shall be computed on at the base rate of 15.50% for thermal generating stations, transmission licensee, SLDC and run of the river hydro generating station and at the base rate of 16.50% for the storage type hydro generating stations and run of river generating station with pondage and distribution licensee on a post-tax basis.*

*..."*

The Petitioner has claimed the Return on Equity amounting to Rs. 55.91 Crore for FY 2017-18. The Commission has allowed the Return on Equity on the opening equity base at the rate of 15.50%. The Return on Equity approved by the Commission for FY 2017-18 is given in the Table below:

**Table 3.7: Return on Equity approved for FY 2017-18**

Particular	Approved in Tariff Order dated 24.10.2017	Claimed by Petitioner	Approved
Return on Equity	51.94	55.91	51.94

### 3.1.2.6 Interest and Finance charges

Regulation 27 of the UERC Tariff Regulations, 2015 specifies as follows:

*“27. Interest and finance charges on loan capital and on Security Deposit*

*(1) The loans arrived at in the manner indicated in Regulation 24 shall be considered as gross normative loan for calculation of interest on loan.*

*(2) The normative loan outstanding as on 1.4.2016 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2016 from the gross normative loan.*

*(3) The repayment for each year of the Control Period shall be deemed to be equal to the depreciation allowed for that year.*

*...*

*(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio of the previous year after providing appropriate accounting adjustment for interest capitalised:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.*

*Provided further that if the generating station or the transmission system or the distribution system or SLDC, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the Transmission Licensee or the Distribution Licensee or SLDC as a whole shall be considered.*

*(6) The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

*...”*

The Petitioner has claimed interest on normative loan of Rs. 156.88 Crore for FY 2017-18 for the purpose of truing up based on the weighted average rate of interest of 12.89% p.a. The Petitioner submitted that it has claimed interest on normative loan based on the actual rate of interest charged by the lending institutions.

The Commission has considered the normative loan worked out under “Capital Cost” as on 01.04.2017 as opening normative loan for FY 2017-18 and repayment has been considered equal to



the admissible depreciation, i.e. Rs. 60.87 Crore. Also, as discussed hereto above, the Commission has approved net additional capitalisation of Rs. 0.78 Crore for FY 2017-18, accordingly, addition to normative loan has been considered as 0.54 Crore as per the UERC Tariff Regulations, 2015.

Further, as discussed in the Tariff Order dated 24.10.2017, most of the lenders for the Phase 1 of the Petitioner's project have charged interest only upto FY 2014-15 because the term loan of the lenders in the consortium turned into NPA as per the banking norms. The relevant extract of the Tariff Order dated 24.10.2017 is reproduced hereunder:

*"Further, as discussed under IDC, most of the bankers had charged interest only upto FY 2014-15. The Petitioner was asked to clarify the reason for the same, in response to which the Petitioner submitted that term loan of the lenders in the consortium had turned into NPA as per the banking norms, hence, some of the banks avoided charging interest. The Commission observed that the Petitioner was providing for interest expenses in its books of accounts on provisional basis as per the loan agreement entered into with the banks. The Commission in this regard is of the view that since the interest has been charged by only few lenders after FY 2014-15, hence, calculation of weighted average rate of interest based on the previous year actual interest charged by the bankers will not reflect a true picture. Moreover, considering the interest based on the provisions made by the Petitioner in its books of accounts will not be prudent as the same are based on estimation. The Petitioner in Form F-9.2 has submitted the rate of interest on actual loans and in accordance with the information given in the said Form the latest borrowing made by the Petitioner in FY 2016-17 from IFCI & consortium bank was @ 12.20% per annum. Therefore, the Commission is of the view that as the actual weighted average rate of interest cannot be properly worked out because few of the banks had stopped charging interest post FY 2014-15, hence, the rate of interest of 12.20% as given by the Petitioner in its Forms for latest borrowing of Rs. 53.60 Crore has been considered by the Commission for calculating the interest on normative loan."*

In this regard, the Commission sought information from the Petitioner regarding the actual interest charged by the lenders during the FY 2017-18, in response to which the Petitioner submitted that in the FY 2017-18 only few of the lenders from the consortium had charged interest on loan and for the rest of the lenders, the Petitioner had booked interest expenses provisionally in its financial statements.

Accordingly, the Commission is of the view, that there is no merit in deviating with the methodology adopted for considering the rate of interest in the Tariff Order dated 24.10.2017, since the actual weighted average rate of interest cannot be worked out for FY 2017-18 for the reasons

discussed above. Therefore, interest rate of 12.20% as earlier approved by the Commission has been considered for working out the interest on normative loan for FY 2017-18. Accordingly, the interest on normative loan for FY 2017-18 works out to Rs. 98.44 Crore by applying the rate of 12.20% which shall, however, be trued up once the restructuring of loans for the Petitioner's project is complete. The Petitioner is advised to approach the financial institutions and complete the restructuring of the loans at the earliest.

Based on the above considerations and the UERC Tariff Regulations, 2015, the Commission has approved the interest expenses of FY 2017-18 for Phase 1 of the Petitioner's project as shown in the Table below:

**Table 3.8 Interest on Loan as approved for FY 2017-18 (Rs. Crore)**

Particulars	Approved in Tariff Order dated 24.10.2017 for FY 2017-18	Claimed by Petitioner	Approved after truing up for FY 2017-18
FY 2017-18	98.41	156.88	98.44

### 3.1.2.7 Operation & Maintenance (O&M) Expenses

#### 3.1.2.7.1 Truing up of O&M Expenses for FY 2017-18

Regulation 48(1) of UERC Tariff Regulations, 2015 as amended from time to time specifies as follows:

*“(1) Normative O&M Expenses for Open Cycle Gas Turbine/Combined Cycle generating stations shall be as under:*

*(In Rs. Lakh/MW)*

Year	Gas Turbine/ Combined Cycle generating stations		Small gas turbine power generating stations (less than 50 MW Unit size)	Advance F class Machines
	With warranty spares for 10 years	Without warranty spares		
2015-16	9.25	13.87	16.83	28.36
2016-17	9.86	14.79	17.95	30.29
2017-18	10.52	15.77	19.14	32.35
2018-19	11.22	16.82	20.41	34.56

...”

Based on the applicable norms of O&M expenses for combined cycle generating station, the Commission had approved normative O&M expenses that works out to Rs. 69.23 Crore for FY 2017-18 for 214 MW capacity of the Petitioner's plant.

The Petitioner claimed an amount of Rs. 54.56 Crore towards O&M expenses for FY 2017-18 as per the audited accounts. Further, the Petitioner submitted the separate details of employee,

R&M and A&G expenses.

As per UERC Tariff Regulations, 2015 the variation in normative and actual O&M expenses shall be considered as part of gain/loss on account of controllable factors.

Regulation 14 of UERC Tariff Regulations, 2015 specifies as follows:

***"14. Sharing of Gains and Losses on account of controllable factors:***

(1) *The approved aggregate gain and loss to the Applicant on account of controllable factors shall be dealt with in the following manner:*

- a) *1/3<sup>rd</sup> of such gain or loss shall be passed on as a rebate or allowed to be recovered in tariffs over such period as may be specified in the Order of the Commission;*
- b) *The balance amount of such gain or loss may be utilized or absorbed by the Applicant."*

As discussed above, O&M expenses have been considered as controllable factor, accordingly, the Commission has approved the total O&M expenses for FY 2017-18 after sharing of gain/loss in accordance with the Regulations as shown in the Table below:

**Table 3.9: O&M Expenses Approved After Sharing of Gains and Losses for FY 2017-18  
(Rs. Crore)**

Particulars	Actual Claimed in the Petition	Adjusted claim considered for sharing	Normative approved now	Efficiency gain/(loss)	Generator Share	Net Entitlement
O&M Expenses		A	B	C=B-A	D=2/3xC	E=A+D
FY 2017-18	54.56	54.56	69.23	14.67	9.78	64.34

### 3.1.2.8 Interest on Working Capital

The Petitioner submitted that as per the Orders issued by UERC, UPCL was required to make the payment towards the invoices raised by the Petitioner within 3 working days. However, due to delay in payment of the said invoices beyond the prescribed time frame, the Petitioner has incurred Working Capital interest and has, accordingly, claimed the same as part of AFC during the true-up of FY 2017-18.

Regulation 33 of UERC Tariff Regulations, 2015 specifies as follows:

"...

a) *In case of open cycle Gas Turbine/Combined Cycle thermal generating stations, working capital shall cover:*

(i) *Landed fuel cost for 1 (one) month corresponding to the NAPAF duly taking into account the*

- mode of operation of the generating station on gas fuel and liquid fuel;*
- (ii) Liquid fuel stock for ½ (half) month corresponding to the NAPAF, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;*
- (iii) Operation and maintenance expenses for one month;*
- (iv) Maintenance spares @ 30% of operation and maintenance expenses; and*
- (v) Receivables equivalent to 2 (two) months of Capacity Charge and Energy Charges for sale of electricity calculated on NAPAF duly taking into account the mode of operation of the generating station on gas fuel and liquid fuel.*
- ...”*

As discussed in the Tariff Order dated 24.10.2017, the Commission vide its Order dated 17.04.2017 allowed the Petitioner to forego interest on working capital in lieu of non-chargeability of rebate by UPCL while making payment of generation bills raised by the Petitioner. The relevant extract of the Tariff Order dated 24.10.2017 is reproduced hereunder:

*“However, the Petitioner vide its letter dated 07.04.2017 submitted that it intends to forego interest on working capital in case UPCL does not charge rebate on their energy bills. The Commission evaluated the submissions made by the Petitioner and observed that it would be in the interest of consumer of the State if Petitioner’s proposal is accepted in this regard since with the implementation of this arrangement there will be net reduction in generation tariff of the Petitioner and consequent reduction in power purchase cost of UPCL resulting in the decrease of retail/consumer tariffs. In this regard, the Commission vide its Order dated 17.04.2017 had allowed the Petitioner (M/s SEPL) to forego interest on working capital in lieu of non-chargeability of rebate by UPCL while making payment of generation bills raised by M/s SEPL. Relevant extract of the above mentioned Order is as follows:*

*“From the above illustration, it is clear that there will be net saving in cost of power purchase to the tune of about Rs. 13 Crore per year or Rs. 1 Crore p.m. under the arrangement that UPCL does not charge rebate to M/s SEPL and in turn M/s SEPL foregoes interest on working capital. However, this arrangement will only be applicable to M/s SEPL as other Gas based generators in the State have not given their option to this effect. Keeping in view, the overall benefit to UPCL and consumers of the State, the Commission allows implementation of the above arrangement between UPCL and M/s SEPL. The Commission also advices other Gas based generators to explore the*

option forwarded by M/s SEPL in the interest of UPCL and consumers of the State.

Accordingly, the direction issued by the Commission vide its Order dated 25.01.2017 regarding non-applicability of provision of rebate till 31.03.2017 and deduction of rebate by UPCL thereafter, shall be limited to only two Gas based generators namely M/s GIPL and M/s Beta Infratech for whom the provision relating to deduction of rebate by UPCL on the energy bills shall be governed in accordance with the original PPA approved by the Commission. However, the Respondents will be at liberty to raise the fortnightly bills to UPCL corresponding to fuel bills raised by M/s GAIL in accordance with the principles laid down in the Commission's Order dated 25.01.2017."

In this regard, the Commission advises the Petitioner to file a separate Petition, corroborating the interest charges borne by it on account of non-compliance of the Commission's directive by UPCL, alongwith the details of cash credit account and the interest levied on it during FY 2017-18.

Accordingly, in line with the decision taken in the Tariff Order dated 24.10.2017 and aforesaid discussions, interest on working capital is not being allowed for the purpose of truing up of FY 2017-18.

### **3.1.2.9 Non-Tariff Income**

Regulation 46 of UERC Tariff Regulations, 2015 specifies as follows:

*"46. Non Tariff Income*

*The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Charges in determining the Net Annual Fixed Charges of the Generating Company.*

*Provided that the Generating Company shall submit full details of its forecast of non tariff income to the Commission in such form as may be stipulated by the Commission from time to time.*

*The indicative list of various heads to be considered for non tariff income shall be as under:*

- a) Income from rent of land or buildings;*
- b) Income from sale of scrap;*
- c) Income from statutory investments;*
- d) Interest on delayed or deferred payment on bills;*

- e) Interest on advances to suppliers/contractors;
- f) Rental from staff quarters;
- g) Rental from contractors;
- h) Income from hire charges from contractors and others;
- i) Income from advertisements, etc.;
- j) Any other non- tariff income.

*Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated business of the Generating Company shall not be included in Non-Tariff Income."*

The Petitioner has claimed an amount of Rs. 0.91 Crore as NTI for FY 2017-18. Accordingly, non-tariff income of Rs. 0.91 Crore has been adjusted by the Commission from the Gross AFC of FY 2017-18.

### 3.1.2.10 Annual Fixed Charges (AFC) for FY 2017-18

Based on the above analysis, the Commission has worked out the approved figures of Gross AFC for FY 2017-18 after truing up. The summary of Gross AFC for FY 2017-18 is as shown in the Table below:

**Table 3.10: Annual Fixed Charges for FY 2017-18 approved by the Commission (Rs. Crore)**

Particulars	Approved in T.O. dated 24.10.2017	Claimed by the Petitioner	Approved after truing-up
Depreciation	60.78	71.40	60.87
Interest on Loan & Financial Cost	98.41	156.88	98.44
Return on Equity	51.94	55.91	51.94
O&M Expenses	69.23	54.56	64.34
Interest on Working Capital	0.00	3.00	0.00
Less: Non-Tariff Income	0.00	0.91	0.91
<b>Total</b>	<b>280.36</b>	<b>340.83</b>	<b>274.68</b>

Accordingly, trued-up AFC for FY 2017-18 works out to Rs. 274.68 Crore. The surplus for FY 2017-18 alongwith the carrying cost works out to Rs. 6.91 Crore which has been considered by the Commission in the ARR of FY 2019-20.

### 3.1.2.11 Capacity Charge and Energy Charge Rate (ECR) for FY 2017-18

Based on the above analysis for all the heads of expenses of AFC, the Commission has after truing up, approved the Annual Fixed Charges (AFC) of the Petitioner attributable to its beneficiary

for FY 2017-18.

Regulation 49 of UERC Tariff Regulations, 2015 specifies as follows:

***"49. Computation and Payment of Annual Fixed Charges and Energy Charges for Thermal Generating Stations***

- (1) *The fixed cost of a thermal generating station shall be computed on annual basis, based on the norms specified under these Regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share/allocation in the capacity of the generating station.*
- (2) *The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:*

$$CC_1 = (AFC/12) (PAF_1 / NAPAF) \text{ subject to ceiling of } (AFC/12)$$

$$CC_2 = (AFC/6) (PAF_2 / NAPAF) \text{ subject to ceiling of } ((AFC/6) - CC_1)$$

$$CC_3 = (AFC/4) (PAF_3 / NAPAF) \text{ subject to ceiling of } ((AFC/4) - (CC_1 + CC_2))$$

$$CC_4 = (AFC/3) (PAF_4 / NAPAF) \text{ subject to ceiling of } ((AFC/3) - (CC_1 + CC_2 + CC_3))$$

$$CC_5 = (AFC \times 5/12) (PAF_5 / NAPAF) \text{ subject to ceiling of } ((AFC \times 5/12) - (CC_1 + CC_2 + CC_3 + CC_4))$$

$$CC_6 = (AFC/2) (PAF_6 / NAPAF) \text{ subject to ceiling of } ((AFC/2) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5))$$

$$CC_7 = (AFC \times 7/12) (PAF_7 / NAPAF) \text{ subject to ceiling of } ((AFC \times 7/12) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6))$$

$$CC_8 = (AFC \times 2/3) (PAF_8 / NAPAF) \text{ subject to ceiling of } ((AFC \times 2/3) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7))$$

$$CC_9 = (AFC \times 3/4) (PAF_9 / NAPAF) \text{ subject to ceiling of } ((AFC \times 3/4) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8))$$

$$CC_{10} = (AFC \times 5/6) (PAF_{10} / NAPAF) \text{ subject to ceiling of } ((AFC \times 5/6) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8 + CC_9))$$

$$CC_{11} = (AFC \times 11/12) (PAF_{11} / NAPAF) \text{ subject to ceiling of } ((AFC \times 11/12) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8 + CC_9 + CC_{10}))$$

$$CC_{12} = (AFC) (PAF_Y / NAPAF) \text{ subject to ceiling of } ((AFC) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6 + CC_7 + CC_8 + CC_9 + CC_{10} + CC_{11}))$$

*Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and*

*Modernisation, the generating company or the transmission licensee shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.*

*Where,*

*AFC = Annual fixed cost specified for the year, in Rupees.*

*NAPAF = Normative plant availability factor in percentage.*

*PAF<sub>N</sub> = Percent Plant availability factor achieved upto the end of the nth month.*

*PAF<sub>Y</sub> = Percent Plant availability factor achieved during the Year.*

*CC<sub>1</sub>, CC<sub>2</sub>, CC<sub>3</sub>, CC<sub>4</sub>, CC<sub>5</sub>, CC<sub>6</sub>, CC<sub>7</sub>, CC<sub>8</sub>, CC<sub>9</sub>, CC<sub>10</sub>, CC<sub>11</sub> and CC<sub>12</sub> are the Capacity Charges of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively.*

(3) *The PAFM shall be computed in accordance with the following formula:*

$$NPAFM = 10000 \times \sum_{i=1} DC_i / \{ N \times IC \times (100 - AUX) \} \%$$

$$i = 1$$

*Where,*

*AUX = Normative auxiliary energy consumption in percentage.*

*DC<sub>i</sub> = Average declared capacity (in ex-bus MW), for the ith day of the period, i.e. the month or the year as the case may be, as certified by the State load dispatch centre after the day is over.*

*IC = Installed Capacity (in MW) of the generating station*

*N = Number of days during the period i.e. the month or the year as the case may be.*

**Note:** *DC<sub>i</sub> and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.*

(4) *Incentive to a generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in Regulation 47(2).*

(5) *The energy charge shall cover the primary fuel cost and shall be payable by every*



beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel price adjustment). Total Energy charge payable to the generating company for a month shall be:

(Energy charge rate in Rs./kWh) x {Scheduled energy (ex-bus) for the month in kWh.}

(6) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(a) For gas and liquid fuel based stations

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for gas and liquid fuel based stations.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

(7) The generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel, i.e. natural gas, RLNG, liquid fuel etc., as per the forms specified at Annexure-I to these regulations:

Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. natural gas, RLNG, liquid fuel etc., shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.

(8) The landed cost of fuel shall include price of fuel corresponding to the grade/quality /calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means for the purpose of computation of energy charges."

The Commission in the Tariff Order dated 24.10.2017 had provisionally approved the Gross Station Heat Rate (GSHR) for 214 MW contracted capacity of the Petitioner's plant, as 1925 kCal/kWh and had directed UPCL to appoint an expert Committee/Consultant for establishing the design heat rate of the Petitioner's plant and submit the report on the same within 3 months. The Petitioner, through the said Order, was also directed to provide the relevant documents/certificate to UPCL for the same. The relevant extract of the Tariff Order dated 24.10.2017 is reproduced hereunder:

*"Accordingly, so as to arrive at a precise design SHR of the plant, the Commission directs the Respondent to appoint an expert Committee/Consultant for establishing the design heat rate of the Petitioner's plant for the contracted capacity and submit the report on the same within 3 months of the issuance of this Order. The Petitioner is also directed to provide all the relevant documents/certificate and also to provide necessary assistance to the Respondent in this regard.*

*Till the outcome of the report on SHR of the expert committee as discussed above for the purpose of the tariff order, the Commission provisionally approves Gross Station Heat Rate for 214 MW contracted capacity as 1925 kCal/kWh, which is the same as approved by the Commission in its Order dated 16.05.2017 vide which tariff for M/s Gama Infraprop Pvt. Ltd. was determined. Similar SHR has been considered as both the plants are located in the same area and are also using similar machines although the SHR for the Petitioner's plant considered by GoI was slightly higher than the SHR considered by GoI for M/s Gama Infraprop Pvt. Ltd.. The provisional value of Gross Station Heat Rate shall be replaced with such value of GSHR as approved by the Commission based on the recommendation of the Expert Committee/Consultant."*

Further, the Commission vide its Suo-Moto Order dated 28.12.2017, in the matter of non-compliance of Commission's direction issued vide Order dated 16.05.2017, regarding the establishment of SHR for the contracted capacity of Gas based Power Plant of M/s Gama Infraprop Pvt. Ltd., again directed UPCL to comply with the direction of the Commission as per the Tariff Order dated 16.05.2017 & 24.10.2017, with respect to finalization of design SHR for both the generators, i.e. M/s Gama Infraprop Pvt. Ltd. & M/s Sravanthi Energy Pvt. Ltd. and submit the report for approval of the Commission. The relevant extract of the Order dated 28.12.2017 is reproduced hereunder.

*"The Commission further directs UPCL to comply with the directions of the Commission as per the Tariff Order dated 16.05.2017 & 24.10.2017, with respect to finalization of design SHR for both the generators, i.e. M/s Gama Infraprop Pvt. Ltd. & M/s Sravanthi Energy Pvt. Ltd. and submit a report*

*in this regard within next 3 months for approval of the Commission."*

In the matter, UPCL vide its letter dated 10.07.2018 submitted its report on the SHR of the gas based Power plant of M/s SEPL and M/s GIPL situated at Kashipur. The Commission sought comments from both the generators on the report submitted by UPCL, and based on the submission received from the generators, the Commission is in the process of analyzing and finalizing the Gross SHR of both plants.

In the light of the above discussion, it is worthwhile to mention that, for computing the Energy Charges payable to the generator, first of all the Gross Station Heat Rate is required to be established for the contracted capacity of the generator's plant.

Accordingly, pending finalization of the GSHR for the Petitioner's plant, the Energy charges shall be trued up once the Gross SHR is finalised and approved by the Commission and accordingly, adjustment required, if any, shall be given effect to in the subsequent Order.

## 4 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2018-19

### 4.1 Capital Cost

The Commission, vide its Tariff Order dated 24.10.2017, approved the Tariff for the Petitioner's plant for the second Control Period, i.e. FY 2016-17 to FY 2018-19. Regulation 12(3) of the UERC Tariff Regulations, 2015 stipulates that under the MYT framework, the performance of the generating company shall be subject to Annual Performance Review.

Regulation 12(3) of the UERC Tariff Regulations, 2015 specifies as under:

*"The scope of Annual Performance Review shall be a comparison of the performance of the Applicant with the approved forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges and shall comprise the following:-*

- a) A comparison of the audited performance of the applicant for the previous financial year with the approved forecast for such previous financial year and truing up of expenses and revenue subject to prudence check including pass through of impact of uncontrollable factors;*
- b) Categorisation of variations in performance with reference to approved forecast into factors within the control of the applicant (controllable factor) and those caused by factors beyond the control of the applicant (un-controllable factors);*
- c) Revision of estimates for the ensuing financial year, if required, based on audited financial results for the previous financial year;*
- d) Computation of sharing of gains and losses on account of controllable factors for the previous year."*

The Commission, vide its Tariff Order dated 24.10.2017, on approval of Business Plan and MYT Petition for the second Control Period from FY 2016-17 to FY 2018-19, had approved the AFC for the second Control Period based on approved capital cost as on COD, i.e. 20.11.2016. The Petitioner, in present Petition, has proposed revision of estimates for FY 2018-19 based on the audited accounts for FY 2017-18.

The Commission, in this Order, has carried out the Truing up for FY 2017-18 in accordance with the UERC Tariff Regulations, 2015. In accordance with Regulation 12(3) of the UERC Tariff

Regulations, 2015, the scope of annual performance review is limited to the revision of estimates for the ensuing year, if required, based on the audited financial results for the previous year and does not provide for the revision of estimates for the current year and give effect on this account in the estimates of the ensuing year. Accordingly, the Commission shall carry out the truing up of FY 2018-19 based on the audited accounts for that year and give effect on this account in the AFC of FY 2020-21.

Further, the Commission observed that the Petitioner has projected a substantial increase in O&M expenses for FY 2018-19 as compared to the actuals claimed for truing up of FY 2017-18. The Petitioner should strive to incur expenditure prudently and should not attempt to incur wasteful expenditure upto the normative level. The Petitioner has set up its plant which will operate for a long period of time, so endeavour should be to develop in house capabilities to operate and maintain the same, rather than depending on the consultants for the same. Employee expenses of the Petitioner are increasing, however, no such impact is observed in reduction of consultancy expenses. In this regard, the Commission directs the Petitioner to plan and execute its expenses relating to operation and maintenance of plant in an optimum manner and submit a detailed methodology for the same in the next tariff proceedings.

## 5 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on MYT for third Control Period

With regard to Multi Year Tariff, Regulation 10 of UERC Tariff Regulations, 2018 specifies as follows:

*"10. MYT Petition for the Control Period*

- (1) ...
- (2) ...
- (3) ...
- (4) *After examining the application, the Commission shall either-*
  - a) *Pass an order approving the forecast of Aggregate Revenue Requirement and expected revenue from tariff and charges for the Control Period, subject to such modifications and conditions as it may specify in the said Order; or*
  - b) *Reject the application for reasons to be recorded in writing.*

*Provided that the applicant shall be given a reasonable opportunity of being heard before rejecting his application.*
- (5) *In its MYT Order, the Commission shall specify the variables included in the Aggregate Revenue Requirement and expected revenue from tariff and charges of the applicant that shall be reviewed by the Commission as part of the Annual Performance Review;*

*Provided that such variables shall be limited to the major items of cost and revenue forecast of the applicant that in the Commission's opinion could have a material impact on the cost of supply of electricity to consumers in the State over the Control Period:*

*Provided further that the variables, as may be stipulated by the Commission under Regulations below, shall form part of the Annual Performance Review, unless exempted by the Commission from such review in its Order.*

Accordingly, in accordance with the aforesaid regulations, the Commission, based on the

financial and physical parameters, has approved the Annual Fixed Charges for each year of the third Control Period from FY 2019-20 to FY 2021-22 based on the approved capital cost for the respective years.

## **5.1 Physical Parameters**

### **5.1.1 NAPAF**

Regulation 47 of UERC Tariff Regulations, 2018 specifies as under:

***“(1) Normative Annual Plant Availability Factor (NAPAF):***

***(a) For all thermal generating stations: 85%”***

Further, as discussed in the Tariff Order dated 24.10.2017, the Commission while approving the PPA for the Petitioner's plant has approved the definition of NAPAF as follows:

*““Normative Availability” or “Target Availability” Or Normative Annual Plant Availability Factor (NAPAF) shall mean Eighty Five (85%) Availability of aggregate Contracted Capacity at the Delivery Point on Contract Year Basis. However UPCL may vary the Availability Factor on monthly basis as required by UPCL but maintaining the NAPAF at 85% yearly basis.”*

Accordingly, the Commission is of the view that the NAPAF of 85% approved for second Control Period in the Tariff Order dated 24.10.2017 shall continue to be applicable for third Control Period as well without any change.

### **5.1.2 Design Energy, Auxiliary Energy Consumption and Saleable Primary Energy**

The Petitioner in its Petition has projected energy generation for the third Control Period from its 225 MW CCPP in line with the energy generation approved by the Commission in its Tariff Order dated 24.10.2017 for the second Control Period.

Accordingly, the Commission approves saleable primary energy after deducting the normative auxiliary consumption of 2.5%, as 1553.61 MU for each year of the Control Period from FY 2019-20 to FY 2021-22.

## 5.2 Financial Parameters

### 5.2.1 Additional Capitalisation for third Control Period

The Commission vide its Tariff Order dated 24.10.2017 on approval of the Business Plan and Tariff Petition of the Petitioner for the second Control Period from FY 2016-17 to FY 2018-19, had decided to consider the additional capitalisation at the time of truing up of the respective years based on the actual expenditure as per the audited accounts in accordance with the prevailing Regulations as amended from time to time.

In the present Petition, the Petitioner has claimed additional capitalisation of Rs. 15.60 Crore during third Control Period in FY 2019-20, under the head Plant & Machinery (Spares). The Petitioner further submitted that the amount of Rs. 15.60 Crore is based on the initial estimates and the final amount based on proposed offers from relevant suppliers will be submitted in due course of time.

The Commission has noted the submission made by the Petitioner and observed that the amount of Rs. 15.60 Crore claimed by the Petitioner under Plant & Machinery (Spares) is an estimated amount and is not backed up by any firm contract/purchase order for the same. The Petitioner has itself submitted that final amount may vary based on the proposals from relevant suppliers at the time of actual procurement. Accordingly, continuing with the methodology adopted by the Commission in the Tariff Order dated 24.10.2017, the capitalization of spares shall be considered based on actual expenditure in the year of purchase, after prudence check and in accordance with the Regulations. Accordingly, the Commission approves nil additional capitalisation for third Control Period from 2019-20 to 2021-22.

Accordingly, capital cost worked out as on 31.03.2018, i.e. Rs. 1193.19 Crore after considering the net additional capitalisation approved for FY 2017-18 has been considered as opening capital cost for FY 2019-20. Hence, as discussed above, no additional capitalisation has been considered for FY 2018-19 which shall, however, be reviewed at the time of truing up of the respective financial year.



### 5.2.2 Depreciation

Regulation 28 of the UERC Tariff Regulations, 2018 specifies as follows:

***"28. Depreciation***

*(1) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission.*

*Provided that depreciation shall not be allowed on assets funded through Consumer Contribution and Capital Subsidies/Grants.*

*(2) The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset.*

*...*

*(4) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix - II to these Regulations.*

*..."*

The Petitioner has claimed depreciation from FY 2019-20 to FY 2021-22 based on the actual expenditure capitalised as per books of account. As mentioned earlier, the Commission has not considered the proposed additional capitalisation and the same, if any, shall be approved at the time of truing up of the respective financial year after prudence check. Accordingly, the Commission has determined the depreciation based on the admissible GFA for the third Control Period. Details of the depreciation claimed and approved for the third Control Period is as follows:

**Table 5.1: Depreciation approved by the Commission for FY 2019-20 to FY 2021-22  
(Rs. Crore)**

Particulars	FY 2019-20		FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Depreciation	72.22	60.90	72.22	60.90	72.22	60.90

### 5.2.3 Return on Equity

Regulation 26 of the UERC Tariff Regulations, 2018 specifies as follows:

***"26. Return on Equity***

(1) Return on equity shall be computed on the equity base determined in accordance with Regulation 24.

Provided that, Return on Equity shall be allowed on account of allowed equity capital for the assets put to use at the commencement of each financial year.

(2) Return on equity shall be computed on at the base rate of 15.50% for thermal generating stations, transmission licensee, SLDC and run of the river hydro generating station and at the base rate of 16.50% for the storage type hydro generating stations and run of river generating station with pondage and distribution licensee on a post-tax basis.

..."

The Petitioner has proposed additional capitalisation for the third Control Period in its Business Plan Petition amounting to Rs. 15.90 Crore for FY 2019-20. However, the Petitioner has not considered proposed additional capitalisation while claiming return on equity for the third Control Period. As discussed earlier, the additional capitalisation will be approved based on the actual expenditure at the time of truing up of the respective year. Accordingly, the Commission has allowed the Return on Equity based on the opening capital cost of the respective financial year of the third Control Period. Details of the Return on Equity claimed and approved is as follows:

**Table 5.2: Return on Equity approved by the Commission for FY 2019-20 to FY 2021-22 (Rs. Crore)**

Particular	FY 2019-20		FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Opening Equity	360.68	335.38	360.68	335.38	360.68	335.38
Addition during the year	0.00	0.00	0.00	0.00	0.00	0.00
Closing Equity	360.68	335.38	360.68	335.38	360.68	335.38
Rate of Return on Equity	15.50%	15.50%	15.50%	15.50%	15.50%	15.50%
<b>Return on Equity</b>	<b>55.91</b>	<b>51.98</b>	<b>55.91</b>	<b>51.98</b>	<b>55.91</b>	<b>51.98</b>

#### 5.2.4 Interest and Finance Charges

Regulation 27 of the UERC Tariff Regulations, 2018 specifies as follows:

***"27. Interest and finance charges on loan capital and on Security Deposit***

(1) The loans arrived at in the manner indicated in Regulation 24 shall be considered as gross normative loan for calculation of interest on loan.

(2) *The normative loan outstanding as on 1.4.2019 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2019 from the gross normative loan.*

(3) *The repayment for each year of the Control Period shall be deemed to be equal to the depreciation allowed for that year*

...

(5) *The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio of the previous year after providing appropriate accounting adjustment for interest capitalised:*

*Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.*

*Provided further that if the generating station or the transmission system or the distribution system or SLDC, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the Transmission Licensee or the Distribution Licensee or SLDC as a whole shall be considered.*

(6) *The interest on loan shall be calculated on the normative average loan of the year by applying the weighted average rate of interest.*

...“

The Petitioner has considered the opening loan balance for FY 2019-20 as Rs. 1178.92 Crore. The Petitioner has not considered any addition to normative loan on account of proposed additional capitalisation for the third Control Period. Further, the Petitioner has considered the weighted average rate of interest as 12.10%, 11.97% and 11.79% for FY 2019-20, FY 2020-21 and FY 2021-22 respectively.

As discussed in Chapter 3 of this Order, as most of the lenders for the Phase 1 of the Petitioner's project stopped charging interest post FY 2014-15 because the term loans turned into NPA as per the banking norms, therefore, the actual weighted average rate of interest could not be worked out for FY 2017-18. Hence, interest rate of 12.20% as earlier approved by the Commission in

the Tariff Order dated 24.10.2017 has been considered for working out the interest on normative loan for the third Control Period from FY 2019-20 to FY 2021-22.

The Commission has considered the closing loan balance of FY 2017-18 as opening loan balance for FY 2018-19. The Commission has considered the depreciation for FY 2018-19 as the normative repayment for the year. The Commission has considered the closing loan balance for FY 2018-19 as the opening loan balance for FY 2019-20. As discussed in the Chapter of Business Plan, the Commission has decided to approve the additional capitalisation on actual basis and, accordingly, the Commission has not considered any addition to loan during each year of the third Control Period from FY 2019-20 to FY 2021-22. The Commission has considered the normative repayment equivalent to the approved depreciation for each year of the third Control Period from FY 2019-20 to FY 2021-22. The interest rate of 12.20%, as discussed above, has been considered to compute the interest on the average loan balance for each year of the Control Period which shall, however, be reviewed at the time of truing up of subsequent years.

Accordingly, based on above discussion, the interest on loan approved by the Commission for the third Control Period from FY 2019-20 to FY 2021-22 is as shown in the Table given below:

**Table 5.3: Interest on Loan approved by the Commission for FY 2019-20 to FY 2021-22 (Rs. Crore)**

Interest on Normative Loan	FY 2019-20		FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Gross Opening Normative Loan	1178.92	715.80	1088.02	654.89	997.12	593.99
Increase during the year	0.00	0.00	0.00	0.00	0.00	0.00
Normative Repayment of loan	90.90	60.90	90.90	60.90	90.90	60.90
Net Closing Normative Loan	1088.02	654.89	997.12	593.99	906.22	533.09
Average Normative Loan	1133.47	685.35	1042.57	624.44	951.67	563.54
Rate of Interest	12.10%	12.20%	11.97%	12.20%	11.79%	12.20%
<b>Normative Interest</b>	<b>137.16</b>	<b>83.61</b>	<b>124.83</b>	<b>76.18</b>	<b>112.16</b>	<b>68.75</b>

#### 5.2.5 Operation & Maintenance (O&M) Expenses

Regulation 48(1) of the UERC Tariff Regulations, 2018, specifies as follows:

*“(1) Normative O&M Expenses for Open Cycle Gas Turbine/Combined Cycle generating stations shall be as under:*

(In Rs. Lakh/MW)

Year	Gas Turbine/ Combined Cycle generating stations		Small gas turbine power generating stations (less than 50 MW Unit size)	Advance F class Machines
	With warranty spares for 10 years	Without warranty spares		
2018-19	11.22	16.82	20.41	34.56
2019-20	11.97	17.94	21.76	36.92
2020-21	12.76	19.13	23.21	39.44
2021-22	13.61	20.41	24.75	42.14

Accordingly, based on the applicable O&M norms specified in the MYT Regulations, 2018, the normative O&M expenses claimed and allowed by the Commission for third Control Period from FY 2019-20 to FY 2021-22 are as follows:

**Table 5.4: O&M expenses approved by the Commission for FY 2019-20 to FY 2021-22 (Rs. Crore)**

Particular	FY 2019-20		FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
O&M expense	81.62	79.01	87.17	84.40	93.09	90.18

### 5.2.6 Interest on Working Capital

The Petitioner submitted that as per the Orders issued by UERC, UPCL was required to make the payment towards the invoices raised by the Petitioner within 3 working days. However, due to delay in payment of the said invoices beyond the prescribed time frame, the Petitioner has incurred Working Capital interest and has, accordingly, claimed the same as part of AFC of the third Control Period from FY 2019-20 to FY 2021-22.

Regulation 33 of UERC Tariff Regulations, 2018 specifies as follows:

“ ...

*In case of open cycle Gas Turbine/Combined Cycle thermal generating stations, working capital shall cover:*

- Landed fuel cost for 1 (one) month corresponding to the NAPAF duly taking into account the mode of operation of the generating station on gas fuel and liquid fuel;*
- Liquid fuel stock for ½ (half) month corresponding to the NAPAF, and in case of use of more than one liquid fuel, cost of main liquid fuel duly taking into account mode of operation of the generating stations of gas fuel and liquid fuel;*
- Operation and maintenance expenses for one month;*
- Maintenance spares @ 30% of operation and maintenance expenses; and*

*Receivables equivalent to 2 (two) months of Capacity Charge and Energy Charges for sale of electricity calculated on NAPAF duly taking into account the mode of operation of the generating station on gas fuel and liquid fuel.*

*...”*

As discussed in the Tariff Order dated 24.10.2017, the Commission vide its Order dated 17.04.2017 allowed the Petitioner to forego interest on working capital in lieu of non-chargeability of rebate by UPCL while making payment of generation bills raised by the Petitioner. However, based on the submission made by the Petitioner, it appears that UPCL is not complying with the directions issued by the Commission in this regard.

In this regard, as discussed in Chapter 3 of this Order, the Commission advises the Petitioner to file a separate Petition, corroborating the interest charges borne by it on account of non-compliance of the Commission’s directive by UPCL, alongwith the details of cash credit account and the interest levied on it.

Accordingly, in line with the decision taken in the Tariff Order dated 24.10.2017 and aforesaid discussions, the Commission has not considered any interest on working capital while approving the AFC for third Control Period from FY 2019-20 to FY 2021-22.

#### **5.2.7 Non-Tariff Income**

Regulation 46 of UERC Tariff Regulations, 2018 specifies as follows:

*“46. Non Tariff Income*

*The amount of non-tariff income relating to the Generation Business as approved by the Commission shall be deducted from the Annual Fixed Charges in determining the Net Annual Fixed Charges of the Generating Company.*

*Provided that the Generating Company shall submit full details of its forecast of non tariff income to the Commission in such form as may be stipulated by the Commission from time to time.*

*The indicative list of various heads to be considered for non tariff income shall be as under:*

- a) Income from rent of land or buildings;*
- b) Income from sale of scrap;*

- c) Income from statutory investments;
- d) Interest on delayed or deferred payment on bills;
- e) Interest on advances to suppliers/contractors;
- f) Rental from staff quarters;
- g) Rental from contractors;
- h) Income from hire charges from contactors and others;
- i) Income from advertisements, etc.;
- j) Any other non- tariff income.

*Provided that the interest earned from investments made out of Return on Equity corresponding to the regulated business of the Generating Company shall not be included in Non-Tariff Income."*

The Petitioner has proposed non-tariff income of Rs. 0.04 Crore for each financial year of the third Control Period from FY 2019-20 to FY 2021-22. In the absence of any yardstick for estimating the non-tariff income of the Petitioner, the Commission provisionally accepts the same while approving the AFC for the third Control Period from FY 2019-20 to FY 2021-22. However, the same shall be reviewed based on the actual audited accounts during true up of respective years.

#### 5.2.8 Annual Fixed Charges for third Control Period from FY 2019-20 to FY 2021-22

In accordance with the UERC Tariff Regulations, 2018, the Annual Fixed Charge (AFC), for the third Control Period as claimed and approved by the Commission is shown in the Table below:

**Table 5.5: Annual Fixed Charges approved by the Commission for FY 2019-20 to FY 2021-22 (Rs. Crore)**

Annual Fixed Charges	FY 2019-20		FY 2020-21		FY 2021-22	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Depreciation	72.22	60.90	72.22	60.90	72.22	60.90
Interest on Loan	137.16	83.61	124.83	76.18	112.16	68.75
Return on Equity	55.91	51.98	55.91	51.98	55.91	51.98
O&M Expenses	81.62	79.01	87.17	84.40	93.09	90.18
Interest on Working Capital	7.92	-	8.14	-	8.38	-
Less: Non-Tariff Income	0.04	0.04	0.04	0.04	0.04	0.04
<b>Net AFC</b>	<b>354.78</b>	<b>275.47</b>	<b>348.23</b>	<b>273.43</b>	<b>341.72</b>	<b>271.78</b>
True up impact with carrying cost for FY 2017-18	-	-6.91	-	-	-	-
<b>Total Annual Fixed charges</b>	<b>354.78</b>	<b>268.56</b>	<b>348.23</b>	<b>273.43</b>	<b>341.72</b>	<b>271.78</b>

**5.2.9 Annual Fixed Charges, Capacity Charge and Energy Charge Rate (ECR) for FY 2019-20, FY 2020-21 and FY 2021-22.**

Based on the above analysis for all the heads of expenses of AFC, the Commission has approved the Annual Fixed Charges (AFC) of the Petitioner for the third Control Period attributable to its beneficiary.

Regulation 49 of UERC Tariff Regulations, 2018 specifies as follows:

***“49. Computation and Payment of Annual Fixed Charges and Energy Charges for Thermal Generating Stations***

- (1) *The fixed cost of a thermal generating station shall be computed on annual basis, based on the norms specified under these Regulations, and recovered on monthly basis under capacity charge. The total capacity charge payable for a generating station shall be shared by its beneficiaries as per their respective percentage share/allocation in the capacity of the generating station.*
- (2) *The capacity charge (inclusive of incentive) payable to a thermal generating station for a calendar month shall be calculated in accordance with the following formulae:*

$$CC_1 = (AFC/12) (PAF_1 / NAPAF) \text{ subject to ceiling of } (AFC/12)$$

$$CC_2 = (AFC/6) (PAF_2 / NAPAF) \text{ subject to ceiling of } ((AFC/6) - CC_1)$$

$$CC_3 = (AFC/4) (PAF_3 / NAPAF) \text{ subject to ceiling of } ((AFC/4) - (CC_1 + CC_2))$$

$$CC_4 = (AFC/3) (PAF_4 / NAPAF) \text{ subject to ceiling of } ((AFC/3) - (CC_1 + CC_2 + CC_3))$$

$$CC_5 = (AFC \times 5/12) (PAF_5 / NAPAF) \text{ subject to ceiling of } ((AFC \times 5/12) - (CC_1 + CC_2 + CC_3 + CC_4))$$

$$CC_6 = (AFC/2) (PAF_6 / NAPAF) \text{ subject to ceiling of } ((AFC/2) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5))$$

$$CC_7 = (AFC \times 7/12) (PAF_7 / NAPAF) \text{ subject to ceiling of } ((AFC \times 7/12) - (CC_1 + CC_2 + CC_3 + CC_4 + CC_5 + CC_6))$$

$$CC_8 = (AFC \times 2/3) (PAF_8 / NAPAF) \text{ subject to ceiling of } ((AFC \times 2/3) -$$



$$(CC1+CC2+CC3+CC4+CC5+CC6 +CC7))$$

$$CC9=(AFCx3/4) (PAF9/NAPAF) \text{ subject to ceiling of } ((AFCx3/4)-(CC1+CC2+CC3+ CC4+CC5+CC6+ CC7+CC8))$$

$$CC10=(AFCx5/6) (PAF10/NAPAF) \text{ subject to ceiling of } ((AFCx5/6)-(CC1+CC2+CC3+ CC4+CC5+CC6+ CC7+CC8+CC9))$$

$$CC11=(AFCx11/12) (PAF11/NAPAF) \text{ subject to ceiling of } ((AFCx11/12)-(CC1+CC2+CC3+CC4 +CC5+CC6+CC7+CC8+CC9+CC10))$$

$$CC12=(AFC) (PAFY/NAPAF) \text{ subject to ceiling of } ((AFC)-(CC1+CC2+CC3+CC4+CC5+ CC6+CC7+CC8+ CC9+CC10+CC11))$$

*Provided that in case of generating station or unit thereof or transmission system or an element thereof, as the case may be, under shutdown due to Renovation and Modernisation, the generating company or the transmission licensee shall be allowed to recover part of AFC which shall include O&M expenses and interest on loan only.*

*Where,*

*AFC = Annual fixed cost specified for the year, in Rupees.*

*NAPAF = Normative plant availability factor in percentage.*

*PAF<sub>N</sub> = Percent Plant availability factor achieved upto the end of the nth month.*

*PAF<sub>Y</sub> = Percent Plant availability factor achieved during the Year.*

*CC<sub>1</sub>, CC<sub>2</sub>, CC<sub>3</sub>, CC<sub>4</sub>, CC<sub>5</sub>, CC<sub>6</sub>, CC<sub>7</sub>, CC<sub>8</sub>, CC<sub>9</sub>, CC<sub>10</sub>, CC<sub>11</sub> and CC<sub>12</sub> are the Capacity Charges of 1st, 2nd, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 11th and 12th months respectively.*

*(3) The PAFM shall be computed in accordance with the following formula:*

$$NPAFM = 10000 \times \sum_{i=1} DC_i / \{ N \times IC \times ( 100 - AUX ) \} \%$$

*Where,*

*AUX = Normative auxiliary energy consumption in percentage.*

$DC_i$  = Average declared capacity (in ex-bus MW), for the  $i$ th day of the period, i.e. the month or the year as the case may be, as certified by the State load dispatch centre after the day is over.

IC = Installed Capacity (in MW) of the generating station

N = Number of days during the period i.e. the month or the year as the case may be.

**Note:**  $DC_i$  and IC shall exclude the capacity of generating units not declared under commercial operation. In case of a change in IC during the concerned period, its average value shall be taken.

- (4) Incentive to a generating station or unit thereof shall be payable at a flat rate of 50 paise/kWh for ex-bus scheduled energy corresponding to scheduled generation in excess of ex-bus energy corresponding to Normative Annual Plant Load Factor (NAPLF) as specified in Regulation 47(2).
- (5) The energy charge shall cover the primary fuel cost and shall be payable by every beneficiary for the total energy scheduled to be supplied to such beneficiary during the calendar month on ex-power plant basis, at the energy charge rate of the month (with fuel price adjustment). Total Energy charge payable to the generating company for a month shall be:

$(\text{Energy charge rate in Rs./kWh}) \times \{\text{Scheduled energy (ex-bus) for the month in kWh.}\}$

- (6) Energy charge rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

(b) For gas and liquid fuel based stations

$$ECR = GHR \times LPPF \times 100 / \{CVPF \times (100 - AUX)\}$$

Where,

AUX = Normative auxiliary energy consumption in percentage.

CVPF = Weighted Average Gross calorific value of primary fuel as received, in kCal per kg, per litre or per standard cubic meter, as applicable for gas and liquid fuel based

stations.

ECR = Energy charge rate, in Rupees per kWh sent out.

GHR = Gross station heat rate, in kCal per kWh.

LPPF = Weighted average landed price of primary fuel, in Rupees per kg, per litre or per standard cubic metre, as applicable, during the month.

- (7) The generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel, i.e. natural gas, RLNG, liquid fuel etc., as per the forms specified at Annexure-I to these regulations:

*Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. natural gas, RLNG, liquid fuel etc., shall also be displayed on the website of the generating company. The details should be available on its website on monthly basis for a period of three months.*

- (8) *The landed cost of fuel shall include price of fuel corresponding to the grade/quality /calorific value of fuel inclusive of royalty, taxes and duties as applicable, transportation cost by rail/road/gas pipe line or any other means for the purpose of computation of energy charges."*

Based on the aforesaid Regulations, capacity charges and energy charges shall be recovered by the Petitioner from the Respondent corresponding to the contracted capacity. Further, with regard to Energy charges, the Petitioner has been provisionally allowed to recover energy charges at actual gas bills raised by the gas supplier till the finalisation of Gross Station heat rate (GSHR) for the Petitioner's Plant. However, the ECR shall be reviewed once the Gross SHR is finalised and approved by the Commission, and accordingly, adjustment required, if any, shall be given effect to in the subsequent Order.

**(Subhash Kumar)**  
**Chairman**