Order

On

True up for FY 2016-17, Annual Performance Review for FY 2017-18 &

ARR for FY 2018-19

For

M/s Sravanthi Energy Pvt. Ltd.

March 21, 2018

Uttarakhand Electricity Regulatory Commission

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

Dehradun - 248171

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UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

Petition No.: 62 of 2017

In the Matter of:

Petition filed by M/s Sravanthi Energy Pvt. Ltd. for True up of FY 2016-17, Annual Performance Review of FY 2017-18 and Revised Annual Revenue Requirement for FY 2018-19.

In the Matter of:

M/s Sravanthi Energy Pvt. Ltd. LG, 136, Rider House, Sector 44, Gurgaon, Haryana-122002.

AND

In the Matter of:

Uttarakhand Power Corporation Limited Urja Bhawan, Kanwali Road, Dehradun

Coram

Shri Subhash Kumar Chairman

Date of Order: March 21, 2018

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 Multi Year Tariff) Regulations, 2015 (hereinafter referred to as "UERC Tariff Regulations, 2015") for the second Control Period from FY 2016-17 to FY 2018-19 specifying therein terms, conditions and

... Petitioner

... Respondent

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 24.10.2017 for the Control Period from FY 2016-17 to FY 2018-19. As per the provisions of Regulation 12 of the UERC Tariff Regulations, 2015, Sravanthi Energy Pvt. Ltd. (hereinafter referred to as "M/s SEPL" or "the Petitioner") filed the Petition (Petition No. 62 of 2017 and hereinafter referred to as the "Petition"), giving details of its revised projections of Annual Fixed Charges (AFC) for FY 2018-19, based on the true up of FY 2016-17 and Annual Performance Review of FY 2017-18 on 30.11.2017.

The Petition filed by M/s SEPL had certain infirmities/deficiencies which were informed to it vide Commission's letter no. UERC/6/TF/433/2017-18/2017/1392 dated 01.12.2017 & UERC/6/TF/433/2017-18/2017/1421 dated 07.12.2017 and M/s SEPL was directed to rectify the said infirmities in the Petition and submit certain additional information necessary for admission of the Petition. M/s SEPL vide its letter no. SEPL/UERC/19/2017 dated 11.12.2017 and further vide reply dated 15.12.2017 removed the critical deficiencies. Based on the submissions made by M/s SEPL, the Commission vide its Order dated 29.12.2017 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 processing of the Petition, as may be stipulated by the Commission, 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 Annual Performance Review Petition filed by M/s SEPL for true up of FY 2016-17, APR for FY 2017-18 and revised AFC for FY 2018-19 and is based on the original as well as all 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.

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 past practices, the Commission has tried to elaborate the procedure and principles followed by it in determining the ARR of the generator. The Annual Fixed Charges of M/s SEPL are recoverable from the beneficiary, i.e. UPCL. It has been the endeavour of the Commission in past also, to issue Tariff Orders for the large generating stations 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 the

generating stations. 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 Truing up for FY 2016-17.
- Chapter 3 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2017-18, Revised ARR & Tariff for FY 2018-19.

1. Background and Procedural History

M/s SEPL is a 428 MW gas based Combined Cycle Power Plant (CCPP) located in Village Khaikhera, Kashipur, District Udhamsingh Nagar, Uttarakhand. Sravanthi Energy Pvt. Ltd. is a Company incorporated under the Companies Act, 1956 and is engaged in the business of generation of power in the State through 428 MW gas based combined cycle power plant on build, own and operate basis at Village Khaikhera, Kashipur in the Udhamsingh Nagar district of Uttarakhand in two phases of 214 MW 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 and the current Order relates to Phase I of the project (hereinafter referred to as "generating station") comprising of 214 MW for which M/s SEPL has executed a PPA with UPCL. Electricity generated by this generating station is supplied to Uttarakhand Power Corporation Ltd (UPCL), the sole distribution licensee in the State.

In exercise of powers conferred to it under Section 61 of the Electricity Act, 2003, and all other powers enabling it in this behalf, the Commission notified the UERC Tariff Regulations, 2015 on 10.09.2015. These Regulations superseded the UERC Tariff Regulations, 2011.

The Commission vide its Tariff Order dated 24.10.2017 approved the Business Plan and Multi Year Tariff for M/s SEPL for the second Control Period from FY 2016-17 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. In accordance with Regulation 12 of the UERC Tariff Regulations, 2015, the Generating Company is required to file a Petition for Annual Performance Review by November 30 of every year.

In compliance with the Regulations, M/s SEPL filed its Petition for Annual Performance Review for FY 2016-17 on 30.11.2017. Through the above Petition, M/s SEPL sought true up for FY 2016-17, APR for FY 2017-18 and AFC for FY 2018-19 based on the audited accounts for FY 2016-17. Based on the scrutiny of the Petition submitted by the Petitioner, the Commission vide its letter no. UERC/6/TF/433/2017-18/2017/1421 dated 07.12.2017 pointed out certain data gaps in the Petition and sought information/clarifications from the Petitioner. The Petitioner vide its letter no. SEPL/ UERC/19/2017 dated 11.12.2017 and further, vide reply dated 15.12.2017 removed the critical deficiencies. Based on the submissions made by M/s SEPL, the above Petition was provisionally admitted by the Commission vide its Order dated 29.12.2017. 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 SEPL, the Commission sent the copies of the tariff proposals to UPCL.

UPCL vide its letter no. 498/UPCL/Com/GG-1/D(F) dated 06.02.2018 requested the Commission to allow additional four weeks time to file its comments, however, the Commission has not received any objections/suggestions/comments from UPCL in this regard till the date of the 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 Truing up for FY 2016-17

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 2016-17 based on the audited accounts and has, accordingly, requested the Commission to carry out the truing up for FY 2016-17 alongwith the sharing of gains and losses. The Petitioner also submitted that the Tariff formats submitted by it are based on the actual position of the capitalisation and the revenue expenditure as has been incurred and not on the amounts

approved by the Commission in the Tariff Order dated 24.10.2017, so that the same can be substantiated from the audited financial statements and requested that the expenditures as may be deemed fit and appropriate on merits may be approved by the Commission.

2.1 Impact of Sharing of Gains & Losses on account of Controllable Factors for FY 2016-17

Regulation 14 of the UERC Tariff Regulations, 2015 specify 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)* 1/3rd 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 comprise 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 T.O. 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, M/s SEPL vide its letter dated 15.12.2017 has again submitted before the Commission in the current tariff proceedings, that it is willing to forego the IWC for FY 2016-17, hence, the same has not been considered by the Commission for the purposes of truing up of FY 2016-17 and, accordingly, sharing of gains and losses has been carried out for O&M expenses only. While the capital related expenses like interest on loans, depreciation etc. have 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.

2.1.1 Physical Parameters

2.1.1.1 NAPAF

The Commission vide its Order dated 20.07.2016 on approval of the PPA for the Petitioner's plant approved the definition of NAPAF, in accordance with 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 is allowed in accordance with the ceiling rate provided under the Scheme. Accordingly, the Commission is of the view that the NAPAF of 85% approved for FY 2016-17 in the Tariff Order dated 24.10.2017 for second Control Period shall continue to be applicable without any change.

2.1.1.2 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, auxiliary consumption of 2.5% has been considered in accordance with Regulation 47(4)(i) of the Tariff Regulations, 2015. Accordingly, applying the NAPLF of 85% and reducing the auxiliary consumption, the saleable energy works out as 777.41 MU for FY 2016-17. M/s SEPL has not sought any deviation in the approved design energy for FY 2016-17. Accordingly, the Commission decides to maintain the design energy and saleable primary energy as considered in the MYT Order dated 24.10.2017 for the Petitioner's plant.

2.1.2 Financial Parameters

2.1.2.1 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.

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
Total Capital Cost	1192.41

Table 2.1: Approved Capital Cost for Phase 1 of M/s
SEPL as on COD (Rs. Crore)

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 2.2: Financing for Flase 1 as on COD (Ks. Crore)				
Particulars	Approved (Rs. in Crore)	Percentage (%)		
Debt	857.31	71.90		
Equity	335.10	28.10		
Total Loan and Equity	1192.41	100.00		

 Table 2.2: Financing for Phase 1 as on COD (Rs. Crore)

2.1.2.2 Additional Capitalisation

The Petitioner has claimed the additional capitalisation for FY 2016-17 amounting to Rs. 28.89 Crore under the head Plant & Machinery (Spares).

It is observed that the Commission in its Tariff Order dated 24.10.2017 had considered Nil additional capitalisation for FY 2016-17 for the Petitioner's plant as they did not seek any additional capitalization apart from the Initial spares in the Business Plan Petition. As discussed in the MYT Order, the Commission did not approve any cost with respect to initial spares while approving the Business Plan Petition of the Petitioner and stated that the same will be reviewed at the time of truing up based on the actual expenditure subject to the ceiling limit specified under Regulations.

M/s SEPL in this instant Petition has submitted the additional capitalisation of Rs. 28.89 Crore for FY 2016-17 under Plant & Machinery (Spares) on account of breakdown of the machinery. The Petitioner submitted that on 19th October, 2016, GT#1 tripped on GT high exhaust spread @35 MW since the actual spread was more than the allowable, exhaust thermocouples TC#11,12 & 13 (adjacent thermocouples) were on higher side and TC # 3, 4 & 5 (adjacent thermocouples) were on lower side as a preventive action GT#1 was not re-started and planned for a complete inspection of exhaust thermocouples and combustion section. After unit cool down, Borescope inspection was performed for combustion cans & turbine section and it was observed that broken pieces were trapped in between DLN-nozzle and DLN end cap and was a serious concern as combustion parts were damaged. Subsequently combustion can FWD nozzles were removed and found that the "Transition Piece impingement sleeve was damaged, the broken parts were carried out by CPD air & trapped at upstream of DLN cap", i.e. the cooler section was found to be damaged and the hotter side of TP's were intact and physically no abnormality seen in TBC coating. Failure of TP's was on air side, i.e. cooler section and to recoup from the damage, machinery parts available from the gas turbine of Phase 2, which is not yet commissioned was pulled out for replacement in GT#1.

The Petitioner requested the Commission that since it is imperative to get the brand new parts for replacement and efficient operation, the expenditure may be allowed to them as part of additional capitalization. The Petitioner also submitted that in case the amount is recovered from the insurance company, the same shall be reimbursed to UPCL to the extent of the amount allowed and reimbursed by UPCL till the receipt of the funds.

In this regard, the Commission directed M/s SEPL to explain as to why the said damaged part were not claimed as a replacement under warranty from OEM, and asked the Petitioner to submit the status of claim made before the insurance company in this regard. In response, M/s SEPL submitted that since the equipments were procured in the year 2010/2011, the guarantee from OEM had already lapsed and, therefore, no claim could have been lodged on OEM on account of these damages. The Petitioner further submitted that they were having comprehensive insurance policy for their project to cover any contingencies, and accordingly, claim in this regard has been duly lodged with the insurance company for recovery of damages.

The Commission has gone through the submissions of the Petitioner. Based on the information submitted by the Petitioner, the Commission observed that the additional capitalization claimed by it during the FY 2016-17 on account of replacement of parts of GT#1 of Phase I of the project have been subjected to claim with the insurance company. Moreover, the Petitioner did not

make any outright purchase of these parts, rather has pulled the machinery parts from the GT of the Phase 2 of the project which has not yet commissioned, and replaced the parts in the GT#1 of Phase 1 of the project in order to recoup from the damages. Further, the replacement cost of Rs. 28.89 Crore claimed by the Petitioner is an estimated cost based on the offer from M/s GE Power India Ltd. and no actual expenditure has been incurred by the Petitioner in this regard. The Commission also observed that no accounting treatment has been done by the Petitioner for aforesaid transaction in its books of accounts.

The Commission, in this regard, is of the view that as the claim before the insurance company for the recovery of cost of damaged parts is still pending and no cost has actually been incurred by the Petitioner as can be seen from the submissions made by it, therefore, allowing the claim of additional capitalization based on the estimates would not be prudent and will be against the provisions of the Regulations. Moreover, the proposal of the Petitioner to refund the amount to UPCL in case any recoveries from the insurance company is made in this regard, is not in accordance with the provisions of the Regulations and allowance of any such practice by the Commission would defeat the very purpose of approval of AFC by the Commission, as the same would become subjective in nature. The Commission, accordingly, approves Nil additional capitalisation for FY 2016-17. Further, the Commission is of the view that additional capitalisation in this regard would be reviewed in the FY in which the actual expenditure is incurred by the Petitioner and capitalised in its accounts and the claim for recovery against the damages is settled by the insurer.

2.1.2.3 Depreciation

Regulation 28 of UERC Tariff Regulations 2015 specifies as follows:

"(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.

Provided that in case of generating stations, the salvage value shall be as provided in the agreement signed by the developers with the State Government for creation of site;

Provided further that the capital cost of the assets of the generating station for the purpose of computation of depreciable value for the purpose of determination of tariff under these regulations shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff.

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.

Provided that the salvage value for IT equipment and software shall be considered as NIL and 100% value of the assets shall be considered depreciable.

(3) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

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

Provided that, the remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance useful life of the assets.

(5) In case of the existing projects, the balance depreciable value as on 01.04.2016 shall be worked out by deducting the cumulative depreciation as admitted by the Commission upto 31.03.2016 from the gross depreciable value of the assets. The difference between the cumulative depreciation recovered and the depreciation so arrived at by applying the depreciation rates as specified in these Regulations corresponding to 12 years shall be spread over the remaining period upto 12 years. The remaining depreciable value as on 31st March of the year closing after a period of 12 years from date of commercial operation shall be spread over the balance life.

(6) Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."

(7) In case of de-capitalization of assets in respect of generating station or unit thereof or distribution licensee or SLDC or transmission system or element thereof, the cumulative depreciation shall be adjusted by taking into account the depreciation recovered in tariff by the decapitalized asset during its useful services"

The Petitioner has claimed depreciation of Rs. 37.72 Crore for FY 2016-17 based on the actual expenditure capitalised in its books of accounts which is higher than the capital expenditure allowed by the Commission as on COD vide its Tariff Order dated 24.10.2017. The Commission has, accordingly worked out the depreciation of Rs. 20.28 Crore against the opening GFA of Rs. 1192.41 Crore for FY 2016-17, i.e. from COD to 31.03.2017.

With regards the depreciation computation on additional capitalisation during FY 2016-17, i.e. from COD to 31.03.2017, since the Commission has not allowed any additional capitalization for FY 2016-17, accordingly, the depreciation on additional capitalisation has been considered as Nil for FY 2016-17. Based on the above discussed approach, the summary of depreciation as approved in MYT Order dated 24.10.2017 and as approved now by the Commission for FY 2016-17 after truing up is shown in the Table given below:

Table 2.3: Depreciation approved for Phase 1 of M/s SEPL after truing up of FY2016-17 (Rs. Crore)

Particulars	Approved in Tariff Order dated 24.10.2017 for FY 2016-17	Claimed	Approved after truing up for FY 2016-17
FY 2016-17	20.26	37.72	20.28*

* reworked after providing asset class-wise depreciation on Other Fixed Assets

2.1.2.4 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 amount 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 rate of 15.5% 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**.

...″

As discussed in the Tariff Order dated 24.10.2017, the Petitioner's plant operated under the PSDF scheme introduced by the MoP, which was applicable upto the end of FY 2016-17, and under the PSDF scheme, the Petitioner was not entitled for any RoE during the applicability of the Scheme. The Petitioner has also not claimed any RoE for FY 2016-17, i.e. from COD to 31.03.2017 in its current Tariff Petition. In view of the above, no RoE has been considered for FY 2016-17.

2.1.2.5 Interest on Loans

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 submitted that it has claimed interest on normative loan based on the actual rate of interest charged by the lending institutions. As discussed in above Paras, normative loan worked out under "Capital Cost" as on 20.11.2016 (COD) has been considered as opening normative loan for FY 2016-17, i.e. as on the date of COD and repayment has been considered equal to admissible depreciation, i.e. Rs. 20.28 Crore. Also, as discussed hereto above, since the Commission is not allowing any additional capitalisation for FY 2016-17, accordingly, addition to normative loan has been considered as Nil.

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 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 2016-17 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 2016-17. Accordingly, the interest on normative loan for FY 2016-17 works out to Rs. 34.45 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.

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

Table 2.4: Interest on Loan as approved for Phase 1 for FY 2016-17 (Rs. Crore)

Particulars	Approved in Tariff Order for FY 2016-17 dated 24.10.2017	Claimed	Approved after truing up for FY 2016-17
FY 2016-17	34.45	79.35	34.45

2.1.2.6 Operation & Maintenance (O&M) Expenses

2.1.2.6.1 Truing up of O&M Expenses for FY 2016-17

Regulation 48(1) of Principal UERC Tariff Regulations, 2015 specifies as follows:

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

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

Normative O&M Expenses for FY 2015-16 (In Rs. Lakh/MW)

Based on the representations received from gas based generating plants in the State, the Commission amended the Regulations to incorporate provision for normative O&M expenses for advance F class machines w.e.f. 18.01.2017.

Regulation 48(1) of the UERC Tariff Regulations, 2017 (First Amendment) specifies as under:

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

	Gas Turbine/ Com generating st	0	Small gas turbine power generating	Advance F class Machines	
Year	With warranty spares for 10 years	Without warranty spares	stations (less than 50 MW Unit size)		
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	35.35	
2018-19	11.22	16.82	20.41	34.56	

Normative O&M w.e.f. 18.01.2017 (In Rs. Lakh/MW)

Since the UERC Tariff Regulations, 2017 (First Amendment) came into force w.e.f. 18.01.2017, accordingly, till 17.01.2017 Principal Regulation would be applicable and from 18.01.2017 onwards, norms of First Amendment Regulation will be applied. Based on the applicable norms of O&M expenses for Combined cycle generating station, normative O&M expenses works out to Rs. 23.15 Crore on pro-rata basis for FY 2016-17, i.e. from 23.08.2016 to 20.11.2016 for GT 1 & GT 2 and from 21.11.2016 to 31.03.2017 for the entire Combined Cycle, i.e. GT 1, GT 2 & STG.

The Petitioner claimed an amount of Rs. 26.77 Crore towards O&M expenses for FY 2016-17 (post COD) as per the audited accounts. Further, the Petitioner submitted the separate details of employee, R&M and A&G expenses.

The Commission analysed the submissions made by the Petitioner and observed that few of the expenses claimed by the Petitioner are not allowable under the provisions of the MYT Regulations, 2015. In this regard the Commission is of the view that the expenses of such nature cannot be allowed as part of AFC to be passed on to the consumers in the form of Tariff and, accordingly, disallows the same. The details of expenses disallowed by the Commission alongwith reasons for the views taken by the Commission are as given in the table below:

Table 2.5. Expenses disanowed in F1 2010-17				
Particulars	Amount (Rs. in Crore)	Remarks		
BG Invocation Charges (PGCIL)	0.45	Not related to sale of power in the State		
Interest on TDS, TCS, Service Tax & WCT	0.18	Penal nature interest		
Loss on sale of Fixed Assets	0.02	Asset sold Pre-COD		
CSR Expenses	0.01	Should be borne out of profit of the Company		
Total	0.65			

As per MYT 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 MYT 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)* 1/3rd 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."

As discussed above, O&M expenses have been considered as controllable factor, accordingly, the Commission has approved the total O&M expenses for FY 2016-17 after sharing of gain/loss in accordance with the Regulations as shown in the Table below:

Particulars	Actual Claimed in	Adjusted claim considered for sharing	Normative approved now	Efficiency gain/(loss)	Generator Share	Net Entitlement
O&M Expenses	the Petition	Α	В	C=B-A	D=2/3xC	E=A+D
FY 2016-17	26.77	26.12	23.15	-2.98	-1.98	24.14

Table 2.6: O&M Expenses Approved After Sharing of Gains and Losses for FY 2016-17 (Rs. Crore)

2.1.2.7 Interest on Working Capital

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

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

a) 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;

- *b)* 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;
- *c) Operation and maintenance expenses for one month;*
- d) Maintenance spares @ 30% of operation and maintenance expenses; and
- e) 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."

The Petitioner submitted that it had incurred Rs. 1.80 Crore towards the actual working capital interest due to delay in payment of the energy bills by UPCL during FY 2016-17. The Petitioner further submitted that it is willing to forgo the said interest as the plant was operating during the relevant period under PSDF Scheme and the Commission has already provided for the refund of the rebate charged and deducted by UPCL.

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."

Accordingly, based on the above discussion and in line with the methodology adopted in the Tariff Order dated 24.10.2017, interest on working capital has not been included in the annual fixed charges (AFC) allowable to the Petitioner for FY 2016-17.

2.1.2.8 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 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 claimed an amount of Rs. 0.50 Crore as NTI for FY 2016-17, i.e. from COD to 31.03.2017. Accordingly, non-tariff income of Rs. 0.50 Crore has been adjusted by the Commission from the Gross AFC of FY 2016-17.

2.1.2.9 Annual Fixed Charges for FY 2016-17

Based on the above analysis, the Commission has worked out the approved figures of Gross AFC for FY 2016-17 after truing up. The summary of Gross AFC for FY 2016-17 is as shown in the Table below:

Particulars	Approved in Tariff Order for FY 2016-17 dated 24.10.2017	Claimed	Approved after truing up	
Depreciation	20.26	37.72	20.28	
Interest on loan	34.45	79.35	34.45	
Interest on Working Capital	0.00	0.00	0.00	
O&M expenses	23.15	26.77	24.14	
RoE	0.00	0.00	0.00	
Total Annual Fixed Costs	77.86	143.84	78.87	
NTI	0.00	0.50	0.50	
Net AFC	77.86	143.34	78.37	

Table 2.7: Summary of Net AFC Truing up for FY 2016-17 (Rs. Crore)

2.1.3 Annual Fixed Charges, Capacity Charge & Energy Charge Rate (ECR) for FY 2016-17

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 2016-17 effective from the date of commissioning till 31.03.2017.

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:

AFC x (NDM/NDY) x (PAFM/NAPAF) (in Rupees).

Where,

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

NAPAF = *Normative annual plant availability factor in percentage*

NDM = Number of days in the month

NDY = Number of days in the year

PAFM = Plant availability factor achieved during the month, in percent:

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.

(3) The PAFM shall be computed in accordance with the following formula: $NPAFM = 10000 \ x \Sigma DCi / \{ N \ x \ IC \ x \ (100 - AUX) \} \%$

i = 1

Where,

AUX = Normative auxiliary energy consumption in percentage.

DCi = 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: DCi 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 x LPPF x 100 / {CVPF x (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 Petitioners plant, as 1925 kCal/kWh and directed the 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 MVV 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 Pot. Ltd. & M/s Sravanthi Energy Pot. Ltd. and submit a report in this regard within next 3 months for approval of the Commission."

As can be seen from the above discussion, 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. The Commission has already directed UPCL to appoint an expert committee/consultant for establishing the design SHR for the Petitioner's plant but no report in this regard has been submitted by UPCL till date.

In this regard, the Commission is of the view, that till the finalization of the GSHR for the Petitioner's plant, the methodology adopted in the Tariff Order dated 24.10.2017 for determination of energy charge for FY 2016-17 on the basis of actual fuel bills raised by the Petitioner is continued. Accordingly, the average ECR for FY 2016-17, based on actual fuel bills raised between the period September, 2016 to March, 2017 works out to Rs. 5.21/kWh.

As discussed in the Tariff Order dated 24.10.2017 the Petitioner's plant commenced supply of power to the Respondent (UPCL) pursuant to the PSDF Scheme of GoI allowing the recovery of overall tariff from beneficiary (UPCL) only to the extent of the target price, i.e. Rs. 4.70/kWh. In addition, the Petitioner has also received PSDF support during the currency of the Scheme, accordingly, the difference in actual overall per unit charges (Rs. 4.70/unit from UPCL + PSDF support p.u. received from MoP) recovered by the Petitioner and approved fixed charges per unit alongwith per unit energy charges is required to be settled. In case overall per unit actual recovery inclusive of PSDF support is in excess of the approved overall per unit fixed charges in this Order and actual energy charges, then the Petitioner is liable to refund the difference to the Respondent.

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Further, in case overall recovery is less than the overall per unit fixed charges approved in this Order and actual energy charges then no adjustment would be required till the end of FY 2016-17, i.e. upto validity of the PSDF Scheme of GoI. The summary of approved Capacity Charge and actual Energy Charge Rate (ECR) considered by the Commission and actual per unit charges recovered by the Petitioner during FY 2016-17 is given in the Table below:

considered by the Commission for FY 2016-17 (2 nd half)			
Particular	FY 2016-17 (2 nd half)		
Fixed Charge (Rs./kWh)	1.01		
Energy Charge (Rs./kWh)	5.21		
Total	6.22		
Paid by UPCL	4.70		
PSDF Support	0.21		
Total	4.91		

Table 2.8: Approved Capacity Charge and actual Energy Charge Rate considered by the Commission for FY 2016-17 (2nd half)

From the above mentioned Table it is apparent that in FY 2016-17 approved overall per unit charges (per unit trued up Annual Fixed Charge and average ECR based on actual fuel bills) are higher than that actually recovered by the Petitioner, hence, no adjustment is required for FY 2016-17 since the PSDF Scheme was applicable during the relevant period. However, the ECR shall be reviewed based on the GSHR recommended by the expert Committee/Consultant and approved by the Commission, and accordingly, adjustment required, if any, shall be given effect to in the subsequent Tariff Order.

3 Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on APR for FY 2017-18, Revised ARR & Tariff for FY 2018-19

3.1 Annual Performance Review

The Commission, vide its Tariff Order dated 24.10.2017, approved the Multi Year Tariff for the Petitioner for the Control Period FY 2016-17 to FY 2018-19. Regulation 12(3) of the UERC (Terms and Conditions for Determination of Multi Year Tariff) Regulations, 2015 stipulate that under the MYT framework, the performance of the generating company shall be subject to Annual Performance Review.

Regulation 12(3) of the UERC (Terms and Conditions for Determination of Multi Year 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:-

- 1. 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;
- 2. 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);
- 3. Revision of estimates for the ensuing financial year, if required, based on audited financial results for the previous financial year;
- 4. 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 Control Period from FY 2016-17 to FY 2018-19 approved the AFC for the Control Period based on the approved capital cost as on COD, i.e. 20.11.2016 and the provisions of UERC Tariff Regulations, 2015. The Petitioner, in this Petition, proposed revision of estimates for FY 2018-19 based on the audited accounts for FY 2016-17 and revised estimates for FY 2017-18.

The Commission, in this Order, has carried out the Truing up of Phase 1 of the Petitioner's 225 MW CCPP in accordance with the UERC (Terms and Conditions for Determination of 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. The Commission shall carry out the truing up of FY 2017-18 based on the audited accounts for that year and give effect on this account in the AFC of FY 2019-20. The Commission, as discussed earlier, while carrying out the truing up has trued up the O&M expenses for FY 2016-17 based on the detail of actual expenses submitted by the Petitioner. Further, for the reasons discussed before, the Commission has not allowed any additional capitalisation for FY 2016-17. Hence, the Commission, under the provisions of Regulation 12(3) of the UERC Tariff Regulations, 2015, has revised the AFC for FY 2018-19. The approach adopted by the Commission in the approval of each element of ARR for FY 2018-19 is elaborated in the subsequent paragraphs.

3.2 Physical Parameters

3.2.1 NAPAF

Regulation 47 of UERC Tariff Regulations, 2015 specifies as under:

"(1) Normative Annual Plant Availability Factor (NAPAF):

(a) For all thermal generating stations: 85%"

Also, as discussed in the Tariff Order dated 24.10.2017, the Commission while approving the PPA for the Petitioner's plant 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 FY 2018-19 in the Tariff Order dated 24.10.2017 for second Control Period shall continue to be applicable without any change.

3.2.2 Design Energy, Auxiliary Energy Consumption and Saleable Primary Energy

The Petitioner in its Petition has projected energy generation from its 225 MW CCPP as approved for FY 2018-19 in the Tariff Order dated 24.10.2017 for second Control Period.

Accordingly, the Commission approves saleable primary energy after deducting the normative auxiliary consumption of 2.5% as 1553.61 MU for FY 2018-19.

3.3 Financial Parameters

3.3.1 Capital Cost

As detailed earlier in Chapter 2, the Commission has considered the capital cost as on COD of Rs. 1192.41 Crore in accordance with the Tariff Order dated 24.10.2017. The financing for the project has been considered same as approved in the Tariff Order dated 24.10.2017 as shown in the Table below:

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
Total Capital Cost	1192.41
Debt (71.90%)	857.31
Equity (28.10%)	335.10

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

3.3.2 Additional Capitalisation

The Commission, as discussed earlier has not approved any additional capitalisation in FY 2016-17, i.e. from COD till 31.03.2017. With regard to FY 2017-18, the Petitioner has not claimed any additional capitalisation proposed to be incurred in FY 2017-18.

The Petitioner has claimed an amount of Rs. 15.60 Crore on account of proposed procurement of initial spares in FY 2018-19 to be financed entirely through debt. The Petitioner in the Petition for approval of Business Plan earlier filed before the Commission proposed Nil additional capitalisation in FY 2018-19, and accordingly, the Commission while approving the Business Plan for second Control Period in the Tariff Order dated 24.10.2017, approved Nil additional capitalisation for FY 2018-19. The Commission asked the Petitioner to submit the time plan for acquisition of the initial spares proposed as additional capitalisation during FY 2018-19, in response to which the Petitioner submitted that it intends to purchase the same in the first quarter of FY 2018-19.

With respect to the cost of Initial Spares to be allowed as additional capitalisation, the Commission had already taken a view in this regard in the Tariff Order dated 24.10.2017 and has stated that the same will be reviewed at the time of truing up based on the actual expenditure subject to the ceiling limit specified under the Regulations. Accordingly, the Commission at this stage doesn't find any reason to approve any additional capitalisation for FY 2018-19 and additional capitalisation, if any, shall be considered on the basis of actual expenditure subject to prudence check in the year of acquisition.

3.3.3 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.

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

...″

As regards the depreciation for FY 2018-19 of the second Control Period, the Commission has determined the depreciation for FY 2018-19 considering the approved GFA base and asset class wise rates of depreciation specified in UERC Tariff Regulations, 2015. Accordingly, the depreciation approved by the Commission for FY 2018-19 is as shown in the Table given below:

Table 3.2: Depreciation Charges as Approved by the Commission for FY 2018-19 of Second
Control Period (Rs. Crore)

Particular	Approved in MYT Order dt. 05.04.2016	Claimed	Approved in this Order
Depreciation	60.78	74.19	60.84*

* reworked after providing asset class-wise depreciation on Other Fixed Assets

3.3.4 Return on Equity

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 submitted that it has computed and claimed RoE based on the equity contribution to meet the actual expenditure. Also, the Petitioner in its Tariff Petition stated that the proposed additional capitalisation for FY 2016-17 and FY 2018-19 shall be financed in entirety through debt.

As discussed above, the Commission has considered the Capital Cost as on COD of Rs. 1192.41 Crore as approved by the Commission in its Tariff Order dated 24.10.2017. As per the financing considered by the Commission of the total approved Capital Cost of Rs. 1192.41 Crore as on COD, Rs. 335.10 Crore have been funded through equity as already discussed in Chapter 2 of this Order.

With regard to additional capitalisation, as discussed earlier, as the Commission has not considered any additional capitalisation for FY 2016-17 (from COD to 31.03.2017) and FY 2018-19, therefore, addition to equity has also been considered as Nil.

Accordingly, the Commission has computed the RoE at the rate of 15.50% as specified in UERC Tariff Regulations, 2015. The summary of the Return on Equity approved for FY 2018-19 is shown in the Table given below:

Table 3.3: Return on Equity for FY 2018-19 (Rs. Crore)				
Particular	Approved in Tariff Order dt. 24.10.2017	Claimed	Approved in this Order	
Return on Equity	51.94	55.91	51.94	

3.3.5 Interest on Loans

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.

...″

As discussed in Chapter 2 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 2016-17. 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 FY 2018-19.

The Commission has considered the closing loan balance for FY 2017-18 as the opening loan balance for FY 2018-19. The depreciation for the year has been considered as the normative repayment for the year. The interest rate of 12.20%, as discussed above, has been considered to compute the interest on the average loan balance for the year. The interest on loan approved by the Commission for FY 2018-19 of the second Control Period is as shown in the Table given below:

Table 3.4: Interest on Loan for FY 2018-19 of second Control Period (Rs. Crore)				
Particular	Approved in Tariff Order dt. 24.10.2017	Claimed	Approved in this Order	
Interest on Loan	91.00	135.97	90.98	

3.3.6 Operation and Maintenance expenses

Regarding the Operation and Maintenance expenses, Regulation 48(1) of the UERC Tariff Regulations, 2015 as amended by the UERC (Terms and Conditions for determination of Multi Year Tariff) (first amendment) Regulations, 2017 specifies as follows:

"48 Operation and Maintenance Expenses

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

			(In Rs.	. Lakh/MW)
	Gas Turbine/ Co generating	0	Small gas turbine power generating	Advance
Year	With warranty spares for 10 years	Without warranty spares	stations (less than 50 MW Unit size)	F class Machines
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	35.35
2018-19	11.22	16.82	20.41	34.56

Since the UERC Tariff Regulations, 2017 (First Amendment) came into force w.e.f. 18.01.2017, accordingly, for FY 2018-19, norms of First Amendment Regulation will be applicable. Accordingly, the normative O&M expenses approved for FY 2018-19 in the Tariff Order dated 24.10.2017 for second Control Period shall continue to be applicable without any change. Based on the above, the normative O&M expenses approved by the Commission for FY 2018-19 are as follows:

"

Table 3.5: O&M Expenses Approved After for FY 2018-19 (Rs. Crore)				
Particulars Approved in Tariff Order dt. 24.10.2017 Claimed Approved in this Order				
O&M Expenses	73.96	77.00	73.96	

However, the Petitioner is advised to exercise due prudence and reasonableness while incurring the O&M expenses for FY 2018-19. Any unreasonable or imprudent expenditure will not be allowed to be pass through in tariffs.

3.3.7 Interest on Working Capital

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

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

- *a)* 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;
- *b)* Liquid fuel stock for ¹/₂ (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;
- *c) Operation and maintenance expenses for one month;*
- d) Maintenance spares @ 30% of operation and maintenance expenses; and
- e) 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.

The Petitioner has submitted that in line with the Commission's Order, UPCL was required to make payment towards the invoices raised by the Petitioner within 3 working days, however, due to the delay in payment of the said invoices beyond the prescribed time frame the Petitioner had to incur working capital interest. The Petitioner in its Petition has claimed an amount of Rs. 3.44 Crore and Rs. 7.71 crore respectively for FY 2017-18 and FY 2018-19 as interest on working capital. The Petitioner also submitted that out of the same it has actually incurred an amount of Rs. 1.33 Crore during the period April 2017 to September 2017.

It is to be noted that the Commission vide its Order dated 17.04.2017 had allowed the gas based power generators included in the GoI Scheme, to forego interest on working capital in lieu of non-chargeability of rebate by UPCL on payment of bills raised by respective generators. Further, the Commission in its Order dated 06.12.2017 had held that it was open for both UPCL and the gas generators to sit together and work out in the interest of the consumers of the State whether the payment of electricity bills is to be made in terms of the PPA or the existing arrangement approved by the Commission vide its Order dated 17.04.2017 would continue and intimate to the Commission their agreement on the issue within one month of the date of Order alongwith proper justification. The Commission also held that if payment is made to the generators will be at a liberty to claim interest on working capital in accordance with the Regulations. However, UPCL has not submitted its compliance in the matter till date. **The Commission once again directs UPCL to submit the Order.**

Accordingly, as discussed above and in line with the methodology adopted in the Tariff Order dated 24.10.2017, no interest on working capital has been included in the annual fixed charges (AFC) allowable to the Petitioner for FY 2018-19.

3.3.8 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 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 (NTI) of Rs. 0.04 Crore for FY 2018-19. The Commission provisionally accepts the NTI projected by the Petitioner for FY 2018-19, however, the same shall be trued up based on the actual audited accounts for the year.

Table 3.6: Non-Tariff Income for FY 2018-19 of second Control Period (Rs. Crore)			
Particulars	Approved in Tariff Order dt. 24.10.2017 Claimed Approved in this Order		
NTI	0.00	0.04	0.04

3.3.9 Annual Fixed Charges, Capacity Charge & Energy Charge Rate (ECR) for FY 2018-19

Based on the above analysis for all the heads of expenses of AFC, the Commission has approved the Annual Fixed Charges (AFC) for FY 2018-19 attributable to its beneficiary.

Regulation 49 of the UERC Tariff Regulations, 2015 as amended by the UERC (Terms and Conditions for determination of Multi Year Tariff) (Second Amendment) Regulations, 2017 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:

CC₁= (AFC/12) (PAF₁ / NAPAF) subject to ceiling of (AFC/12)

CC2= (AFC/6) (PAF2 / NAPAF) subject to ceiling of ((AFC/6) – CC1)

CC3= (AFC/4) (PAF3 / NAPAF) subject to ceiling of ((AFC/4) – (CC1+CC2))

CC4= (AFC/3) (PAF4 / NAPAF) subject to ceiling of ((AFC/3) – (CC1+CC2+CC3))

CC5= (AFC x 5/12) (PAF5/NAPAF) subject to ceiling of ((AFC x 5/12) – (CC1+CC2+CC3+CC4))

CC6= (AFC/2) (PAF6/NAPAF) subject to ceiling of ((AFC/2) – (CC1+CC2+CC3+CC4+CC5))

CC7= (AFCx7/12) (PAF7/NAPAF) subject to ceiling of ((AFCx7/12)-(CC1+CC2+CC3+CC4+CC5+CC6))

CC8=(AFCx2/3) (PAF8/NAPAF) subject to ceiling of ((AFCx2/3)– (CC1+CC2+CC3+CC4+CC5+CC6+CC7))

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

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

CC11=(AFCx11/12) (PAF11/NAPAF) subject to ceiling of ((AFCx11/12)– (CC1+CC2+CC3+CC4+CC5+CC6+CC7+CC8+CC9+CC10))

CC12=(AFC) (PAFY/NAPAF) 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.*

PAFN = *Percent Plant availability factor achieved upto the end of the nth month.*

PAFY = *Percent Plant availability factor achieved during the Year.*

CC₁, CC₂, CC₃, CC₄, CC₅, CC₆, CC₇, CC₈, CC₉, CC₁₀, CC₁₁ and CC₁₂ 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:

 $NPAFM = 10000 \ x \ \Sigma \ DCi / \{ N \ x \ IC \ x \ (\ 100 - AUX) \} \%$

i = 1

Where,

AUX = Normative auxiliary energy consumption in percentage.

DCi = *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: DCi 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 expower 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 x LPPF x 100 / {CVPF x (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.

(b) 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.

(c) 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 analysis of all the heads of expenses of AFC, the Commission has approved the Annual Fixed Charges (AFC) for FY 2018-19. The Commission to arrive at the Net AFC has adjusted the Non-Tariff Income from the gross AFC approved for FY 2018-19. The summary of Annual Fixed Charge approved by the Commission for FY 2018-19 of the second Control Period is given in the Table below:

Depreciation	Interest on	Interest on	O&M	RoE	Gross Annual	Non-Tariff	Net
	Loan	working Capital	Expenses	ROE	Fixed Cost	Income	AFC
60.84	90.98	0.00	73.96	51.94	277.72	0.04	277.68

Table 3.7: Approved AFC for FY 2018-19 (Rs. Crore)

The capacity charges and energy charges shall be recovered by the Petitioner from the Respondent corresponding to the contracted capacity in accordance with the provisions of the UERC Tariff Regulations, 2015. However, as discussed in Chapter 2 of this Order since the design SHR has not been finalised as yet for the contracted capacity of the Petitioner's plant by UPCL, therefore, ECR cannot be worked out at this stage. Accordingly in line with the decision taken by the Commission in the Order dated 17.04.2017, the generator is allowed to continue to raise the fortnightly Gas Supply Bills on UPCL on actual basis as is being received from GAIL/supplier of gas till the finalisation of the design SHR and any adjustment required shall be given effect to in the subsequent Tariff Order based on the SHR recommended by the expert Committee/ Consultant and approved by the Commission.

The approved AFC for FY 2018-19 shall be deemed to be recoverable in accordance with the mechanism specified in UERC Tariff Regulations, 2015. The Tariffs approved in this Order shall be applicable from 01.04.2018 and shall continue to apply till further Orders of the Commission.

(Subhash Kumar) Chairman