

Before

**UTTARAKHAND ELECTRICITY REGULATORY COMMISSION**

**Petition No. 35 of 2016**

**&**

**Petition No. 02 of 2017**

**In the matter of:**

Petition filed under Section 62 & Section 86(1)(a) of the Electricity Act, 2003, read with the UERC (Terms & Conditions for Determination of Multi Year Tariff) Regulations, 2015, as amended till date for determination of tariff for the Control Period from FY 2016-17 till FY 2018-19 for supply of power to UPCL from 428 MW Gas based Kashipur Combined Cycle Power Plant of M/s Sravanthi Energy Pvt. Ltd. at Village Khaikhera, Kashipur, District Udham Singh Nagar.

**AND**

**In the matter of:**

Petition seeking approval of Business Plan for the Control Period starting from FY 2016-17 to FY 2018-19 for supply of 214 MW of power to UPCL from 428 MW Gas based Kashipur Combined Cycle Power Plant of Sravanthi Energy Private Ltd. at Village Khaikhera, Kashipur, District Udham Singh Nagar, Uttarakhand.

**In the matter of:**

M/s Sravanthi Energy Pvt. Ltd.

... Petitioner

**AND**

Uttarakhand Power Corporation Ltd.

... Respondent

**CORAM**

**Shri Subhash Kumar      Chairman**

**Date of Order: October 24, 2017**

This Order relates to the Petitions filed by M/s Sravanthi Energy Pvt. Ltd. (hereinafter referred to as "the Petitioner" or "Generator" or "M/s SEPL") for approval of Business Plan for the Control Period from FY 2016-17 till FY 2018-19 and determination of tariff for supply of 214 MW of power to UPCL from its 428 MW Gas based Kashipur Combined Cycle Power Plant for the Control

Period from FY 2016-17 till FY 2018-19. The Petitioner had executed a PPA for 214 MW capacity with the licensee and has initiated commercial operation of its Combined Cycle Power Plant w.e.f. 20.11.2016.

## **1. Background and Submissions**

- 1.1 The Petitioner is a 428 MW gas based Combined Cycle Power Plant (CCPP) located in Village Khaikhera, Kashipur, District Udham Singh Nagar, Uttarakhand. Sravanthi Energy Pvt. Ltd. (hereinafter referred to as “SEPL” or “Petitioner” or “Applicant”) is a Company incorporated under the Companies Act, 1956. Sravanthi Energy Private Limited 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 is developing a 428 MW gas based combined cycle power plant on build, own and operate basis at Village Khaikhera, Kashipur in the Udham Singh 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. The heat content of the exhaust gas from each of the gas turbine would be recovered from the associated dual pressure non reheat horizontal heat recovery steam generators (HRSG). The steam generated would then be expanded in a condensing type non-reheat steam turbine which drives an electric generator.
- 1.2 The Petitioner also submitted that 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-gasified Liquefied Natural gas (R-LNG) as the main fuels for power generation.
- 1.3 The Petitioner in its MYT Petition for Phase I of the project submitted that the expected date of commissioning of first gas Turbine is 25<sup>th</sup> July 2016, second gas Turbine is 5<sup>th</sup> August 2016 and steam turbine is 25<sup>th</sup> August 2016.
- 1.4 The Petitioner submitted that for permanent evacuation of power from Sravanthi Kashipur CCPP, it has signed the Connectivity Agreement with Power Transmission Corporation of

Uttarakhand Limited (PTCUL) on 30<sup>th</sup> September 2011 and Power Grid Corporation of India Limited (PGCIL). Further, the Petitioner has also constructed a dedicated transmission system comprising of a 2.512 km long 220 kV transmission line from its Power Station to Loop In Loop Out (LILO) at Kashipur-Mahuakheraganj 220KV transmission line and connectivity to Petitioner has been allowed by PTCUL.

- 1.5 The Petitioner submitted that it had executed a Gas Supply Agreement with GAIL with take or pay clause pursuant to the provisions of the Scheme for supply of gas for generation of 20,70,00,002 units of power during the period of April 01<sup>st</sup>, 2016 to September 30<sup>th</sup>, 2016.
- 1.6 The Ministry of Power, Government of India vide letter of Award No.4/14/2016-Th-1 dated 21<sup>st</sup> March 2016 has allocated 4,57,83,396 SCM of e-bid RLNG gas to the Petitioner for generation. It was also submitted that the Petitioner will continue to be eligible for participation in the bid for allocation of gas as per the Scheme till the applicability of the scheme.
- 1.7 The Petitioner submitted that the detailed Project report (DPR) of the Project was prepared by Tata Consulting Engineers Limited in May 2010. IFCI Ltd. (hereinafter referred to as "IFCI" or "Lender") was the lead Lender for the Project and DESEIN Pvt. Ltd (hereinafter referred to as "LII" or "LE") was the Lender's Engineer providing Due Diligence Services for the Project.
- 1.8 The Petitioner submitted that the completed cost of Project was estimated to be Rs. 834.37 Crore which was later revised to Rs. 845.00 Crore at the time of financial appraisal by Banks in September 2010. The same was funded by Term Loan of Rs. 633.75 Crore and promoter's equity of Rs. 211.25 Crore at a Debt to Equity Ratio of 75:25.
- 1.9 The Petitioner submitted that it has placed the EPC contract with M/s Sravanthi Infratech Private Limited with specific conditions to procure critical equipments from reputed suppliers. The Gas Turbine generator (GTG) was sourced from GE, France and orders for Steam Turbine Generator (STG) and HRSG were placed on reputed capital equipment suppliers namely M/s Hangzhou Steam Turbine Co. Ltd. (China) and M/s Greens Power Equipment (China) Co. Ltd. The orders for utility and ancillary equipment were placed on reputed suppliers like Areva, ABB, Atlas Capco, Voltamp, Transformers and Rectifiers, GEI Industrial Systems Ltd, Honeywell, and so on.

1.10 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.

1.11 UPCL had filed a Petition dated 14.06.2016 seeking approval of draft PPA to be executed with M/s SEPL. The Commission vide its Order dated 21.06.2016 while admitting the Petition directed the parties as follows:

*"a) The Petitioner to issue to the Respondent on or before 24.06.2016, the Discom's Letter of Confirmation provided at Annexure-I of the PSDF support Agreement executed by the Respondent with MoP, Gol and also the Letter of Intent (LoI) for purchase of power from SEPL. In Discom Letter of Confirmation, at Para 3(iii), the price for purchase of incremental energy should be Rs. 4.70/kWh or as notified by MoP in future.*

*b) The Respondent to file Tariff Petition and Business Plan Petition in accordance to UERC (Terms and Conditions of Determination of Multi Year Tariff) Regulations, 2015 within 30 days of issue of the Order.*

*c) PTCUL to submit the status of evacuation of power from the project and the capacity available in the 220 kV Kashipur-Mahuakheraganj line within one week. Further, PTCUL with regard to the connectivity, is required to allow connectivity to the project for testing and commissioning activities including evacuation of power till the final decision of the Commission in the matter."*

1.12 Further the Commission vide its Order dated 20.07.2016 approved the Power Purchase Agreement for contracted capacity of 214 MW with certain modifications.

1.13 In the meantime, the Petitioner filed a Petition dated 20.07.2016 for determination of tariff for supply of power from its 428 MW Gas based Kashipur Combined Cycle Power Plant to UPCL.

1.14 The Petitioner in its Tariff Petition made the following requests:

- a. Approve the Capital Cost of the Project which will be used for determination of Annual Fixed Charges for the Project;
- b. Determine the Tariff for the proposed supply of 214 MW (gross capacity) power to

UPCL for the period from the CoD till the forthcoming tariff control period of FY 2016-17 to FY 2018-19.

- c. To allow the actual plant availability to be achieved based on the actual availability of gas in that particular financial year while carrying out the Truing-up exercise;
- d. To decide an interim tariff of Rs. 4.70 per unit of electricity, constituting of Rs. 4.70 per unit as Capped Unit Price and Rs. (0.03) (“negative 3 paisa”) per unit of PSDF support till the determination of final tariff;
- e. Provide approval for permanent evacuation of power by injecting power into Power Transmission Company of Uttarkhand Limited (PTCUL) transmission system through 220 KV Loop In Loop Out at Kasipur - Mahuakheraganj transmission line of the Petitioner already connected to the aforesaid transmission line;
- f. Allow for recovery of actual energy charge (calculated as per the provision of regulation 55 of the MYT Regulation 2015) for every unit (after netting of with the start-up power) of infirm power supplied to the state grid till First COD is achieved;
- g. Grant “Must Dispatch” status to the Power Station for supply of electricity for a quantum equal to Total Incremental Electricity (as defined in the PSDF agreement) till the time the Petitioner gets e-bid RLNG allocation under the said Scheme considering the fact that the Gas Supply Agreement with GAIL is on “take-or-pay” basis;

1.15 The copy of the aforesaid Petition was forwarded to the Respondent (UPCL) for submission of its reply. A hearing was held on maintainability of the Petition on 09.08.2016 and the Commission, vide its Order dated 09.08.2016 while admitting the Petition directed the parties as follows:

*“a. UPCL is directed to treat the Petitioner’s generating station as a must-dispatch station and dispatch the Gross energy equivalent to 214 MW from the date of commissioning of the project.*

*b. UPCL is directed to pay a provisional tariff of Rs. 4.70 per unit (exclusive of the PSDF support) to the generator for energy supplied to it or for the period after September, 2016 the capped price decided by GoI in accordance with the GoI (PSDF) Scheme.*

*c. UPCL is also directed to submit its comments, if any, on the merits of the Tariff Petition within one month from the date of the Order.*

*d. The Petitioner is directed to furnish full details as required by the regulations, consequent to the commissioning of the first phase of the project, so that the normative Station Heat Rate could be*

*determined.*

*e. The Petitioner is also directed to furnish the details of the total capital cost including IDC consequent to the commissioning of the first phase of the project.*

*f. The Petitioner is directed to submit the copy of the fortnightly bills raised by GAIL and also the details of PSDF support amount received by it during the month by 7th of the ensuing month.*

*...”*

1.16 Further, the Commission, based on the information submitted by the Petitioner, vide its Order dated 09.08.2016 had allowed 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.

1.17 Thereafter, in compliance to the directions of the Commission, the Petitioner filed another petition dated 19.12.2016 seeking approval of Business Plan for the Control Period from FY 2016-17 to FY 2018-19 under Regulation 8 of UERC (Terms and Conditions for Determination of Tariff) Regulations, 2015 (in short, UERC MYT Regulations, 2015). The Petitioner in its Business Plan made the following requests:

- a. Admit the Business Plan Petition and approve the Business Plan for SEPL for the Control Period from FY 2016-17 to FY 2018-19 in accordance with Regulation 8 of UERC MYT Regulations, 2015.
- b. Approve the Capital Cost of the Project which will be used for determination of Annual Fixed Charges for the Project.
- c. Approve planned outages of Power Station and also grant permission for change in planned outages depending upon requirement of SLDC, Discom and Petitioner.
- d. Allow the Petitioner to make revision to the current petition and submit additional & relevant information that may emerge or become available subsequent to this filing.
- e. Condone any inadvertent omission/errors/shortcomings and permit the “Petitioner” to add/change/modify/alter this filing and make further submissions as may be required at a future date.

1.18 During scrutiny of the Petitions, further additional deficiencies were sent to the Petitioner vide Commission’s letters on various dates. Additionally, a meeting was also held with the representatives of the Petitioner on 04.11.2016, wherein the Petitioner was informed that the

replies on the deficiencies pointed out by the Commission were pending and also the intricacies of the submissions made by the Petitioner in its Tariff Petition and also during the meeting were discussed. The Petitioner in this regard was asked to submit the information within the time frame given by the Commission. The Petitioner submitted its reply in response to the deficiencies pointed out by the Commission vide its reply on various dates.

- 1.19 UPCL (Respondent) submitted its comments on Business Plan Petition and the Tariff Petition filed by the Petitioner on 06.01.2017. The Respondent's reply was sent to the Petitioner for its comments. Further, the Commission vide its letter dated 18.07.2017 also asked the Respondent to submit its comments on the replies filed by the Petitioner on the queries raised by the Commission. UPCL vide its letter dated 28.08.2017 submitted its comments in the matter, which were forwarded to M/s SEPL with a liberty to file its submissions on the comments made by the Respondent. M/s SEPL vide its letter dated 04.09.2017 submitted its reply in the matter.
- 1.20 The Petitioner's submissions, Respondent's comments, and Commission's views on the same have been discussed in the subsequent Paras.

## **2. Petitioner's Submissions**

- 2.1 The Petitioner vide its Petition dated 20.07.2016 submitted that the completed cost of the project as per DPR was estimated to be Rs. 834.37 Crore which was later revised to Rs. 845.00 Crore at the time of financial appraisal by the Banks and the funding was structured with a Term Loan of Rs. 633.75 Crore and promoter's equity of Rs. 211.25 Crore at a Debt to Equity Ratio of 75:25. The lead lender had appraised the Project in September 2010. The Petitioner had placed the EPC contract with M/s Sravanthi Infratech Private Limited with specific conditions to procure critical equipment from reputed suppliers. Accordingly, the Gas Turbine generator (GTG) were sourced from GE, France while orders for steam turbine generator and HRSG were placed on reputed capital equipment suppliers namely M/s Hangzhou Steam Turbine Co. Ltd. (China) and M/s Greens Power Equipment (China) Co Ltd. The orders for utility and ancillary equipment were placed on reputed suppliers like Areva, ABB, Atlas Capco, Voltamp, Transformers and Rectifiers, GEI Industrial Systems Ltd, Honeywell, and so on.
- 2.2 The Petitioner submitted that the project was initially expected to achieve date of

commercial operation by 31.12.2011. However, the country suffered deficit in supply of domestic natural gas and prices in the spot market for imported RLNG sky rocketed whereby making the cost of energy unviable for Discoms to procure. Eventually, the existing gas based power plants as well as those power plants which were under construction got stranded. The Petitioner submitted that it had drawn major portion of debt and had incurred capital expenditure on the Project. After the commitment from Government of India in respect of supply of gas under the Scheme, the commissioning and balance activities were taken up at Sravanthi Kashipur CCPP. The Petitioner had in its petition submitted that the project was expected to achieve CoD (commercial operation) by July 2016. As a result of this delay which was purely due to uncontrollable factors (non-availability of domestic gas) substantial amount of interest during construction (IDC) was incurred.

- 2.3 The Government of Uttarakhand vide Government Order No. 456(2)/1/2015-04(03)/160/2010 dated 28.04.2015 directed UPCL to purchase power from the Sravanthi Kashipur CCPP equivalent to 50% of its Installed Capacity, i.e. 214 MW on gross capacity basis at a net capped tariff of Rs. 5.50 per unit of electricity. Subsequently, the Government of India, based on the bidding process under the Scheme revised the net capped tariff payable by the Distribution Companies at Rs. 4.70 per unit of electricity, excluding the PSDF support.
- 2.4 The Petitioner submitted that in order to supply 214 MW (gross capacity) of power to UPCL at normative availability of 85%, the Petitioner has to operate two GTG and one STG at full load from the Petitioner's 1<sup>st</sup> phase of 214 MW. Thus the installed capacity to be utilized by the Petitioner for supply of power to UPCL would be 214MW (two GTG 71.5 MW each+ one STG of 71 MW=214 MW). The Petitioner requested the Commission for considering the installed capacity as 214 MW for the purpose of determination of capital cost of Rs. 1452.19 Crore. Further, the Petitioner also requested the Commission to consider the operational capacity of the plant as 214 MW (in line with the Power Purchase Agreement executed with UPCL) for the purpose of calculation of O&M expenses and interest on working capital since these costs are closely related to the operational capacity.
- 2.5 The Petitioner also submitted that the Gas allocation from the Government of India for FY 2016-17 was about 50% PLF of the total plant capacity and based on the said allocation the plant will be able to achieve the Normative Plant Availability Factor as specified in the Regulations for the capacity to be utilized for supplying power to UPCL.

- 2.6 The Petitioner had in its Petition claimed a tariff based on the estimated capital cost of Rs. 1,452.00 Crore being the cost of the first phase of Combined Cycle Power Plant (CCPP) comprising of two GTG and one STG as on 25.08.2016.
- 2.7 Since the petition for fixation of tariff had been filed prior to commissioning of the project based on the estimated capital cost, the Commission asked the Petitioner to submit the actual executed (duly audited) cost of the project and corresponding computation of tariff in accordance with the Regulations. The Petitioner vide its letter dated 25.11.2016 informed that Phase 1 of the project, i.e. two GTGs were commissioned on 23.08.2016, and the STG was commissioned on 20.11.2016 in support of which, a certificate dated 22.11.2016 from UPCL was also submitted, confirming the commissioning status of the Plant. The Petitioner further vide its reply dated 19.12.2016 furnished the details of capital cost as on CoD, i.e. 20.11.2016 subsequent to commissioning of the project. The Petitioner's submissions, Respondent's comments and the Commission views/decisions on the same have been discussed in subsequent Paras.

### **3. Respondent's Submissions**

- 3.1 The Respondent submitted that the Petitioner in its DPR and also in the Petition has stated the name plate rating/gross capacity of the plant as 450 MW while the Petitioner in its Petition has shown the capacity as 428 MW due to site condition against 450 MW for the purpose of determination of tariff and the said assumed capacity is totally hypothetical and is not permissible as per Regulation. The Respondent submitted that as per Regulation the total cost of the generating station must correspond to its total capacity of 450 MW. The Respondent also submitted that the Petitioner in its Petition has stated that the capital cost of the generating station as per DPR is Rs. 834.37 Crore for 214 MW. The Respondent stated that correctness of capital cost is required to be scrutinized.
- 3.2 The Respondent also submitted that the Petitioner has admitted that there has been time over run and cost over run in the project, however, the Petitioner has failed to show that the same was not attributable to the causes for which the generator himself is responsible. The Respondent submitted that the Interest During Construction as name itself suggest is to be considered for the construction period itself and the same cannot be stretched so as to include the time which the generator spent in procuring the fuel or commencing test and trial of the plant and also ultimately commissioning the same irrespective of the fact whether the delay after completion of the construction of the plant was attributable to the

generator or not.

- 3.3 The Respondent submitted that Regulation 21(9) of MYT Regulation, 2015 categorically provides that interest during construction shall be computed from the date of infusion of the debt fund and after taking into account the prudent phasing of fund upto SCOD, and the same caters to the situation upto the Schedule Date of Commissioning in principle. The Respondent also mentioned that there may be a situation where the generator during the period of construction tied up the generated power by entering into a power purchase agreement and therein also agreeing to the schedule date of commissioning as mentioned in the PPA and the terms of PPA may include the effect in not being able to commission the plant within schedule time, in such cases the other party has an opportunity to find out the reasons for delay and is available with the documents to establish the cause for the delay and hence would be in a position to show that the same is attributable solely to the generator however in cases like the present one when the plant whose construction has been completed long time back enters into a PPA after more than 3 years and commissions the plant, it is not possible for the other party to counter or find the falsity of the statement made by the Petitioner, hence, in such cases the IDC cannot be considered for a period beyond the time when the construction was completed which in the present case is 31<sup>st</sup> March, 2012. It is pertinent to mention here that during this period as the Respondent had no control over the Petitioner or any interest in the fact whether the Petitioner was getting delayed in commissioning or is not for any other reason being able to commission within time, the effect of the delay should be borne by the Petitioner himself otherwise it would imply that the generator in any case will get the full recovery of all the cost incurred whereas the same without any reason would be borne by the consumers of the State. The Respondent submitted that in the present case the Petitioner is not entitled to any IDC for period beyond the date of completion of construction.
- 3.4 The Respondent further submitted that out of 27,000 MW Stranded Gas project around 9,000 MW has procured the domestic gas during this period and it is surprising that the Petitioner all this while did not make any effort to run the plant or procure the fuel, therefore, it is the incompetency of the Petitioner who failed to secure the domestic gas and commission the plant within time, and, therefore, claiming IDC and pre-commissioning expenses is not justifiable as it would amount to compensating the Petitioner for its own wrong. It is also pertinent to mention here that the petitioner all this while has not obtained

any open access neither it has any understanding of arrangement with any consumer of the licensee in the State, which clearly show that the generator all this while was never ready to run the plant, it would be totally inequitable to burden the consumer of the State with the extra cost for making the recovery possible for the generator. That the State of Uttarakhand is one of the first State to come forward and make long term arrangement to purchase power from the stranded gas plant, thereby cooperating with the policy of the Central Government to help the stranded gas plant from becoming a non performing asset, however, the same cannot go to the disadvantage of the Respondent rather the Petitioner in all fairness should have not claimed any IDC in the first place.

- 3.5 The Respondent also submitted that due to the reason of delayed commissioning the Petitioner is claiming the IDC for the entire period as well as also claiming the pre-operative expenses which can't be claimed as the same has been included in the capital cost in DPR. If any maintenance was required after 31<sup>st</sup> December, 2011, it would be on the part of Petitioner and cannot be more than the one provided for in the Regulations. The Petitioner has just made a bald statement regarding having no guarantee cover, the same needs to be proved by producing relevant and authentic document. The Respondent also submitted that apart from the guarantee cover the Petitioner might have, certain equipment themselves may have manufacturer guarantee, whether the supplier of the equipments has given the guarantee need to be disclosed by the Petitioner, and further it has to be shown whether the guarantee extends from the supply of the equipment or from the date of commissioning because if the guarantee has been given from the date of supply then the total guarantee of the equipments will be reduced by the time of delay hence the total life of the equipments will not be 25 years and it may be possible that after 22 years of plant life the Petitioner may claim R&M or may provide lesser generation as the case may be.
- 3.6 Further, the Respondent submitted that even if, for the sake of evaluating the calculation of the Petitioner, the capital cost is considered as Rs. 834.37 Crore, as per MYT Regulation 2015 the loan part comes to Rs.  $834.37 \times 0.7 =$  Rs. 584.05 Crore, therefore, the IDC claim upto March, 2015 @ 11.2% p.a. comes out to Rs. 192.73 Crore for 3 years as the PSDF scheme was applicable from 1<sup>st</sup> April, 2015 onwards.
- 3.7 The Respondent submitted that the initial expected commissioning date of project was 31<sup>st</sup> December, 2011 but the Petitioner in its Petition has shown the 1<sup>st</sup> CoD on 25<sup>th</sup> July, 2016 with the reason that the non-availability of gas was the reason for delay of the project and

has claimed IDC of Rs. 591.71 Crore upto the 1<sup>st</sup> CoD with additional pre-commissioning expenses of Rs. 44.54 Crore.

- 3.8 Further, the Respondent submitted that if the reason for delay was the non-availability of gas/costly gas as claimed by the Petitioner then it is pertinent to mention that PSDF support was provided since 1<sup>st</sup> April, 2015, therefore, the reason of non-availability of gas/costly gas can't be claimed from 1<sup>st</sup> April, 2015 onwards.
- 3.9 The Respondent submitted that the main reason for delay after 1<sup>st</sup> April, 2015 was the absence of PPA/sale of power which cannot be treated as Force Majeure but it is simply the failure of the Petitioner to secure PPA for sale of power as neither the Petitioner tried to sell its power in IEX/PXIL or through short term tender.
- 3.10 The Respondent also submitted that the following parameters may be considered before finalizing the capital cost:
- (a) As the Petitioner has defined the name plate capacity of plant installed of 450 MW, hence, the total capital cost of the project should be pro-rata adjusted for the functional capacity of 428 MW.
  - (b) IDC beyond construction period, i.e. beyond 31.12.2011 should not be considered for the reasons explained above and in fact the IDC computed up to the date of construction should be distributed proportionately between the contracted and non contracted capacity of the plant.
  - (c) As has been considered by the Petitioner during the capitalization of assets at the time of first COD, complete value of land and many other assets were taken while the proportionate value should be considered.

Further, above considerations are more relevant in the light that the remaining half or the un-contracted capacity of the plant should also be loaded equivalently and at par with the contracted capacity.

- 3.11 The Respondent submitted that the Petitioner has requested to fix the NAPAF as per the actual due to uncertainty of gas, the same cannot be considered being against the provisions of the Regulations, wherein the AFC has to be calculated by considering the NAPAF of 85%. Now after having a long term PPA of 25 years, it is the responsibility of the Petitioner to arrange the gas for 25 years and if the Petitioner is unable to secure the long term arrangement of gas then there is no use of having the long term PPA. Moreover, the

Petitioner is requesting for recovery of AFC in case of non-availability of gas, there may be a possibility that the Petitioner may associate any other inefficiency with the non-availability of gas and thereby get the benefit of the same too, further if the recovery is assured for uncertainty of gas which would also mean uncertainty of the units produced, then it would mean that the Petitioner will any how get the recovery of its cost together with other benefits like RoE etc, on the other hand the Respondent will have to bear the same without even having the requisite units of power, which would not only make the per unit power purchase costlier but also make the planning process of the Respondent ineffective and uncertain. Further, it would be reasonable to consider the concern of the Respondent regarding non-availability of power in future in case of non-availability of fuel linkage to the Petitioner, that the recovery of total AFC should be considered through per unit basis of energy generated and not through the fixed charge component allowed in normal cases. It would be more appreciated in the context that in case of non supply of energy, the Respondent would not only be affected by the shortage of power for which some costlier power needs to be arranged but also has to pay the fixed charges to the Petitioner. The PPA has been done by the purchaser to receive power and the generator who want to have a long term PPA with the purchaser will have to fulfill the requirement of purchaser and it is also pertinent to mention that in case of variation in schedule, the power purchase planning of the Respondent may adversely get affected and the Respondent has to arrange the power on a very short period where there are chances that the Respondent may get costly power. Therefore, in case there will be any deviation then there should rather be a penalty clause for generator as it has already been facilitated by defining its power as must-dispatch.

- 3.12 The NAPAF has to be maintained at 85% and for 214 MW contracted capacity it comes out to be 182 MW RTC. As the concept of gas based plant is to meet out the power deficit during peak hour due to the capability of quick start/stop. Therefore, the Respondent requested the Commission to specify the minimum & maximum technical load for which advance scheduling may be provided by UPCL to maintain yearly NAPAF of 85%.
- 3.13 The Respondent submitted that the Petitioner has mentioned about the PSDF support, however, the Petitioner has not disclosed as to what will be the effect in case there is increase in PSDF support either quantum or duration or when there is no PSDF support given by Government then what would be the effect of the same. The Respondent

submitted that the benefit of any increase in any PSDF support should be passed on to the Respondent and in case the PSDF support is not provided the effect of the same shall be borne by the generator.

- 3.14 The Respondent submitted that under the scheme of PSDF support the Petitioner is not entitled for RoE, however, otherwise as per the Regulation the RoE has to be given to the generator, there are various contingencies in the matter and the Regulation of tariff does not specifically cater to the situation of stranded gas based plants, there is a possibility that the Petitioner in order to obtain RoE may not be interested in getting PSDF support even when the same is available moreover it would not be possible for the Respondent to justify the cause as to why the PSDF support was not extended to the generator hence, UPCL requested that provision be made in the tariff order that in case PSDF support is available and the same is not extended to the Petitioner then in such case also, the Petitioner should not be entitled to claim any RoE or in the alternative it should be specifically provided that the issue regarding PSDF support shall be settled by the generator with the Respondent and the generator should be bound to disclose to the Respondent all the efforts made by the Petitioner in obtaining the PSDF including bidding.
- 3.15 The Respondent submitted that the request of the Petitioner for some additional spares under the ambit of initial spares, to be purchased in coming 3 years of the control period is meaningless and arbitrary as the contracted capacity of plant has already been commissioned and merely for taking advantage of the facility of allowance of spares up to 4% of plant and machinery cost, the said request has been raised. It is pertinent to mention that all the initial spares should have been purchased and taken in capital cost at the time or before the CoD of the plant and not later. Further, it is important to consider that the plant consisted of 2 identical sets of generators for which one common spare may be considered and considering half the capacity of the plant as contracted capacity that amount should also be divided proportionately.
- 3.16 The Respondent submitted that the Commission may make provisions in the final order so that, in case the Petitioner fails to procure fuel for any reason whatsoever than the fixed charges for that duration may not be payable by the Respondent.
- 3.17 The Respondent submitted that the Petitioner is not the only isolated gas based generator in the State and there are two other such generators and the power to be procured from these generators is 428 MW which is approximately 20-25 % of the total power requirement of the

Respondent which means in case of failure of supply of power due to non availability of fuel to these generators will not only adversely affect the power purchase plan of the Respondent and the cost of power to cater the deficiency created, but will also cast enormous burden in the form of recovery of Annual Fixed Cost.

- 3.18 The Commission with a view to give an opportunity to the Respondent to make its submissions on the replies filed by the Petitioner, forwarded the copies of the replies made by the Petitioner to the Respondent for its comments on the same. In response to the same UPCL vide its letter dated 28.08.2017 submitted its comments which are discussed in subsequent paras.
- 3.19 The Respondent submitted that the Petitioner has failed to show that the plant was ready for commissioning in the year 2011 as all the units were not ready for testing and commissioning. The Respondent submitted that the Petitioner has only emphasized upon the phase-1 of the plant constituting GT-1, GT-2 and STG which shows the falsity on the part of the Petitioner. The Respondent also submitted that IDC claim of the Petitioner prior to entering into PPA with UPCL is not tenable, and as the PPA was with respect to a quantum of power to be supplied by the Petitioner and it was not unit specific, the Petitioner is intentionally trying to misrepresent the facts. Further even if it is considered that the PPA would be for full capacity of plant, i.e. for 428 MW then the readiness of the same should be considered only after the installation and completion in all respect of the whole plant and, accordingly, the IDC should be treated differently.
- 3.20 The Respondent submitted that the Petitioner in Form-F-6.5A [Break-up of capital cost for Gas based projects on CoD], has shown huge amount of expenditure having been incurred even after COD of the plant apart from the date of readiness of the plant which is unjustifiable and also points out that complete plant was never ready as has been claimed by the Petitioner.
- 3.21 The Respondent submitted that the Petitioner has purchased massive land area costing around Rs. 8.0 Crore, without justifying as to how much land is appropriate for the construction of the plant. The Respondent submitted that huge cost is shown to have been incurred under the head 'Roads' amounting to Rs. 16.74 Crore (Appx) and under the head 'Buildings' amounting to Rs. 72.0 Crore (Appx). Further, the cost of Transmission Line is shown as Rs. 6.02 Crore (Appx) in contradiction to which some other documents duly submitted by the generator themselves are reflecting the cost of Transmission line as Rs. 3.0

Crore which needs to be scrutinized.

- 3.22 The Respondent further submitted that the Petitioner has not yet constructed the transmission line as a whole, since only one out of two circuits is completed and the one which is completed cannot be considered to be agreed upon by the Respondent as per the terms of PPA.
- 3.23 The Respondent submitted that the basis for claiming drastic change in SHR as per the Petitioner's letter dated 19.6.2017 is totally baseless. The Respondent submitted that the guarantee given by the EPC contractor is upon the basis of the site specific parameters which were already considered as is apparent from the Petitioner's submissions dated 25.11.2016. The Respondent submitted that the submissions made by the Petitioner are not relevant for the purpose of determining the SHR, also as the SHR has been guaranteed and on non-fulfilment of guarantee the provision of the contract between the Petitioner and the EPC contractor can be invoked and the Respondent cannot be saddled with the implications of the wrong assurance given by the EPC contractor. Further the conditions related to the ambient temperature, the factory in the vicinity have all been considered at the initial stages by the EPC contractor and there is no drastic change as suggested by the Petitioner.
- 3.24 The Respondent submitted that the financial statement of SEPL clearly mentions that SEPL and EPC contractor are related parties, therefore, it is obvious that the Commission will scrutinize/analyze the impact and influence of the relation on the project and its cost for the purpose of prudence check especially considering the statement of the Petitioner that the said EPC contractor was only for phase-1.
- 3.25 The Respondent submitted that the Petitioner has mentioned about international competitive bidding, and from the available abstracts it appears that there were various opportunities for the Petitioner to eliminate the non-required bidders thereby making international competitive bidding as totally ineffective.

#### **4. Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Business Plan for the Control Period**

- 4.1 UERC (Terms & Conditions for Determination of Multi Year Tariff) Regulations, 2015 (hereinafter referred to as "UERC Tariff Regulations, 2015") specify that the generating company has to file a Petition seeking approval of the Business Plan for the Control Period

from FY 2016-17 to FY 2018-19. Regulation 8 of the UERC Tariff Regulations, 2015 specifies as under:

*“8. Business Plan*

*(1) An Applicant shall submit, under affidavit and as per the UERC (Conduct of Business) Regulations, 2014, a Business Plan by November 30th, 2015, for the Control Period of three (3) financial years from April 1, 2016 to March 31, 2019,*

*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, yearly phasing of capital expenditure along with the source of funding, financing plan and corresponding capitalization 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;”*

4.2 The Commission vide its letter dated 22.08.2016 had asked the Petitioner to file a Petition seeking approval of Business Plan for the relevant Control period. In response, the Petitioner filed a Petition dated 19.12.2016 seeking approval of the Business Plan for the Control Period FY 2016-17 to FY 2018-19 under Section 62 & 86(1)(a) of the Electricity Act, 2003 read with the Regulation 8 of UERC Tariff Regulations, 2015.

The Commission held a hearing on 09.01.2017 in the matter and admitted the Petition. The Capital works related to the Control Period as submitted by the Petitioner are as follows:

**Table 1: Additional capital expenditure as planned during FY 2016-17 to FY 2018-19 (Rs. in Crore)**

Particulars	2016-17	2017-18	2018-19	Claimed under head
	Projected	Projected	Projected	UERC MYT Regulation 2015
Land	0.00	0.00	0.00	Regulation 22(1) (a) & (b)
Civil Works	0.00	0.00	0.00	Regulation 22(1) (a) & (b)
Plant & Machinery (Transmission Line)	0.00	0.00	0.00	Regulation 22(1) (a) & (b)
Plant & Machinery ( including Spares)	15.60	0.00	0.00	Regulation 22(1) (c)
Furniture and Fixtures	0.00	0.00	0.00	Regulation 22(1) (b)
Office Equipment & Others	0.00	0.00	0.00	Regulation 22(1) (b)
Computers	0.00	0.00	0.00	
Vehicles	0.00	0.00	0.00	Regulation 22(1) (b)
<b>Total</b>	<b>15.60</b>	<b>0.00</b>	<b>0.00</b>	

The expenditure on major item claimed has been examined as follows:

### 4.3 Initial Spares

The Petitioner submitted that it has not considered any initial spares at the time of CoD of the Plant. Further, the Petitioner submitted that it would procure initial spares of Rs. 15.60 Crore in the second Control Period which is within the ceiling limit as specified in Regulations. The Petitioner also submitted that they are not seeking any additional capitalization apart from the Initial spares in the current Business Plan Petition.

Regulation 21(11) of UERC Tariff Regulations, 2015 specifies as follows:

*“Initial Spares: Initial spares shall be capitalized subject to the following ceiling norms as a percentage of the Plant and Machinery cost as per actuals upto the cut-off date:*

*(i) Thermal generating stations - 4.0%*

*(ii) Hydro generating stations - 4.0%*

*(iii) Transmission System*

*(a) Transmission line - 1.00%*

*(b) Transmission Sub-station - 4.00%”*

As per the above stated Regulation, the initial spares shall be capitalized as per actual expenditure incurred subject to ceiling limit specified. Here it is pertinent to mention that FY 2016-17 has completed and no information regarding actual expenditure pertaining to initial spares has been submitted. Accordingly, the Commission has not considered the initial spares cost at present and the same will be reviewed at the time of truing up based on the actual expenditure subject to the ceiling limit specified under Regulations.

### 4.4 Financing Plan

The Petitioner submitted that the additional capital expenditure to be incurred in FY 2016-

17 shall be funded by debt. As mentioned above, the Commission has not considered the proposed additional capitalization in the current Order. However, based on the actual admissible additional capitalization and actual financing, truing up will be done for the purpose of determination of Tariff.

#### 4.5 Major shutdown plan for the plant

##### 4.5.1 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. While the forced outages are minimized by having a robust maintenance plan, the planned outages are necessary for the smooth functioning of the unit. 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 Upgradation.
- 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: Maintenance schedule for FY 2016-17**

MONTH	Gas Turbine-1 / HRSG -1		Steam Turbine		Gas Turbine-2 / HRSG -2	
	DETAILS	OUTAGE HOURS	DETAILS	OUTAGE HOURS	DETAILS	OUTAGE HOURS
<b>Apr-16</b>	NA	NA	NA	NA	NA	NA
<b>May-16</b>	NA	NA	NA	NA	NA	NA
<b>Jun-16</b>	NA	NA	NA	NA	NA	NA
<b>Jul-16</b>	Under commissioning	0	---	0	Under Commissioning	----
<b>Aug-16</b>	Open Cycle COD	0	---	0	Open cycle COD	----
<b>Sep-16</b>	GT Stabilizing period	---	---	0	GT Stabilization Period	---
<b>Oct-16</b>	GT Stabilizing period	0	---	0	GT Stabilization Period	----
<b>Nov-16</b>	---	0	---	0	---	0
<b>Dec-16</b>	---	0	---	0		0
<b>Jan-17</b>	GT-1: Offline water wash & Auxiliaries maintenance , Intake filters replacement Shutdown 3 days	72	Both GTs will be off the Grid	72	GT-2: Offline water wash & Auxiliaries maintenance , Intake filter replacement Shutdown 3 days	72
<b>Feb-17</b>	--	0	---	0	--	0
<b>Mar-17</b>		0	---	0	---	0
<b>Yearly</b>		<b>72</b>		<b>72</b>		<b>72</b>

**Table 3: Maintenance schedule for FY 2017-18**

MONTH	Gas Turbine-1/ HRSG -1		Steam Turbine		Gas Turbine-2/ HRSG -2	
	DETAILS	OUTAGE HOURS	DETAILS	OUTAGE HOURS	DETAILS	OUTAGE HOURS
Apr-17	GT#1 Compressor offline wash	24	---	0	---	0
May-17	---	0	---	0	Compressor Offline water wash	24
Jun-17	----	0	---	0	---	0
Jul-17	GT-1: Boroscope Inspection & Offline water wash, intake air filter replacement & HRSG-1: Annual Inspection - Hydro test Shutdown: 4 days ---	96	2 days for Inspection & Minor maintenance	48	GT-2: Boroscope Inspection & Offline water wash, intake air filter replacement & HRSG-1: Annual Inspection - Hydro test Shutdown: 4 days	96
Aug-17	----	0	---	0	----	0
Sep-17	---	0	---	0	---	0
Oct-17	Offline water wash	24	---	0	---	0
Nov-17	---	0	---	0	Offline water wash	24
Dec-17		0	---	0	---	0
Jan-18	---	0	---	0	--	0
Feb-18	Offline water wash	24	---	0	---	0
Mar-18	---	0	---	0	GT-2: Compressor water wash	24
Yearly		168		48		168

**Table 4: Maintenance schedule for FY 2018-19**

MONTH	Gas Turbine-1/ HRSG -1		Steam Turbine		Gas Turbine-2/ HRSG -2	
	DETAILS	OUTAGE HOURS	DETAILS	OUTAGE HOURS	DETAILS	OUTAGE HOURS
Apr-18	--	0	---	0	---	0
May-18	Offline water wash	24	---	0	----	0
Jun-18		0	---	0	Offline water wash	24
Jul-18	---	0	---	0	---	0
Aug-18	----	0	---	0	---	0
Sep-18	GT-1: Offline water wash, intake air filter replacement & HRSG-1: Annual Inspection - Hydro test Shutdown: 4 days	96	Minor inspection & Maintenance	48	GT-1: Offline water wash, intake air filter replacement & HRSG-1: Annual Inspection - Hydro test Shutdown: 4 days	96
Oct-18	----	0	---	0	---	0
Nov-18	---	0	---	0	---	0
Dec-18	Offline water wash	24	---	0	Offline water wash	24
Jan-19	---	0	---	0	---	0
Feb-19	----	0	---	0	---	0
Mar-19	Offline water wash	24	---	0	Offline water wash	24
Yearly		168		48		168

#### 4.6 Trajectory of Performance Parameters

The Petitioner has submitted trajectory of performance parameters in the Table given below:

Parameters	Unit	2016-17	2017-18	2018-19
		Projected	Projected	Projected
Duration		From (23 <sup>rd</sup> Aug 2016 COD to 31 <sup>st</sup> Mar 2017	1 <sup>st</sup> Apr 2017 to 31 <sup>st</sup> Mar 2018	1 <sup>st</sup> Apr 2018 to 31 <sup>st</sup> Mar 2019
Number of days		220	365	365
Installed capacity	MW	150 upto Nov 18th / onwards 214	214	214
Aux. (Normative)		2.8%/2.50%	2.50%	2.50%
Availability (Normative)		85%	85.0%	85.0%
Gross Generation Normative	MU	567	1593.4	1593.4
Auxiliary Consumption	MU	14.18	39.8	39.8
Net Generation Normative	MU	553	1553.6	1553.6

The Commission has noted the submission made by the Petitioner for the maintenance schedule and corresponding shutdown hours of its plant. Since the Petitioner is the second only gas power based generating station in the State after commissioning of Gas based power plant of GAMA Infraprop Private Ltd. in the month of March 2016, therefore, there is no precedence available to evaluate the schedule furnished by the Petitioner. Accordingly, the Commission has accepted the same although the Commission would like to advise the generator to avoid planned shutdowns/maintenance during the winter months when the generation from hydro power reduces and the State witnesses peak demand. However, the Petitioner is directed to have proper communication well in advance with both 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 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 mutually finalise the said Maintenance plan so as to prevent any adverse impact on the supply position in the State on account of the same and submit the plan to the Commission within two months from the date of this Order.**

#### 5. Petitioner's Submissions, Commission's Analysis, Scrutiny and Conclusion on Capital cost and Tariff determination of the Project for Second Control Period ie. FY 2016-17 to FY 2018-19.

## 5.1 Applicability of Regulations

Regulation 1 (3) of Tariff Regulations 2015 specifies as follows:

*“These Regulations shall be applicable for determination of tariff in all cases covered under these Regulations from FY 2016-17, i.e. April 1, 2016 onwards up to FY 2018-19, i.e. March 31, 2019.*

*Provided, all new Projects commissioned after the notification of these Regulations shall be governed by the provisions of these Regulations.”*

In view of the above, for the purpose of determination of tariff all the provision of UERC Tariff Regulations, 2015 have been applied.

### 5.1.1 Saleable Energy

The name plate capacity of the Petitioner’s plant is 450 MW (at ISO condition) in two phases of 225 MW 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 the phases. However, at site conditions the power plant will have a gross capacity of 428 MW in two phases of 214 MW each. The PPA has been entered into with the Respondent for 214 MW for first phase of the project. Further, the Petitioner vide its Petition has submitted that in case of shortfall of domestic gas, GAIL or any third party shall supply the RLNG/Spot gases to achieve the NAPAF of 85%. The Petitioner by referring Regulation 103, i.e. “Savings” of UERC Tariff Regulations, 2015 and Regulation 104, i.e. “Power to Remove Difficulties” prayed to permit flexibility on the actual plant availability achieved during the true-up petition. The Petitioner also prayed that in case domestic gas is available in the period for which relief is sought, in terms of reduced NAPAF, the Commission may direct for upward revision in NAPAF. Further, in case the Commission grants relief to the Petitioner by reducing the NAPAF, the Petitioner will not claim any incentive on account of availability and schedule above such reduced NAPAF. The Petitioner, vide its tariff Forms, submitted that gross generation and Saleable Energy for FY 2016-17 and also for rest of the years till FY 2018-19 is based on NAPAF of 85%, however, in the Petition, the Petitioner has prayed to provide relaxation in the normative availability.

With regard to NAPAF, the Respondent has submitted that after having a long term PPA of 25 years, it is the responsibility of the Petitioner to arrange the gas for 25 years and if the Petitioner is unable to secure the long term arrangement of gas then there is no use of having the long term PPA. Moreover, if the Petitioner’s request for

recovery of AFC in case of non-availability of gas is accepted, there may be a possibility that the Petitioner may associate any other inefficiency with the non-availability of gas and thereby get the benefit of the same too. The Respondent also submitted that in case of non-availability of power in future due to non-availability of fuel linkage to the Petitioner, the recovery of total AFC should be considered through per unit basis of energy generated and not through the fixed charge component allowed in normal cases. It would be more appreciated in the context that in case of non-supply of energy, the Respondent would not only be affected by the shortage of power for which some costlier power needs to be arranged but also has to pay the fixed charges to the Petitioner. The PPA has been done by the purchaser to receive power and the generator who has a long term PPA with the purchaser will have to fulfill the requirement of purchaser and it is also pertinent to mention that in case of variation in schedule the power purchase planning of the Respondent may be adversely affected and Respondent has to arrange the power on a very short period where there are chances that the Respondent may get costly power. Therefore, in case there will be any deviation then there should rather be a penalty clause for generator as it has already been facilitated by defining its power as must-dispatch. The Respondent further submitted that the NAPAF has to be maintained at 85%. As the concept of gas based plant is to meet out the power deficit during peak hour due to the capability of quick start/stop. Therefore, it is required to specify the minimum & maximum technical load for which advance scheduling may be provided by UPCL to maintain yearly NAPAF of 85%. The Respondent submitted that the NAPAF is a crucial factor in recovery of cost, the same has to be not only certain but also such as to prompt efficiency of generator to generate power to the maximum possible capacity.

In reply, the Petitioner submitted that all these factors are as per the terms and conditions of the PPA and the Commission has approved the PPA as per the Regulations. The Petitioner confirms that they shall be governed by the NAPAF of 85% as specified in UERC Regulations, 2015.

Regulation 54 of the UERC Tariff Regulations, 2015 specify NAPAF of 85% for such generating stations. The Commission vide its Order dated 20.07.2016 on approval of 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."*

The Petitioner's Plant had been identified under stranded category by the GoI under the Scheme notification dated 27.03.2015 and had been allocated gas (fuel) to the extent of 50% overall capacity. The Petitioner's plant had commenced generation from its Combined Cycle plant w.e.f. 20.11.2016, hence, effectively Appx. 4 months of commercial generation has been supplied to the licensee during FY 2016-17. Further, since the Petitioner has availed gas supply under the Scheme till FY 2016-17, the Commission allows recovery of allowable AFC for FY 2016-17 based on the actual generation and energy supplied to the Respondent for the above mentioned period, i.e. at a single part tariff in accordance with the Scheme. Apparently, 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. However, subsequent to completion of the aforesaid Scheme the provisions for recovery of AFC shall be in accordance with UERC Tariff Regulations, 2015. However, for the purpose of computation of saleable energy NAPAF of 85% has been considered as specified in the Regulations.

In this regard, the submission of the Respondent that it will have to pay fixed charges to the Petitioner if gas is not available is unfounded. The PPA entered into by the Respondent with the Petitioner clearly stipulates that if the Respondent asks the Petitioner, to back down the generation, only in such cases it is liable to pay capacity charges and fuel charges (under the take or pay condition and also agreed amongst themselves by both the parties in the PPA) subject to the condition that the Petitioner achieves its NAPAF. In other cases it does not even have to pay the fixed charges. It would also be pertinent to mention here that UPCL had filed a Petition seeking relaxation in the conditions of the PPA signed by it with the three gas generators in the State in which one of the issue was NAPAF and payment of charges to the generators. During the hearing held on May 17, 2017 in the matter, the Commission had directed UPCL and the three generators to resolve all the issues raised by UPCL in its petition mutually within 1 month of the date of Order and submit the report on the same latest by 30.06.2017 and based on the report, the Commission would take a final view in the matter. However, till date the complete report has not been submitted by UPCL. The

Commission will take appropriate view in the matter. The submission of the Respondent regarding the capacity installed vis-à-vis the capacity for which PPA has been signed is dealt while approving the capital cost of the project.

The Commission has considered the contracted capacity to work out the saleable energy. In accordance with the Regulation 47(4)(i) of the Tariff Regulations, 2015 auxiliary consumption of 2.5% has been considered. Accordingly, applying the NAPAF of 85% and reducing the auxiliary power, the saleable energy works out as follows:

**Table 5: Saleable Energy Claimed and approved by the Commission**

Particulars	Unit	FY 2016-17		FY 2017-18 & FY 2018-19	
		Claimed	Approved	Claimed	Approved
Contracted Capacity	MW	214.00	214.00	214.00	214.00
Normative Availability	%	85.00%	85.00%	85.00%	85.00%
Aux. consumption	%	2.50%	2.50%	2.50%	2.50%
Saleable Energy	MU	776.6	777.41	1551.3	1553.61

Further, since the two Gas turbines got commissioned on August 23, 2016 and the Combined Cycle of the Plant has been put under commercial operation w.e.f. 20.11.2016, the saleable energy works out to 777.41 MU based on the actual PAF of 85%.

## 5.2 Station Heat Rate

The Petitioner for the purpose of computation of energy charge rate had considered the SHR as 1,919 kCal/kWh in its Petition. The Petitioner vide its subsequent reply dated 25.11.2016 submitted the Heat Balance Diagram from Toshiba who was appointed as the engineering consultant by the EPC Contractor for validation of the engineering design which determined the Gross Station Heat Rate for the phase-I of the project as 1917.08 kCal/kWh. Based on the recommendation from Toshiba and standard conversion factors the Petitioner determined the Gross Station Heat Rate of 1917.08 kCal/kWh and requested to consider the same in place of earlier claim of 1919 kCal/kWh and claimed the Guaranteed Design Heat Rate as 1825.79 kCal/kWh. Subsequently, the Petitioner vide its letter dated 19.06.2017 stated that the expected gross plant (station) heat rate of 1917 kCal/kWh was based on certain assumptions and over a period of time certain parameters affecting the plant heat rate have undergone drastic changes and these parameters are beyond the control of the Petitioner and may kindly be reviewed. The Petitioner also submitted the copy of the agreement for supply with the EPC Contractor stating that at ambient condition, i.e. relative humidity of 60%, ambient temperature of 15 degree Celcius,

two gas turbine and one steam turbine at 100%, guaranteed station heat rate for the 214 MW capacity would be 1675 kCal/kWh. The Petitioner also submitted, that in the tender dated 11<sup>th</sup> August, 2016 for PSDF support the MoP had allowed SHR of 2113 kCal/kWh. The Petitioner further submitted that the average SHR recorded from November, 2016 upto May, 2017 was 2072 kCal/kWh. The Respondent has submitted that the basis for claiming drastic change in SHR is baseless also the conditions related to the ambient temperature, the factory in the vicinity must have been considered at the initial stages by the EPC contractor and there is no drastic change as suggested by the Petitioner. In response, the Petitioner vide its letter dated 04.09.2017 stated that their submission for drastic change in SHR is purely on technical grounds. Further, the site conditions have drastically changed vis a vis the technical assumptions based on which the guaranteed parameters including SHR were determined at the inception.

The Commission has analysed the submissions made by the Petitioner. In its earlier submission the Petitioner produced certificate of EPC contractor wherein, SHR has been mentioned as 1919 kCal/kWh whereas, Heat Balance Diagram depicts plant gross heat rate 1917.08 kCal/kWh. In support of justification for claiming SHR of 1917.08 kCal/kWh the Petitioner submitted the Heat Balance Diagram from Toshiba who was appointed as the engineering consultant by the EPC Contractor for validation of the engineering design. The Commission is of the view that SHR is a crucial parameter for the thermal (gas based) power plant having a financial implication in arriving at cost of power purchase by the licensee for each financial year. Hence, SHR should be based on the guaranteed heat rate by the original manufacture of plant and machinery. However, in the Petitioner's case gas turbines are from GE and HRSG and steam turbines have come from a Chinese manufactures. Hence, no manufacturer can guarantee the station heat rate in such a situation. It would also be relevant to mention that the GoI in its Tender Document for PSDF Support to Stranded Gas Based Plants had considered a Normative SHR (kcal/kWh) and Allowable SHR (+5%) (kcal/kWh) for the Petitioner's plant as 2,012.70 and 2,113.34 respectively. Actual gross SHR submitted by the Petitioner for the period November, 2016 to May, 2017 varies in the range of 2003 kCal/kWh to 2298 kCal/kWh with an average of 2072 kCal/kWh which is almost close to that considered by GoI. However, the Commission is of the view that the same cannot be a true representation of SHR and needs to be validated atleast after six to eight months of continuous operations. **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.

### **5.3 Capital Cost**

Regulation 21 (3) of Tariff Regulations, 2015 specifies as follow:

*“(3) The Capital Cost of a new project, i.e. projects achieving Commercial Operation on or after notification of this Regulation shall include the following:*

- a) The expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
- b) Interest during construction and financing charges, on the actual amount of loan.*
- c) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 21(9) & 21(10) of these Regulations;*
- d) Capitalised Initial spares subject to the ceiling rates specified in Regulation 21(11) of these Regulations;*
- e) Expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 22 of these regulations;*
- f) Adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the CoD as specified under Regulation 45 of these regulations; and*
- g) Adjustment of any revenue earned by the generating company, transmission licensee and distribution licensee by using the assets before CoD.”*

Accordingly, as per Regulation 21(3) read with Regulation 1(3) of UERC Tariff Regulations, 2015, capital cost approved by the Commission shall be considered for the

purpose of determination of Tariff. The Petitioner had vide its Petition submitted that Regulation 23(1) of the Tariff Regulations, 2011 stipulates that in case of a generating company, “investments made prior to 01.04.2013 shall be accepted on the basis of investments approved by the Commission in the previous Orders” and the Petitioner is seeking tariff determination for the first time by the Commission, therefore, there is no previous order of the Commission approving Petitioner’s capital investments. In view thereof, the Petitioner, relying on Regulation 21(1) of the UERC Tariff Regulations, 2015, sought determination of its anticipated capital cost on the basis of audited financial statements and other relevant data. As discussed above, UERC Tariff Regulations, 2015 are applicable on the Plant, accordingly, capital cost of Phase-1 comprising of 2 GTG, 2 HRSG and 1 STG have been determined based on the provisions of UERC Tariff Regulations, 2015.

The Petitioner submitted that the capital cost of the Project was estimated at Rs. 845.00 Crore at the time of financial appraisal by IFCI Ltd. (Lead Lender) and its funding was structured with a term loan of Rs. 633.75 Crore and promoter’s equity of Rs. 211.25 Crore at a Debt to Equity Ratio of 75:25. The Petitioner had vide its Petition submitted that the expected COD of 2 no. of GTG and STG (hereinafter referred to as “Phase-1” of Plant) was 25.08.2016. The Petitioner submitted that expenditure upto 31.03.2016 as per books of accounts was Rs. 1331.76 Crore and expected capital cost from 31.03.2016 to expected COD of the Phase-1 of the Plant would be Rs. 120.43 Crore. Accordingly, the Petitioner had submitted capital cost of Rs. 1452.19 Crore for the Phase-1 of the project. The Petitioner also submitted the estimated bifurcation of the Project cost for Phase-1 as follows:

**Table 6: Estimated Capital Cost and unit wise allocation submitted by the Petitioner (Rs. in Crore)**

Particulars	Project Cost incurred upto 30 <sup>th</sup> March 2016 as per CA Certificate	Project Cost expected to be incurred upto 1 <sup>st</sup> CoD (25 <sup>th</sup> July 2016)	Assets Capitalized on 1 <sup>st</sup> CoD (25 <sup>th</sup> July 2016)	Capital Expenditure between 25 <sup>th</sup> July and 25 <sup>th</sup> Aug 2016	Total Assets Capitalized on 25 <sup>th</sup> Aug 2016
	Actual	Projected	Projected	Projected	Projected
a) Land	8.13	-	8.13	-	8.13
b) EPC	685.36	14.33	699.69	4.00	703.69
c) Non EPC	19.34	0.06	19.40	0.60	20.00
<b>Sub-Total</b>	<b>712.83</b>	<b>14.69</b>	<b>727.52</b>	<b>4.30</b>	<b>731.82</b>
d) Preliminary & Pre-Operative	63.93	2.03	65.96	2.00	67.96
e) Contingency	7.83	1.17	9.00	3.00	12.00
<b>Total Hard Costs</b>	<b>784.59</b>	<b>17.89</b>	<b>802.48</b>	<b>9.30</b>	<b>811.78</b>
f) Commissioning Expenses	-	10.00	10.00	25.00	35.00
g) Margin Money for WC	-	-	-	21.70	21.70
h) Interest During Construction (IDC)	547.17	34.54	581.71	2.00	583.71
<b>Total Soft Costs</b>	<b>547.17</b>	<b>44.54</b>	<b>591.71</b>	<b>48.70</b>	<b>640.41</b>
<b>Aggregate Project Cost</b>	<b>1331.76</b>	<b>62.43</b>	<b>1394.19</b>	<b>58.00</b>	<b>1,452.19</b>

Since the Petitioner had filed the Petition for determination of tariff prior to commissioning of its plant on the basis of estimated capital cost for Phase-1 of the project, accordingly, it was asked to submit detailed breakup of capital cost after commissioning of Phase-1 of the project. In response, the Petitioner furnished the breakup of the capital cost vide its submission dated 19.12.2016 subsequent to commissioning of Phase-1 of the project. Accordingly, for determination of the capital cost, the above referred submission has been considered.

The Respondent in its comments raised certain issues regarding the capital cost and the same has been discussed in following Paras.

**(i) Allocation of Capital Cost between Overall Plant Capacity and Contracted Capacity and allowability of IDC.**

The Respondent requested the Commission to consider the proportionate value of the cost of land and other assets based on the installed capacity and contracted capacity. The Respondent also submitted that the remaining half or the uncontracted capacity of the plant should also be loaded equivalently and at par with the contracted capacity. The Respondent also submitted that IDC beyond construction period, i.e. 31.12.2011 should not be allowed and infact the IDC computed upto the date of construction should be distributed proportionately between the contracted and non contracted capacity of the plant.

In reply, the Petitioner submitted that the Statutory Auditors have duly certified

the capital costs that are directly related or incurred for Phase-1 of the project and the capital expenditure directly and only attributable to Phase-1 have been considered for arriving at the Capital Cost of the Phase-1 of the project. The Petitioner further submitted that IDC has been computed based on the disbursements pertaining to Phase-1 of the project. The Petitioner also submitted that as per the DPR and the loan documents the entire land and other assets were purchased for Phase-1 (225MW) only. The Commission has gone through the submission of the Petitioner as well as the Respondent. The hard cost alongwith the soft cost of the project and its bifurcation have been dealt in the subsequent Paras of this Order.

The Respondent also submitted that if any maintenance is required after 31<sup>st</sup> December, 2011 it should be on the part of Petitioner and cannot be more than that provided for in the Regulation. The Commission is of the view that all the expenses related to construction till commissioning of the plant has been analysed and being allowed in accordance with the regulations and accounting principles and also relevant judicial precedents.

**(ii) Life of the Plant and Guarantee extended by equipment supplier**

The Respondent submitted that it has to be demonstrated whether the guarantee extends from the date of supply of the equipment or from the date of commissioning because if the guarantee has been given from the date of supply then the total guarantee of the equipment's would be reduced by the time of delay, hence, the total life of the equipment's would not be 25 years and it may be possible that after 22 years of plant life the Petitioner may claim R&M or would provide less generation as the case may be. The Petitioner submitted that the OEMs normally provides guarantee for the equipment supplied from the date of the supply to EPC Contractor and as all the equipment were provided in 2010/2011, the OEMs guarantee has already lapsed. The life of the project and more specifically the gas turbine and steam turbine is mainly dependent on the number of hours being operated/fired. Further, the Petitioner stated that they had taken comprehensive insurance policy to cover any contingency at a later stage. The Petitioner also submitted that the plant has been preserved as per the guidelines of the OEMs during the period of unavailability of gas from the GoI.

The Commission appreciates the submission of the Petitioner that the plant has been preserved as per guidelines of the OEMs and there is no loss of life as stated by the

Petitioner. Further, the life of the project has been considered as 25 years under the Regulations and norms for operations have also been specified therein and hence, it would be Petitioner's (generator's) responsibility to maintain and operate the plant in an efficient manner failing which it will have to bear the losses/inefficiencies. Relying on the Petitioner's submission that it has preserved the plant as per the guidelines of the OEMs, the Commission has decided to consider the normative life of plant as 25 years from the actual date of commissioning. Further, in accordance with the PPA, the Petitioner is bound to supply contracted power to the Respondent for 25 years from the date of commissioning of the plant. The Respondent, being a beneficiary of the plant, may agitate the issue if any claim(s) of expenditures for extension of life are submitted by the Petitioner at a later stage. The Commission would then take a view in the matter in accordance with the applicable Regulations. Other issues related to capital cost such as IDC claimed by the Petitioner and the Respondent's comments have been discussed in subsequent Paras.

It is hereby also clarified that generally for determination of capital cost in respect of any power project, the Commission examines the same by broadly segregating overall capital cost into Hard Cost and Soft Cost. In line with the methodology followed by the Commission to analyse the capital cost of the Petitioner's Plant the same has also been broadly classified into two components (i) Hard Cost comprising of expenditure incurred on procurement/supply, erection, testing, commissioning etc. of the entire project equipment/components including consultancy services and, (ii) Soft Cost which includes interest during construction (IDC) and pre-operative expenses. Based on the submissions made by the Petitioner and comments received from the Respondent on the same, analysis of the capital cost of the project has been done which has been discussed in following Paras.

### **5.3.1 Hard Cost**

Hard cost of the project depends upon the prudence in procurement/supply, erection, testing, commissioning of the project equipments/components by the project developer having followed fair process of selection of supplier/service providers. The Petitioner also submitted that the project has been implemented through an EPC contractor namely M/s Sravanthi Infratech Pvt. Ltd which was selected through International Competitive Bidding.

The Petitioner vide its letter dated 25.11.2016 submitted that the Phase-1 of the project had achieved COD on 20.11.2016. The Petitioner submitted the Auditor's certificate dated 19.12.2016 based on the total capital cost incurred for Phase-1 of the project till 20.11.2016 and also submitted the tariff forms vide submission dated 19.12.2016 based on the capital cost of Rs. 1451.46 Crore inclusive of soft cost of Rs. 696.37 Crore for Phase-1 of the project. The Respondent, i.e. UPCL submitted that the Petitioner has stated capital cost of the generating station as per DPR as Rs. 834.37 Crore for 225 MW. In reply, the Petitioner submitted that the total capital cost of the project which has been incurred by the Petitioner has been submitted to the Commission along with the justification and all the relevant supporting documents are based on the audited financials of the Petitioner as on 20.11.2016. The Respondent submitted that the total capital cost of the project should be apportioned based on the total generation capacity of the plant at site condition, i.e. 428 MW and not on name plate capacity of 450 MW, since the recovery of the cost will be limited to the generation of the plant at site condition.

The Respondent submitted that massive land area costing Rs. 8.0 Crore has been purchased without justifying as to how much land is appropriate for the construction of the plant. Further, huge cost is shown to have been incurred under the head 'Roads' which is to the tune of Rs. 16.74 Crore approximately and cost under the head 'Buildings' is shown approximately Rs. 72.00 Crore. Moreover, the cost of Transmission Line is shown as Rs. 6.02 Crore which is in contradiction to some other documents duly submitted by generator which reflected the cost of Transmission line as Rs. 3.00 Crore. The Respondent further submitted that the Petitioner has not yet constructed the transmission line as a whole since only one out of two circuits is completed and the one which is completed cannot be considered to be agreed upon by the Respondent as per the PPA. In response the Petitioner submitted that since the Respondent had not pointed out any reference document for the submissions made by it, hence, they will not be able to comment on this point of the Respondent. Moreover, all the documents substantiating the cost have already been submitted for due analysis of the Commission. As regards the completion of Transmission line, the Petitioner submitted that the Respondent's contention in this regard is unfounded as the 220 kV Kashipur-Mahuakhedaganj Transmission Line allocated for evacuation of power from Block 1 or Phase 1 of the Power Station had been duly completed based on which the

power is evacuated and supplied to UPCL. Further, since the PPA explicitly provides for power to be supplied from Block 1 or Phase 1 of the Power Station, any comparison to the physical status of transmission line meant for Phase 2 is irrelevant and out of context since the Petitioner has also not claimed any costs for the same. The Commission views in the matter have been discussed in subsequent paras.

The Commission analysed the submissions made by the Petitioner and observed that EPC contract for the project was awarded to M/s Sravanthi Infratech Pvt. Ltd. In this regard the Commission vide its letter dated 17.05.2017 asked the Petitioner to submit the copies of the contracts and invoices alongwith purchase orders raised by the sub-contractors to Sravanthi Infratech Pvt. Ltd. in support of the project cost claimed by it. In response to the same the Petitioner vide its letter dated 09.06.2017 submitted before the Commission that SEPL had issued tender for EPC contract under International Competitive Bidding (ICB) guidelines wherein Sravanthi Infratech Pvt. Ltd. (SIPL) qualified as the lowest bidder for the construction of Phase-1 of the project. It was further submitted that SIPL was executing 2 other gas based projects of similar nature and considering the commonality of sub-contractors deployed for execution of works, separate invoices for each of the aforesaid projects was not available. The Petitioner also submitted that invoices relating to sub-contractors were not supplied by SIPL to SEPL (Petitioner). The Petitioner however submitted the copies of ICB documents, SIPL invoices raised on the SEPL against the EPC contract alongwith other invoices raised on SEPL in support of the project cost claimed by the Petitioner for Phase-1.

Further, it has been observed that the actual cost submitted by the Petitioner exceeded the Contract value in few instances. In this regard, the Petitioner submitted that additional expenditure were made to meet the requirement of the project. The Petitioner also submitted that the project was stranded for more than three years, hence, when commissioning activity was started, a lot of items needed to be replaced/repared and servicing was required to be done. Therefore, additional amendment in Purchase Orders/Work Orders was done and also some extra cost was incurred to restart the plant. The Commission appreciates the fact that gas based power plant remained stranded, and such plants could possibly be commissioned through intervention of MoP, GoI by launching PSDF Scheme vide notification dated 27.03.2015. Hence, the

Commission finds it prudent to allow such price escalation.

Based on the invoices / details submitted by the Petitioner, the hard cost of Civil Work and E&M (including the lab equipment & transmission line expenses amounting to Rs. 3.23 Crore) of the plant works out to Rs. 76.11 Crore & Rs. 645.20 Crore respectively totaling to Rs. 721.32 Crore for Phase-1 of the project. The Commission observed that invoices to the tune of Rs. 0.41 Crore were not submitted by the Petitioner. The Respondent in this regard submitted that the expenditures shown in the tariff petition but not supported by the documentary evidences like invoices etc. should not be allowed. The Petitioner in this regard submitted the ledger detail of the said expenses and requested the Commission that based on the materiality of the amounts and the vastness of the documents, they had not produced the documents below Rs. 75,000. The Commission is of the view that as the Petitioner had submitted ledger in support of the said minor expenses and extracting documents related to such expenses from FY 2010-11 to FY 2016-17 would be a time consuming task and will also not be feasible, hence, the same are allowed for tariff calculation.

The Commission based on the prudent analysis of the claims made by the Petitioner observed that in the invoices for Civil Works submitted by the Petitioner, few of the expenses are of such nature that are required to be incurred only once for the entire project of 450 MW and it appears that the same have been claimed by the Petitioner solely for Phase-1 of the project (225 MW). The detailed of such expenses are as given in the table below.

S. No.	Particulars	Amount (Rs. in Crore)
1	Road Works	3.61
2	Finishing Works	2.88
3	Doors & Windows	1.34
4	Construction of Stores & Workshop	6.00
5	Construction of Canteen Building	3.00
6	Construction of Plant Boundary Wall	2.00
7	Construction of Permanent Roads	4.00
<b>Total</b>		<b>22.83</b>

In this regard, the Commission is of the view that the above expenses be allowed only to the extent of 50% for Phase-1 of the project, thus, amounting to Rs. 11.41 Crore. Based on the above discussion, the hard cost with respect to Civil works comes out to Rs. 64.70 Crore (76.11 - 11.41) and E&M expenses (including the lab equipment &

transmission line related works) works out to Rs. 645.20 Crore for Phase-1 of the project as on 20.11.2016.

Further, the Petitioner has claimed the hard cost of Rs. 1.90 Crore for balance minor assets namely furniture and fixtures, office equipment, computer and vehicles. The Commission is of the view that such assets are necessary for operating a plant and are of minor nature. Hence, these have been allowed by the Commission.

The Petitioner also claimed the land cost amounting to Rs. 8.15 Crore for Phase-1 of the project. Based on the documents submitted by the Petitioner in support of the land cost, it was observed by the Commission that total of 36.92 acres of land was purchased by the Petitioner for the project and the entire cost has been claimed in the Phase-1 itself. The trial balances submitted by the Petitioner for Phase-2 of the project were examined by the Commission and it was observed that no amount is appearing under the land cost in the accounts related to Phase-2. Hence, the Commission is of the view that the Petitioner should have apportioned the land cost of Rs. 8.15 Crore equally between Phase-1 & Phase-2 of the project, and thus allows only 50% of the land cost amounting to Rs. 4.08 Crore for Phase-1.

Based on the above, the Commission has worked out the total hard cost for Phase-1 of the project amounting to Rs. 715.88 Crore. The Commission has further compared the hard cost so arrived with the DPR cost of Phase-1 of the project.

The Respondent submitted that the financial statement of SEPL clearly mentions that SEPL and EPC contractor (SIPL) are related parties. Further, from the abstract of ICB documents submitted by the Petitioner it appears that there are various opportunities for the Petitioner to eliminate the non-required bidders thereby making international competitive bidding as totally ineffective. In response, the Petitioner submitted that the selection of the EPC contractor has been done in accordance with the ICB guidelines, which is standard international practice with a formal process based on which the projects are awarded. The Petitioner also submitted that no external agency, bankers/ financial institution or the Government of India has ever raised any doubts on the sanctity of the process followed by SEPL to grant the project to the EPC Contractor.

The Commission analysed the submission made by both the Respondent and the Petitioner. The Commission observed that expenditure under Civil & E&M works has been majorly done through EPC Contractor namely SIPL. Further, the Respondent

made a passing statement that the Petitioner and the EPC contractor were related parties without bringing anything on record as to how the contracts were influenced by the Petitioner.

Thus, based on the above discussions, the Commission has decided to allow the expenditure under the head Civil works and E&M restricting the same to the cost as per DPR. Hence, the Commission approves the hard cost of Rs. 709.41 for Phase-1 of the project, as detailed in the table below:

**Table 7: Capital Cost (Hard Cost) approved by the Commission (Rs. in Crore)**

Particulars	As per DPR (Phase-1)	Claimed for Phase-1 (214 MW)	Admissible Capital cost for Phase-1 (214 MW)
Freehold Land	10.00	8.15	4.08
Civil Works	60.10	76.92	60.10
Plant & Machinery	643.33	644.67	643.33
Miscellaneous Fixed Assets	0.00	1.90	1.90
<b>Total</b>	<b>713.43</b>	<b>731.64</b>	<b>709.41</b>

The Respondent also submitted that the Petitioner in its DPR and also in the Petition had stated the name plate rating/gross capacity of the plant as 450 MW whereas the capacity has been restricted to 428 MW due to site condition against 450 MW for the purpose of determination of tariff and as stated by the Respondent the said assumed capacity is totally hypothetical and is not permissible as per Regulation.

In this regard, it would be relevant to mention that the performance of Gas Turbines varies with locations and ambient conditions. The same Gas Turbine performs differently in the high altitudes and performs differently in winter and in summer. This has nothing to do with the make/type of Gas Turbine itself, but is due to the ambient atmospheric conditions. The gas turbine output and efficiency is a strong function of the ambient air temperature. Depending on the gas turbine type, power output is reduced by a percentage between 5 to 10 percent of the ISO-rated power output for every 10 K increase in ambient air temperature. In general the ambient conditions under which a gas turbine operates have a noticeable effect on both the power output and efficiency. In other words the efficiency and the output decreases as the temperature increases and the same increases with the decrease in temperature. The efficiency is greatly affected by the ambient temperature of the air entering the compressor. There is variation in power and efficiency for a gas turbine as a function of ambient temperature compared to the reference international organization for standards (ISO) condition at sea level and 32.780C. Hence, restriction in gross output capacity of 428 MW is not due to the fault of

the machine, but because of the different ambient conditions.

### **5.3.2 Soft Cost of the Plant**

#### **(i) Interest During Construction (IDC) and Bank Charges**

The Petitioner vide auditor's certificate dated 19.12.2016 submitted that the total financing cost (including bank charges) upto commissioning of Phase-1 of the project is Rs. 604.59 Crore which is almost 42% of the entire project cost of the plant, i.e. Rs. 1428.01 Crore.

Regarding the claim of IDC, the Respondent submitted that the Petitioner had admitted that there had been time over run and cost over run in the project, hence, IDC for delayed period should not be allowed. In reply the Petitioner submitted that it had completed the project on time and had stated that the reasons for cost and time overrun were on account of uncontrollable factors. The Petitioner, further, submitted that only upon receipt of gas the project could be commissioned. The Petitioner also submitted that all the relevant documents regarding the project status and report by Central Electricity Authority (CEA) have been submitted to the Commission which proves that there was no delay on the part of the generator in achieving COD of the project but the delay in achieving COD was due to the uncontrollable factor.

The Commission has gone through the submission made by the Petitioner in respect of readiness of the plant for operation in the year 2011. The Petitioner had submitted various communication with the MoP, CEA & others in the year 2011-12 in respect of the same. The Commission while going through the submissions observed that the Petitioner since June 2011 was continuously communicating with the Govt. authorities for supply of Gas for testing and commissioning & continuous operations for Phase-1 of its project. It was also observed from the letter dated 07.06.2011 issued by MoPNG to MoP, that they had taken into consideration that the Petitioner has requested for supply of gas for testing & commissioning and the Petitioner's plant was ready for conduction of such testing & commissioning activities.

The Respondent has submitted that out of 27000 MW Stranded Gas Plants, plants having capacity of around 9000 MW procured the domestic gas during this period while the Petitioner did not make any effort to run the plant or procure the

fuel, therefore, it amounts to incompetency of the Petitioner who failed to secure the domestic gas and commission the plant within time, and therefore, the Respondent has stated that claiming IDC and pre-commissioning expenses by the Petitioner was not justifiable as it would amount to compensating the Petitioner for its own wrong. The Respondent further submitted that the Petitioner did not obtain any open access neither it undertook any arrangement for selling power to any consumer of the Respondent within the State, which clearly shows that the generator all this while was never ready to run the plant and, hence, the Respondent submitted that it would be totally inequitable to burden the consumer of the State with the extra cost by allowing the recovery to the Petitioner (generator). The Respondent further submitted that the State of Uttarakhand was one of the first state to come forward and make long term arrangement to purchase power from the stranded gas plant, thereby, cooperating with the policy of the Central Government to help the stranded gas plant from becoming a non performing asset, however, the Respondent submitted that the same cannot go to the disadvantage of the Respondent rather the Petitioner in all fairness should have not claimed any IDC in the first place. In reply, the Petitioner submitted that the domestic gas in India is allocated by the Ministry of Petroleum and Natural Gas based on the priority of the sectors and hence, the procurement of domestic gas was beyond the control of the Petitioner. The Petitioner further submitted that it had vide its communications demonstrated its readiness to off take gas from the GoI and the same was also certified by the Lenders Engineer and also acknowledged by the Central Electricity Authority. The Petitioner also referred to the letter dated 07.10.2011 from CEA regarding Approval for Energisation of 2x75MW Gas Based Generation Unit 1&2, 2x95 MVA 11.5/220 kV Generator Transformer, 2x12.5 MVA 11.5/6.9 kV UAT, 220 kV Switchyard consisting Nos. of 220 kV Bays and associated electrical equipment (Part of 2x225 MW CCPP) of Sravanthi Energy Private Limited. As per the Government of India Office Memorandum No. 4/2/2015-Th-I dated 27<sup>th</sup> March, 2015 the gas based projects (total capacity 24,149 MW) were categorized in two parts - (1) plants which are stranded and were not receiving any gas (with total capacity of 14,305 MW) and (2) plants receiving domestic gas for partial operation/low PLF (with total capacity of 9,844 MW). It is clear that the projects which were commissioned and

operational were already receiving domestic gas as also referred by the Respondent. The Petitioner further stated that the domestic gas was allocated by the Government of India as per the policy and there has been no incompetency or laxity on the part of the Petitioner for procuring the same.

The Commission noted the submission made by the Petitioner and is of the view that the IDC is an integral part of the project cost and has to be allowed in accordance with the Regulations and also based on the relevant judicial precedents. However, detailed analysis of the time overrun has to be done in accordance with the principles laid down by the Hon'ble APTEL in this regard in its Orders and the same is discussed in the following Paras.

The Respondent submitted that UERC Tariff Regulations, 2015 provides that IDC shall be computed from the date of infusion of the debt fund and after taking into account the prudent phasing of funds upto Scheduled Commercial Operation Date (SCOD). The Respondent submitted that there may be a situation where the generator during the period of construction ties up the generated power by entering into a PPA. In such cases, as submitted by the Respondent, SCOD is agreed therein if the generator is not able to commission the plant within SCOD, the other party has an opportunity to find out the reasons for delay after proper scrutiny of the available documents to establish the cause for the delay and, hence, would be in a position to show that the same is attributable solely to the generator. However, in cases like the present one the Respondent submitted that when the plant whose construction has been completed long time back enters into a PPA after more than 3 years and then commissions the plant, it is not possible for the other party to counter or find the falsity of the statement made by the Petitioner. Therefore, in such cases, the Respondent submitted that the IDC cannot be considered for a period beyond the time when the construction was completed which in the present case is 31<sup>st</sup> December, 2011. The Respondent further submitted that as during this period the Respondent had no control over the Petitioner or any interest in the fact whether the Petitioner was getting delayed in commissioning or was for any other reason not being able to commission within time and the effect of such delay should be borne by the Petitioner himself otherwise it would imply that the Petitioner in any case will get the full recovery

of all the cost incurred whereas the same without any reason would be borne by the consumers of the State. Hence, the Respondent stated that in the present case, the Petitioner was not entitled to any IDC beyond the SCOD date. In reply, the Petitioner submitted that the delay in commissioning was for the factors beyond the control of the Petitioner as the lack of gas supply from the GoI was the primary reason for the delay. This clearly implies that the plant was stranded because of lack of fuel which was beyond the control of the generator. The Commission is of the view that the Respondent's statement that entering into a PPA prior to the commissioning of the plant the Respondent would be in a better position to find out the reasons and establish the cause of delay in commissioning of the plant is misplaced. The Respondent even at the time of signing of the PPA was aware that the project was a stranded gas based power project and its commissioning had got delayed due to unavailability of fuel (gas), still the Respondent went ahead and entered into PPA with the Petitioner (generator) and submitted the same for approval of the Commission. Furthermore, Regulations clearly specify that the actual capital cost would be examined for prudence and IDC forms an integral part of the capital cost. Infact, the Respondent itself had earlier filed a Petition in the year 2015 seeking approval of the Commission of the Draft Power Purchase Agreement it then proposed to enter with the Petitioner for a period of 2 years. The Respondent even then was aware that the Petitioner's project is complete but not commissioned (i.e. stranded). During those proceedings, it had categorically submitted that the tariff is to be determined by the Commission under section 62 of the Act. However, the Commission vide its Order dated July 30, 2015 rejected the PPA Petition on the ground that the basic premise of the PPA, i.e. conditions on rate of power purchase is not only ambiguous besides also that the basis of arriving at the same has not been established. The Respondent again filed a Petition dated 14.06.2016 seeking approval of draft PPA to be executed with M/s SEPL for life of the project at the tariffs determined by the Commission. Tariff determination under Section 62 is carried out by the Commission in accordance with the principles and norms specified in the Regulations. UPCL now cannot take a plea that the Petitioner is not entitled to any IDC beyond the SCOD date. Infact, Regulation 21(9) of the MYT Tariff Regulations, 2015 specify as under:

***“(9) Interest During Construction (IDC):***

a) Interest during construction shall be computed corresponding to the loan from the date of infusion of debt fund, and after taking into account the prudent phasing of funds upto SCOD.

b) In case of additional costs on account of IDC due to delay in achieving the SCOD, the generating company or the transmission licensee or the distribution licensee or SLDC as the case may be, shall be required to furnish detailed justifications with supporting documents for such delay including prudent phasing of funds:

***Provided that if the delay is not attributable to the generating company or the transmission licensee or the distribution licensee or SLDC as the case may be, and is due to uncontrollable factors as specified in Regulation 12(5) of these Regulations, IDC may be allowed after due prudence check and taking into account prudent phasing of funds."***

***(Emphasis added)***

In fact, Regulation 21(8) of the MYT Tariff Regulations specifies as under:

*"(8) Where power purchase agreement or transmission or wheeling agreement provides for a ceiling of capital cost, the capital expenditure admitted by the Commission shall take into consideration such ceiling for determination of tariff."*

The PPA entered into with the Petitioner by the Respondent also did not provide any ceiling of the capital cost. Further, being a beneficiary of the plant, the Respondent always has a right to analyse relevant details/documents related to schedule plan of commissioning, actual date of commissioning and reason for delay and also corresponding time and cost overrun. The Respondent had already entered into a PPA with the Petitioner, copy of the Petition had been provided for due analysis and comments on the same. Accordingly, now making a blatant submission of not allowing the Petitioner any IDC beyond the SCOD without examining the justifications furnished by the Petitioner would be against the Regulations and also relevant judicial precedents in the regard. Hence, the submission of the Respondent is not tenable.

Further, the Commission had sought information/reasons for delay in the commissioning of the Plant. The Commission observed that during the period when the project remained stranded the Gas prices were inordinately higher and it was not financially viable to procure the Gas fuel at such higher prices. Further, the Commission has gone through the CEA progress reports submitted by the

Petitioner and the same has been dealt in the subsequent Paras.

The Respondent has submitted that it had entered into the PPA with the Petitioner considering them as a stranded gas based plant and upon the understanding that IDC before the execution of the PPA will not be borne by the Respondent and in case the material understanding between the parties is changed the Respondent would be well within its right to reconsider the PPA. In response, the Petitioner submitted that from the clauses of the PPA it is abundantly clear that the intention of buying and selling power was not just based on the status of the plant being stranded but also to fulfill the long term demand for power within the state. Further, the Petitioner has stated that the PPA executed between both the Parties was originally submitted by the Respondent itself and the same was duly reviewed and approved by the Commission. As per the PPA, no such understanding has been recorded wherein IDC before the execution of the PPA was to be borne by the Petitioner. The Commission is of the view that Respondent had filed the PPA petition before the Commission for approval and no where during that proceeding it either brought to the notice of the Petitioner or the Commission that it is not willing to bear the IDC cost prior to the date of entering the PPA. Besides on what ground Respondent (UPCL) had this understanding that excess IDC would be borne by the Petitioner and where the same has been recorded has not been submitted by UPCL. As mentioned by the Petitioner, the PPA entered into between both the parties does not have any such condition or any ceiling on capital cost as referred above. Besides Respondent's submissions regarding reconsideration of a PPA based on the tariffs determined is also arbitrary and untenable as per law and reflects towards the ulterior motives.

The Respondent also submitted that Petitioner has failed to show that the plant was ready for commissioning in the year 2011 as the plant cannot be ready unless all the units are ready for testing and commissioning. The Petitioner has only emphasized upon the phase-1 of the plant constituting GT-1, GT-2 and STG which itself shows the falsity of the Petitioner. Further, the PPA was with respect to a quantum of power to be supplied by the Petitioner and it was not unit specific, and the Petitioner is intentionally trying to misrepresent the facts. Further, hypothetically if it is considered that the PPA would be for full capacity of plant,

i.e. for 428 MW then the readiness of the same would be considered only after the installation and completion in all respect of the whole plant and accordingly the IDC would be treated differently. In response, the Petitioner submitted that as per Clause 1.1.63 of the PPA the "Power Station means Gas Based Combined Cycle Power Project in Kashipur, in the State of Uttarakhand having two (2) blocks of 225 MW each at ISO conditions. Further Clause 1.1.72 of the PPA defines "Scheduled Delivery Date shall mean the scheduled date on which the Seller commences firm supply of 71.5MW of power from its 1<sup>st</sup> Gas Turbine of Block 1 by 25<sup>th</sup> July 2016, followed by additional 71.5MW of power from 2<sup>nd</sup> Gas Turbine of Block 1 by 5<sup>th</sup> August 2016 and subsequently further additional 71 MW of power from Steam Turbine of Block 1, i.e. 214 MW of contracted capacity by 25<sup>th</sup> August, 2016 in accordance with the Agreement". The Petitioner further submitted that intention of the Petitioner was to provide power from Phase I which was ready for testing and commissioning in 2011 and the same was always clearly stated without any ambiguity in the documentation or the petition. The Commission has gone through the submissions made by both the Respondent and the Petitioner, and is of the view that it would not be appropriate to mix the Commissioning of Phase-1 of the project with the second Phase as contended by the Respondent. As per the PPA, the Respondent was fully aware that it would be getting power from Phase-I of the Petitioner's project and hence, raising the issue of Phase-II not being commissioned is irrelevant.

The Respondent submitted that even if, for the sake of evaluating the calculation of the Petitioner, the capital cost is considered as Rs. 834.37 Crore, as per MYT Regulation 2015 the loan part comes to Rs.  $834.34 * 0.7 = 584.05$  Crore, therefore, the IDC claim up to March 2015 @ 11.2% p.a. comes out to be Rs. 192.73 Crore for 3 years as the PSDF scheme was applicable from 1<sup>st</sup> April 2015 onwards. The initial expected commissioning date of the project was 31<sup>st</sup> December 2011 but the Petitioner in its Petition has shown the 1<sup>st</sup> COD on 25<sup>th</sup> July, 2016 for the reason non-availability of gas and has claimed an IDC of Rs. 597.71 Crore up to 1<sup>st</sup> COD with additional pre-commissioning expenses of Rs. 44.54 Crore. The Respondent submitted that if the reason for delay was non-availability of gas/costly gas as claimed by the Petitioner then it is pertinent to mention that PSDF support was provided since 1<sup>st</sup> April 2015 and, therefore, the reason of non-availability-of gas/

costly gas cannot be claimed from 1<sup>st</sup> April 2015 onwards. The Respondent submitted that the main reason for delay after 1<sup>st</sup> April 2015 was no PPA/sale of power which cannot be treated as Force Majeure but it is simply failure of the Petitioner to secure PPA for sale of power of lack of efforts on the part of the Petitioner to sell its power on IEX/PXIL or through short term tender. In reply, the Petitioner submitted that the natural gas was made available to the stranded projects only from 1<sup>st</sup> June 2015 and not from 1<sup>st</sup> April 2015 as contended by the Respondent. The Petitioner also submitted that GoI scheme dated 27<sup>th</sup> March 2015 for utilization of gas based power generation capacity makes it mandatory for the gas based plants to provide power only to the State Discom and not to sell the same in the Power Exchange, i.e. IEX/PXIL. The Petitioner stated that e-Bid Gas under the Scheme could have only been utilized to operate the plant once the Power Purchase Agreement is executed with the State Discom and SEPL in order to become eligible for the off take of gas executed the PPA on 28<sup>th</sup> July, 2016. The Petitioner further submitted that they requested the GoU for a short term PPA, which was rejected by the Commission on the ground that tariff on short term PPA could be determined only on the basis of competitive bidding as per the regulations. In this regard the Petitioner stated that even though the gas was made available under the PSDF scheme and they could have drawn gas under the scheme from 2015, but their eligibility to participate in the scheme was firmed up in 2016 after gaining certainty on the PPA that got executed on 28<sup>th</sup> July 2016, hence the full IDC and pre-operative expenditure should be allowed till the date of COD.

The Commission has gone through the submissions of the Petitioner and the Respondent. Ministry of Power, GoI, declared the Petitioner as a successful bidder vide its letter dated 21.03.2016. Subsequently, the Petitioner entered into PSDF agreement on 30.04.2016 and then entered into an agreement with M/s GAIL for supply of gas on 05.05.2016. Thereafter, a draft PPA was submitted for approval to the Commission vide application dated 14.06.2016 and the same was approved vide the Commission's Order dated 20.07.2016 subject to incorporation of certain modification in the PPA.

The Petitioner had submitted the letter dated 16.05.2011 addressed to

MoPNG by MoP wherein based on the CEA progress report an urgent request for allocation of gas to the six under construction projects was made for testing, commissioning and commercial operation of the projects failing which those projects would become stranded assets. The Commission has gone through the reports and observed that CEA had made the following observations:

- “1) all civil works for open cycle completed, both the gas turbines & generator placed on foundations,*
- 2) operation container module for local operator in open cycle placed in position,*
- 3) bypass damper material started arriving at site,*
- 4) generator transformer, Unit Aux. transformer and Station transformer placed on foundation,*
- 5) Gas conditioning skid erection is nearing completion,*
- 6) HRSG erection completion is expected in 06/11,*
- 7) ACC commissioning is expected in 06/11,*
- 8) Gas pipeline connectivity completion is expected 04/11,*
- 9) Readiness of ATS through nearby Grid sub-station is scheduled by 15.05.11”*

CEA had also mentioned that the combined cycle commissioning was expected in 08/2011, hence, as per CEA's observation the Petitioner was in a position to commission the Combined Cycle by the end of 2011. Besides above, CEA vide its letter dated January 06, 2012 addressed to MoP again reiterated the fact that Phase-I (225 MW) of the Petitioner was ready for commissioning and awaiting gas allocation/supply for start of commissioning activities.

The Commission has considered all the replies/comments of the Petitioner and the Respondent with respect to the soft cost. In respect of higher financing charges including IDC, the Petitioner in its Petition has submitted that the Project was initially expected to achieve date of commercial operation by 31.12.2011. However, the country suffered deficit in supply of domestic natural gas and prices in the spot market for imported RLNG sky rocketed whereby making the cost of energy unviable for discoms to procure. The existing gas based power plants as well as those power plants which were under construction got stranded. Till this time, the Petitioner had drawn major portion of debt and incurred capital expenditure on the Project. After the commitment from Government of India in respect of supply of gas under the PSDF Scheme, the commissioning and balance

activities were taken up in the Project. The Petitioner further submitted that the CEA's report states that the project was likely to be commissioned in the 11<sup>th</sup> plan.

As per DPR, the project was to be commissioned within 20 months from the Zero Date. Further, the Petitioner vide its letter dated 25.11.2016 submitted the PERT chart wherein the Zero date was 30th April, 2010, i.e. the award of contract for EPC to M/s Sravanthi Infratech Pvt. Ltd. Accordingly, the Schedule date of commissioning works out to 31.12.2011. The Petitioner vide its various submission claimed that the project was completed by 31.12.2011 and only because of non-availability of gas it was not able to run the plant. The Petitioner also referred to CEA report to emphasise on its point. The Commission observed that as per the Report of the working group on Power for twelfth plan (2012-17), Phase-1 of the Petitioner project was mentioned as likely to be commissioned during the 11<sup>th</sup> Plan if gas was made available to it. Further as per the letter dated 07.10.2011, CEA had granted Approval for Energisation of 2x75 MW Gas Turbines Unit 1&2, 2 x 95 MVA 11.5/220 kV Generator Transformer, 2x12.5MVA 11.5/6.9kV UAT, 220kV Switchyard consisting 220kV Bays and associated electrical equipment (Part of 2x225MW CCPP) of the Petitioner's plant. MoP vide its letter dated 16.05.2011 to MoPNG taking reference of the CEA report on the Gas based projects, mentioned that if these projects are not allocated gas for testing, commissioning and commercial operation immediately then they will become stranded assets.

Further, the Commission also observed that the Petitioner was continuously trying for allocation of gas for testing and commissioning of its project as is evident from the letter written by the Petitioner on various dates namely 01.09.2011 to Joint Secretary (MoPNG), 14.09.2011 to Secretary (MoPNG), 16.09.2011, 07.11.2011 & 28.11.2011 to the Hon'ble Minister (MoPNG) requesting allocation of gas for testing & commissioning of the Phase-1 of its project stating that the first phase of their project is complete in all respect and is ready for commissioning. It rather validates the claim of the Petitioner, in its Petition that the project was expected to be completed by the end of December, 2011.

The Respondent vide its letter dated 28.08.2017 submitted that as per the Form F-6.5A (break-up of capital cost for gas based project on COD), huge amount of expenditure have been incurred even after COD of the plant which is

unjustifiable and also pointed out that complete plant was never ready as has been claimed by the Petitioner. In response, the Petitioner submitted that as per Form F-6.5A, the break-down of capital cost is required to be submitted and the Petitioner had, based on audited financial statements submitted the break down of capital cost broken up for Gas Turbines and Steam Turbine separately along with the variance. Further, there is no capital cost which has been provided in the said Form F-6.5A that pertains after the CoD of the Plant as has been contended by the Respondent. The Commission analysed the submission made by both the Respondent and the Petitioner in this regard and is of the view that the Respondent had misinterpreted the information given by the Petitioner in Form F-6.5A, moreover the Commission with regard to the readiness of the plant and the prudence of capital cost has dealt with the same at relevant paras in the order.

The Commission to further establish the claims made by the Petitioner decided to go through the accounts so as to establish when the major assets were capitalized and the plant was ready for commissioning. It has been observed from the trial balances submitted for phase-1 of the project that there was an increase in CWIP amounting to Rs. 8.29 Crore from 2012-13 to 2015-16. The Petitioner was asked to provide the details of such expenses, in response to the same the Petitioner vide its letter dated 26.05.2017 submitted the invoices of major works done during the period that mainly comprised of minor civil and erection & commissioning works including the finishing works pending which commissioning of the projects could not be affected.

Regarding the increase in project cost due to time overrun, Hon'ble ATE in its Judgment in Appeal No. 72 of 2010 in the matter of Maharashtra State Power Generation Co. Ltd. and Maharashtra Electricity Regulatory Commission & others has clearly stipulated the treatment of cost overruns and time overruns on account of delay under three cases, (i) due to factors entirely attributable to the Petitioner, (ii) due to factors beyond the control of the Petitioner, and (iii) situation not covered by (i) & (ii). In the present case, the Commission agrees that the commissioning of the project was beyond the control of the Petitioner due to non-availability of the fuel at reasonable rate. Moreover, the Commission is of the view that based on the submissions made by the Petitioner, it appears that the major

activities of the Phase-1 of the project were completed by the end of 2011 and the Phase-1 was ready by the end of March, 2012, therefore, the IDC & pre-operative expenses post SCOD being uncontrollable, be principally allowed to the Petitioner as discussed in the following paras.

The Respondent (UPCL) vide its letter dated 21.09.2016 submitted that the main reason for delay after 1<sup>st</sup> April 2015 was the absence of PPA which cannot be treated as Force Majeure but it is simply the failure of the Petitioner to secure PPA for sale of power and the Respondent further stated that the Petitioner neither tried to sell its power in IEX/PXIL nor through short term tender. In this regard, as already mentioned above, the Commission is of the view that the Respondent (UPCL) is also in a way responsible for the delay in commissioning of the Petitioner's project beyond April, 2015. Despite being aware of the fact that the Commission encourages short term/medium term procurement of power through competitive bidding, the Respondent filed a PPA Petition on 13.07.2015 seeking approval of a medium term PPA with the Petitioner for a period of 2 years without undertaking any competitive bidding and the Petition was rejected by the Commission vide its Order dated 30.07.2015. Further, as submitted by the Petitioner, PSDF Scheme was applicable only to those generators who secured a PPA with the distribution licensee. Hence, without a firm PPA the Petitioner was not eligible to participate in the PSDF Scheme.

Moreover, the Respondent also could not demonstrate that any of the stranded projects got commissioned between the year 2012 and upto the commencement of the Scheme by procuring domestic gas.

The Petitioner was directed to submit the detailed computation of IDC along with the supporting documents. In reply, the Petitioner vide its letter dated 19.12.2016 and further vide letter dated 26.05.2017 submitted the IDC calculation and interest statements indicating the interest charged by banks. Subsequently, the Commission directed the Petitioner to submit the details of penal interest, if any, charged by the banks for delay in payment. In reply, the Petitioner vide letter dated 10.11.2016 submitted that the bank has charged penal interest amounting to Rs. 6.22 Crore.

The Commission analysed the submission of the Petitioner with respect to

IDC and observed that few of the banks had stopped charging interest after FY 2014-15, and still the Petitioner was providing interest in its account year on year on provisional basis. The Commission asked the Petitioner to provide reasons/justification for the same. In response, the Petitioner vide its letter dated 11.07.2017 stated that term loan accounts of the lenders in the consortium had turned into NPA as per the banking norms and hence some of the banks had avoided charging interest on the same. Further the Petitioner submitted that from the accounting perspective the project is liable to discharge its financial obligation as per the terms of the loan. The Commission in this regard is of the view that although as a prudent financial practice the Petitioner was charging provisional interest in its books of account during the period even when the bankers were not charging interest, however, the allowance of capital cost based on provisions and estimations is not permitted under the Regulations. Hence, in respect of the same the Commission is of the view that interest cost should be allowed for the Phase-1 of the Petitioner's project on the basis of actual interest charged by the bankers as per the bank statements. On the basis of the interest statements submitted before the Commission by the Petitioner, the interest cost allowable from FY 2010-11 and upto CoD, i.e. 20.11.2016 works out to Rs. 426.31 Crore including penal interest of Rs. 21.10 Crore. The Commission is of the view that penal interest has accrued due to the inefficiency of the Petitioner in servicing its debts and hence, the same should not be pass through to the Respondent and subsequently to the consumers, and accordingly, the same has been deducted from the interest charges worked out for the Petitioner. Further, the Commission also decides to allow the additional interest expense amounting to Rs. 4.11 Crore incurred by the Petitioner from FY 2010-11 to FY 2014-15 on account of interest on buyer's credit, interest on unsecured loans etc. under the IDC. Thereafter, the Commission has determined the allowable IDC and finance charges amounting to Rs. 409.31 Crore till 20.11.2016 for the Phase-1 of the project. Accordingly, allowable interest and finance charges works out to Rs. 409.31 Crore against the Petitioner's claim of Rs. 604.59 Crore as per the CA certificate for Phase-1 of the project.

However, in this regard, the Commission would like to advise the Petitioner to approach the bankers to waive the interest not charged after FY 2014-15 or the Petitioner should explore means to absorb the same in the interests of the

consumers of the State as the same will not be allowed as pass through even if the bankers at a later stage charge it to the Petitioner.

**(ii) Pre-operative Expenses**

The Petitioner in its revised Tariff formats has submitted that they had incurred an amount of Rs. 91.78 Crore under Pre-operative expenses on account of plant maintenance and establishment expenses incurred till the commissioning of the project. The Petitioner further submitted that turbines and other BoP have been maintained as per the OEM standards to avoid any negative impact on plant and machinery and also expenditure was incurred towards salary of 45-50 project team members on board apart from other overheads directly related to the project.

The Commission examined the details submitted by the Petitioner in support of the claims made by it and asked the Petitioner to submit the comparative statement of Pre-operative expenses for Phase 1 and Phase 2 of the project and also provide invoices/details of major expenses claimed for Phase 1 under the head Pre-operative expenses as summarized below:

<b>S. No.</b>	<b>Particulars</b>	<b>Amount (Rs. in Crore)</b>
1.	Consultancy Charges	1.44
2.	Electricity Charges	5.65
3.	Insurance Project	7.88
4.	Legal & Professional Charges	13.92
5.	Salaries	19.61
6.	Loss on foreign exchange	10.59
7.	Rates & Taxes	1.92
8.	Employee benefits	5.46
9.	Anciliary Borrowing Cost	6.24
<b>Total</b>		<b>72.71</b>

The Petitioner vide its letter dated 06.10.2017 submitted the details which were analyzed by the Commission. From the invoices submitted by the Petitioner it was observed that certain expenses related to Phase 2 have been claimed under Phase 1 of the project. The Commission is of the view that since these expenses is directly attributable to Phase 2, hence, the same shall not be allowed in Tariff determination for Phase 1. Further certain expenditure claimed by the Petitioner for Phase 1 appeared to be common for both the Phases of the project, hence, the Commission is of the view that the same may be disallowed to the extent of 50% while determining the Tariff for Phase 1. The summary of such expenses is as given in the Table below:

Main Head	Particulars	Description	Total Amount Claimed (Rs. in Crore)	Amount Disallowed (Rs. in Crore)	Allowed for Phase 1 (Rs. in Crore)	Reason for disallowance
Consultancy charges	Rajendra Prasad J		0.01	0.003	0.003	Common for Phase 1 & 2
Professional Charges	Audit fees		0.02	0.01	0.01	Common for Phase 1 & 2
Rates & Taxes	UEPPCB Dehradun		0.04	0.02	0.02	Common for Phase 1 & 2
Rates & Taxes	Increase in Authorised Capital		0.26	0.13	0.13	Common for Phase 1 & 2
Rates & Taxes	Increase in Authorised Capital		0.60	0.30	0.30	Common for Phase 1 & 2
Rates & Taxes	Increase in Authorised Capital		1.00	0.50	0.50	Common for Phase 1 & 2
Professional Charges	Manohar Chowdhary & Associates	Audit fees	0.07	0.03	0.03	Common for Phase 1 & 2
Legal & Professional charges	Desein Pvt. Ltd.	certification of financial model of Ph 1 & 2	0.02	0.01	0.01	Common for Phase 1 & 2
Legal & Professional charges	KPMG	Assessment Proceedings	0.03	0.01	0.01	Common for Phase 1 & 2
Professional Charges	Manohar Chowdhary & Associates	Audit fees	0.08	0.04	0.04	Common for Phase 1 & 2
Professional Charges	Manohar Chowdhary & Associates	Audit fees	0.08	0.04	0.04	Common for Phase 1 & 2
Consultancy charges	K. Suribabu	Technical Services	0.005	0.002	0.002	Common for Phase 1 & 2
Consultancy charges	K. Suribabu	Technical Services	0.005	0.002	0.002	Common for Phase 1 & 2
Professional Charges	Manohar Chowdhary & Associates	Audit fees	0.08	0.04	0.04	Common for Phase 1 & 2
Professional Charges	KPG	Audit fees	0.06	0.03	0.03	Common for Phase 1 & 2
Consultancy charges	Fox Mandal & Co.	Appointment as LLC	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.01	0.01	-	Related to Phase 2
Legal & Professional charges	Desein Pvt. Ltd.	Phase II construction monitoring	0.02	0.02	-	Related to Phase 2
<b>TOTAL</b>			<b>2.41</b>	<b>1.24</b>	<b>1.17</b>	

Further, the Petitioner had claimed an amount of Rs. 6.24 Crore as Ancillary borrowing cost under the head Preliminary & Pre-operative expenses. The Commission sought information from the Petitioner with regard to the nature of these expenses and was apprised that the same are Penal interest charged by the bankers of the Petitioner on account of non-payment of principal/interest charges in due time. The Commission is of the view that since these expenses could have been avoided and are controllable in nature, hence, the same should not be passed on to the consumers of the state in the form of Tariff. Therefore, the Commission disallows the entire amount of Rs. 6.24 Crore claimed by the Petitioner under the head Ancillary borrowing cost.

Further, the Petitioner also submitted the comparative statement of Preliminary & Pre-operative expenses on yearly basis for both the Phases, i.e. Phase 1 and Phase 2 of the project. The Commission analyzed the same and observed that expense under the head Civil infra (tree and plant cutting, drains construction etc.) amounting to Rs. 2.26 Crore was charged entirely under Phase 1 of the project and no expense on this account has been charged to Phase 2. Similarly an expense under the head construction power amounting to Rs. 0.30 Crore was booked entirely in Phase 1. Further, fire security expenses, security charges, salaries & related expenses have been charged to both the Phases in the initial years, but later on the amounts were entirely charged to Phase 1 of the project totaling to Rs. 16.09 Crore. In this regard, the Commission observed that above expenses appears to be common for both the Phases of the project as works for both the Phases was going on during the period as is evident from the financial and comparative statements submitted by the Petitioner. Therefore, the Commission is of the view that apportioning the entire amount of expenses on Phase 1 of the project would not be prudent, hence, the same should be allowed only to the extent of 50% for Phase 1. Further, the Petitioner had also claimed an amount of Rs. 0.83 Crore as staff incentive under the head preliminary & pre-operative expenses, for which the Commission is of the view that the same should be borne by the Petitioner out of its own resources and the same cannot be allowed to be passed on to the consumers in the form of Tariff. It is pertinent to mention here that in the past also the Commission has not allowed the expense in the nature of incentives to the state utilities for recovery in the form of Tariff.

Further, the Petitioners claim for electricity charges amounting to Rs. 5.65 Crore was analysed by the Commission. In order to establish the Petitioner's claim the details were sought from the Respondent (UPCL), based on which it was observed that as per the records, the Petitioner had paid total amount of Rs. 5.38 Crore towards electricity charges which also included a late payment surcharge amounting to Rs. 0.13 Crore. In view of the above, the Commission disallows the amount of Rs. 0.27 Crore, being short paid by the Petitioner towards charges for electricity as the same have not been actually incurred by the Petitioner. Further, the Commission also disallows the late payment surcharge amounting to Rs. 0.13 Crore as the same was controllable in nature and arose as the Petitioner had defaulted in making timely payment of the electricity bills to UPCL, hence, the same is not allowed.

Based on the views of the Commission regarding time overruns being uncontrollable on the part of the Petitioner and also based on the above discussion, the Commission approves Rs. 73.70 Crore under the Preliminary and Pre-operative expenses against the Petitioner's claim of Rs. 91.78 Crore.

**(iii) Working Capital Margin Money**

The Petitioner in Form F-6.1, Statement of Capital Expenditure has claimed Working Capital margin money amounting to Rs. 23.45 Crore towards actual gas price and the related tariff impact on the receivables alongwith certain expenditures which are incurred for the project but not capitalized, example deposits made to regulatory authorities, i.e. Customs, UPCL, GAIL, etc. but forms a part of the project expenditure. The same is not an allowable expenditure for the purposes of Tariff calculation as the same is recurring in nature and is not a one-time cost related to construction of the project, hence, the same has not been allowed as part of the project cost in accordance with the Regulations.

Accordingly, the Capital cost as per DPR, Capital Cost submitted for Phase 1 till the COD by the Petitioner, and admissible Capital Cost as on COD of Phase 1 is as follows:

**Table 8: Capital Cost considered by the Commission as on 20.11.2016 (Rs. in Crore)**

Particulars	As per DPR	Capital Cost Submitted for Phase 1 as on COD	Admissible Capital cost for Phase 1 as on COD	Capital Cost after apportionment of soft cost
Freehold Land	10.00	8.15	4.08	4.08
Civil Works	60.10	76.11	60.10	101.37
Plant & Machinery	643.33	645.48	643.33	1085.07
Other Fixed Assets	0.00	1.90	1.90	1.90
Finance Cost	87.64	604.59	409.31	-
Preliminary & Pre-Operative Expenses	33.30	91.78	73.70	-
Working Capital Margin	0.00	23.45	-	-
<b>Total</b>	<b>834.37</b>	<b>1451.46</b>	<b>1192.41</b>	<b>1192.41</b>

#### 5.4 Additional Capitalisation and De-capitalisation

The Petitioner has submitted that it has not incurred any additional capital expenditure from COD of Phase-1 of the project till 31.03.2017. Accordingly, no additional capitalization has been considered for the purpose of tariff determination. The Petitioner in its Business Plan Petition has also not projected any additional capitalization for the Second Control period apart from the initial spare which has been dealt in subsequent paras. Further, as discussed before while dealing with the Business Plan, the Commission has not considered any additional capitalization. The Commission will review the additional capitalization based on the audited accounts at the time of truing up in accordance with the UERC Tariff Regulations, 2015.

##### 5.4.1 Initial Spares

With regard to initial spares, the Respondent (UPCL) has submitted that the request of the Petitioner for some additional spares under the ambit of initial spares to be purchased in coming 3 years of the Control period is meaningless and arbitrary as the contracted capacity of plant has already been commissioned and merely for taking advantage of the facility of allowance of spares up to 4% of plant and machinery cost the said request has been raised. The Respondent further submitted that all the initial spares should have been purchased and taken in capital cost at the time or before the CoD of the plant and not later. Further, the Respondent has submitted that it is important to consider that the plant consists of 2 identical sets of generators for which one common spare may be considered and considering half the capacity of the plant as contracted capacity that amount should also be divided proportionately. In reply, the Petitioner submitted that it has not considered 4% of Capital Costs as initial spares as per applicable Regulation in the initial project cost and requested that in lieu of Initial

Spares, it may be allowed to undertake capitalization of Capital Expenditures on Spares which it plans to procure in FY 2016-17. The Petitioner further submitted that the actual expenditure incurred under this head may be allowed during true-up subject to prudence check by the Commission. The Petitioner also submitted that in order to get the best rate for initial spares, SEPL has not procured the said spares upto the date of commissioning, however the capitalization on the same should not be disallowed for the sole reason that they are procured beyond the date of commissioning.

In this regard, Regulation 21(11) of UERC Tariff Regulations, 2015 specifies as follows:

*“Initial Spares: Initial spares shall be capitalized subject to the following ceiling norms as a percentage of the Plant and Machinery cost as per actuals upto the cut-off date:*

- (i) Thermal generating stations - 4.0%*
- (ii) Hydro generating stations - 4.0%*
- (iii) Transmission System*
  - (a) Transmission line - 1.00%*
  - (b) Transmission Sub-station - 4.00%”*

As per above stated regulation, the initial spares shall be capitalized as per actual expenditure incurred subject to ceiling limit specified upto cut-off date.

Further, Regulation 3(19) of the UERC Tariff Regulations, 2015 defines cut-off date as follows:

*“(19) Cut-off Date” means 31st 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 31st 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;”*

Hence, in accordance with the Regulations, since the project got commissioned in November, 2016, the Petitioner can procure initial spares till FY 2018-19.

Here it is pertinent to mention that since FY 2016-17 is already complete and no information regarding actual expenditure pertaining to initial spares has been submitted. Accordingly, the Commission has not considered the cost of initial spares in

the current proceedings and 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.

#### **5.4.2 Capital Structure**

Regulation 1(3) of UERC Tariff Regulations, 2015 specifies as under:

*“Provided, all new projects commissioned after the notification of these Regulations shall be governed by the provisions of these Regulations.”*

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

*“(1) For a project declared under commercial operation on or after 1.4.2016, debt-equity ratio shall be 70:30. Where equity employed is more than 30%, the amount of equity for the purpose of tariff shall be limited to 30% and the balance amount shall be considered as normative loan. Where actual equity employed is less than 30%, the actual equity would be used for determination of Return on Equity in tariff computations.*

*...”*

In accordance with the above mentioned Regulations, debt-equity ratio shall be considered as 70:30. The amount of equity for the purpose of tariff determination shall be limited to 30% and where actual equity employed is less than 30%, the actual equity shall be considered.

The Petitioner has claimed a debt-equity ratio of 71.47:28.53 in its initial submission. The Commission asked the Petitioner to re-submit the capital cost in UERC Formats based on the actual capital cost as on COD. In reply, the Petitioner submitted the information vide its letter dated 19.12.2016 and letter dated 06.10.2017 wherein in Form F-9.1, it has been submitted by the Petitioner that the loans as on the date of capitalization stood at Rs. 1090.80 Crore (including Rs. 168.10 Crore unpaid and unfunded interest) for the total project cost of Rs. 1451.46 Crore. The Commission is of the view that since the unpaid interest of Rs. 168.10 is provisional in nature and has not been actually incurred by the Petitioner nor has any fund been provided by any banker for the same, hence, the same cannot be considered as part of loan portfolio and also the project cost, while arriving at the debt-equity ratio for the Petitioner's project. Thus, based on the above, the debt equity ratio works out to 73.24:26.76 and the same has been considered for the purpose of capital structure as on COD of the Phase-1 of the project.

Hence, the capital structure as on COD is as follows:

**Table 9: Financing of GFA for FY 2016-17**

Particular	Claimed		Corrected for unfunded interest		Allowed	
	(Rs. in Crore)	%	(Rs. in Crore)	%	(Rs. in Crore)	%
Debt	1090.80	75.15	922.70	71.90	857.31	71.90
Equity	360.66	24.85	360.66	28.10	335.10	28.10
<b>Total</b>	<b>1451.46</b>	<b>100.00</b>	<b>1283.36</b>	<b>100.00</b>	<b>1192.41</b>	<b>100.00</b>

The Petitioner has claimed financing of additional capitalization to be funded entirely through debt. However, as mentioned above, the Commission has not considered any amount of additional capitalisation. Hence, financing of the same also has not been considered, however, the same will be reviewed at the time of truing up based on the actual funding and applicable regulations. The Capital structure for the additional capitalization is as follows:

**Table 10: Financing of Additional Capitalisation**

Particular	FY 2016-17				FY 2017-18				FY 2018-19			
	Claimed		Allowed		Claimed		Allowed		Claimed		Allowed	
	(Rs. in Crore)	%	(Rs. in Crore)	%	(Rs. in Crore)	%	(Rs. in Crore)	%	(Rs. in Crore)	%	(Rs. in Crore)	%
Debt	15.60	100.00	0.00	70.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Equity	0.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>15.60</b>	<b>100.00</b>	<b>0.00</b>	<b>100.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

#### 5.4.3 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.

...

(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 for FY 2016-17, i.e. from COD to 31.03.2017 of Rs. 42.7 Crore corresponding to the GFA of Rs. 1451.46 Crore. The Commission has worked out the depreciation of Rs. 20.26 Crore against the admissible GFA of Rs. 1192.41 Crore for FY 2016-17, i.e. from COD to 31.03.2017. Further, the

Commission has determined the depreciation based on the admissible GFA for the second Control Period. Detail of the depreciation claimed and approved for the second Control Period is as follows:

**Table 11: Depreciation approved by the Commission for FY 2016-17 to FY 2018-19 (Rs. in Crore)**

Particulars	FY 2016-17		FY 2017-18		FY 2018-19	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Depreciation	42.7	20.26	73.20	60.78	73.20	60.78

#### 5.4.4 Return on Equity

The Petitioner had claimed return on equity of Rs. 37.45 Crore corresponding to equity of Rs. 414.24 Crore based on the expected COD dated 25.08.2016 in the Petition. However, the Petitioner vide its letter dated 19.12.2016 and letter dated 06.10.2017 submitted revised tariff forms based on the actual COD and has claimed return on equity of Rs. 38.06 Crore corresponding to the equity amount of Rs. 360.6 Crore for FY 2016-17, i.e. from COD to 31.03.2017.

The Respondent submitted that the Petitioner has mentioned about the PSDF support, however, the Petitioner has not disclosed as to what will be the effect in case there is an increase in PSDF support either in quantum or duration or when there is no PSDF support given by the Government then what would be the effect of the same. The Respondent submitted that the benefit of any increase in any PSDF support shall be passed on to the Respondent and in case the PSDF support is not provided the effect of the same shall be borne by the Petitioner. The Respondent further submitted that under the scheme of PSDF support the Petitioner is not entitled for RoE, however, otherwise as per the Regulation, the RoE has to be given to the generator. The Respondent also submitted that there are various contingencies in the matter and the Tariff Regulations does not specifically cater to the situation of stranded gas based plants. As also stated by the Respondent, there is a possibility that the Petitioner in order to obtain RoE may not be interested in getting PSDF support even when the same is available, moreover, it would not be possible for the Respondent to justify the cause as to why the PSDF support was not extended to the Petitioner. Hence, the Respondent submitted that in case the PSDF Scheme is not extended to the Petitioner then in such case also Petitioner should not be entitled to claim any RoE or in the alternative it should be specifically provided that the issue regarding PSDF support shall be settled by the generator with the Respondent and the generator should be bound to disclose to the Respondent all the

efforts made by the Petitioner in obtaining the PSDF support including bidding. In reply, the Petitioner submitted that under the e-Bid RLNG scheme, the tariff is pre-determined by the MoP. Further, if there is any change in the actual price of the gas, i.e. more than the cost specified at the time of the bid, the PSDF support is provided to the extent to cover the cost and if the gas cost is lower the same would be recovered from the Project company by the MoP. Hence, as per the scheme the State Discom are fully protected from the price fluctuations and the obligation is limited to pay for the incremental units as per the pre-determined rate. The Petitioner also submitted that under the scheme the generator shall completely forego the RoE and the fixed cost recovery shall be limited to meet only the obligation towards debt servicing and O&M cost.

The Commission has gone through the submission of the Petitioner and the Respondent. With respect to applicability of the PSDF scheme and RoE, the Commission has not allowed any RoE for FY 2016-17 as the Petitioner was bound by the PSDF scheme and it is not entitled for any RoE for the said period. Further, as far as the applicability of the scheme is concerned, it will prevail only for the period specified in the GoI Scheme notification, thereafter, tariff will be determined as per prevailing UERC Tariff Regulations. Further, in case of extension of the PSDF scheme and adoption of the same by the Petitioner, based on the terms and conditions of the scheme, view on the admissibility of RoE shall be taken by the Commission.

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.”*

Under the PSDF scheme, the Petitioner is not entitled for any RoE during the applicability of the Scheme. However, the Petitioner has claimed RoE of Rs. 38.06 Crore

for FY 2016-17, i.e. from COD to 31.03.2017. Based on the above discussion, no RoE has been considered for FY 2016-17. The Return on Equity claimed by the Petitioner and approved by the Commission in accordance with the Regulations for FY 2016-17, FY 2017-18 and FY 2018-19 is as follows:

**Table 12: Return on Equity approved by the Commission (Rs. in Crore)**

Particular	FY 2016-17		FY 2017-18		FY 2018-19	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Return on Equity	38.06	0.00	71.07	51.94	71.07	51.94

#### 5.4.5 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 in the Petition had claimed interest on normative loan of Rs. 72.6 Crore based on the expected COD of 25.08.2016. Further, the Petitioner vide letter dated 09.06.2017 and letter dated 06.10.2017, in Form F-9.3 has submitted the average normative loan of Rs. 1041.28 Crore based on actual COD for FY 2016-17, i.e. from COD

to 31.03.2017. The Petitioner has considered the weighted average rate of interest of 13.9% p.a. for computation of interest on normative loan which is Rs. 145.14 Crore for FY 2016-17, i.e. from COD to 31.03.2017.

As discussed in above Paras, normative loan worked out under “Capital structure” as on 20.11.2016 (COD) has been considered as opening normative loan for FY 2016-17, i.e. date of COD and repayment has been considered equal to admissible depreciation, i.e. Rs. 20.26 Crore. 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. Interest on normative loan works out to Rs. 34.45 Crore by applying the rate of 12.20% p.a. In this regard, the Commission is of the view that interest rate of 13.90% claimed by the Petitioner is on a higher side considering that interest rates have reduced over the years and even the base rate of Axis bank as on date is around 9%. Hence, there is all the more reason for the Petitioner to renegotiate the rate of interest being charged by the banks on the loans disbursed. Accordingly, the Petitioner is directed to approach the bankers to reduce the rate of interest based on the prevailing rates.

The Commission has approved interest on loan for FY 2016-17, i.e. from COD to 31.03.2017 as Rs. 34.45 Crore. Further, the Commission has considered the same rate of interest for the computation of the admissible interest amount for the balance two year of the Control Period and the approved depreciation for the respective year has been considered as repayment of normative loan in accordance with the UERC Tariff Regulations, 2015. Details of the interest claimed and allowed for the Control Period is given in the Table below:

**Table 13: Interest on Loan approved by the Commission for FY 2016-17 to FY 2018-19  
(Rs. in Crore)**

Interest on Normative Loan	FY 2016-17 (COD to 31.03.2017)		FY 2017-18		FY 2018-19	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
Gross Opening Normative Loan	1037.22	857.31	1045.34	837.05	954.44	776.27
Increase during the year	53.57	0.00	0.00	0.00	0.00	0.00
Normative Repayment of loan	45.45	20.26	90.90	60.78	90.90	60.78
Net Closing Normative Loan	1045.34	837.05	954.44	776.27	863.54	715.49
Average Normative Loan	1041.28	847.18	999.89	806.66	908.99	745.88
Rate of Interest	13.90%	12.20%	14.3%	12.20%	14.4%	12.20%
<b>Normative Interest</b>	<b>145.14</b>	<b>34.45</b>	<b>143.09</b>	<b>98.41</b>	<b>130.54</b>	<b>91.00</b>

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

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:

**Table 14: Normative O&M Expenses for FY 2015-16  
(In Rs. Lakh/MW)**

Year	Gas Turbine/ Combined Cycle generating stations		Small gas turbine power generating stations (less than 50 MW Unit size)
	With warranty spares for 10 years	Without warranty spares	
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

The Petitioner in its Petition has claimed O&M expenses of Rs. 37.76 Crore for FY 2016-17 based on the norms specified for F class machines as specified by CERC based on the expected COD of 25.08.2016. The Petitioner in the revised Tariff Form based on actual COD claimed the O&M expenses as 32.4 Crore. However, the UERC Tariff Regulations, 2015 did not specify any norms for advance F class machines till amendment to UERC Tariff Regulations, 2015 was made by the Commission.

Based on the representations received from gas based generating plants in the State, the Commission has amended the Regulations to incorporate provision for normative O&M expenses for advance F class machines w.e.f. 18.01.2017. As per UERC Tariff Regulations 2017 (First Amendment), Regulation 48(1) of the Principal Regulation specifies as under:

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

**Table 15: Normative O&M w.e.f. 18.01.2017 (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	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, 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 for Combined cycle generating station, O&M expenses works out to Rs. 23.12 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, i.e. COD to 31.03.2017 for the entire Combined Cycle, i.e. GT 1, GT 2 & STG against the claim of the Petitioner of Rs. 32.40 Crore. Accordingly, based on the applicable O&M norms, detail of the O&M expenses claimed and allowed by the Commission are as follows:

**Table 16: O&M expenses for FY 2016-17 to 2018-19 approved by the Commission (In Rs. Crore)**

Particular	FY 2016-17 (COD to 31.03.2017)		FY 2017-18		FY 2018-19	
	Claimed	Approved	Claimed	Approved	Claimed	Approved
O&M expense	32.40	23.15	69.12	69.23	73.82	73.96

**5.4.7 Interest on Working Capital**

As mentioned in earlier Paras, UERC Tariff Regulations, 2015 shall be applicable for all the projects commissioned after the date of notification of the said Regulation. Accordingly, interest on working capital for FY 2015-16 along with the second Control Period, i.e. from FY 2016-17 to FY 2018-19 will be determined in accordance with Regulation 33 of UERC Tariff Regulations, 2015.

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 in its Petition has submitted that it had considered the rate of interest on working capital equal to 12.20% in accordance with the Regulations.

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 advises 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 interest on working capital has not been included in the annual fixed charges (AFC) allowable to the Petitioner.

#### **5.4.8 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 not proposed any non-tariff income for FY 2016-17, i.e. from COD to 31.03.2017 and for the balance period of second Control Period, i.e. for FY 2017-

18 and FY 2018-19. Accordingly, no non-tariff income has been adjusted by the Commission as of now. However, the same is subject to correction during the truing up proceedings.

#### 5.4.9 Annual Fixed Charges

Based on the above analysis, and in accordance with the UERC Tariff Regulations, 2015, the Annual Fixed Charge (AFC), for the second Control Period, i.e. from FY 2016-17 to FY 2018-19, as claimed and approved by the Commission is shown in the Table below:

**Table 17: Annual Fixed Charges approved by the Commission for FY 2016-17 to FY 2018-19 (Rs. in Crore)**

Annual Fixed Charges	FY 2016-17		FY 2017-18		FY 2018-19	
	Claimed	Allowed	Claimed	Allowed	Claimed	Allowed
Depreciation	42.70	20.26	73.21	60.78	73.21	60.78
Interest on Loan	145.14	34.45	143.09	98.41	130.54	91.00
Return on Equity	38.06	0.00	71.07	51.94	71.07	51.94
O&M Expenses	32.40	23.15	69.12	69.23	73.82	73.96
Interest on Working Capital	12.08	0.00	24.30	0.00	24.38	0.00
<b>Total</b>	<b>270.39</b>	<b>77.86</b>	<b>380.79</b>	<b>280.36</b>	<b>373.02</b>	<b>277.67</b>
Non Tariff Income	0.00	0.00	0.00	0.00	0.00	0.00
<b>Net AFC</b>	<b>270.39</b>	<b>77.86</b>	<b>380.79</b>	<b>280.36</b>	<b>373.02</b>	<b>277.67</b>

#### 5.4.10 Annual Fixed Charges, Capacity Charge and Energy Charge Rate (ECR) for FY 2016-17, FY 2017-18 and 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) of the Petitioner for the second Control Period attributable to its beneficiary, i.e. for FY 2016-17 effective from date of commissioning till 31.03.2017 & for FY 2017-18 w.e.f. 01.04.2017 to 31.03.2018 & FY 2018-19 w.e.f. 01.04.2018 to 31.03.2019.

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. Further, 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, 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. Further, in case overall recovery is less than the approved overall per unit fixed charges 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 is given in the Table below:

<b>Particular</b>	<b>FY 2016-17 (2nd half)</b>
Fixed Charge (Rs./kWh)	1.00
Energy Charge (Rs./kWh)	4.36
<b>Total</b>	<b>5.36</b>
Paid by UPCL	4.70
PSDF Support	0.21
<b>Total</b>	<b>4.91</b>

From the above mentioned table it is apparent that in FY 2016-17 approved overall per unit charges are higher than that actually recovered by the Petitioner, hence, no adjustment is required since during the validity of the PSDF Scheme for FY 2016-17. It is also hereby clarified that the energy charge rate (ECR) as mentioned above are the average ECR based on the actual fuel bills raised by the Petitioner, accordingly, for the purpose of adjustment of excess recovery, actual energy charges is required to be considered. Accordingly, both the Petitioner as well as the Respondent are directed to reconcile the amount to be adjusted amongst themselves based on the principles stipulated above within 15 days of the date of Order.

As already held in Para 5.4.7, since the Petitioner has not been allowed any interest on working capital based on its offer and in accordance with the decision of the Commission in its Orders dated 20.07.2016 and 17.04.2017 that in case of no interest on working capital is claimed by the generator then no rebate would be allowed to UPCL. The relevant extract of the Orders dated 20.07.2016 and 17.04.2017 are reproduced below:

**Extract of the Orders dated 20.07.2016**

*“... In case the tariff determined by the Commission in accordance with the Regulations for the generator exceeds the capped price, then apparently the generator will not be able to recover its Annual Fixed Cost (including Interest on Working Capital) determined in accordance with the*

*Regulations and if the tariff determined falls short of the capped price then interest on working capital would be allowed to the generator as per the Regulations. Therefore, if the generator gets interest on working capital, it will have to pass on the rebate to UPCL otherwise no rebate would be allowed to UPCL. The Commission would take a view on the same during tariff determination proceedings of the Respondent. “*

**Extract of the Orders dated 17.04.2017**

*“In this regard, the Commission in its Order dated July 20, 2016 on approval of PPA between UPCL and M/s SEPL has already held as under:*

*“...Therefore, if the generator gets interest on working capital, it will have to pass on the rebate to UPCL otherwise no rebate would be allowed to UPCL. The Commission would take a view on the same during tariff determination proceedings of the Respondent.”*

*The above provision has been made since the tariff determination proceedings of both the gas generators commissioned in the State, i.e. M/s GIPL and M/s SEPL are under process and, accordingly, the Commission was of the view that decision on applicability of rebate can be made based on the approved AFC for these generators and the recoveries made by them including the PSDF support during the currency of the Scheme. If the approved AFC (including interest on working capital) and energy charges remains within the ceiling of Rs. 4.70 per unit and the PSDF support, the generators will have to pass on the rebate to UPCL and in case the approved AFC (including interest on working capital) and energy charges for the past period exceed the recoveries made by the generator during the corresponding period then no rebate will be chargeable for that period from the Gas Generator.”*

Based on the above, the Respondent is required to refund the amount of rebate deducted from the bills of the Petitioner, if any, within one month of the date of Order.

5.4.11 Ordered accordingly.

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