

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the Matter of:

Petition seeking determination of project specific tariff for 12.6 MW Small Hydro Power Project under Section 62 and 86 of the Electricity Act, 2003 read with Regulation 13 of Uttarakhand Electricity Regulatory Commission (Tariff and Other Terms for Supply of Electricity from Nonconventional and Renewable Energy Sources) Regulations, 2013.

In the matter of:

Uttar Bharat Hydro Power Pvt. Ltd.

...Petitioner

AND

In the matter of:

Uttarakhand Power Corporation Ltd.

...Respondent

CORAM

Shri Subhash Kumar Chairman

Date of Order: August 21, 2018

This Order relates to the Petition dated 09.03.2017 filed by M/s Uttar Bharat Hydro Power Limited (hereinafter referred to as "the Petitioner" or "the generator") seeking determination of project specific tariff for its 12.6 MW Small Hydro Power Project on Sarju River at Kapkote, Bageshwar District, Uttarakhand under Section 62 and 86 of the Electricity Act, 2003 read with Regulation 13 of UERC (Tariff and Other Terms for Supply of Electricity from Non-conventional and Renewable Energy Sources) Regulations, 2013 (hereinafter referred to as "RE Regulations, 2013").

1. Background and Petitioner's Submission

- 1.1 A Petition dated 09.03.2017 was filed by the Petitioner under Section 62 and Section 86 of the Electricity Act, 2003 read with Regulation 13 of RE Regulations, 2013 seeking determination of project specific tariff for sale of energy generated by its 12.6 MW Sarju II Small Hydro Power Project (hereinafter referred to as "the Project/Plant") to Uttarakhand Power Corporation Limited (hereinafter referred to as "UPCL" or the Respondent).

- 1.2 The Petitioner has setup a project having an installed capacity of 12.6 MW in the name of Sarju II SHP which was commissioned on 28.05.2016. The Petitioner on 08.08.1995 executed a Memorandum of Understanding with Non-Conventional Energy Development Agency (NEDA) for investigating and establishing techno-economic feasibility and setting up of small hydro power project. The Petitioner was permitted to set up a 3 MW Small Hydro Electric Scheme at Sarju Stage II on Sarju River (upstream of Bageshwar) in District Bageshwar (formerly Almora) by the Government of Uttar Pradesh and a Memorandum of Understanding was executed between the Petitioner (formerly, M/s Jubilee Steels), NEDA, Government of Uttar Pradesh and Uttar Pradesh State Electricity Board (UPSEB). The Petitioner and the Respondent entered into a Power Purchase Agreement dated 16.12.2002 for sale of power from 3 MW Sarju II Project.
- 1.3 The Petitioner executed an Implementation Agreement with the Government of Uttarakhand on 28.04.2004 and as per the said agreement the Petitioner was required to achieve commercial operation within 54 months from Effective date. The Implementation Agreement dated 28.04.2004 was amended by Supplementary Agreement dated 25.09.2006. The Implementation Agreement provided that no royalty in shape of free power to be supplied to the Government for the first 15 years after the Commercial Operation Date in case the Petitioner sells the power to the Respondent.
- 1.4 The Petitioner got the DPR of the project prepared based on discharge data from January 2004 to December 2007 and accordingly envisaged the capacity of the project at 15 MW. Subsequently, a revised DPR was prepared and issued in April 2011 with revised cost estimate of Rs. 12414.33 Lakhs (including interest during construction) and CUF of the plant at 45%.
- 1.5 The Petitioner submitted that pursuant to the assessment carried out, the Petitioner sought an enhancement in the capacity of the small hydro project on 23.04.2007 and the same was accepted by the Government of Uttarakhand on 10.02.2010. The Petitioner entered into a Supplementary Implementation Agreement dated 03.06.2011 with Government of Uttarakhand for increasing the capacity of the Project from 3 MW to 15 MW and agreed to execute the Power Purchase Agreement with UPCL for total generated saleable energy. The Scheduled Commercial Operation Date was revised to 10.08.2011 (ie. 18 months from 10.02.2010) in view of the Supplementary agreement.
- 1.6 The Petitioner submitted that it had consistently kept the Respondent informed of its

enhanced capacity for its power project and regarding the requirement of arrangements at Kapkote Sub-station to ensure evacuation of the enhanced capacity.

- 1.7 The Petitioner submitted that it had entered into a supplementary power purchase agreement with UPCL on 26.02.2015 inter alia enhancing the capacity of the project from 3 MW to 12.6 MW and further modifying some of the terms and conditions of the PPA dated 16.12.2002 to be consistent with the Electricity Act, 2003 and Renewable Energy Regulations. The Petitioner further submitted that it opted for project specific Tariff for its Sarju II project.
- 1.8 The Petitioner submitted that it executed lease deed of forest land at Bageshwar on 14.11.2007 for the project area of 4.305 hectares of land. The bids were invited for Electro-Mechanical, Hydro-Mechanical and Civil works, which were awarded to the successful bidders on 10.09.2007 for Civil works and on 07.04.2008 for Electro-Mechanical works.
- 1.9 The Petitioner submitted that it was prevented from carrying out any construction activities on the land due to various agitations including but not limited to indefinite hunger strikes by the villagers from April 2008. The Petitioner provided village development packages to different villages in the vicinity of the project area and thereafter carried out work related to such village area. The agitations continued till completion of the project and the Petitioner was from time to time required to negotiate and provide packages to resolve the agitations.
- 1.10 The Petitioner submitted that they applied on 03.05.2008 for obtaining permission from the District Magistrate, Bageshwar for stone crushing. However, permission could not be granted as a Writ Petition was filed before the Hon'ble High Court of Uttarakhand by Himalayan Yuva Gramin Vikas Sanstha and on 16.07.2009, the Hon'ble Court passed an Interim Order directing that no new stone crushers shall be set up or established in the State of Uttarakhand unless a new comprehensive policy, which provided enough safeguards, is formulated and approved by the Hon'ble High Court. Thereafter, the Hon'ble High Court vide Order dated 24.08.2009 constituted an Expert Committee comprising of twelve members to formulate the said policy to safeguard the public from health hazards, environment and noise pollution due to the stone crushing activities. On 08.02.2010, the said Committee submitted its report on the stone crushers before the Hon'ble High Court. In response to the said report, the private and captive users of stone crushers filed objections. Due to the implementation of the policy, all stone crushers activities came to a standstill, which created an acute shortage of aggregate. The aggregate being a major

component for construction activities affected the construction activities of the Petitioner due to its shortage. The Petitioner filed an Interim Relief Application before the Hon'ble High Court stating that it was implementing the project under an agreement with the GoU and was not engaged in commercial stone crushing activities. The Hon'ble High Court, after considering the submissions of the Petitioner, vide Order dated 18.06.2010 clarified that the Order dated 16.07.2009 prohibiting stone crushing activities would not cover power projects which were working under the agreement with Government and have necessary clearances and provided that stone crushing activities were not carried out for commercial purposes. In accordance with the Order of the Hon'ble High Court, the permission for stone crushing was granted by the District Magistrate, Bageshwar for the Petitioner's project on 21.12.2011.

- 1.11 The Petitioner submitted that during the paucity of the stone crushing activities it obtained other clearances necessary for establishing the project from Uttarakhand Environment Protection and Pollution Control Board and Office of Senior Fish Inspector, Bageshwar.
- 1.12 The Petitioner submitted that it was sanctioned loan for the project as detailed hereunder:
- i. On 28.02.2008, State Bank Of India (SBI) sanctioned a term loan of Rs. 30.00 Crore for construction of the Project in consortium by appraising total loan to the project of Rs. 59.36 Crore.
 - ii. On 13.03.2008, Sate Bank of Saurashtra (SBS) sanctioned the loan for Rs. 15.00 Crore.
 - iii. On 30.07.2008, Bank of India (BOI) sanctioned the loan for Rs. 14.36 Crore.
 - iv. Due to the increase in project cost SBI and BOI again enhanced the loan to the project from Rs. 59.36 Crore to Rs. 96.36 Crore vide their sanction advices dated 22.07.2011 and 05.12.2012 of SBI and BOI sanction advice dated 25.07.2011.
 - v. The Sanction letters required the Petitioner to execute the Implementation Agreement with the Government for enhanced capacity, which was executed by the Petitioner on 03.06.2011.
- 1.13 The Petitioner submitted that on July 2011, September 2012 and July 2013 due to repeated cloud burst and extra-ordinary rainfall in the vicinity of the project, the Sarju River was flooded which caused heavy loss to the Project. The Government had recognized the cloud bursts in July 2013 as national calamity. Due to the flooding, the project equipment were submerged in the Sarju River and the diversion weir of the Project was completely

submerged and filled with water and sand. The Petitioner further submitted that damages due to flooding delayed the completion of the project, apart from causing financial loss to the Petitioner.

- 1.14 The Petitioner submitted that it was ready for commissioning the project on 01.08.2015 as the Original Equipment Manufacturer (Kirloskar Brothers Limited) had completed the work as on 01.08.2015 and certified the machinery to be capable of generating 12.6 MW. The LILO Transmission line was also ready. Further the Independent Engineer appointed by the Lenders (State Bank of India) of the Sarju II Project had also completed the inspection of the site work as well as machine installed on 02.08.2015/03.08.2015 and certified that the construction of the project was completed in all respects and the machines were installed and ready for commissioning. However, the Petitioner could not commission and declare commercial operation of the project due to non-availability of the interconnection facility to be arranged by UPCL. The Petitioner further submitted that inspite of Commission's Order dated 02.07.2015 and 11.09.2015 to allow LILO connection on the 33 kV Kapkote-Karmi Line of UPCL, an interim arrangement to enable the Petitioner to commission the Sarju II Project, UPCL vide letter dated 24.07.2015 had indicated the non availability of evacuation system. The Petitioner submitted that they repeatedly sought the permission for interconnection from UPCL for their Sarju II project, which was granted on 28.05.2016 and the Petitioner's Sarju II project was commissioned on 28.05.2016.
- 1.15 The Petitioner submitted that it has also commenced construction work of the dedicated transmission line from its Power House Switchyard to the Kapkote Sub-station. However, in absence of the exact location of gantry to be erected at the inter connection point as well as space for breaker, isolator, CTs and control panel etc at the Kapkote Station to be provided/decided by UPCL, the route of the line could not be finalized. The Petitioner further submitted that the contention that the location of gantry would only impact the last portion of the line is not correct. The route has to be finalized based on location in the substation. In reality, the route initially finalized by the Petitioner had to be reworked based on the actual location provided by UPCL. If the Petitioner had constructed substantial portion of its transmission line, it would have had to revise 5 km of the line incurring additional costs and delays.
- 1.16 The Petitioner submitted that UPCL on 24.08.2016 had provided the details of exact location of gantry and, accordingly, the Petitioner was expected to complete the construction of the

dedicated transmission line by March-2017.

1.17 The Petitioner submitted that it had incurred a total cost of Rs. 19,284.98 Lakh until the Commercial Operation Date inclusive of Interest during Construction against the cost of Rs. 12414.33 Lakh as envisaged in the DPR dated April, 2011. After deducting 75% of MNRE subsidy (Rs. 411 Lakh), the Capital Cost works out to Rs. 18,873.98 Lakh. The Petitioner in support of the capital cost of the Sarju-II SHP as on the date of commissioning of the project submitted a certificate dated 08.03.2017 issued by Chartered Accountant firm. The CA certificate shows the following details:

Table 1.1: Capital Cost Claimed for Sarju-II Project (Rs. in Lakh)

S. No.	Particulars	Expenses Incurred upto 30.06.2014
1	Cement	1,217.25
2	Civil Works	6,065.19
3	Steels	1,063.95
4	Transmission Line	200.00
5	Other Purchase	482.44
6	Explosive Goods	14.51
7	Land	91.01
8	Power Fuels	45.12
9	Transport Charges	289.35
10	Pre-operative Expenses	873.99
11	Sand Transport	1.83
12	Uttarakhand Govt. (Energy Dept)	50.00
13	Hydro Mechanical	263.65
14	Electro Mechanical	1,146.07
15	Bank Interest on Term Loan	7,569.19
16	Charity & Donation	0.66
17	Consumable Goods	0.16
18	Royalty Expenses	1.88
19	Less: Insurance Claim	-91.26
	Total	19,284.98

1.18 The Petitioner submitted that the increase in capital cost as compared to the DPR is mainly on account of steep rise in the cost of material, increase in labour cost and increase in Interest during Construction. The Petitioner submitted head wise details of cost overrun as detailed below:

i. Tunnel and Adits:

The Petitioner submitted that during the tunnel excavation, the Petitioner encountered geological surprises due to which extra strengthening work had to be undertaken resulting into an increase in the cost from Rs. 5627.82 lakh envisaged in DPR issued in

April 2011 to Rs. 6615.37 lakh. The increase in cost on this account is approximately Rs. 987.55 lakh for the reasons stated below as submitted by the Petitioner:

- (a) From Outlet, there was no road access available to do excavation work and lining work, so the company increased the lining rate and excavation work of contract due to which extra payment was made to the contractor of Rs. 206.40 Lakh.
- (b) Rs. 132.93 Lakh was additionally incurred on the contract apart from the contracted price, i.e. 10% of contract value was incurred from the date on request of contractor by the Petitioner.
- (c) The Petitioner incurred Diesel escalation cost of Rs. 35.54 lakh as per contract terms.
- (d) The Petitioner incurred an amount of Rs. 249.53 Lakh on account of labour rate escalation as per contract terms.
- (e) The Petitioner had to incur an amount of Rs. 225.00 Lakh as idling cost in the project area as work has been stopped due to local agitations and flood. Since no work/very negligible work were done during flood and agitations period, hence, labour and equipment remained idle, therefore, cost has been incurred as per contract terms.
- (f) The Petitioner incurred an additional cost for strengthening the nearby area by grouting cement and an additional cost of Rs 122.2 lakh was incurred on this account.

ii. De-silting Tank:

The Petitioner submitted that additional cost as detailed below were incurred on the De-silting tank related works:

- (a) The Petitioner paid an amount of Rs. 19.00 lakh against river diversion to the contractor which was not envisaged in the DPR of the Petitioner's project.
- (b) In the DPR Steel Reinforcement was considered 111 MT, whereas as per actual site condition the consumption of steel was 312 MT, so the difference of 201MT was additionally incurred as steel cost, along with its labour cost amounting to a total of Rs. 107.53 lakh in addition to the DPR cost.
- (c) The Petitioner submitted that due to the repeated flood, the area of Disilting tank

was submerged with floodwater and silt, due to which they have incurred an additional cost of Rs. 97.40 lakh against flood work.

- (d) The Petitioner submitted that an additional cost of Rs. 55.37 Lakh was incurred in excavation of Disilting tank as against envisaged DPR cost.

iii. Power House and Tail Race:

The Petitioner submitted that due to the repeated flood, the area of Power House was submerged with the flood water, sand and silt due to which an additional expenditure of Rs. 114.95 lakh against flood work was incurred.

1.19 The Petitioner submitted that MNRE vide its letter dated 06.12.2016 informed that the Petitioner's Sarju II project is entitled to receive a capital subsidy of Rs. 548 Lakh. In accordance with the UERC RE Regulations, the Petitioner has deducted 75%, i.e. Rs. 411 Lakh from the capital cost.

1.20 The Petitioner submitted that a total of Rs. 5,785.49 Lakh has been deployed as equity for the Sarju II project by the Petitioner, which is 30% of the Capital Cost (i.e. Rs. 19,285 Lakh). The Petitioner submitted that based on Regulation 15(2) of UERC RE Regulations, 2013, the Debt-Equity Ratio has been considered as 70:30. The Debt and Equity components of the Capital Cost for determination of tariff are as under:

Table 1.2: Financing of Capital Cost Claimed (Rs. in Lakh)

Type of Fund	Total	% of Cost
Debt	Rs. 13,499 Lakh	70%
Equity	Rs. 5,785 Lakh	30%
Total	Rs. 19285 Lakh	100%

1.21 The Petitioner submitted that UERC RE Regulation, 2013 provides for consideration of the loan as gross normative loan for calculation of interest on loan and normative loan outstanding each year to be worked out by deducting cumulative repayment of previous year which is equal to the annual depreciation allowed or actual repayment whichever is higher. Accordingly, the gross normative loan has been considered as Rs. 13,500 Lakh (without considering subsidy) and Rs. 13,090 Lakh (considering 75% subsidy) and the repayment has been considered as Rs. 1010 Lakh (depreciation without considering subsidy) and Rs. 990 Lakh (depreciation considering subsidy) per year for 12 years respectively.

Further, the Regulation provides for consideration of interest rate as lower of the

actual interest payable to the financial institutions or the average State Bank of India (SBI) Base Rate prevalent during the first six months of the previous year plus 300 basis points and a normative repayment period of 12 years. The SBI Base Rate plus 300 basis points is 13%. However with the volatile market conditions and small market capitalization of the Petitioner, it is impossible for the Petitioner to secure loans at lower than 14.5%.

The Petitioner further submitted that the above rate of interest is a competitive market based rate which is available to other developers of projects of similar nature in the State. It was also submitted that serious loss and prejudice would be caused to the Petitioner in the event the interest on loan is considered on normative basis and not actual basis as there are circumstances justifying the relaxation. The Petitioner requested the Commission to exercise its power to relax as provided under Regulation 50 of the Renewable Energy Regulations on the issue of interest of loan under Regulation 16 of UERC RE Regulations, 2013, and consider the actual interest on loan incurred by the Petitioner.

1.22 The Petitioner submitted that Regulation 17 of RE Regulations, 2013 provides for consideration of the capital cost of the project as value base and the depreciation to be allowed up to a maximum of 90% of the capital cost. The capital cost without considering subsidy is Rs. 19,284.98 Lakh and after considering 75% of the subsidy is Rs. 18,873.98 Lakh. Therefore, 90% of the same works out to Rs. 17,356.48 Lakh without considering subsidy and Rs. 16,986.58 Lakh after considering 75% of the subsidy.

The Petitioner further submitted that Regulation 17 provides for depreciation per annum based on 'Differential Depreciation Approach' over loan tenure and period beyond loan tenure over useful life computed on 'Straight Line Method. In accordance with the above, the Regulations provide for depreciation for generic tariff as 5.83% per annum for the first 12 years and remaining to be spread over the useful life. Similarly the Petitioner has considered the Depreciation as 5.83% for the first 12 years (period of loan tenure) and the balance depreciation to be recovered over 23 years (the balance useful life) at 1.29%.The Depreciation amount claimed by the Petitioner is as under:

Table 1.3: Depreciation Claimed (Rs. in Lakh)

Years	Depreciation Rate (%)	Depreciation per year (not considering subsidy)	Depreciation per year (considering 75% subsidy)
1-12	5.83%	10.10	Rs 9.90
13-35	1.29%	2.30	Rs 2.20

1.23 The Petitioner submitted that Regulation 18 of RE Regulations, 2013 provides for value base

of equity to be considered for return on equity, i.e. Rs. 5810 lakh. The pre-tax return on equity is 20% per annum for the first 10 years and 24% for the 11th year onwards. The amount of RoE claimed by the Petitioner is as under:

Table 1.4: Return on Equity Claimed (Rs. in Lakh)

Years	Rate (%)	RoE Per Year
1-10	20	11.57
11-35	24	34.70

- 1.24 The Petitioner submitted that Regulation 20 of RE Regulations, 2018 provides that the O&M expenses are to be considered based on normative O&M Expenses specified under Chapter 5 of the Regulations for different technologies, escalated at 5.72% per annum. Regulation 28 provides for the normative O&M Expenses for the year 2013-14 for Small Hydro Power Projects of capacity between 5MW to 15 MW as Rs. 22.73 lakhs per MW and for the Sarju II project of 12.6 MW the same works out to Rs. 286 Lakhs. For the year 2016-17, the O&M expenses come out to Rs. 319 lakh and thereafter escalated at 5.72% per annum.
- 1.25 The Petitioner submitted that Regulation 19 of RE Regulations, 2018 provides for Working Capital requirement to be (a) O&M expenses for one month; (b) Receivables equivalent to two months calculated on normative CUF and (c) Maintenance Spares @ 15% of O&M Expenses. Regulation 19 provides for interest rate as the average State Bank of India Base Rate prevalent during the first six months of the previous year plus 350 basis points that comes to 13.5% for FY 2016-17.
- 1.26 The Petitioner submitted that Regulation 10(3) of RE Regulations, 2013 provides for consideration of capacity utilization factor for project as that envisaged in the approved DPR or the normative CUF specified under Chapter 5 for the relevant technology, whichever is higher. The normative CUF for small hydro power projects is 40%. The CUF envisaged in the Revised DPR is 45%. However, it is submitted that the CUF envisaged in the Revised DPR is based on discharge measurement data of 2004 to 2007. Even as per the DPR, the water availability is varying from year to year. The water discharge was further measured in the year 2008 to 2012 wherein the water availability is varying from year to year and reducing as is clear from the data on water availability for nine years, i.e. 2004 to 2012. Therefore the hydrology data since the DPR have showed a decline in water availability, which also resulted in reduction of capacity from 15 MW to 12.6 MW. However even after reduced capacity, the water availability is not sufficient for CUF of 45%.

The Petitioner further submitted that CUF as per the Revised DPR is based on the

assumption that the availability of the water for the project would be sufficient. In case the availability of the water is not as assumed, the above CUF of 45% would not be realistic. The actual water availability data in 2016 (i.e. after the commissioning of the project) demonstrates that the data in the DPR is no longer reflective of the current position and the CUF is 39.00% (Approx.). Further, for the year 2015 and 2016, the actual PLF of Sarju-III (which is a downstream project of the Sarju II project) is also 37% which is in similar line of Sarju-II. It is anticipated that the water availability for the future years would be as per the actual figures for 2015 and 2016 and not the data assumed in the Revised DPR.

The Petitioner further submitted that in a hydro project, the generation of electricity depends on the water availability, which is beyond the control of the Petitioner. Thus, the above CUF is not due to any default or inefficiency of the Petitioner but due to factors beyond its control, namely, the quantum of water available to the Petitioner's small hydro project. It was submitted that the plant/project of the Petitioner was available, but the plant/project could not generate electricity only due to the non-availability of the water.

The Petitioner further submitted that if the CUF is taken as 45%, the project would not be able to recover its costs as the actual CUF would be substantially less. This would render the project unviable which is contrary to the intent and objective of the Electricity Act. The Petitioner in support of its claim cited the judgement of Hon'ble Supreme Court in the matter of, Gujarat UrjaVikas Nigam Ltd v. Tarini Infrastructure Ltd (2016) 8 SCC 743 that stated as under:

"16. All the above would suggest that in view of Section 86(1) (b) the Court must lean in favour of flexibility and not read inviolability in terms of the PPA insofar as the tariff stipulated therein as approved by the Commission is concerned. It would be a sound principle of interpretation to confer such a power if public interest dictated by the surrounding events and circumstances require a review of the tariff. The facts of the present case, as elaborately noted at the threshold of the present opinion, would suggest that the Court must lean in favour of such a view also having due regard to the provisions of Sections 14 and 21 of the General Clauses Act, 1898."

The Petitioner submitted that although the above observation is in regard to review of a tariff, the principle that can be ascertained is that if the surrounding events and circumstances require a review, the same is to be considered. In the present case, though the DPR provided for a CUF of 45%, the facts and circumstances with regard to water availability have changed sufficiently to require a review of such CUF.

The Petitioner further submitted that the Hon'ble Appellate Tribunal has also advocated maintaining flexibility in the tariff in the context of small hydro power projects. The Hon'ble Tribunal in Techman Infra Ltd v. Himachal Pradesh Electricity Regulatory Commission and Others Appeal no. 50 and 65 of 2008 dated 18.09.2009 has held as under:

"19.... As can be seen from the objectives before the Commission listed in paragraph 06 above, the Commission was required to balance efficient and economic development of renewable energy with the interest of consumers as well as fairness to investors. We feel that in order to balance the various objectives the Commission should have left some flexibility in the capital cost determined in the impugned order.

.....

22. Since the capacity utilization factor also varies with the specific project and specific site depending on the hydrology of a particular location it will be proper to follow the same dispensation as for capital cost for determining the CUF of the project in which CUF of 45% is contested by the developer or the Board"

The Petitioner further submitted that UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2013 provides for the power to remove difficulties and power to relax as under:

"49. Power to Remove Difficulties

If any difficulty arises in giving effect to these regulations, the Commission may, of its own motion or otherwise, by an order and after giving a reasonable opportunity to those likely to be affected by such order, make such provisions, not inconsistent with these regulations, as may appear to be necessary for removing the difficulty.

50. Power to Relax

The Commission, for reasons to be recorded in writing, may vary any of the provisions of these regulations on its own motion or on an application made before it by an interested person."

The Petitioner stated that it has been a well accepted principle that there cannot be any regulation providing for various terms and conditions in an absolute manner without the need to consider exemption, relaxation, deviation, removing difficulties etc. on an on-going basis. The regulations are based on certain assumptions. There is always a need to exempt or relax or deviate from the terms and conditions. The norms and parameters for determination of tariff by the State Commission are also terms and conditions which cannot be specified in an absolute manner. In this regard, the Petitioner relied on the following

judgments as given hereunder:

i. Premium Granites & Anr. V. State of Tamil Nadu & Ors (1994) 2 SCC 691:

"48. After considering the facts and circumstances of the case and giving our careful consideration to the arguments advanced by the learned Counsels for the respective parties, it appears to us that the MMRD Act was enacted by the Parliament under Entry 54 List 1 of the 7th Schedule to the Constitution. The aforesaid Entry enables the Central Government to regulate mines and mineral development in public interest by making such declaration and the Parliament, has, in fact, made such declaration by Section 2 of the MMRD Act. In respect of minor minerals, the Parliament by the said MMRD Act has left the powers of regulating minor minerals to the State Governments under Section 15 of the MMRD Act. Different State Governments have exercised such power under Section 15 of the MMRD Act and State of Tamil Nadu has enacted in 1959 the Mineral Concession Rules. There is no dispute that the MMRD Act and the rules framed thereunder either by the Central Government or by the State Government are for mineral development subserving the cause of public interest. It cannot also be disputed that mineral development is not a vague expression and the MMRD Act and the rules framed under it, clearly furnish the scope and purport of the word "mineral development". It has been very reasonably contended that scientific exploitation of minerals without waste is undoubtedly a part of mineral development as envisaged by the MMRD Act and the rules framed thereunder. The expression "public interest" finds place in the Constitution and in many enactments which have since been noted and considered by this Court in various decisions. The said expression is, therefore, a word of definite concept. There is also force in the contention of the appellants that the guidelines need not be expressly found in the impugned provisions but such guidelines can be gathered from the setting of the Act and the rules framed thereunder. Such contention gets support from the decisions of this Court in P.J. Irani (supra), K. Kandaswamy Chettiar (supra), Jalan Trading Co. (supra), Workmen of Meenakshi Mills Ltd. (supra).

49. The power of relaxation under Rule 39 of Mineral Concession Rules is to be exercised for "mineral development" and "in public interest" after recording reasons for such exercise of power. In our view, it has been rightly contended by the learned Counsel in support of the validity of the Rule 39, that the exercise of power under the said Rule 39 cannot be made arbitrarily, capriciously and on subjective satisfaction of the concerned authority but the same is to be exercised within the parameters of "mineral development" and "in public interest" which as aforesaid, are not vague and indefinite concepts. Such exercise of power must satisfy the reasonableness of state action before a court of law if any challenge of improper action in exercise of the said power under Rule 39 in a given case is made. It has been held by the Constitution Bench of this Court in Meenakshi Mill's case (supra) that if a speaking order is required to be passed on objective consideration, such

provision is not vitiated on the ground of absence of a provision for appeal or review because the remedy available by way of judicial review is by itself an adequate safeguard against improper and arbitrary exercise of power. It has also been held by this Court in the said decision that requirement of giving reasons for exercise of the power by itself excludes chances of arbitrariness.

50. The observation made in the majority decision in Delhi Transport Corporation's case (*supra*) as referred to hereinbefore should be appreciated with reference to the facts and circumstances of a case and the true import of a provision under which a discretionary power is to be exercised. While no exception can be made to the observation of this Court in the said decision that "It would be both unwise and impolitic to leave any aspect of its life to be governed by discretion when it can conveniently and easily be covered by the rule of law", it should also be borne in mind that it is not always feasible and practical to lay down such exhaustive written guidelines which can cover all contingencies. It has, therefore, become necessary to make provisions for exercise of discretion in appropriate cases by giving broad guidelines and indicating the parameters within which such power is to be exercised. In various decisions referred to hereinbefore, this Court has upheld such exercise of discretion if the same does not appear to be wholly uncontrolled, uncanalised and without any objective basis.

51. "Public interest" is a paramount consideration in the MMRD Act itself and the rules framed thereunder cannot but subserve 'public interest' in furthering the cause of mineral development. We are, therefore, unable to hold that Rule 39 is *per se* obnoxious and having contained unbridled, unguided and uncanalised discretionary power offends Article 14 of the Constitution."

ii. Hindustan Paper Corporation Limited v. Government of Kerala (1986) 3 SCC 398:

"9. ... In almost all the statutes by which the fiscal or economic interests of the State are regulated, provision for granting exemption in appropriate cases would have necessarily to be there and the power to grant exemption is invariably conferred on the Government concerned. The Legislature which is burdened with heavy legislative and other types of work is not able to find time to consider in detail the hardships and difficulties that are likely to result by the enforcement of the statute concerned. It has, therefore, now become a well-recognised and constitutionally accepted legislative practice to incorporate provisions conferring the power of exemption on the Government in such statutes. Such exemptions cannot ordinarily be granted secretly. A notification would have to be issued and published in the Gazette and in the ordinary course it would be subject to the scrutiny by the Legislature. The power can be exercised only in the public interest as provided by the Section itself. The validity of provisions conferring the power of exemption has been consistently upheld by this Court in a number of decisions commencing with the State of Bombay and *Anr. v. F.N. Balsara* [1951]2SCR682 .

1.27 The Petitioner submitted that the case of the Petitioner requires consideration of exercise of

powers to relax. The Petitioner's project would not be viable at 45% CUF which is based on availability of water at much higher levels. As per the actual water availability, the Petitioner's CUF comes to 39%. Such difference is solely due to the lack of water availability which is beyond the control of the Petitioner. As a renewable project, the Petitioner's project is to be promoted and kept viable. In view of the above, the Petitioner requested before the Commission to consider CUF for the Petitioner's project be taken as 39%. At the very least, it is submitted that the CUF be taken as 40% as per the Regulation 28 of the UERC (Tariff and Other Terms for Supply of Electricity from Renewable Energy Sources and non-fossil fuel based Co-generating Stations) Regulations, 2013. In the alternative, the Commission may be pleased to allow another study for water availability for determination of the CUF of the Petitioner's project.

- 1.28 Based on the above, the Petitioner initially claimed the levellised tariff of Rs. 7.46/unit considering the discounting factor as the weighted average cost of capital. The Petitioner while computing the Saleable Energy, considered "free energy to home state @ 10%" from 16th year onward. The AFC & levellised tariff claimed by the Petitioner is summarized in the table below:

Table 1.5: AFC & Levellised Tariff Claimed (Rs. in Crore)

Year	ROE	O&M Charges	Interest on WC	Interest on Debt	Dep	Total	Net Saleable Energy (MU)	Tariff (Rs./kWh)	Discount Factor %	Discounted Tariff
1	11.57	3.20	1.10	18.80	10.10	44.77	49.82	8.99	1.00	8.99
2	11.57	3.38	1.10	17.40	10.10	43.55	49.82	8.74	0.91	7.99
3	11.57	3.57	1.00	15.90	10.10	42.14	49.82	8.46	0.84	7.07
4	11.57	3.78	1.00	14.40	10.10	40.85	49.82	8.20	0.76	6.27
5	11.57	3.99	1.00	13.00	10.10	39.66	49.82	7.96	0.70	5.56
6	11.57	4.22	1.00	13.00	10.10	39.89	49.82	8.01	0.64	5.11
7	11.57	4.46	1.00	11.50	10.10	38.63	49.82	7.75	0.58	4.53
8	11.57	4.72	1.00	10.00	10.10	37.39	49.82	7.50	0.53	4.01
9	11.57	4.99	1.00	8.60	10.10	36.26	49.82	7.28	0.49	3.55
10	11.57	5.27	0.90	7.10	10.10	34.94	49.82	7.01	0.45	3.13
11	13.88	5.57	1.00	5.60	10.10	36.15	49.82	7.26	0.41	2.96
12	13.88	5.89	1.00	4.20	10.10	35.07	49.82	7.04	0.37	2.63
13	13.88	6.23	0.80	3.30	2.30	26.51	49.82	5.32	0.34	1.81
14	13.88	6.59	0.80	2.90	2.30	26.47	49.82	5.31	0.31	1.66
15	13.88	6.96	0.80	2.60	2.30	26.54	49.82	5.33	0.29	1.52
16	13.88	7.36	0.80	2.30	2.30	26.64	44.84	5.94	0.26	1.55
17	13.88	7.78	0.80	1.90	2.30	26.66	44.84	5.95	0.24	1.42
18	13.88	8.23	0.90	1.30	2.30	26.61	44.84	5.93	0.22	1.29
19	13.88	8.70	0.90	0.90	2.30	26.68	44.84	5.95	0.20	1.18
20	13.88	9.20	0.90	0.60	2.30	26.88	44.84	5.99	0.18	1.09
21	13.88	9.72	0.90	0.30	2.30	27.10	44.84	6.04	0.17	1.01
22	13.88	10.28	0.90	-	2.30	27.36	44.84	6.10	0.15	0.93
23	13.88	10.87	0.90	-	2.30	27.95	44.84	6.23	0.14	0.87
24	13.88	11.49	1.00	-	2.30	28.67	44.84	6.39	0.13	0.81
25	13.88	12.14	1.00	-	2.30	29.32	44.84	6.54	0.12	0.76
26	13.88	12.84	1.10	-	2.30	30.12	44.84	6.72	0.11	0.71
27	13.88	13.57	1.10	-	2.30	30.85	44.84	6.88	0.10	0.67
28	13.88	14.35	1.10	-	2.30	31.63	44.84	7.05	0.09	0.63
29	13.88	15.17	1.20	-	2.30	32.55	44.84	7.26	0.08	0.59
30	13.88	16.04	1.20	-	2.30	33.42	44.84	7.45	0.07	0.55
31	13.88	16.96	1.30	-	2.30	34.44	44.84	7.68	0.07	0.52
32	13.88	17.93	1.30	-	2.30	35.41	44.84	7.90	0.06	0.49
33	13.88	18.95	1.40	-	2.30	36.53	44.84	8.15	0.06	0.46
34	13.88	20.04	1.40	-	2.30	37.62	44.84	8.39	0.05	0.44
35	13.88	21.18	1.50	-	2.30	38.86	44.84	8.67	0.05	0.41
Levellised Tariff (per unit)										7.46

1.29 The Commission vide its Order dated May 03, 2017, while admitting the Petition, directed UPCL, the sole Respondent in the present matter to file its comments, if any, on the tariff Petition within one month from the date of Order. UPCL vide its letter dated 10.11.2017 filed its comments and the same was forwarded to the Petitioner for its reply. In response, the Petitioner vide its letter dated 20.11.2017 submitted its rejoinder on the same. The submissions of UPCL and the Petitioner have been dealt with at appropriate places in the

order.

- 1.30 The Petition filed by the Petitioner had some deficiencies which were communicated to it vide Commission's letter dated 07.06.2017. The Petitioner submitted its reply vide letter dated 20.09.2017. Subsequently, additional deficiencies/shortcomings in the replies filed by the Petitioner were communicated to it from time to time.
- 1.31 The Commission has considered the replies/information submitted by the Petitioner as well as contentions raised by the Respondent and the same has been discussed at appropriate places in the Order alongwith the Commission's views on the same.

2. Respondent's Comments

- 2.1 UPCL, the sole Respondent in the matter submitted its comments vide letter dated 10.11.2017, on the Petition filed by M/s UBHP for determination of project specific Tariff for its Sarju II SHP.
- 2.2 The Respondent submitted that the Implementation Agreement for 3 MW capacity was executed for the Petitioner's plant on 28.04.2004 and the PPA for the said capacity was executed with the Respondent on 16.12.2002, i.e. prior to execution of IA. In response to the same, the Petitioner submitted that it is stated that the project was initially granted to the Petitioner by the Government for a capacity of 3 MW and a Memorandum of Understanding was executed on 07.05.1997 between the Petitioner (formerly, M/s Jubilee Steels), NEDA, Government of Uttar Pradesh and Uttar Pradesh State Electricity Board (UPSEB). Thereafter the PPA was executed with the Respondent on 16.12.2002. The Petitioner further stated that the Respondent has not disputed the PPA dated 16.12.2002 which has been entered into between the parties at any time or even in the present Reply and by making such vague allegations at this stage the Respondent is trying to mislead the Commission.

The Commission analyzed the submission of both the Respondent and the Petitioner and is of the view that such an allegation made by the Respondent at this stage has no relevance and hence, cannot be accepted by the Commission. The Respondent never agitated this issue while signing the PPA or at the time of getting the same approved by the Commission and raising this issue now clearly depicts that Respondent is trying to mislead the Commission by diverting the attention of the Commission on irrelevant issues.

- 2.3 The Respondent submitted that IA executed between the Petitioner and the GoU in the year

2011 is the final IA and all IAs prior to that have no sanctity as they were upon different consideration. In response to the same, the Petitioner submitted that the Respondent is raising vague and unsubstantiated allegations to deny legitimate costs of the Petitioner without any rationale. It is denied that the Agreements prior to 2011 have no relevance. The entire factual sequence from the grant of sanction in 1997 to the Petitioner to the execution of the Supplementary Power Purchase Agreement dated 26.02.2015 is important and relevant. Infact the agreement dated 26.02.2015 is clearly a supplementary agreement not just by the nomenclature of the agreement but by the terms of the Agreement. The Power Purchase Agreement dated 26.02.2015 seeks to amend the Power Purchase Agreement dated 16.12.2002 and is not a fresh Agreement.

The Commission analyzed the submissions made by the Respondent and the Petitioner in this regard and is of the view that present Petition is specifically related to determination of Tariff for the Petitioner's SHP and challenging the sanctity of IAs and PPAs entered into by the Petitioner with the GoU and the Respondent at this stage is not justifiable.

- 2.4 The Respondent submitted that the Petitioner has opted for project specific tariff on 18.04.2015 for the first time, whereas in the Petition it was submitted that project was ready for commissioning on 11.07.2015 and as per Regulation 10(2) of RE Regulations, 2013 the Petitioner was required to opt for project specific tariff at least three months before the date of commissioning. As the Petitioner has not complied with the Regulation 10(2) of RE Regulations within the specified time, therefore project specific Tariff cannot be opted by the Petitioner and the only alternative is to accept generic Tariff. In response to the same, the Petitioner submitted that the requirement under the RE Regulations is for option to be exercised 3 months before the commissioning of the project. Since the project was commissioned in 2016, there is no issue of any delay in exercise of the option. In any event, even as per the readiness of the Petitioner, the claim of the Petitioner is that it was ready for commissioning by August 2015 and therefore, the letter sent on 18.04.2015 was within time. The letter sent on 11.07.2015 was for grant of inter-connection, which was required prior to commissioning. Therefore, the three-month period cannot be considered from 11.07.2015. The Respondent's interpretation of the Renewable Energy Regulations and the stipulation of the specified time period is vague and baseless.

The Commission has noted the submission of both the Respondent and the

Petitioner and is of the view that there does not appear any defect on the part of the Petitioner in opting for project specific Tariff in accordance with the provisions of the Regulations and accordingly, the project specific tariff for Sarju II project has been worked out by the Commission. Further, the Commission observed that the Petitioner in the Petition has submitted that the plant was ready for Commissioning on 01.08.2015 and has specifically stated that OEM (M/s Kirloskar Brothers) had completed the works and certified the machinery to be capable of generating 12.6 MW, however, in its reply dated 20.09.2017 the Petitioner submitted that the actual date of finishing the work by M/s Kirloskar Brothers (M/s KBL) is 30.05.2016. The Commission asked the Petitioner to submit the justification on the above submissions made by the Petitioner. In response to which the Petitioner vide its letter dated 27.04.2018 submitted that the plant was completed for trial and testing and thereafter for commissioning in August, 2015. The Petitioner requested for interconnection to UPCL for spinning the units and for the trial run thereafter as without interconnection, spinning it was not possible, and without spinning it is not possible to find out the leakage in the units set up by the OEM supplier, i.e. M/s Kirloskar Brothers Ltd. Further, M/s KBL vide their letter dated 06.08.2015 requested the Petitioner to charge the penstock, release of water and interconnection with grid for spinning, commissioning and synchronization. The Petitioner was not granted interconnection by UPCL and no certain date was provided by UPCL for interconnection, so the Petitioner did not took the risk for charging the tunnel as it is a standard principle of tunnel, that once the tunnel is charged it cannot be discharged. Moreover, the charged tunnel cannot be kept ideal for long time as it is a pressurized tunnel and if kept ideal for long time it may burst. The Petitioner submitted due to this they had mentioned the date of completion of work by M/s KBL as May, 2016 after commissioning, synchronization and handover of the project to the Petitioner.

- 2.5 The Respondent's other submissions on the specific items along with the Petitioner's comments and the Commission's views on the same have been dealt at relevant paras in the Order.

3. Commission's Approach & Analysis

3.1 Statutory Requirements

- 3.1.1 The Commission had specified the RE Regulations, 2013 under Section 61 of the Electricity Act, 2003. For the purposes of this Order, the Commission has been guided by

the said Regulations.

- 3.1.2 In accordance with sub-Regulation (2) of Regulation 10 of RE Regulations, 2013, the RE based generating stations may opt for the generic tariff or may file a petition before the Commission for determination of "Project Specific Tariff". Relevant part of the aforesaid Regulation is reproduced hereunder:

"The RE Based Generating Stations and Co-generating Stations, except those mentioned under Proviso 2 to sub- Regulation (1) of Regulation 2, may opt for the generic tariff, as determined based on norms specified in these Regulations for different technologies, or may file a petition before the Commission for determination of "Project Specific Tariff". For this purpose RE Based Generating Stations and Co-generating Stations shall give its option to the distribution licensee at least 3 months in advance of date of commissioning of the project or commissioning of the 1st unit, in case of multiple units or one month after the date of issuance of these Regulations, whichever is later. This option once exercised shall not be allowed to be changed during the validity period of the PPA."

In view of the above-mentioned Regulation, since the Petitioner has opted for Project Specific Tariff for its Sarju II SHP in accordance with sub-Regulation (2) of Regulation 10 of RE Regulations, 2013, therefore, the Petitioner is entitled for the same and, accordingly, the Commission has worked out the Tariff for the Petitioner's project.

3.2 Design Energy

- 3.2.1 The Petitioner submitted the revised DPR dated April 2011 for its Sarju II SHP and stated that the CUF envisaged in the said DPR was considered as 45%. The Petitioner, as discussed earlier, requested the Commission to exercise its power to relax under the RE Regulations, 2013 and consider the CUF of the plant as 39% since the CUF envisaged in the revised DPR of April 2011 was based on availability of water at much higher levels, whereas, as per the actual water availability which is at a lower level, the Petitioner's CUF comes to 39%. The Petitioner submitted that such difference is solely due to the lack of water availability in the river which is beyond the control of the Petitioner.

- 3.2.2 Regulation 10(3) of RE Regulations, 2013 specifies as under:

"Project Specific Tariff, on case to case basis, shall be determined by the Commission in the following cases:

(a) For projects opting to have their tariffs determined on the basis of actual capital cost instead of normative capital cost as specified for different technologies under Chapter 5, the CUF (generation)

for recovery of fixed charges shall be taken as that envisaged in the approved DPR or the normative CUF specified under Chapter 5 for the relevant technology, whichever is higher;..."

3.2.3 The Commission examined the revised DPR of the Petitioner's SHP wherein the CUF of the plant was stated as 49% as against the Petitioner's submission of 45% as discussed above. The Commission asked the Petitioner to provide the details regarding the calculation of Saleable Energy as envisaged in the DPR and hydrology data considered by the Petitioner for calculation of Saleable Energy to arrive at CUF of the plant as claimed in the Petition. The Petitioner, in response to the same, submitted that the revised DPR was prepared for cost escalation only and has stated that CUF considered in the revised DPR was considered on 75% dependable year basis. The Petitioner further submitted that in the original DPR prepared by the Indo Canadian Consultancy Services Ltd. the environmental release was considered only 5% of lean season discharge instead of mandatory 10% lean season discharge.

3.2.4 The Commission examined the revised DPR of April, 2011 submitted by the Petitioner and has found that as per revised DPR gross energy generation of 67.79 MUs for a capacity of 15 MW has been shown and with forced outage of 5% considered in the said DPR, the CUF has been arrived at 49%. The Commission further examined the original DPR of January 2008 of the Petitioner's SHP which contains the calculation of annual projected generation on 75% dependable year and the same has been shown as 64.86 MUs for 15 MW capacity. The Petitioner has also enclosed a letter of Secretary, Energy, GoU, wherein all the hydro project developers were directed to ensure a continuous minimum discharge equivalent to 15% of the average lean season in accordance with the directions of Hon'ble National Green Tribunal. The Commission has, accordingly, considered the minimum 15% discharge so as to enable the Petitioner to comply with the directions of the Hon'ble NGT and also the State Government.

3.2.5 The RE Regulations, 2013 does not specify whether the design PLF would be based on 90% dependable year or 75% dependable year. In this regard reliance is placed on Regulation 3(25) of UERC (Terms and Conditions for Determination of Tariff) Regulations, 2015 which defines design energy as under:

"Design Energy" means the quantum of energy which can be generated in a 90% dependable year with 95% installed capacity of the hydro generating station;"

However, in the absence of data on 90% dependable year, the Commission has

relied upon the discharge data of 75% dependable year. Further, as discussed above a continuous minimum discharge equivalent to 15% of the average lean season discharge has also been factored. Hence, the same translates into an annual generation of 61.06 MU for 15 MW capacity at 100% machine availability or 58 MU at 95% machine availability which translates to a CUF of 44.14% which is lower than the normative CUF of 45% specified in the RE Regulations, 2013. Hence, the normative CUF of 45% has been considered as the CUF for recovery of AFC of the Petitioner's plant.

The gross energy at a CUF of 45% for plant having capacity of 12.6 MW translates to 49.67 MUs.

- 3.2.6 Further, in accordance with the RE Regulations, 2013 normative auxiliary consumption including transformation losses of 1% has been reduced from the normative design generation of 49.67 MUs to work out the saleable energy of the said SHP which works out to 49.17 MUs against the saleable energy of 49.82 MUs considered by the Petitioner in its Tariff Petition for Sarju II SHP.
- 3.2.7 With respect to the Petitioner's contention for relaxing the CUF of the plant, the Commission is of the view that there is no merit in deviating from the Regulations, where the Regulations without any ambiguity clearly spells out the basis for considering the CUF for the generating stations. The Commission, accordingly, abstains from deviating from the methodology adopted for considering the CUF of the Petitioner's plant and approves the same as 45% as discussed above.
- 3.2.8 Para 4.2 of the Implementation Agreement dated 28.04.2004 executed between GoU and the Petitioner requires that a royalty of 10% will be applicable after 15 (fifteen) year of CoD in all cases of sale of power. Hence, saleable energy for the purpose of computation of tariff has been further reduced by 10% w.e.f. 16th year onwards. Approved saleable energy for 35 years is shown in **Appendix-I**.

3.3 Capital Cost

- 3.3.1 Regulation 13 of RE Regulations, 2013 stipulates that:

"13. Petition and proceedings for determination of Project Specific Tariff

(1) The RE Based Generating Stations and non-fossil fuel based Co-generating Stations may make an application for fixation of Project Specific Tariff based on actual Capital Cost in respect of the completed units of the RE Based Generating Stations and Co-generating Stations in such formats

and along with such information as the Commission may require from time to time.

Provided that for Project Specific Tariff determination, the RE Based Generating Stations and Co-generating Stations shall submit the break-up of Capital Cost items along with its petition.

(2) Till fixation of final tariffs a RE Based Generating Stations or Co-generating Stations may either accept the generic tariff as provisional tariff or make an application for determination of provisional tariff in advance of the anticipated date of completion of project based on the capital expenditure actually incurred up to the date of making the application or a date prior to making of the application, duly audited and certified by the statutory auditors. The provisional tariff as may be determined by the Commission may be charged from the Commercial Operation Date (CoD) of the respective unit of the generating station.

Provided that the RE Based Generating Stations and Co-generating Stations shall be required to make a fresh application for determination of final tariff based on actual capital expenditure incurred up to the date of commercial operation or commissioning of the generating station, with duly audited and certified copies of accounts by the statutory auditors within 18 months from the CoD.

(3) The generating company shall file application for determination of tariff for as many years for which it wants the tariff to be fixed.

(4) A petition for determination of tariff shall be accompanied by such fee as specified in the UERC (Fee and Fines) Regulations, 2002, as amended from time to time, and shall be accompanied by:

(a) information in forms 1.1, 1.2, 2.1 and 2.2 as the case may be, and as appended in these regulations;

(b) Detailed project report outlining technical and operational details, site specific aspects, premise for capital cost and financing plan etc.

(c) A Statement of all applicable terms and conditions and expected expenditure for the period for which tariff is to be determined.

(d) A statement containing full details of calculation of any subsidy and incentive received, due or assumed to be due from the Central Government and/or State Government. This statement shall also separately include the proposed tariff calculated with and without consideration of the subsidy and incentive.

(e) Any other information that the Commission requires the Petitioner to submit."

3.3.2 The Petitioner in the instant Petition and further in its replies on the deficiencies pointed out by the Commission, submitted the break-up of Capital Cost alongwith the reasons for delay during construction of the project broadly segregating the same into time overrun and cost overrun. The Respondent submitted that the Petitioner in the effort of explaining the reasons for difference between the estimated project cost of Rs. 12,414

Lakh and the claimed actual cost of Rs. 19,285 Lakh has detailed various factors as uncontrollable, most of which actually does not contribute in the delay of the project or the cost and as such are not justified for considering the escalation of project cost. Further, the actual project cost claimed by the Petitioner has increased almost 55% as compared to the revised DPR dated April 2011. The Respondent further submitted that the Petitioner contended that stone crushing activities were stopped by the Hon'ble High Court vide its order dated 16.07.2009 which was eventually allowed for non-commercial purpose only vide Court's Order dated 18.06.2010. The Petitioner was allowed to set up stone crusher for the construction of its Sarju II SHP on 21.12.2011 after the permission was granted by the DM Bageshwar for the same. The Respondent stated that permission for increasing the capacity of the plant from 3 MW to 15 MW was accorded by the GoUK on 10.02.2010 and revised DPR was prepared in April 2011, hence, any restriction on establishing the stone crusher by the Hon'ble High Court, way back in the year 2009, could not have contributed in the delay of project or upon its cost as stated by the Respondent. The Respondent further stated that the DPR prepared in April 2011 should have already considered the effect of cost overrun.

The Commission has noted the submissions made by the Respondent and clarifies that for the purpose of approval of capital cost of the project, the Commission considers the actual expenditure incurred after carrying out the prudent check of cost escalations, if any, with reference to the cost estimated in the DPR based on the justification for cost overrun and time overrun as furnished by the Petitioner. Hence, submission of the Petitioner regarding steep rise in cost of material and labour have not been considered in toto in support of its claims for cost escalation. However, submissions of the Petitioner have been analyzed and further information were sought on the replies submitted by the Petitioner on various dates before arriving at the Capital Cost allowable to the Petitioner as discussed in the subsequent paras.

- 3.3.3 The Commission vide its letter dated 07.06.2017 and further vide its letter dated 07.09.2017 asked the Petitioner to submit its reply on certain deficiencies/shortcomings observed in the Petition filed before the Commission including the details with respect to LoI issued to successful bidders of Civil Works, Electro-Mechanical, Hydro-Mechanical for the project alongwith the Award Price and Actual Price paid. The Petitioner vide its reply dated 20.09.2017 submitted the requisite information. The

aforesaid reply of the Petitioner alongwith the replies submitted subsequently on the additional queries raised by the Commission at various point of time, were analyzed by the Commission. It was observed that the costs on the basis of the Contract value fell short of the Actual Capital Cost claimed by the Petitioner and therefore, the Petitioner was asked to provide the justification for the same. The Petitioner in its reply referred to the submissions made by it in the Petition with respect to the justification regarding the time and cost overrun of the project and further stating that the contracts entered into by it were based on the initial and indicative BOQ without detailed engineering and the contracts clearly provided that the BOQ's were indicative and the actual BOQ shall be applicable for payments. The Petitioner further submitted that on account of the said condition, no supplementary contracts were entered with the Agency contractor by the Petitioner. The Commission in order to establish the claims of the Petitioner and to have a more realistic approach to analyze the claimed cost, asked the Petitioner to provide copies of all the invoices exceeding Rs. 2.50 Lakh alongwith the other information. The Commission, subsequently, also sought details of expenses below Rs. 2.50 Lakh from the Petitioner.

3.3.4 The Petitioner submitted the copies of the invoices, which were examined by the Commission. The Petitioner's submissions and the Commission's views on the same are discussed in the subsequent paras.

3.3.5 The invoices submitted by the Petitioner were segregated into various expenses heads as claimed by the Petitioner and matched with the value of the contracts entered into by the Petitioner & the actual claims made by it as summarized in the Table below:

Table 3.1: Details of Capital Expenditure (Hard Cost) (Rs. in Lakh)

S. No.	Work Detail	Contractor Name	DPR Cost (April 2011)	Cost Claimed by the Petitioner	Contract Value	Actual Bills / Details submitted by the Petitioner
1	Land	N.A.	290.02	91.01	N.A.	91.01
2	Power Plant, & Accessories	Kirloskar Brothers Ltd.	1,600.00	1146.07	1,000.00 (without Tax)	<i>Pre Tax: 814.11</i> <i>Post tax: 912.44</i>
		Others			N.A.	191.58
3	Transmission Line	Miscellaneous	210.00	200	N.A.	197.00
4	Hydro Mechanical Works	PES Engineers	-	263.64	177.21	146.38
		Others			N.A.	104.96
5	Civil Works & Others (including preliminary & pre-operative)	Akasva Infrastructures Pvt. Ltd.	7761.5	9235.80	2,215.27	4909.31
		Other Material & Misc works			N.A.	3818.33
		Preliminary & Pre-Operative	161.00	873.98	N.A.	873.94
Total			10022.52	11810.5		11244.95

3.3.6 As regards the Land Cost, since the actual contracts/details submitted by the Petitioner

are within the DPR Cost, hence, the Commission has allowed the same based on the actual details submitted by the Petitioner.

3.3.7 The contract for Power Plant & Accessories was awarded to M/s Kirloskar Brothers Ltd. As per the contract details submitted by the Petitioner, the Petitioner accepted a bid by M/s Kirloskar Brother Pvt. Ltd. for supply of goods as per the bidding document for the sum of Rs. 1,000.00 Lakh exclusive of taxes & duties with a condition that tax & duties shall be reimbursed on actual basis. Against the same, the Petitioner submitted the bills amounting to Rs. 912.44 Lakh (including taxes) before the Commission which appeared to be in order, therefore, the Commission has allowed Rs. 912.44 Lakh under this head. Also bills pertaining to other expenditure related to Power Plant & Accessories amounting to Rs. 191.58 Lakh have been submitted by the Petitioner before the Commission which appears to be in order and the Commission allows the same under this head. Accordingly, the Commission allows an amount of Rs. 1104.02 Lakh under the head Power Plant & Accessories.

3.3.8 The works of transmission line was done by the Petitioner through various suppliers/contractors for which bills/details amounting to Rs. 197.00 Lakh were submitted against the claimed cost of Rs. 200 Lakh, which were also within the DPR Cost. On analyzing the invoices with respect to the Transmission line submitted by the Petitioner, it was observed by the Commission that out of the total expenditure on transmission Line amounting to Rs. 197.00 Lakh, an amount of Rs. 150.82 Lakh has been incurred post COD. The Commission sought information in this regard from the Petitioner in response to which it was submitted by the Petitioner that due to lack of clarity from UPCL on the interconnection point for Sarju II SHP they were unable to construct the Transmission line. The Petitioner further submitted that the Commission in its Suo-moto order dated 11.09.2015 directed UPCL to submit a comprehensive Action Plan for evacuation of existing and proposed generation in Kapkote region and also directed UBHP to start the construction of 33 kV line as per the terms of PPA and supplementary PPA dated 16.12.2002 & 26.02.2015 respectively between its existing/upcoming generating station and 33 kV S/s Kapkote of UPCL. The Petitioner further submitted that in pursuance of the said Order of the Commission they started the survey work for the dedicated transmission line from Sarju II to Kapkote sub-station and completed 5 Km of the transmission line, however, for finalizing the balance route the exact location of gantry

to be erected was required from the Respondent including information on the space for breaker, isolators, CTs and control panel etc at the Kapkote S/s. The Petitioner submitted that they followed repeatedly with the UPCL in this regard vide letters dated 19.08.2015, 09.10.2015, 01.11.2015, 22.12.2015 & 28.01.2016, however, UPCL could provide the location of gantry bay and other equipment demarcations to the Petitioner only on 24.08.2016. The Petitioner further submitted that immediately after the finalization of gantry location by UPCL, they started the work on balance transmission line and completed the same in February 2017, which was finally approved for energisation by the electrical inspector on 12.06.2017. The submission made by the Petitioner in this regard were send to UPCL vide Commission's letter dated 11.05.2018 for submitting its comments on the same, in response to which UPCL vide its letter dated 21.08.2018 submitted that with regard to the construction of evacuation line from Sarju-II to Kapkote sub-station M/s UBHP had deliberately done the non-compliance of order dated 11.9.2015 of the Commission and had delayed the construction of Sarju-Kapkote evacuation line. M/s UBHP had intentionally tried to escape from the condition of PPA regarding construction of line from Sarju-II to Kapkote and had not laid a single pole till the time they had first claimed that they were ready with their plant and it is only after rightful direction of the Commission, they had started the construction. They had further delayed the line citing wrongful blame on UPCL that UPCL had not informed about the gantry location, however it is worth considering that gantry can only be within the substation premises at Kapkote and exact location of substation is apparent and if at all any decision regarding route is required to be taken based on location of gantry it is relevant for last leg of maximum upto 100 meters only and not kilometers before the substation. The Respondent submitted that this said contention of M/s UBHP itself suggests that they were never serious about erecting a dedicated line to Kapkote. UPCL also submitted that the comparison made by M/s UBHP between Sarju-II to Kapkote line (to be constructed by M/s UBHP) and Kapkote-Bageshwar line (to be constructed by UPCL) is irrelevant considering that M/s UBHP had to construct approximately just 5 Km line whereas UPCL had to construct 31 Km line and that too on Panther conductor. UPCL had diligently constructed the line and is almost on the verge of completing it and the only reason of delay is that the line is passing through dense forest and necessary permission with regard to it is taking time despite best of efforts of UPCL. Moreover, UPCL is consistently informing the

Commission regarding the progress of construction alongwith reasons. Admittedly, the construction of dedicated line from Sarju II to Kapkote S/s and strengthening works of Kapkote-Bageshwar line were taken up by the Petitioner and the Respondent respectively after the issuance of Commission's Order dated 11.09.2015. Since the project was ready for Commissioning in the month of August, 2015 to be evacuated through LILO connectivity in the Kapkote-Karmi line as directed by the Commission and this issue has been dealt in para 3.3.20 of this Order, therefore, the above works have no bearing on the commissioning of the project.

Therefore, the Commission is of the view that based on the invoices submitted by the Petitioner, the expenditure on Transmission Line upto the date of COD, i.e. 28.05.2016 amounting to Rs. 46.19 Lakh be allowed as part of project cost as on COD and the balance amount of expenditure incurred after COD amounting to Rs. 150.81 Lakh be allowed as additional capitalization in respective years.

- 3.3.9 The contract for Hydro Mechanical works was given to M/s PES Engineers Pvt. Ltd. through work order for various works as detailed below:

Table 3.2: Capital expenditure under hydro mechanical works (Rs. in Lakh)

Work Description	Amount (Rs. in Lakh)
Supply of various components of H & M Package	119.00
H & M Package (Draft Tube Gate & Hoist)	22.93
H & M Package (Surge Shaft Gate)	24.08
Fabrication, Laying in position of the Silt/Gravel Flushing Pipe	11.19
TOTAL	177.21

The amount against actual bills submitted by the Petitioner in lieu of the above Hydro Mechanical contract worked out to Rs. 146.38 Lakh. The Commission observed that actual bills submitted by the Petitioner for Hydro Mechanical works done by PES Engineers are within the contracted amount and, accordingly, the Commission allows the same. Further, the Petitioner has also submitted invoices amounting to Rs. 104.96 Lakh for works related to Hydro Mechanical works done through various other contractors/suppliers. Since the invoices submitted in this regard appears to be reasonable, therefore, the Commission allows the same under the head Hydro Mechanical works. In view of above discussion, the Commission allows an amount of Rs. 251.34 Lakh under the head Hydro Mechanical works.

- 3.3.10 The cost of civil works & other expenditure as projected in the DPR was Rs. 7922.50 Lakh, against which the actual expenditure claimed by the Petitioner was Rs. 10109.78

Lakh after deducting the recoveries from the insurance claims, amounting to Rs. 91.26 Lakh. UPCL submitted that the claim of the Petitioner for steep rise in cost of material as one of the factor for causing cost overrun though delay was solely attributable to the Petitioner as IA was executed way back in 2004. Further, the Respondent also submitted that the increase in labour cost should not be allowed as the project was executed under EPC contract and all such variations must have been covered. UPCL submitted that cost escalation on account of geological surprises and corresponding excavation of tunnel has not been explained by the Petitioner. The massive overrun of Rs. 987.55 Lakh and reason for the same are not justified and hence, should not be considered. Further, heavy expenditure amounting to Rs. 97.40 Lakh have been claimed against the flood works which is not measurable and is not provisioned in the original DPR. The Respondent further submitted that the Petitioner has not detailed and neither attached any evidences of specific losses/expenditures incurred in each event of cloud burst/heavy rainfall and has generally submitted the increase in expenditure without proper explanation.

In this regard, the Commission noted that the Petitioner had provided news paper cuttings for the year 2010, 2011, & 2012 corroborating incidents of heavy rain fall/flood occurred in the Kapkote area during the construction of the project. Further, the Petitioner has also furnished the photographs of the roads and project sites depicting damages caused due to such heavy rainfall and flooding in the related area. Hence, change in design of the project components as a measure of safety to the project to ensure uninterrupted operation of the SHP during such incidents of flood/heavy rainfall and discharge cannot be disallowed merely on the fact that the same was not considered in the project's DPR initially. Since the Kapkote area had witnessed cloud burst/heavy rainfall in the past years during the construction of the project and whether it affected the project area so much that it delayed the construction activity resulting in time overrun has been dealt later in para 3.3.20(vi). Notwithstanding the past occurrences, re-occurrences of such natural calamities in the Kapkote area and particularly affecting the project then during its operation cannot be ruled out in future. Accordingly, additional cost related to change in design of the project components, extra cost on account of excavation and repair/rectification and reinforcement is being considered as on account of extraneous uncontrollable factors and the same has been examined in the following paras. Moreover, the Respondent in its submissions has not

submitted any evidence contrary to the claim of the Petitioner. The Respondent with all its machinery and its field offices in the vicinity of the project, should have corroborated its submissions with proper evidences and based on the same should have denied the Petitioner's claims.

3.3.11 Moreover, the Commission vide its letter dated 07.06.2017 asked the Petitioner to submit the details with respect to damages & financial losses caused due to cloud burst & heavy rainfall during 2011, 2012 & 2013 in response to which the Petitioner submitted the year wise details. The Petitioner submitted that total financial loss in the year 2011, 2012 & 2013 was Rs. 143.56 Lakh, 91.74 Lakh & Rs. 114.17 Lakh respectively, against which insurance recoveries amounting to Rs. 91.26 Lakh were made.

3.3.12 Since the Petitioner has been allowed project specific tariff, hence, neither the normative benchmark cost as provided in the Regulations nor the references from the other project cost, particularly cost related to civil works, can be adopted in the present case. Accordingly, to arrive at the project cost invoices of the various contractors raised on the Petitioner vis-a-vis contract agreement has been examined. Further, in relation to cost escalation due to time overrun the Commission has also taken cognizance of the justifications segregating the cost and time overruns into controllable and uncontrollable factors. However, hard cost of the project has been considered based on the bills/details provided by the Petitioner. Details of Civil and other major works of Rs. 9601.58 Lakh in totality have been discussed and classified under the following heads:

- (i) Main components under Civil Works namely construction of spill way, under sluice, de-silting basin and power channel, construction of tunnel, adit, surge shaft, pressure shaft, power house, tail race switch yard etc. under the contract entered into by the Petitioner with M/s Akasva Infrastructure Pvt. Ltd. including flood protection and rectification works amounting to Rs. 4909.31 Lakh;
- (ii) Expenditure on reinforcement Steel & Cement provided to the contractor for accomplishment of civil works including miscellaneous material consumed during the construction phase of the project amounting to Rs. 2260.76 Lakh;
- (iii) Miscellaneous construction/Civil works undertaken by the Petitioner during the tenure of the project amounting to Rs. 721.63 Lakh.
- (iv) Other miscellaneous expenses amounting to Rs. 835.94 Lakh, summarized under

the following heads:

Table 3.3: Miscellaneous expenditure (Rs. in Lakh)

Particulars	Amount
Explosives & consumables	12.41
Other Purchases	483.43
Power & Fuel	31.41
Freight & Transport	256.81
UK Govt (for capacity enhancement)	50.00
Royalty (DM Bageshwar)	1.88
Total	835.94

- (v) Preliminary & Pre-operative expenses amounting to Rs. 873.94 Lakh, summarized hereunder:

Table 3.4: Preliminary & Preoperative expenses (Rs. in Lakh)

Particulars	Amount
Telephone Expenses	4.60
Electricity Expenses	7.45
Vehicle Running & Maintenance	38.53
Bank Charges	72.18
Salary & Wages	425.93
Tour & Travelling	90.91
Petty Expenses	21.66
Professional Expenses	28.89
Staff Welfare Expenses	19.64
Advertisement Expenses	3.77
Printing & Stationery	2.20
Rent Expenses	12.89
Village Development Expenses	16.03
Charity & Donation	13.11
Business Promotion	3.27
Insurance Expenses	30.19
Miscellaneous Payments	15.64
Repair & Maintenance	43.26
Office Expenses	4.10
ROC Fees	9.29
Land related	10.39
Total	873.94

3.3.13 The Petitioner had entered into an agreement with M/s Akasva Infrastructure Pvt. Ltd. for Civil works wherein, the contract value was Rs. 2,215.27 Lakh against which, the Petitioner submitted bills raised by the contractor amounting to Rs. 4,909.31 Lakh including works related to “flood protection & rectification works”. The Commission vide its letter dated 17.04.2018 asked the Petitioner to justify the reason for increase in contracted cost with M/s Akasva vis a vis actual cost by more than 2 times. In response to the same the Petitioner vide its letter dated 27.04.2018 submitted that the contract with M/s Akasva were based on indicative BOQ without detailed engineering and it was clearly mentioned in the contract that actual BOQ shall be applicable for payments.

The Petitioner also cited out certain instances namely under Tunnel and Adits head the BOQ for steel ribs in the contract was 333 MT whereas actual quantity used was 995 MT.

- 3.3.14 In order to establish the merits of reasons/justification submitted by the Petitioner with respect to time and cost-overrun pertaining to the Sarju-II project, and to discuss other related issues, and the “extent of financial loss caused due to cloud burst and heavy rainfall in the year 2011, 2012 & 2013 near Sarju II SHP” and “variation in actual cost incurred vis-à-vis DPR cost mainly with respect to various components of civil works”, the Commission vide various letters and discussions sought the information from the Petitioner. The submissions made by the Petitioner were analyzed and taken into consideration while arriving at the allowable Capital Cost of the project.

The Commission vide its letter dated 17.04.2018, apart from other details, asked the Petitioner to submit the justification for delay in achieving the COD of Sarju II SHP in the light of the fact that works on both the Sarju III and Sarju II SHP of the Petitioner started almost in the same financial year and geographically also both the plants are situated in the same vicinity, however, Sarju III SHP achieved commissioning in the year 2014 whereas it took additional two years for Sarju II to achieve COD. In response to the same the Petitioner vide its letter dated 27.04.2018 submitted that the length of Sarju II tunnel with Adits is 5468 meters, whereas the length of Sarju III tunnel with Adits is 3752 meters. The difference in length of 1756 meters consumed additional construction time of almost 18 months, which is the only time difference between Sarju II and Sarju III SHP as Sarju III was completed in December 2013 and commissioned in July 2014, whereas Sarju II was completed in August 2015 and commissioned in May 2016.

- 3.3.15 The overall expenses under “Civil Works & Other Expenditure” based on the bills/details submitted by the Petitioner was Rs. 9601.58 Lakh (including works undertaken by other miscellaneous contractors), which exceeded the cost envisaged in the DPR of April, 2011 by Rs. 1679.03 Lakh. As discussed earlier under the Petitioner’s submission, the main reasons for cost overrun were “increase in the cost of the material and labour” and “increase in the quantity of material used for construction of the project”. The Petitioner in its reply Petition submitted the details of cost overrun stating that it had to incur additional cost in the form of extra material & works used for the completion of the project due to additional works and restoration/repairs of existing works. Further, additional time consumed to materialize such changes lead to delay in completion of the

project. As submitted by the Petitioner the major amount of additional cost incurred in comparison to cost envisaged in the DPR is as summarized below:

Table 3.5: Details of additional cost (Rs. in Lakh)

S. No.	Particulars	Increase in cost
1	Tunnels & Adits	987.55
2	De-Silting Tank	
	-River Diversion works	19.00
	-Addition Steel Cost	107.53
	-flood works	97.40
	-excavation of de-silting tank	55.37
3	Power House & Trail race (Flood works)	114.95
	TOTAL	1381.80

3.3.16 The Petitioner in support of the capital cost of the Sarju-II SHP as on the date of commissioning of the project produced the certificate dated March 08, 2017 issued by Chartered Accountant firm wherein it had showed the recoveries from insurance companies amounting to Rs. 91.26 Lakh. The same was again re-affirmed by the Petitioner in its reply dated 27.04.2018.

3.3.17 Based on the details/invoices alongwith the contract agreements as discussed above, the Commission is of the view that the cost under the head "Civil works & other expenditure" be allowed on the basis of actual bills/details submitted by the Petitioner after reducing the recoveries from insurance claims made by the Petitioner as the same were uncontrollable in nature and were necessitated by floods and related protection works. Further, the claim of the Petitioner regarding increase in the steel cost due to additional consumption of steel of 201 MT (Appx.) as compared to the quantity envisaged in the DPR, due to which additional cost of Rs. 107.53 Lakh has been incurred on the works related to De-silting tank, lacks proper justification and cannot be supported from the information submitted by the Petitioner. Accordingly, the Commission disallows Rs. 107.53 Lakh under the head "Civil works & other expenditure".

3.3.18 Further, from the details submitted by the Petitioner regarding Preliminary & Preoperative expenses, the Commission observed that an amount of Rs. 13.11 Lakh has been incurred by the Petitioner towards charity & donation which is not an allowable expense for the purpose of Tariff and should be met by the generator out of its own resources. Further, expenditure amounting to Rs. 85.83 Lakh incurred under the head petty expenses, professional expenses, staff welfare expenses & miscellaneous payment

does not appear to be reasonable in the absence of proper justification and, accordingly, the Commission disallows the same. Hence, after adjusting the recoveries from insurance amounting to Rs. 91.26 Lakh, amount incurred towards charity & donations amounting to Rs. 13.11 Lakh and other expenditures of Rs. 85.83 Lakh disallowed as discussed above, the Commission allows an amount of Rs. 9303.85 Lakh under “Civil works & other expenditure”.

3.3.19 Accordingly, based on the analysis as dealt in the preceding Paras, the hard cost of the project works out to Rs. 10947.22 Lakh as against Rs. 11810.50 Lakh claimed by the Petitioner and the same is presented in the table given below:

Table 3.6: Hard Cost allowed by the Commission (Rs. In Lakh)

S. No.	Particulars	Amount (Rs. in Lakh)
1	Land	91.01
2	Transmission System / Transmission Line	197.00
3	Power Plant & Accessories	1104.02
4	Hydro Mechanical Works	251.34
5	Civil Works & Other Expenditure	9395.11
6	Less: Recoveries from Insurance Company	-91.26
7	Net Hard Cost Allowed	10947.22

3.3.20 The Petitioner submitted that it had incurred an amount of Rs. 7569.18 Lakh as Interest During Construction (IDC) against the IDC of Rs. 2391.81 Lakh as projected in the DPR. The Petitioner submitted the bank statement/supporting documents in support of the IDC claimed by it wherein the total interest charged by the financial institutions during the period March, 2008 to May, 2016 was Rs. 7513.44 Lakh excluding the penal interest of Rs. 19.57 Lakh and bank charges amounting to Rs. Rs. 34.92 Lakh levied by the bank. The penal interest charged by the banks is not an allowable item for the purposes of Tariff, accordingly, the same has not been allowed by the Commission. Further, the bank charges on loan account has been claimed by the Petitioner under the head Preliminary & Pre-operative expenses, accordingly, the Commission has also allowed the same under Preliminary & Pre-operative expenses as per the Petitioner’s claim. The IDC being a time linked factor, hence, the Petitioner vide its Petition and further through various submissions made before the Commission provided the reason/justification for the time overruns which were analyzed by the Commission and following view has been taken on the same:

(i) Based on the Supplementary Implementation Agreement and permission for

capacity enhancement granted by GoU the Petitioner was required to achieve commissioning of its project within 18 months from the date 10.02.2010, i.e. by August 2011. However, the same has been completed and put to commercial use w.e.f. May, 2016. Hence, there is substantial delay of more than 55 months in achieving commissioning of the project.

- (ii) Further, with regard to treatment of the impact of cost escalations caused by time overrun, the Commission has decided to take references of the judgment pronounced by Hon'ble APTEL. In this regard, it would be relevant to refer to the judgment April 27, 2011 in Appeal No. 72/2010 of Hon'ble APTEL. Relevant part of the same is reproduced as under:

"7.4. The delay in execution of a generating project could occur due to following reasons:

- i) due to factors entirely attributable to the generating company, e.g., imprudence in selecting the contractors/suppliers and in executing contractual agreements including terms and conditions of the contracts, delay in award of contracts, delay in providing inputs like making land available to the contractors, delay in payments to contractors/suppliers as per the terms of contract, mismanagement of finances, slackness in project management like improper co-ordination between the various contractors, etc.*
- ii) due to factors beyond the control of the generating company e.g. delay caused due to force majeure like natural calamity or any other reasons which clearly establish, beyond any doubt, that there has been no imprudence on the part of the generating company in executing the project.*
- iii) situation not covered by (i) & (ii) above.*

In our opinion in the first case the entire cost due to time over run has to be borne by the generating company. However, the Liquidated Damages (LDs) and insurance proceeds on account of delay, if any, received by the generating company could be retained by the generating company. In the second case the generating company could be given benefit of the additional cost incurred due to time over-run. However, the consumers should get full benefit of the LDs recovered from the contractors/ suppliers of the generating company and the insurance proceeds, if any, to reduce the capital cost. In the third case the additional cost due to time overrun including the LDs and insurance proceeds could be shared between the generating company and the consumer..."

- (iii) So as to establish that the delay in commissioning of the project was on account of controllable factors or uncontrollable factors, the Commission has also analysed

the PERT Chart provided by the Petitioner with respect to the major activities related to the construction of the project, as summarized below:

Table 3.7: Details of schedule vis-à-vis actual duration of major activities

S. No.	Description of work	Scheduled			Actual		
		Start Date	Completion Date	Duration (Days)	Start Date	Completion Date	Duration (Days)
1	HRT						
	U/G Excavation	Dec-08	Aug-11	974	Dec-08	Apr-14	1948
	Lining	Aug-10	Oct-11	427	Aug-10	July-15	1796
	Adit Plugging	July-11	Oct-11	93	May-15	Aug-15	93
2	Power House						
	Civil Work	Jan-10	Aug-11	762	Jan-10	May-14	1582
	Electro-Mechanical	Feb-11	Aug-11	182	Jan-14	Aug-15	578
3	Weir and D-Tank						
	Civil Work	Sep-10	July-15	1765	Sep-10	July-15	1765
	Hydro-Mechanical	Jan-15	July-15	182	Jan-15	July-15	182

(iv) The Petitioner claimed that due to agitation by villagers it was prevented from carrying out any construction activities, despite having executed lease deed with the GoU on 14.11.2007. After various discussions and negotiations, the Petitioner provided village development packages to different villages in the vicinity of the project area and thereafter carried out works related to such village area. The Petitioner submitted that the agitations from villagers continued till the completion of the project and they were from time to time required to negotiate and provide packages to resolve the agitations. The Petitioner further submitted that Uttarakhand Environment Protection and Pollution Control Board (UEPPCB) granted consent to establish the project on 30.04.2008 and it was only after this clearance from the UEPPCB it was in a position to start the actual construction activities. The Respondent submitted that the Petitioner's claim regarding time over run due to agitation by the villagers is not justified and wrongly represented as a factor contributing delay, as the agitation did not last even a month and was way back in the year 2007-08 when the plant of 12.6 MW SHP was not even conceived. The Commission vide its letter dated 07.06.2017 asked the Petitioner to submit a PERT chart in respect of the project depicting all the major activities and milestones, to which the Petitioner vide its reply dated 08.08.2017 provided the PERT chart depicting the major activities with respect to the Project. As per the PERT chart, the Petitioner submitted that its schedule and actual date of start of activities related to the project was December 2008, wherein the civil works related to the power house was commenced. From the aforesaid submission of the

Petitioner it can be seen that since the consent to establish was received from UEPPCB on 21.04.2008, hence, the Petitioner couldn't have started the construction activity prior to that date. However, it is also pertinent to mention that prior to commencement of the construction activity, activities related to procurement of land and setting of offices, advance payment to the contractors, etc. are required to be carried out. Hence, no disallowance of IDC can be made for the period prior to December 2008 since loan disbursement started from the month of March 2008 itself for funding aforesaid activities prior to the start of major activities. Moreover, based on the invoices submitted by the Petitioner, it was observed by the Commission that an expenditure of Rs. 213.64 Lakh (Appx.) in FY 2007-08 and Rs. 1259.37 Lakh (Appx.) in FY 2008-09 were incurred by the Petitioner, that clearly depicts that works related to Sarju II SHP were ongoing during the said period.

- (v) The Petitioner further submitted that the Hon'ble High Court of Uttarakhand passed an order on 16.07.2009, stating that no new stone crushers shall be set-up or established in the State of Uttarakhand. This led to an acute shortage of the aggregate due to which the project of the Petitioner was delayed. The Petitioner further submitted that only after the permission was granted by DM Bageshwar on 21.12.2011 for setting up the stone crushers, the project work could be regained back to normal pace thus delaying the overall project work by 24 months. The Respondent submitted that the delay in obtaining the permission of setting up a non-commercial stone crusher from District Magistrate, Bageshwar is simply due to the lackadaisical approach of the Petitioner as the Petitioner himself has submitted that Hon'ble High Court had allowed the same way back in June, 2010. Moreover, the Respondent submitted that, the implementation agreement regarding 12.6 MW capacity was executed with GoU only on 03.06.2011, and that only upon the execution of implementation agreement any work for the enhanced capacity should have been taken up. The Respondent further submitted that till the end of year 2010, the Petitioner was involved only in enhancing the capacity of the plant and preparing the DPR. The claims of the Petitioner have been examined based on the bills submitted by the Petitioner, wherein it has been observed that Civil works were being carried out continuously by it during the period July 2009 to December 2011 as is evident from the running bill for civil works raised by M/s Akasva Infrastructure Pvt. Ltd. and other contractors, as submitted by the

Petitioner. Further, as can be observed from the above table that all the works related to major civil components of the SHP viz. HRT, Weir Tank, Power House etc. commenced and were under progress during the alleged ban of stone crusher period. Hence, the claim of the Petitioner that the project got delayed due to shortage of aggregate on account of ban on the stone crusher activities is not tenable. Further, it was also observed that during the period August 2009 to November 2011, disbursements were being received regularly by the Petitioner from its banker. Moreover, from the invoices submitted by the Petitioner, the Commission examined that works including civil works were undergoing during the alleged period and bills for the same were also being raised by the contractors/suppliers on regular basis. The Commission is of the view that the justification of the Petitioner for delay in carrying out project related activities due to shortage of aggregate on account of ban on stone crushing activities cannot be held as attributable to fully uncontrollable factors. Accordingly, the Petitioner's claim that the project got delayed due to the stay by Hon'ble High Court of Uttarakhand on crushing activities during the period July, 2009 to December, 2011 is not justified.

The Commission analyzed the submissions of the Petitioner and observed that stone crushing activities in the region were banned in view of the interim Order dated 16.07.2009 of the Hon'ble High Court. The Petitioner preferred an appeal in the year 2010 for an interim relief against the aforesaid Order of the Hon'ble High Court and the Court vide its Order dated 18.06.2010 clarified that the Order dated 16.07.2009 prohibiting stone crushing activities would not cover power projects which were working under an agreement with Government and have necessary clearances and provided that stone crushing activities were not carried out for commercial purposes. Further, after the High Court's Order dated 18.06.2010 the Petitioner was able to secure permission from DM Bageshwar only on 21.12.2011 for setting up stone crusher for its project.

In this regard, the Commission is of the view that the Petitioner should have immediately moved to the Hon'ble High Court for seeking interim relief against the Hon'ble High Court's Order dated 16.07.2009 vide which the stone crushing activities were banned in the region. Notwithstanding the fact that such

prohibition would enormously hamper the Petitioner's ongoing construction activity on account of the project site being remotely located in the hilly region and largely dependent on local quarries, the Petitioner did not show that urgency and approached the Hon'ble High Court in 2010, i.e. almost one year after pronouncement of such prohibitory Orders by the said Hon'ble Court. The Commission feels that the Petitioner should have acted more promptly considering the fact that each day of delay in completion of the project amounts to additional cost towards interest during construction resulting in increase of overall capital expenditure in the project. The High Court vide its Order dated 18.06.2010 provided clarification on its order dated 16.07.2009 and granted relief to the Petitioner. However, another 1.5 years lapsed from the said High Court Order for the Petitioner to secure permission from DM Bageshwar for setting up stone crusher for its project.

Hence, in accordance with the principles laid down in the Hon'ble ATE's above referred Order and in the absence of any satisfactory justification of the Petitioner, the Commission disallows 50% of the average interest cost for 29 months, i.e. from August, 2009 to December, 2011.

- (vi) Further, the Petitioner has submitted that cloud burst and heavy rains in the project vicinity in the July 2011, September 2012 and July 2013 as one of the reasons for time overrun, which had severely affected the project causing heavy loss to the project. The Petitioner has stated that due to repeated cloud burst and extraordinary rainfall, the Sarju river got flooded due to which the project equipment were submerged, the diversion weir of the project was completely submerged and filled with water & sand thus delaying the completion of the project. The Petitioner, further, submitted that cloud burst in July 2013 was declared by the GoU and the Government of India as a national calamity.

In this regard, Respondent submitted that the claims of the Petitioner regarding cloud burst and heavy rains in the vicinity of the project are not relevant and misleading as the same are expected features of weather in the area where the plant is established and cannot be considered as ground for effecting the cost of project.

The Commission, in order to establish the claims of the Petitioner and to examine the extent of damage caused to the Petitioner's project due to the

aforesaid events, vide its letter dated 31.05.2017 asked District Magistrate Bageshwar, UREDA & UJVN Ltd. to provide information alongwith supporting documentary evidence, if any, in respect of the natural calamity caused due to cloud burst & extra-ordinary heavy rainfall citing the nature & extent of damages caused to areas situated in and around 12.6 MW Sarju II SHP during the aforesaid years. Further, as discussed above, documents in support of damages caused by heavy rainfall/flood have also been furnished by the Petitioner.

The Commission took note of the submissions of the Petitioner and the other relevant information sought from various departments in this regard. UJVNL vide its letter dated 24.08.2017 provided the correspondences and progress report with respect to Sarju II project as submitted by the Petitioner. On analyzing the same, the Commission observed that the Petitioner in the progress report dated 09.09.2010 had informed GoU and Urja Cell of the GoU, that due to cloud burst on 18.08.2010 and heavy rain during the month, heavy debris and flood water has entered in the project tunnel and power house. The major approach roads to the tunnels, power house, weir site were washed away by the flood and due to this there is a possibility that the project may be delayed. Further, the Petitioner in its progress report dated 31.12.2013 has informed that apart from damanges due to cloud burst on 18.08.2010 another cloud burst has occurred on 12.09.2012 on top of the tunnel alignment and around the power house of Sarju II which extensively damaged the approach road of the project and again in June 2013 there was heavy flood that resulted in hampering of the project work and eventually delay in achieveing the commissioning of the project.

The Commission also sought information in this regard from DM Bageshwar, in response to which no information with respect to Sarju II project was received from their office. However, in response to Commission's letter dated 26.06.2016 regarding Sarju III project, information regarding cloud burst and heavy rainfall in Kapkote region was received from the office of DM Bageshwar on 08.06.2017. Since, both Sarju II and Sarju III project are in the same vicinity, therefore, the Commission has considered the observation/findings of the report of DM Bageshwar with respect to Sarju III project to be applicable for Sarju II project also. DM Bageshwar in its report has stated that based on the local

intelligence, the cloud burst on 18.08.2010 could have resulted in flooding and washing away of some construction material and machines kept near the plant. The cloud burst on 13.09.2012 has resulted in damage of the protection work of power house. Further, the loss due to cloud burst and heavy rainfall in 2011 and 2013 could not be established based on the local intelligence and on analyzing the office records no evidence as to damage caused to the project is available.

The Commission analysed the second Supplementary IA dated 03.06.2011 entered by the Petitioner with the GoU wherein it has been stated that scheduled COD of the project shall be 18 months from 10.02.2010, i.e. 10.08.2011. Further, the Petitioner has submitted that they were ready for Commissioning as on 01.08.2015, however, due to non-availability of interconnection to be arranged by the UPCL in their system, the Petitioner was not able to declare Commissioning of its project. In this regard, the Commission observed that the Period of delay between the scheduled COD, i.e. 10.08.2011 and the date on which the Petitioner's plant was ready for Commissioning, i.e. 01.08.2015, covering almost 48 months, has been claimed by the Petitioner as time overrun due to natural calamities in the year 2011, 2012 and 2013.

Taking cognizance of the progress reports submitted by the Petitioner to GoU, it has been seen that in the reports, the Petitioner has submitted that cloud burst/calamity occurred on 18.08.2010, 12.09.2012 and June 2013 resulting in hampering of the project work. However, there is no mention of the cloud burst occurrence in July 2011 as mentioned by the Petitioner in the instant Petition. Further, taking cognizance of the District Magistrate (DM), Bageshwar report in the matter, it has been stated by the District Administration that although there have been cloud burst on 18.08.2010 and 13.09.2012 resulting in flooding and washing away of some construction material/machines kept near the plant and damage of the protection work of power house respectively, however, the report of DM has categorically stated that loss due to cloud burst and heavy rainfall in the year 2011 and 2013 could not be established based on the local intelligence reports and has further stated in its report that on analysing the office records, no evidence as to damage caused to the project is available.

Based on the above, the Commission observes that in the reports of the

Petitioner submitted to the Government there is mention of cloud burst on 18.08.2010, 12.09.2012 and June 2013, whereas there is no mention of cloud burst in July 2011. Further, in the report of DM although there is mention of cloud burst on 18.08.2010 and September 2012, however, it has been categorically mentioned that there has been no loss to the project due to cloud burst in 2011 and 2013. Therefore, the claim of the Petitioner that time overrun from year 2011 to 2015 was on account of cloud burst/natural calamities in the year 2011, 2012 and 2013 could not be established as fully attributable on account of reasons beyond the control of the Petitioner or reasons fully attributable to the Petitioner. Hence, in accordance with the principles laid down in the Hon'ble ATE's above referred Order and in the absence of any satisfactory justification of the Petitioner, the Commission disallows 50% of the average interest cost for 48 months, i.e. from August, 2011 to July, 2015.

Accordingly, the Commission disallows 50% of the average interest cost for the period August, 2009 to July, 2015 covering almost 72 months which works out to Rs. 2732.16 Lakh.

- (vii) With regard to LILO connectivity on Kapkote-Karmi line, the Commission analysed the submission made by the Petitioner and the Respondent and observed that the Petitioner was continuously writing to UPCL for grant of connectivity on Kapkote-Karmi line since June, 2015 vide its letter dated 23.06.2015, 11.07.2015, 10.09.2015, 15.11.2015, 22.12.2015, 12.01.2016 & 19.01.2016, however UPCL did not respond to the same on even a single occasion. Further, vide its letter dated 21.08.2018, the Respondent has informed that the Kapkote-Karmi line was energized only on 18.11.2015.

The Petitioner had submitted that it was ready for commissioning on 01.08.2015, however, it could not commission the project since UPCL failed to provide the interconnection to the Petitioner's project in accordance with the Commission's directions in the Orders dated 02.07.2015 and 11.09.2015 to allow LILO connectivity as ad-interim arrangement. The connectivity was subsequently granted and the meter at the interconnection point was installed by UPCL only on 28.05.2016 and thereby enabling commissioning of the project on the said date. In this regard, the Respondent submitted that the delay was on the part of the Petitioner and the permission for LILO connectivity was an exception and did not

absolve the Petitioner of its contractual obligations. The Respondent further submitted that even after considering the relaxation given by the Commission vide Order dated 02.07.2015 the project cannot be considered as completed till the construction of LILO infrastructure and its adequate clearance from Electrical inspector. UPCL also stated that the Petitioner had completed the formalities regarding Electrical Inspector clearance only in February, 2016 and the clearance was obtained only in March, 2016, accordingly, the claim of the Petitioner that delay was on part of UPCL is not justified. It was also submitted that the Petitioner was communicating with UPCL for grant of connectivity even when the Petitioner was not ready with their LILO evacuation facility. In this regard, the Commission is of the view that there is no denial that by way of LILO connectivity, the Petitioner cannot be absolved of its contractual obligations & the same view was also held by the Commission in its Order dated 11.09.2015. However, to avoid bottling up of generation, the Commission had allowed connectivity as an ad-interim arrangement vide its Order dated 02.07.2015 to the Petitioner so as to enable it to commission the Sarju-II SHP. In this regard, the Commission would like to state that UPCL was directed by the Commission vide its Order dated 02.07.2015 and 11.09.2015 to allow LILO connectivity to the Petitioner as an ad-interim arrangement, however, UPCL never informed the Petitioner that it was ready to allow such LILO connectivity to it. Had UPCL informed the same, and then the Petitioner would have delayed the commissioning the fault would have been on the part of the Petitioner. Moreover, Kapkote-Karmi line on which the LILO connectivity was to be allowed was not energized at that time. Furthermore, the contention of the UPCL that the Petitioner applied for Electrical Inspector clearance only in February, 2016 instead of applying for the same in July 2015 itself does not hold good, since the Kapkote-Karmi line got energized only on 18.11.2015, therefore, it does not make much difference even if the Petitioner would have got the clearance from Electrical Inspector prior to that period since the commissioning of the project was not possible without energization of Kapkote-Karmi line. Further, the Petitioner was continuously writing to UPCL for grant of inter-connectivity since June 2015 and UPCL did not respond to any of the letters of the Petitioner, rather vide its letter dated 24.07.2015 UPCL informed the Petitioner that for Sarju II SHP the evacuation was proposed on new parallel line (panther

conductor) between Kapkote to Bageshwar which was to be constructed. Moreover, even after the Commission's Order dated 02.07.2015 and 11.09.2015 to grant inter-connectivity to the Petitioner's Sarju II SHP, UPCL did not take any steps in this regard and neither informed the Petitioner nor the Commission that Kapkote-Karmi line was yet to be energized and allowing LILO connectivity would not be possible. Hence, the reason for delay in getting the project commissioned beyond August, 2015 has been established as not attributable to the Petitioner and, accordingly, the Commission has treated this delay as uncontrollable.

3.3.21 The Petitioner submitted its financial statements from FY 2007-08 to FY 2016-17. The Petitioner was asked to submit the details of other income as per the Audited Balance sheet of the company, in response to which the Petitioner vide its letter dated 11.05.2018 submitted the same. The Commission based on the details submitted by the Petitioner observed that an amount of Rs. 30.14 Lakh has been earned from interest on deposits during the said period with respect to Sarju II project. The Commission is of the view that since the said income pertains to the period of construction of the project, hence, based on the accounting principles, the same should be reduced from the capital cost of the project.

3.3.22 The IDC arrived at after reducing the penal interest has been prorated in the ratio between the "actual capital cost allowed (Hard Cost)" and "the capital cost claimed by the Petitioner (Hard Cost)"

3.3.23 The Commission in view of the above allows the IDC to the Petitioner as detailed below:

Table 3.8 : Interest During Construction allowed by the Commission (Rs. in Lakh)

Particulars	State Bank of India	Bank of India	SBI & SBS FCNB	Interest on OD	Total
Interest Booked (less of penal interest) for approx 99 months i.e. March 2008 to May 2016	4226.70	1816.21	1365.78	104.76	7513.44
Interest Cost Prorated on the allowed capital cost					6964.25
Less: 50% of Average Interest for 72 Months disallowed					-2732.16
Net Interest Cost Allowed					4232.09

3.3.24 In view of the above discussion, the total cost allowed to the Petitioner as on CoD is as summarized below:

Table 3.9: Capital Cost allowed by the Commission (Rs. In Lakh)

S. No.	Particulars	Amount (Rs. In Lakh)
1	Land	91.01
2	Transmission System / Transmission Line	197.00
3	Power Plant & Accessories	1104.02
4	Hydro Mechanical Works	251.34
5	Civil Works & Other Expenditure	9395.11
6	Less: Recoveries from Insurance Company	-91.26
7	Net Hard Cost Allowed	10947.22
6	Interest During Construction	4232.09
7	Less: Other Income	30.14
Total		15149.18

3.4 MNRE Grant

3.4.1 Regulation 24 of RE Regulations, 2013 specifies as under:

“The Commission shall take into consideration any incentive or subsidy offered by the Central or State Government, including accelerated depreciation benefit if availed by the generating company, for the renewable energy power plants while determining the tariff under these Regulations.

Provided that only 75% of the capital subsidy for the financial year of commissioning as per applicable scheme of MNRE shall be considered for tariff determination.

...”

3.4.2 The Commission in this regard, had asked the Petitioner to submit full details of any subsidy and incentive received, due or assumed to be due from the Central Government and/or State Government. The Petitioner in this regard submitted communication dated 09.12.2016 and 06.04.2017 between the Petitioner and the MNRE wherein the Petitioner has submitted intimation to MNRE for depositing 50% of the amount of capital subsidy in the form of Bank Guarantee for release of capital subsidy. The Petitioner also submitted that as per Govt. guidelines the subsidy eligible for its project works out to Rs. 548 Lakh and the same has been considered by the Commission and also the Petitioner for the purposes of tariff determination in accordance with the Regulations.

3.5 Debt-Equity Ratio

3.5.1 Regulation 15 of RE Regulations, 2013 specifies as under:

“(2) Debt-Equity Ratio

The debt-equity ratio for generic and project specific tariff shall be as follows:

(a) For generic tariff debt-equity ratio shall be 70:30.

(b) For project specific tariff, the following provisions shall apply:

If the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as normative loan.

Provided that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff.

Provided further that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment.

(3) Subsidy available from MNRE, to the extent specified under Regulation 24, shall be considered to have been utilized towards pre-payment of debt leaving balance loan and 30% equity to be considered for determination of tariff.

Provided further that it shall be assumed that the original repayments shall not be affected by this prepayment.

(4) The amount of subsidy shall be considered for each renewable source as per the applicable policy of MNRE. If the amount of subsidy is increased or reduced by MNRE, then necessary corrections in tariffs would be carried out by the Commission provided the reduction in subsidy amount is not due to the inefficiency of the generating company."

3.5.2 As per the Petitioner's submission, the actual equity of Rs. 5752 Lakh has been deployed, as per the CA certificate dated 30.06.2017, to finance the capital cost as on CoD. The Commission has worked out the capital cost on CoD as Rs. 14902.42 Lakh and additional cost for Transmission line, which has been, incurred post COD as Rs. 246.76 Lakh. The proportion of equity in the total approved cost of Rs. 15149.18 (Rs. 14902.42 + Rs. 246.76) works out to 37.97% which is in excess of 30%. Accordingly, in accordance with the Regulations, equity is capped to 30% of the capital cost and equity in excess of 30% is treated as normative loan having terms similar to the actual loan portfolio.

3.5.3 Accordingly, financing of the capital cost as on CoD and additional cost for Transmission line incurred post COD has been considered to be met out from Rs. 4544.75 Lakh as equity and loan of Rs. 10604.42 Lakh.

3.6 Depreciation

3.6.1 For the purpose of computation of depreciation, Regulation 17 of RE Regulations, 2013 specifies as under:

"(1) For the purpose of tariff, depreciation shall be computed in the following manner, namely:

(a) The value base for the purpose of depreciation shall be the capital cost of the project as admitted by the Commission.

- (b) *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.*
- (c) *Depreciation per annum shall be based on 'Differential Depreciation Approach' over loan tenure and period beyond loan tenure over useful life computed on 'Straight Line Method'. For generic tariff the depreciation rate for the first 12 years of the Tariff Period shall be 5.83% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 13th year onwards.*
- (d) *Depreciation shall be chargeable from the first year of commercial operation.*
Provided that in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis for computation of project specific tariff.
- (2) *75% of the Capital subsidy received by the generator shall be reduced from the capital cost for depreciation purposes."*

3.6.2 In accordance with the above referred Regulations, depreciation for the first 12 years of the tariff period has been computed @ 5.83% per annum of the approved Capital Cost of Rs 15149.18 Lakh, further reduced by 75% of the capital subsidy of Rs. 548.00 Lakh. The balance depreciation has been spread over the remaining useful life of the project. Depreciation as approved by the Commission has been shown in enclosed **Appendix-I**.

3.7 **Return on Equity (RoE)**

With regard to computation of RoE, Regulation 18 of RE Regulation, 2013 specifies as under:

- "(1) The value base for the equity shall be as determined under Regulation 15(2).*
- (2) The Return on Equity shall be:*
- (a) Pre-tax 20% per annum for the first 10 years.*
- (b) Pre-tax 24% per annum 11th year onwards."*

Accordingly, return on equity on the equity deployed in the capital cost have been computed in accordance with the Regulations. The approved RoE is shown in enclosed **Appendix-I**.

3.8 **Interest on Loan**

3.8.1 The amount of Loan including normative loan has been worked out towards the approved project cost in accordance with Regulation 15 of the RE Regulations, 2013 as already discussed in Para 3.5.3 above.

3.8.2 Further, Regulation 15(3) of RE Regulations, 2013 specifies as under:

“Subsidy available from MNRE, to the extent specified under Regulation 24, shall be considered to have been utilized towards pre-payment of debt leaving balance loan and 30% equity to be considered for determination of tariff.

Provided further that it shall be assumed that the original repayments shall not be affected by this prepayment.”

3.8.3 Accordingly, from the loan amount worked out in Para 3.5.3 above, 75% of the capital subsidy of Rs. 548.00 Lakh has been considered as utilized towards pre-payment of debt in accordance with the Regulations.

3.8.4 However, as discussed in Petitioner’s submission above, the Petitioner has requested that in case the subsidy is not received, the capital cost may be adjusted accordingly. The same may be reviewed in accordance with Regulation 15(4) of RE Regulations, 2013 which is reproduced hereunder:

“The amount of subsidy shall be considered for each renewable source as per the applicable policy of MNRE. If the amount of subsidy is increased or reduced by MNRE, then necessary corrections in tariffs would be carried out by the Commission provided the reduction in subsidy amount is not due to the inefficiency of the generating company.”

3.8.5 Interest on Loan has been worked out in accordance with Regulation 16 of RE Regulations, 2013 which is reproduced hereunder:

“16. Interest on loan capital

(1) The loans arrived at in the manner indicated in Regulation 15(2) shall be considered as gross normative loan for calculation of interest on loan. The normative loan outstanding as on 1st April of every year shall be worked out by deducting the cumulative repayment up to 31st March of previous year from the gross normative loan.

(2) For the purpose of computation of generic tariff, the normative interest rate shall be considered as average State Bank of India (SBI) Base Rate prevalent during the first six months of the previous year plus 300 basis points.

For the purpose of computation of project specific tariff, interest rate shall be considered as lower of the actual interest payable to the financial institutions or the average State Bank of India (SBI) Base Rate prevalent during the first six months of the previous year plus 300 basis points

(3) Notwithstanding any moratorium period availed by the generating company, the repayment of loan is being considered from the first year of commercial operation of the project and shall be equal to the annual depreciation allowed.

While calculating project specific tariff, notwithstanding any moratorium period availed by the generating company, the repayment of loan shall be considered from the first year of commercial

operation of the project and shall be equal to the annual depreciation allowed or actual repayment made, whichever is higher.

(4) Normative period of loan repayment shall be taken as 12 years."

3.8.6 The Commission has worked out the rate of interest in accordance with Regulation 16(2) of RE Regulations 2013, which works out to 12.76%. As per the Petitioner's submission made in the Petition the actual rate of interest levied by its lead banker, i.e. SBI & BOI is 14.50%. The Respondent submitted that the claim of the Petitioner with regard to the higher interest rate and the request for relaxation in existing regulations is arbitrary and not acceptable as the laid down principles are uniform and similar for all the generators. The Commission takes note of the submission of the Respondent. Since the normative rate of interest is lower than the actual rate payable to the financial institution, therefore, the Commission has allowed interest on loan from the date of commissioning of the project at the rate of 12.76% per annum. Further, loan repayment has been considered as annual depreciation allowed or actual repayment schedule of the loan, whichever is higher, as per above referred regulations.

3.8.7 The approved interest on loan for the tariff period is shown in the enclosed **Appendix-I**.

3.9 **Operation & Maintenance (O&M) Expenses**

3.9.1 For projecting the O&M expenses, relevant provisions of RE Regulations, 2013 are as under:

"20. Operation and Maintenance expenses

(1) Operation and maintenance expenses for the year of commissioning shall be determined based on normative O&M expenses specified by the Commission under Chapter 5 for different technologies for the first Year of Control Period, i.e. for FY 2013-14. These expenses shall be escalated @ 5.72% p.a. to arrive at O&M expenses for the ensuing years.

(2) Normative O&M expenses allowed for the year of commissioning shall be escalated at the rate of 5.72% p.a. to determine the O&M expenses for the different years of the Tariff Period."

3.9.2 Further, Regulation 28 of RE Regulations, 2013 specifies O&M expenses @ Rs 22.73 Lakh/MW for the SHPs commissioned on or after April 01, 2013 having capacity in the range of 5 MW to 15 MW. Subsequently, the Commission issued the Sixth amendment to the RE Regulations, 2013 which inter alia amends Regulation 28 of the RE Regulations and specifies O&M expenses @ Rs 30.00 Lakh/MW for the SHPs commissioned on or after April 01, 2013 having capacity in the range of 5 MW to 15 MW. The said

amendment was effective from the date of notification, i.e. 23.09.2017.

3.9.3 The Petitioner vide its submission dated 29.09.2017 requested before the Commission to consider the amended O&M cost as notified by the Commission vide Sixth amendment to the RE Regulations, 2013.

3.9.4 In accordance with the above referred Regulations and the subsequent amendments thereof, O&M expenses as approved by the Commission for the tariff period of the project is shown in enclosed **Appendix-I**.

3.10 Interest on Working Capital

3.10.1 Regulation 19 of RE Regulations, 2013 specifies as under:

19. Interest on Working Capital

(1) The Working Capital requirement in respect of wind energy projects, small hydro power, Solar PV, Canal Bank and Canal Top Solar PV, Solar thermal and grid interactive roof top and small solar PV power projects shall be computed in accordance with the following:

(a) Operation & Maintenance expenses for one month;

(b) Receivables equivalent to 2 (Two) months of energy charges for sale of electricity calculated on the normative CUF;

Provided for determination of project specific tariff sale of electricity will be calculated based on the CUF envisaged in the approved DPR or the normative CUF specified for the relevant technology under Chapter 5, whichever is higher.

(c) Maintenance spare @ 15% of operation and maintenance expenses

.....

3) Interest on Working Capital shall be at interest rate equivalent to the average State Bank of India Base Rate prevalent during the first six months of the previous year plus 350 basis points.

3.10.2 In accordance with the above mentioned Regulations, components of working capital for each financial year during tariff period have been computed. Further, as specified in above mentioned Regulations, the rate of interest as computed based on the aforesaid regulation works out to 13.26%, which has been considered for working out the interest on working capital. Interest on Working Capital (IWC) as approved by the Commission is given in enclosed **Appendix-I**.

3.10.3 Based on the analysis and computation of Annual Fixed Charges (AFC) as described above for the Tariff Period of 35 years, yearly AFC as approved by the Commission is as shown in enclosed **Appendix-I**.

3.11 Annual Tariff

Based on the AFC and saleable energy as approved by the Commission, annual tariff for the period of 35 years has been determined as shown in enclosed **Appendix-I**.

3.12 Discounting Factor

3.12.1 Regulation 14 of the RE Regulations, 2013 specifies as under:

“ ...

(6) For the purpose of levelised tariff computation, the discount factor equivalent to weighted average cost of capital shall be considered. For determination of weighted average cost of capital, the pre-tax return on equity would be adjusted for tax at the applicable rates.

...”

3.12.2 Based on the above referred Regulation, the Discounting Factor for 35 years has been worked out for each year based on the post tax weighted average cost of capital (WACC) of each year during the life of the project and the same has been shown in enclosed **Appendix-I**.

3.13 Levelised Tariff

In light of the above discussions & computation made for Annual Fixed Charges (AFC), Annual Tariff & Discounting Factors, levelised tariff for the entire life of the project has been computed which comes out to Rs. 5.87 per unit against the proposed levelised tariff of Rs 7.46 per unit.

3.14 Date of applicability of tariff

The tariff so determined will be applicable w.e.f 28.05.2016 being the date of COD of the project, and shall be valid for a period of 35 years from this date.

3.15 Payment of arrears

3.15.1 The difference in the project specific levelised tariff determined by this Order and the generic tariff being paid to the Petitioner till date is hereby allowed to be recovered by the Petitioner from UPCL as arrears for the past period who shall pay the same in six equal installments commencing from September, 2018.

3.16 Incentive for generation beyond normative PLF

3.16.1 As per Regulations, the tariff for generation beyond normative PLF shall be allowed to be recovered at the project specific tariff determined by the Commission in this Order.

4. The Petition is disposed off accordingly.

(Subhash Kumar)
Chairman

Appendix-I

Particulars	Unit	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
Year		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Installed Capacity	MW	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
Net Generation	MU	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	49.17	44.26	44.26
AFC																		
O&M Expenses	Rs. Lakh	286	368	422	447	472	499	528	558	590	624	659	697	737	779	824	871	920
Depreciation	Rs. Lakh	845	845	845	845	845	845	845	845	845	845	845	845	126	126	126	126	126
Interest on Term Loan	Rs. Lakh	1225	1111	948	783	613	456	312	160	41	0	0	0	0	0	0	0	0
Interest on Working Capital	Rs. Lakh	83	85	84	82	79	77	75	74	73	73	80	82	67	70	72	75	77
Return on Equity	Rs. Lakh	894	909	909	909	909	909	909	909	909	909	1091	1091	1091	1091	1091	1091	1091
Total Fixed Cost	Rs. Lakh	3333	3319	3209	3066	2918	2786	2670	2546	2458	2451	2675	2715	2021	2066	2112	2162	2215
Per Unit Tariff Components																		
PU O&M Expenses	Rs. p.u.	5.82	7.49	8.59	9.08	9.60	10.15	10.73	11.35	12.00	12.68	13.41	14.17	14.98	15.84	16.75	17.71	18.72
PU Depreciation	Rs. p.u.	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19	17.19	2.56	2.56	2.56	2.56	2.56
PU Interest on Term Loan	Rs. p.u.	24.91	22.60	19.28	15.93	12.46	9.27	6.35	3.26	0.84	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PU Interest on Working Capital	Rs. p.u.	1.68	1.72	1.71	1.66	1.61	1.57	1.53	1.50	1.48	1.49	1.62	1.66	1.37	1.42	1.47	1.52	1.57
PU Return on Equity	Rs. p.u.	18.18	18.48	18.48	18.48	18.48	18.48	18.48	18.48	18.48	18.48	22.18	22.18	22.18	22.18	22.18	22.18	22.18
Total Fixed PU Components	Rs. p.u.	67.79	67.49	65.25	62.35	59.35	56.67	54.29	51.78	49.99	49.85	54.40	55.21	41.10	42.01	42.96	43.97	45.04
Levellised Tariff																		
WACC (%)		11.85%	11.99%	12.20%	12.46%	12.81%	13.23%	13.74%	14.50%	15.35%	15.73%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%
Discounting Factor	Rs./kWh	1.00	0.89	0.80	0.71	0.63	0.55	0.49	0.43	0.37	0.32	0.28	0.24	0.21	0.18	0.15	0.13	0.11
Discounted Tariff		6.78	6.75	6.53	6.23	5.93	5.67	5.43	5.18	5.00	4.99	5.44	5.52	4.11	4.20	4.30	4.89	5.00
Levellised Tariff	Rs./kWh	5.87																

Particulars	Unit	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Year		18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Installed Capacity	MW	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
Net Generation	MU	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26	44.26
AFC																			
O&M Expenses	Rs. Lakh	973	1029	1088	1150	1216	1285	1359	1436	1519	1605	1697	1794	1897	2005	2120	2241	2370	2505
Depreciation	Rs. Lakh	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126	126
Interest on Term Loan	Rs. Lakh	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Interest on Working Capital	Rs. Lakh	80	83	87	90	93	97	101	105	110	115	120	125	130	136	143	149	156	163
Return on Equity	Rs. Lakh	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091	1091
Total Fixed Cost	Rs. Lakh	2270	2329	2391	2456	2526	2599	2677	2759	2845	2937	3034	3136	3244	3358	3479	3607	3742	3885
Per Unit Tariff Components																			
PU O&M Expenses	Rs. p.u.	21.99	23.25	24.58	25.98	27.47	29.04	30.70	32.46	34.31	36.28	38.35	40.54	42.86	45.31	47.91	50.65	53.54	56.61
PU Depreciation	Rs. p.u.	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85	2.85
PU Interest on Term Loan	Rs. p.u.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
PU Interest on Working Capital	Rs. p.u.	1.81	1.88	1.95	2.03	2.11	2.20	2.29	2.38	2.48	2.59	2.70	2.82	2.95	3.08	3.22	3.37	3.53	3.69
PU Return on Equity	Rs. p.u.	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65	24.65
Total Fixed PU Components	Rs. p.u.	51.30	52.62	54.02	55.51	57.07	58.73	60.48	62.33	64.29	66.36	68.55	70.86	73.30	75.89	78.62	81.51	84.56	87.79
Levelling Tariff																			
WACC (%)		15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%	15.69%
Discounting Factor	Rs./kWh	0.10	0.09	0.07	0.06	0.06	0.05	0.04	0.04	0.03	0.03	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
Discounted Tariff		5.13	5.26	5.40	5.55	5.71	5.87	6.05	6.23	6.43	6.64	6.85	7.09	7.33	7.59	7.86	8.15	8.46	8.78
Levelling Tariff	Rs./kWh																		