

Before

UTTARAKHAND ELECTRICITY REGULATORY COMMISSION

In the matter of:

Petition seeking adjustment of tariff for Vanala Small Hydro Power Project (15 MW) unit of M/s Him Urja Pvt. Ltd. as per Section 61 and 62 of the Electricity Act, 2003 read with Regulation 14 & 15 of UERC (Tariff and Other Terms for supply of Electricity from Renewable Energy Sources and Non fossil fuel based Co- generating Stations) Regulations, 2010, as amended from time to time seeking revision of tariff.

In the matter of:

M/s Him Urja Pvt. Ltd.

... Petitioner

AND

In the matter of:

Uttarakhand Power Corporation Ltd.

... Respondent

CORAM

Shri Subhash Kumar Chairman

Date of Hearing: March 10, 2017

Date of Order: May 17, 2018

The Order relates to the Petition dated 30.01.2017 filed by M/s Him Urja Pvt. Ltd. (hereinafter referred to as "Petitioner") seeking adjustment of tariff for Vanala Small Hydro Power Project (15 MW) (hereinafter referred to as "Project") of the Petitioner, necessitated due to additional capital expenditure incurred from FY 2013-14 to 07.07.2016, for rectifying catastrophic damages caused to the plant by the unprecedented natural calamity/floods that occurred in Uttarakhand State in June & July, 2013.

1. Background and Petitioner's Submissions

1.1 The Petition was filed under Section 61 and 62 of Electricity Act 2003 read with Regulation 15(9) of UERC (Tariff and Other Terms for Supply of Electricity from Non-conventional and Renewable Energy Source) Regulations, 2010 ("RE Regulations, 2010") as amended from time to time. The Petitioner had commissioned its project on river

Nandakini, District Chamoli, Uttarakhand, having an installed capacity of 15 MW in December, 2009, which is presently connected to 66 kV Srinagar-Joshimath transmission line at Mangrauli sub-station near Nandprayag, Chamoli.

- 1.2** The Petitioner submitted that it had entered into a PPA with Uttarakhand Power Corporation (hereinafter referred to as “Respondent” or “UPCL”) on 21.12.2012 for sale of power to UPCL as per the directions of the Commission based on the project specific tariff in accordance with RE Regulations, 2010 and the project specific tariff was determined by the Commission vide Order dated 10.04.2014 at the rate of Rs. 4.00/kWh per unit in accordance with RE Regulations, 2010.
- 1.3** The Petitioner submitted that the disaster struck in June/ July 2013 causing widespread damages in the State of Uttarakhand. The catchment of all the rivers flowing from Uttarakhand received very heavy rainfall upto 700 mm in three days causing very heavy floods which resulted in widespread flooding and devastation of untold magnitude. Many hydro power projects were also affected due to the disaster.
- 1.4** The Petitioner submitted that its Vanala small hydro project was shut down in the night of June 15, 2013 due to heavy flood in the river Nandakini. During the night of 16/17 June 2013 the D Tank of the project Vanala was severely damaged and intimation was sent to insurance company accordingly. The main access road from Rishikesh to Nandprayag was breached and damaged at many locations and it was not possible to transport materials from Rishikesh. The damages occurred at the weir were not accessible, therefore, it remained un-assessed at that time.
- 1.5** The Petitioner submitted that it was a series of cloudburst that happened in the area on 15 July, 2013. There were as many as 20 cloudbursts in the project area at around 7.30 a.m. on that day. The entire area was totally cut off as many bridges were washed away and the roads were cut off due to numerous landslides. The entire project area was covered with landslides and mudslides. The main bridge on the Nandprayag Ghat Road which is an access road for the project was washed away. The site was totally inaccessible except on foot. The main Rishikesh Badrinath highway was severely breached at Srinagar, Kameda, Paglanala, Tangdi etc. causing total disruption of traffic from Rishikesh. The main bridge on the Nandprayag Ghat road was temporarily constructed by army in Sept 2013 and the road was opened to traffic.

- 1.6** The Petitioner submitted the following details of the damages to the structure of the project:
- (a) The Diversion weir was totally damaged;
 - (b) The Feeder Channel was damaged and the entire bed of the feeder channel was washed away alongwith the protection walls;
 - (c) Transition of the D-tank and the floor was washed away;
 - (d) The RCC Channel was damaged at few places;
 - (e) The Bellmouth area totally subsided with landslides covered the area;
 - (f) The pipe having total length of 2200m was damaged having different degree of damage. About 700 m length was totally damaged whereas in other area the surrounding bed of the pipe was washed away or subsided. The hill through which pipe was passing subsided by as much as 2 to 4m;
 - (g) The power house was flooded necessitating replacement/repair of machines and equipment;
 - (h) The stability of the structures which were not damaged was threatened as the underlying strata had weakened and/or washed away.
- 1.7** The Petitioner submitted that it had started the assessment of the damages in August 2013 as also to prepare methodology for restoration of the project. The DPR was prepared considering suitable protective and remedial measures required to restore/strengthen the foundations which were adversely affected due to disaster and to minimise such losses in future.
- 1.8** The Petitioner submitted that the capital cost of the works to be completed had been estimated at Rs. 46.77 Crore and out of this cost the claim of the insurance company has been settled at Rs. 5.57 Crore. The Petitioner further submitted that it had defaulted in servicing of the loan from the financial institution as the project was shut down and there was no revenue stream available. L&T Infrastructure Finance Company Ltd. sanctioned additional loan of Rs. 22.00 Crore in September 2013 for restoration of project and for servicing of loan in accordance with the circular of the Reserve Bank of India which stipulated support to units in distress due to natural calamities.

1.9 The Petitioner submitted that the restoration work was started in the month of June 2013 itself after first disaster but the second disaster on July 2013 had put everything on hold as the entire communication system of roads etc in the valley were damaged. The expert team of the Petitioner could visit the site only in the month of August 2013 to assess the damages. In the month of September, 2013 after opening of roads the work of restoration started once again. The Petitioner submitted that the emphasis was to start generation as early as possible, therefore, the works which were bare minimum required to restore generation were completed in March 2014 and the generation of the project started. The Petitioner further submitted that the plant had to be shut down from time to time whenever required to carry out the repairs.

1.10 The Petitioner submitted that it had faced constraints resulting in slow progress of work. There was no approach road to the site. The material had to be carried across the river through ropeway and thereafter on head load or through another ropeway. Further, the work was very labour intensive as the material were carried on head load or through cable ways to large distance upto 2.5 km.

1.11 The Petitioner submitted that it has capitalised the capital works in progress in the books of account amounting to Rs. 22.05 Crore as on 07.07.2016. Details of expenditure incurred from the date of disaster till 07.07.2016 is as follows:

Table-1: Statement of Additional Expenses incurred for Vanala Project

(Rs. In Crore)

S. No.	Particulars	2013-14	2014-15	2015-16	2016-17 (07.07.2016)	Total
1	Materials including its freight					
(a)			1.03	2.54	1.17	4.74
(b)	Structural Steel		0.14	0.18	0.12	0.44
(c)	Reinforcement		0.09	0.07	0.20	0.36
(d)	Other Materials & Consumables		1.01	1.88	0.22	3.11
2	Salary & Wages		1.54	5.04	0.86	7.44
3	Electro Mechanical Equipments		0.00	0.30	0.24	0.54
4	Other Expenses					
(a)	Hire Charges of Equipment & Vehicles		0.19	0.73	0.18	1.10
(b)	Repair & Maintenance of Equipments & Vehicles		0.09	0.14	0.01	0.23
(c)	Vehicle Running Expenses		0.14	0.07	0.02	0.23
(d)	Freight & Cartage		0.00	0.06	0.00	0.06
(e)	Mining Royalty		0.00	0.02	0.00	0.02
(f)	NAP Land		0.07	0.04	0.00	0.12
(g)	Wire Screens		0.00	0.00	0.28	0.28
5	Bill of Contractor for restoration of damages occurred in June-2013	4.87	2.16	0.00	0.00	7.03
6	Sub-total	4.87	6.46	11.06	3.31	25.71
7	Less Amount recd from Insurance Co.	1.50	4.07	0.00	0.00	5.57
8	Net Amount spent (6-7)	3.37	2.39	11.06	3.31	20.14
9	Interest during Construction	0.00	0.00	1.29	0.62	1.91
10	Total Expenses incurred (8+9)	3.37	2.39	12.35	3.93	22.05
	Cumulative Expenses	3.37	5.76	18.12	22.05	

- 1.12** The Petitioner submitted that it was not possible to work out the interest during construction (IDC) directly attributable to the restoration work because funds received from the financial institution have been utilized both for restoration of the project as well as for servicing the loan. Accordingly, the Petitioner requested the Commission to work out the IDC based on normative 70% debt month to month of the actual cost incurred on restoration. The Petitioner, further, submitted that most of the restoration work had been carried out departmentally to save the cost by way of taxes and contractor's profit.
- 1.13** The Petitioner submitted that the work of restoration has not created any new asset capable of generating additional power capacity and no new generation capacity has been added to the project. The capacity to generate power remained the same as before at 15 MW. The existing assets were strengthened, the under lying foundation strengthened and protection against future disaster to minimize the loss and consequent loss of generation.
- 1.14** The Petitioner submitted that it is entitled to relief in terms of the Regulation 14 and Regulation 15 as well as proviso to the Regulation 15 (9) of RE Regulations, 2010 as amended from time to time. The Petitioner further submitted that the bar of additional capitalization as contained in the regulation 15(9) is not applicable to it as the bar is for the normative tariff whereas the tariff of the Petitioner is not normative but project specific. The distinction between generic/normative tariff and project specific tariff has clearly been spelled out in the Regulation 11 of RE Regulations, 2010 which specifies as under:

"11. Tariffs

(1) xxx

(2) *The RE Based Generating Stations and Co-generating Stations, except those mentioned under Proviso 1 & 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"*

- 1.15** The Petitioner submitted that the disaster occurred once again in the project area on 20.06.2016 and 01.07.2016 causing widespread damage to the projects being operated by the Petitioner. The Vanala project was shut down since 20.06.2016 and repair works were being carried out. The Petitioner further submitted that the floods in year 2016 were much higher than the year 2013 floods. The discharge in the river as measured at the weir site of Rajwakti Project was about 1500 cumecs as against the peak flood discharge of 50 year

period as per DPR was only about 900 cumecs. The loss during 2016 disaster to the pipeline had been only 80m as against about 600m during the 2013 disaster though the landslides occurred across the pipeline but it was able to withstand the landslides.

- 1.16** The Petitioner submitted that the occurrence of changing of the course of the river was stipulated in the DPR but before the Petitioner could act on the threat second disaster happened and the river was totally blocked by the debris and changed its course. Upon blocking of the river a pond of water having depth of more than 10 m was formed behind the diversion weir and that broke with the pressure of the water and caused widespread damage to the project structures as well as roads and bridges downstream the diversion weir.
- 1.17** The ferocity of the cloudburst was so severe that a rivulet having catchment area of about 4 sq. km carried discharge of about 200 cumecs with boulders of the size of 6m across and blocked the main river having catchment area of about 500 sq km. The debris carried in the rivulet was so large that the entire area of about 200x200m was filled with boulders to a height of about 10m. This area included the feeder channel, D tank and diversion weir of the project. The Petitioner further submitted that in catastrophic disaster like those occurred in the project area it was not possible to insulate the project totally against any form of loss but the restoration works proposed by the Petitioner can definitely minimize the loss to the project and consequent loss of generation.
- 1.18** The Petitioner submitted that the cost to be incurred in restoration of the project and the claim to be received from the insurance companies is yet to be worked out for the disaster occurred in year 2016. The Petitioner sought liberty to file the additional claims, if any, at a future date. The Petitioner further submitted that it has suffered huge damages during the disaster of year 2013 and subsequently in year 2016 due to unprecedented heavy floods, landslides and cloudbursts. The Petitioner was badly hit financially and has undergone huge mental agony as it had to incur lot of cost on restoration as well as lost valuable generation for long periods of time and it had to continuously arrange for finances both for restoration as well as servicing of the debt.
- 1.19** The Petitioner submitted that the total cost of restoration, due to disaster happened in year 2013, was Rs. 46.7 Crore as per DPR out of which the Petitioner has already incurred an amount of Rs. 27.61 Crore and it has received insurance claim amounting to Rs. 5.57

Crore. Accordingly, the net additional capitalisation of Rs. 22.05 Crore. The Petitioner further submitted that the balance restoration work is yet to be done.

1.20 The Petitioner submitted that the Commission has allowed similar capitalization in the case of Himalayan Hydro Power (P) Ltd allowing additional tariff of Rs.1.34 per unit. The rates of works in the case of Petitioner are comparable with the rates adopted in the above case.

1.21 Copy of the aforesaid Petition was forwarded to the Respondent (UPCL) for submission of its reply on the same. The Respondent submitted its reply vide letter dated 20.02.2017 as discussed in subsequent paras. The Commission held a hearing on 10.03.2017 and admitted the Petition vide Order dated 15.03.2017. Vide the said Order, the Petitioner was asked to submit certain information for the purpose of determination of levelled tariff. UPCL was also asked to submit its comments, if any, on the information submitted by the Petitioner. UPCL vide its letter dated 22.09.2017 and 28.10.2017 submitted its reply to the various submission made by the Petitioner as per the information sought by the Commission.

2. Respondent's Submissions, Petitioner's replies and the Commission's views on the same

2.1 UPCL vide letter dated 20.02.2017 submitted that the reliefs claimed in the Petition cannot be granted under the provisions of the Regulation in which the Petition has been filed and amendment in the Principal RE Regulations, 2010 would be required to allow the claim of the Petitioner. UPCL further submitted that the Petitioner knowingly, has relied upon Regulation 15(9) of RE Regulation, 2010, and has not mentioned proviso to the said Regulation and as per the proviso no additional capitalisation can be granted from retrospective effect for any cause that has occurred before 01.04.2014. In this regard, the Petitioner vide letter dated 03.04.2017 submitted that it has not prayed for any amendment of the Regulations and the claim sought is within the powers of the Commission. The Petitioner further submitted that the Respondent has wrongly read the provisions of the said regulation which do not refer to cause of loss arising before 1.04.2014. The embargo against additional capitalisation was not applicable to the Petitioner as the tariff was project specific. Further, it was wrong to state that no additional capitalisation can be claimed for any disaster that occurred before 01.04.2014.

The regulation provides that any expenses incurred after 01.04.2014 which become necessary due to natural calamity shall be allowed.

The Commission has gone through the above stated submissions of the Petitioner and the Respondent. The Respondent has mentioned that no additional capital expenditure can be allowed retrospectively in accordance to Regulation 15(9) of RE Regulations, 2010 as amended from time to time whereas the Petitioner has submitted that Regulation 15(9) is not applicable to it.

Regulation 15 (9) of RE Regulation, 2010 as amended from time to time specifies as follows:

“(9) The Tariff being normative, any shortfall or gain due to performance or other reasons is to be borne/retained by the RE Based Generating Stations and Co-generating Stations and no true up of any parameter, including additional capitalisation for whatsoever reasons, shall be taken up during the validity of the tariff.

Provided that any additional expenditure of capital nature which becomes necessary on account of damages caused by natural calamities (but not due to flooding of power house attributable to the negligence of the generating company) after prudence check by the Commission, shall be allowed as additional capitalisation after adjusting the proceeds from any insurance scheme for all the generating stations covered under these Regulations. For additional capital expenditure admitted, as above, appropriate adjustment in tariff shall be allowed for balance life of that project based on the norms given in Chapter 4 & 5 of the Regulations.

Provided that additional capitalisation on this account would only be allowed if appropriate and adequate insurance cover was available for the generating station at the time of occurrence of natural calamities referred to in first proviso above”

It is to be noted that as per RE Tariff Regulation, 2010 RE based generating stations may opt for the ‘Generic Tariff’, specified in said Regulations for different technologies on the basis of norms provide therein, or may file a petition before the Commission for determination of ‘Project Specific Tariff’. Further, as per the aforesaid regulation, no true up of any parameter including additional capitalisation shall be allowed during the validity of the tariff where normative tariff has been worked out for the RE generating station based on the norms specified in the Regulations. Accordingly, it

is clear that the Regulation 15 (9) of RE Tariff Regulation, 2010 shall be applicable to the RE generators who have adopted 'Generic Tariff' whereas the tariff for the Vanala SHP has been determined by the Commission as a 'Project Specific Tariff' vide Order dated 10.04.2014. Further, the first proviso of Regulation 15 (9) of RE Tariff Regulations, 2010 also allows additional expenditure of capital nature which becomes necessary on account of damages caused by natural calamities even in case of projects who have adopted generic tariff.

As far as the Respondent's submission that no capitalisation can be claimed or allowed for any cause occurred before 01.04.2014 as per the second amendment to RE Regulations, 2010 is concerned, it is pertinent to mention that the aforesaid amendment came into force w.e.f. 01.04.2014 and the additional capitalisation incurred on or after 01.04.2014 due to natural calamity is allowable irrespective of date of occurrence of disaster. However, as discussed in the above Para, the Vanala project tariff being "Project Specific", it does not fall under the provisions of Regulation 15(9) of RE Regulations, 2010 as amended from time to time. Accordingly, the contention of UPCL that no additional capitalisation can be claimed for any cause that has occurred before 01.04.2014 is not relevant in the current scenario. Infact in the Order dated 10.04.2014, the Commission had considered additional capitalisation for works carried out by the Petitioner even after commissioning of the project.

2.2 The Respondent vide letter dated 20.02.2017 submitted that the Petitioner has not given relevant details in the Petition such as the amount of insurance cover, amount claimed from the insurance company. The Respondent submitted that the amount claimed would give insight on the reasonability of the actual destruction suffered by the Petitioner. In reply, the Petitioner vide letter dated 03.04.2017 submitted that all the relevant details such as loss and quantities at each location, cost analysis of each component, photographs are available in the DPR.

The Commission has analysed all the submissions made by the Petitioner and is of the view that details and documents have been provided by the Petitioner. Further, the Petitioner, in reply to the Commission's queries has submitted all the relevant information sought regarding insurance claim.

2.3 The Respondent vide letter dated 20.02.2017 submitted that the Petitioner has

incorporated incomplete cause of action and has prayed for the leave of the Commission. The Respondent further submitted that the project has started to function after the alleged disaster of year 2016, hence, the Petitioner cannot be permitted to file the details when such details of expenditure crystallizes and it should file the complete facts till the date of filing of the current Petition. The Respondent submitted that the Petitioner has tried to fabricate the cause of action by presenting the balance sheet of the company as prepared in July 2016 and has tried to suggest capitalisation as in the books and not when the assets were put to use. In reply, the Petitioner vide letter dated 03.04.2017 submitted that it may not be possible to repair all the damages till the date of filing of the Petition, hence, only critical components of the project were repaired and commissioned on 02.01.2017. Further, the claim to the insurance company shall be submitted after the completion of the repair works. The Petitioner also submitted that the Respondent cannot put allegation that the books of accounts have been manipulated.

With regard to the Respondent's submission on the fabrication of the facts by presenting the balance sheet upto July 2016, is concerned, UPCL instead of putting such allegation should have corroborated the same with documentary evidence. They could have visited the site or produced evidence in support of the claim. Here, it is pertinent to mention that the Petitioner has submitted invoices, insurance document, loan document and other relevant information as directed by the Commission. Moreover, the Commission appointed Professor Devadutta Das, Former Professor, IIT Roorkee, an independent Consultant for establishing the necessity of works and reasonableness of the cost incurred by the Petitioner in coordination with the Project Officer, UREDA. The Consultant submitted his report on 03.05.2018. The Commission has taken cognizance of the said report while finalising the capital expenditure as discussed in subsequent paras. The Petitioner has claimed capitalisation incurred due to natural calamity in year 2013 and components pertaining to such capital expenditure are being used in the project. Further, the Commission has dealt with the capital expenditure claimed by the Petitioner in the relevant paras of this Order.

- 2.4** UPCL vide letter dated 22.09.2017 submitted that the sanction letter submitted by the Petitioner did not provide the bifurcation of the amount of Rs. 22 Crore between 'one year debt obligation of existing facilities into fresh loan due to natural calamity' and "for

critical repair and maintenance of the existing project'. The Respondent further submitted that existing facilities also includes debt against Rajwakti SHP and Milkhet SHP. In reply, the Petitioner vide letter dated 06.10.2017 submitted that the basis of the sanction of the loan was that the interest and principal repayment for one year of the Petitioner's projects, i.e. Vanala SHP, Melkhet SHP and Rajwakti SHP was rescheduled by the financial institution and the said amount was to be utilised for restoration of the projects. There was no damage to the Rajwakti Project. The nomenclature of the loan was to meet the regulatory requirement of the financial institution.

It is to be noted that the Petitioner vide letter dated 14.09.2017 has already provided the basis of deriving out the sanctioned loan amount of Rs. 22 Crore. The Commission has dealt with the issue in the subsequent Paras.

- 2.5** The Respondent vide letter dated 22.09.2017 submitted that the statement of interest paid on sanctioned loan of Rs. 22 Crore has not been certified. Moreover, the Petitioner has shown additional interest & delayed interest on the borrowings which should not be allowed. In reply, the Petitioner vide letter dated 06.10.2017 submitted that the actual interest on the sanctioned loan was more than Rs. 7.10 Crore till 07.07.2016 based on the actual expenditure incurred, however, it has claimed only Rs. 1.91 Crore for the purpose of capitalisation. The IDC has been considered on the 70% of the amount actually spent of additional capitalisation at the prevailing interest rate.

It is to be noted that the actual interest amount paid by the Petitioner is Rs. 7.10 Crore and in support of the interest amount, the Petitioner has submitted the interest certificates of the lending banks vide various submissions. Further, with regard to the issue of capitalising of Rs. 1.91 Crore against the actual interest of Rs. 7.10 Crore, the Commission has discussed the same under the head of 'Interest During Construction'.

- 2.6** The Petitioner, in reply to the Commission's query, vide letter dated 03.04.2017 has submitted that the funds were not directly identifiable as the funding was done for the composite purpose including repair of the project as well as debt servicing. In this context, the Respondent vide letter dated 22.09.2017 submitted that the Petitioner has admitted that the funding was done in consolidated manner and amount claimed by the Petitioner specifically pertaining to the damage caused due to natural calamity cannot be ascertained and therefore the claim should not be entertained. In reply, the Petitioner vide

letter dated 06.10.2017 submitted that the Petitioner did not have sufficient funds and was suffering from losses of Rs. 30 Crore, therefore, the amount spent on repair was financed from the financial institutions.

As mentioned earlier in the Order, the Petitioner has submitted that the nomenclature of the loan was to meet the regulatory requirement of the financial institution. It appears from the various submissions that it was merely financial engineering undertaken by the financial institution so that the amount is available with the Petitioner for the purpose of restoration works of the Vanala SHP affected due to natural calamity. As far as UPCL's comment regarding disallowance of capital expenditure on account of non establishment of amount incurred particularly for the restoration work against the total sanctioned loan is concerned, as mentioned earlier, it is to be noted that the Petitioner has provided invoices of the works executed and further, it is irrelevant to ascertain the quantum of loan used for restoration works and/or for debt servicing, ultimately the loan has been used for the project either by way on expenses towards restoration works or by way of debt servicing during the period of restoration works.

- 2.7 The Respondent vide submission dated 22.09.2017 submitted that neither the BOQ of the works awarded for the respective work contracts has been provided nor the bifurcation of the work done departmentally has been provided. The Respondent further submitted that the contract dated 31.12.2013 pertains to damages occurred on 16/17 December 2013 where infact no natural calamity occurred on the said date. The Respondent requested the Commission to call upon the investigation report, photographs and videos for prudence check of the claim. The Respondent also submitted that there is no document to put light on the matter that quotations for the work execution were invited or independent bidding process was adopted. In reply, the Petitioner vide letter dated 06.10.2017 submitted that quantity mentioned in the contacts are only indicative and actual quantities details are available in bills. Further, with regard to the prudence check of the claim, the Petitioner submitted that all the information regarding the damages is available in the DPR. The Petitioner further submitted that the quotations were also taken from the other contractors to maintain transparency and the Petitioner is not bound to follow the rules as stipulated in the rule book of the government as the company is a

private company.

With regard to the Respondent's submission on the non submission of BOQ, it is to be noted that the Petitioner vide letter dated 15.06.2017 has submitted the BOQ of the respective contracts and vide same submission, the Petitioner has also submitted that the date of damages occurred had been wrongly typed as 16/17 December, 2013 in place of 16/17 June 2013 and the Petitioner has submitted the addendum to the said contract rectifying the date of damage. Further, with regard to the work execution, it is pertinent to mention that the insurance surveyor has taken cognizance of the fact that the Petitioner has procured quotations from three vendors for the restoration work and M/s Ramose Infra Private Limited quoted the least amount for execution of work. The consultant appointed by the Commission and the Project Officer, UREDA have also physically verified the work executed by the Petitioner.

- 2.8** The Respondent submitted that the Petitioner has received an amount of Rs. 8.20 Crore as loss of Profit which should be adjusted in the total cost of restoration works. The Respondent further submitted that all the expenses incurred by the Petitioner are met by the Respondent and ultimately by the consumers of the State. In reply, the Petitioner submitted that Petitioner has incurred expenses on the interest and repayment of loan in the period when the plant was not in running condition and against these an amount of Rs. 8.20 Crore has been received from the insurance company.

The Respondent would have been correct to ask the Petitioner to adjust the amount received from the insurance company on account of loss of profit, if the Respondent had paid to the Petitioner as per the Tariff determined by the Commission vide Order dated 10.04.2014 for the period when no power was provided by the Petitioner due to shut down of the plant because of natural calamity occurred in June/July 2013. As the Petitioner has not generated any revenue from the Respondent, it will be unjustified to share the insurance amount received on account of loss of profit. Accordingly, the Commission does not agree with the contention of the Respondent.

- 2.9** The Respondent submitted that the Petitioner has not provided the justification for estimating the cost of acquiring the land as Rs. 0.20 Crore and no supporting document has been provided. In reply, the Petitioner submitted that the land was required to shift the bypass towards hill side as on the river side it was prone to loss.

It is to be noted that the Petitioner vide letter dated 15.06.2017 has submitted that the land was required for construction of the retaining walls and extension of the D-tank. The Petition has also submitted land acquisition documents.

2.10 The Respondent submitted that from the assessment of damages and preparation of the DPR till completion of the work, especially considering the influence the Petitioner may exercise over the contactors, all work, its costs, its assessment, procurement, payment, preparation of balance sheet and other documents has been done by the Petitioner in house and no transparent process has been adopted. In reply, the Petitioner submitted that it had invited all the stakeholders to visit the site and verify the disaster as well as the work executed.

With regard to the assessment of damages is concerned, it is to be noted that the certificate of Tehsildar dated 24.08.2013 is enclosed with the DPR which certifies that the project was shut down due to damage to the projects because of calamity that happened in the year 2013. Further, insurance surveyor has also assessed the damages. Further, the Commission has sought information of the damages caused to the SHP due to natural calamity caused in year 2013 at Nandprayag, Chamoli citing out the nature and extent of damage caused to areas situated at or around the site of Valana Project from UREDA. In reply, UREDA vide letter dated 03.08.2017 submitted that the officials of UREDA physically inspected the site & randomly verified the quantities of works executed and further submitted that many new landslides and streams of water were formed in the project area threatening stability of pipe line/power conduit and in view of these, the extensive protection works has been carried out to provide stability to structure and to protect against subsequent disaster.

Further, generation being a de-licensed activity and the Petitioner is a private company, it is not required to get the approval of the DPR from the Commission, or get it prepared from any other Government authorities. The Commission has gone through the contracts as well as the invoices submitted by the Petitioner. As mentioned earlier, the contactors had been selected through competitive bidding and the insurance surveyor has also admitted the same in its final survey report to the Vanala Project.

Further, the Consultant, appointed by the Commission, has gone through the reasonableness and necessity of the work executed by the Petitioner. The Consultant in its

report has compared the rates as mentioned in the DPR for dismantling of concrete/ reinforced concrete, Excavation in hard rocks, plum concrete with M20/M25 including shuttering, Debris removal, MS reinforcement, structural work, fabrication and erection of MS plate pipe etc. with the rates of corresponding items as per Uttarakhand PWD rates. The rates considered by the Petitioner in the DPR are found lower than the rates of PWD. The relevant extract of the report is as follows:

“The item wise rates of various jobs involved have been calculated as per Uttarakhand PWD schedule of rates and compared with those adopted by Him Urja in their estimate of cost in the DPR submitted to Hon’ble UERC. The same is enclosed as Annexure-II. It may please be seen that the rates as per DPR is less than that as mentioned in Uttarakhand PWD schedule of rates pertaining to year 2014. In view of the above it can be construed that the amount claimed in the petition on civil works being less may be considered as acceptable.”

2.11 UPCL submitted that the Petitioner has failed to show and establish that the silt profile of the river changed due to which extension/construction of new D-tank was done and the Petitioner should establish the necessity for carrying out such work and its advantage. The Respondent further submitted that the life of the project should be increased considering the level of protection work carried out and this will only provide gains to the Petitioner. The Respondent also submitted that the creation of new assets which does have any effect upon the generation cannot be considered in capital cost of the project. In reply the Petitioner submitted that it had submitted before the Commission regarding the change in silt profile of the river leading to low generation and mounting operational losses. With regard to increase in the life of project, the Petitioner submitted that the protection works are meant to serve as protection of the existing assets and with expiry of life of original work the utility of the protection work ends.

It is to be noted that the Petitioner vide letter dated 14.09.2017 submitted month wise generation in MUs from the Original COD to till 13.09.2017 as follows:

Table-2: Net Generation Data in MU (as per JMR)

Month/Year	2009	2010	2011	2012	2013	2014	2015	2016	2017
January	-	1.63	3.23	2.64	1.97	-	2.01	1.55	2.40
February	-	2.01	2.48	1.78	2.49	-	1.99	1.55	1.94
March	-	2.48	2.69	2.10	2.38	2.13	3.64	1.52	2.03
April	-	-	2.86	2.27	3.34	3.63	3.43	1.59	3.21
May	-	1.33	3.73	2.58	3.52	4.25	5.12	2.62	3.07
June	-	3.48	4.25	3.34	1.01	3.28	4.81	2.74	6.04
July	-	4.62	3.39	1.87	-	2.96	5.16	-	8.80
August	-	-	1.22	0.85	-	4.98	3.01	-	9.59
September	-	0.13	3.90	5.22	-	4.82	6.25	-	4.93
October	-	2.53	7.91	8.33	-	6.45	6.03	-	-
November	-	5.76	5.03	4.78	-	4.68	3.99	-	-
December	0.19	4.47	3.48	3.29	-	2.98	2.19	-	-
Total	0.19	28.44	44.17	39.05	14.71	40.12	47.63	11.57	42.01

It can be analysed from the above generation data, that the total generation i.e. 141.33 MU from the re-commissioning of the project till date (i.e. 37 months) is much higher than what the plant had achieved (i.e. 111.85 MU) from the original commissioning to the date of disaster (i.e. 43 Months). It is clear from the aforesaid details that with the construction/extension of the D-tank, the generation has increased. Further, the major additional capitalisation claimed were under the strengthening works which were basically for protection work and a nominal additional capitalisation of Rs. 0.60 Crore for E/M works which will not anyhow extend the life of the entire project. Accordingly, life of the entire project cannot be extended as there is no increase/value addition to P&M due to additional capitalisation, however, capitalisation pertaining to protection work will provide a safe guard against the future calamities.

Further, the Consultant vide its report dated 03.05.2018 submitted that the project was not able to perform optimally as projected during the monsoon months of July to September due to excessive silt in the river which has changed drastically during the monsoon months due to some construction activities upstream as also due to landslides. The Consultant also mentioned that the extension of the D tank has increased the PLF in year 2017 and after the completion of third chamber of D tank, the PLF will further increase to 55%. The relevant extract of the report is as follows:

“The Vanala D Tank was also designed for the same parameters as that for Rajwakti SHP. Therefore, Vanala project was not able to operate during the monsoon months. The Vanala project was able to achieve PLF of 21% to 36% till 2016. After 2013 disaster it was noticed that further landslides alongside the river have taken place thereby increasing the silt content during the monsoon months. Therefore, it was decided to add on vortex type D Tank and the exiting tanks

were augmented by creating one additional D Tank chamber and also increasing the length of D Tanks by about additional 60m. The extension of the D tank was completed in the year 2016-17. During the year 2017 HUPL has been able to achieve PLF of 48.13% and is likely to further increase to 55% after third chamber of the D Tank extension is ready. It can also be seen from the table of generation of the month July August September that the PLF has increased from 40% to 84%. It may noted that the according to water availability the plant runs at full capacity during June to Sept. Thus it can be seen that the expenses incurred on the D Tank have resulted in substantial improvement in generation from the project."

(Emphasis added)

With regard to PLF, Regulation 11(3) of RE Regulations, 2010 specifies as follows:

"11. Tariffs

(1) XXX

(2) XXX

(3) 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 of the normative CUF specified under Chapter 5 for the relevant technology, whichever is higher."

Accordingly, based on the aforesaid Regulation, the Commission has considered the CUF of 46.55% for the purpose recovery of allowable annual fixed charges as levelised tariff in its Order dated 10.04.2014.

In the present case, tariff being project specific in nature, as the actual allowable expenditure for the extension of the D Tank is to be recovered from the beneficiary as annual fixed charges, therefore, the benefit of increase in generation due to such extension should also be passed on to the beneficiary by way of increased CUF. Accordingly, the Commission is of the view that in case the CUF of the generating plant remains higher than approved CUF in Order dated 10.04.2014 for the purpose of recovery of the annual fixed charges consecutively for three years, the beneficiary may approach the Commission for upward revision of the CUF for the purpose of recovery of approved AFC in line with the Judgment of Hon'ble APTEL in Appeal no. 50 & 65 of 2008 and IA. 98 & 143 of 2008.

2.12 The Respondent submitted that as per submission of the Petitioner, the damages due to calamity was only amounting to Rs. 7.34 Crore and the Petitioner departmentally assessed the damages and prepared DPR and accordingly, chose to do protection work. The Respondent also submitted that the word 'Protection Work' is mere reference & does not show anything and the Petitioner in its discretion and as per its will may choose to spend any amount on such work but that would not entitle the Petitioner to claim it from the Respondent. In reply, the Petitioner contested and submitted that the Electricity Act entitles the consumer for lower tariff but it also entitles the generator to recover reasonable price of power.

The Commission has gone through the submissions of the Petitioner where reconstruction cost of the damage was amounting to Rs. 7.34 Crore presented before the insurance company for the claim against which Rs. 5.57 Crore has been received from the insurance company on account of material loss. Further, it cannot be denied that the new D-tank has increased the generation which will help the Respondent/licensee to meet its energy demand. Further, the expenditure incurred for protection work has not only minimised the chances of major breakdown due to natural calamity but also ensures the regular supply of power.

2.13 The Respondent, vide its various submissions, has expressed its inability to comment because relevant document/annexure has not been provided to it. In this regard, it is to be noted that the Commission vide its various letters, while forwarding submission of the Petitioner for comments to the Respondent, has given liberty to the Respondent to examine the submissions/documents at Commission's Office in working days which have not been forwarded to the Respondent due to their being voluminous in nature. The Commission expresses displeasure on the approach adopted by the Respondent. Instead of submitting such statements, UPCL officials should have visited the Commission's Office for scrutiny of the documents.

It is pertinent to mention that the Petitioner has discussed regarding the natural calamity that occurred in year 2013 and year 2016. Further, the Petitioner has submitted the detailed expenditure incurred for restoration and protection work due to natural calamity occurred in year 2013. The Petitioner further submitted that the project was shut down on 20.06.2016 onwards due to disaster occurred in year 2016 and cost to be incurred

in restoration of the project and the claim to be received from the insurance company is yet to be worked out. Accordingly, in this Order, the Commission has dealt with the expenditure incurred on account of damages which occurred due to natural calamity in year 2013 only.

3. Analysis & admissibility of the additional capitalization

3.1 Applicability of the Regulations

3.1.1 Before going into the merits of the Petition, the Commission first refers to the relevant provisions of the Regulations applicable in the present Petition. Regulation 14 (1) of RE Regulations, 2010 provides as follows:

“14. 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 complete units of the RE Based Generating Stations and C-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 breakup of Capital Cost items along with its petition.”

3.1.2 The Commission is aware of the intensity & volume of the flood that occurred in mid of June & July, 2013 in the hilly region of the State of Uttarakhand that had resulted in severe damages to man & machines, manmade structures such as roads, bridges including power generating stations and transmission lines.

3.1.3 The Petitioner's Vanala SHP is situated at a hilly terrain of Uttarakhand State where natural calamity occurred in June & July, 2013 which led to extensive damages to several structures. Hence, loss/damage to the said SHP cannot be ruled out. Further, documents, extract of newspaper and photographs corroborate the Petitioner's averment in the matter. UPCL has infact made plain statements regarding the damages and the capital expenditure incurred by the Petitioner without corroborating the same. Infact as a Respondent, if they alleged some wrong doing by the Petitioner, the burden of proof was on them to produce the evidence that would have proved the

claims they made against the Petitioner. Under judicial proceedings, they cannot be allowed to follow the shoot and scoot policy. They have to prove whatever they have alleged. In the absence of any proof by the Respondent, the Commission while examining prudence would be guided by the facts and relevant information available with it.

3.2 Additional Capitalisation due to damage

3.2.1 The Petitioner submitted that the restoration works on the project were started soon after the 1st calamity occurred in June 2013, however, advent of second disaster in July 2013 had put everything on hold as the entire transportation system including road, bridges etc. in the valley were damaged. The Petitioner could only start assessment of the damages in the month of August 2013 and thereafter could prepare methodology for restoration of the project. Accordingly, the Detailed Project Report was prepared on 03.11.2013. The Petitioner submitted the breakup of expenditures for reconstruction of project after natural calamity as per DPR as follows:

**Table-3: Breakup of Projected Expenditure
as per DPR**

Particulars	Amount (Rs. In Crore)
Land	0.20
Civil Works	43.97
E/M Works	0.60
IDC	2.00
Total	46.77

3.2.2 The Petitioner submitted that the entire project was covered under insurance and, accordingly, amount of Rs. 7.34 Crore was claimed against the damages which were settled at Rs. 5.57 Crore by the insurance company.

3.2.3 For determination of capital cost, the Commission has examined the same by broadly segregating overall capital cost into (i) Hard Cost, (ii) Insurance Claim and De-capitalisation and (iii) Time overrun and (iv) Interest during Construction & Incidental Expenditure during Construction. Based on the submissions made by the Petitioner and comments received from the Respondent on the same, analysis of the capital cost of the project has been done and the same is discussed in following Paras.

HARD COST

3.2.4 The Commission has gone through the DPR and directed the Petitioner to submit the schedule of work done for the damages occurred due to the said natural calamity. The Petitioner submitted hard cost details along with the completion status of the same as follows:

Table-4: Component wise Completion status and DPR vis-a-vis Actual Expenditure incurred till 07.07.2017

(Rs in Crore)

Sr. No	Name of the Project component	Start Date of restoration work	Completion date of restoration work	Percentage of completion	Expenditure as per DPR	Expenditure as per Actual
Damages occurred due to calamity in June 2013						
1	Weir	Sep, 2014	March, 2015	100%	1.30	1.03
2	Feeder Channel	Dec, 2013	March, 2015	100%	0.47	0.42
3	Main D-tank	July, 2013	March, 2014	100%	1.05	0.90
4	Transmission Line	July, 2013	March, 2014	100%	0.16	0.16
Damages occurred due to calamity in June 2013						
5	Bypass D-Tank	April, 2014		64%	3.87	2.26
6	Circular D-Tank	April, 2014	March, 2015	100%	1.06	0.76
7	D-Tank River Protection	April, 2015	July, 2016	100%	1.93	1.72
8	Extension D-Tank	April, 2014		52%	1.73	0.67
9	Power Channel	April, 2014		11%	4.06	0.40
10	Pipeline	Sep, 2013		68%	23.62	15.52
11	Penstock	April, 2014		17%	4.20	0.53
12	PH & Transmission Line	Sep, 2013		77%	0.59	0.39
13	E&M Works	April, 2015	July, 2016	100%	0.60	0.54
14	Land	April, 2014	July, 2016	100%	0.20	0.11
15	Screen Wire	April, 2015	July, 2016	100%	-	0.28
	Total				44.83	25.70

3.2.5 As reproduced earlier in Para 1.11 of this Order, the Petitioner, vide Table under Para 3.18 of the Petition has submitted the detailed breakup of the head wise expenditure incurred upto 07.07.2016. The same has been categorised between Hard Cost, Incidental Expenditure During Construction (IEDC) and Interest during Construction (IDC) for the purpose of analysis. The detail of the same is as follows:

Table-5: Category wise Break up of Total Capital Expenditure claimed (Rs. in Crore)

S. No.	Particulars	Claimed
	Hard Cost	
1	Cement	4.74
2	Structural Steel	0.44
3	Reinforcement Steel	0.36
4	Other Materials & Consumables	3.11
5	Electro Mechanical Equipments	0.54
6	Land	0.12
7	Wire Screens	0.28
8	Add: Payment to Contractors- Ramose Infra (P) Ltd.	7.03
	Sub-Total	16.61
9	Less: Amount received from Insurance Company on account of Material Loss	5.57
(A)	Total Amount	11.04
	Incidental Expenditure During Construction	
1	Salary & Wages	7.44
2	Hire Charges of Equipment & Vehicles	1.10
3	Repair & Maintenance of Equipments & Vehicles	0.23
4	Vehicle Running Expenses	0.23
5	Freight and Cartage	0.06
6	Mining Royalty	0.02
(B)	Sub-total	9.09
(C)	Interest During Construction	1.91
	Total Capital Expenditure (A)+(B)+(C)	22.05

3.2.6 The Commission has observed that for the purpose of restoration and protection works, out of the total expenditure incurred, the Petitioner awarded contracts of Rs. 6.47 Crore which later on was finally settled at Rs. 7.03 Crore, and while the balance works were carried out departmentally. The Commission has gone through the DPR, contracts, insurance survey report, Invoices and Balance Sheets submitted by the Petitioner for prudence check of the claim. The additional capitalisation has been claimed primarily for capital repairs and protection work of Pipeline which works out to approx. 60% of total cost claimed and the work is yet to be completed. In this regard, it is to be noted that the major expenditure on the pipeline is on account of concreting (concrete casing) the pipeline of length of 3.30 km with a diameter of 2.6 m and the same is being used for the purpose of generation. Further, the total expenditure incurred/claimed by the Petitioner is within the DPR cost. Accordingly, the Commission admits the hard cost of Rs. 16.61 Crore. Further, the Consultant has analysed the requirement of the encasing of the pipeline and it was seen that point load carrying capacity of the pipeline has increased by 10 times. Thus, the pipe shall be able to resist much higher load as compared to bare pipe. The relevant extract of the Consultant's report is as follows:

“... The disaster of 2013 and 2016 resulted in heavy landslides consisting of large stones upto as large as 2m dia resulting in extensive damage to the pipe. HUPL is operating Rajwakti project with identical configuration but never experienced such heavy landslides. To overcome the damage to pipe it was proposed to encase the pipe with 250mm M25 concrete with the shell acting as reinforcement through shear connectors. It was seen from the analysis of two structure that the point load carrying capacity of bare MS pipe was only 4 tons but the concrete encased pipe the point load carrying capacity increased to 40 tons with a casing thickness of 200mm with M30 concrete....”

3.2.7 However, since some works are still remaining, the Commission advises the Petitioner to carry out only those works which are essential for smooth running of the project. Hence, proper justification has to be submitted by the Petitioner while claiming the additional capitalisation of the pending works. Further, the Commission also observed that the Consultant has submitted that since the works after disaster of 2013 and disaster 2016 are intermingled, therefore, all the works executed till 04.04.2018 have been examined. The Consultant also submitted that an additional RCC pad work has been proposed to minimise the impact of the stones falling free from a height of 5m on the encased pipeline. The work on the same is yet to be done. With regard to protection work, the Consultant also submitted that there could be many engineering solutions for estimates of forces and remedial measures and the developer has adopted one of many such possibilities.

In this regard, the Commission is of the view that the Petitioner has already encased the pipeline to minimise the impact of disaster and there could still be additional remedial actions for minimisation of losses including protection of pipeline against natural calamity. However, remedial works of any type/nature cannot provide foolproof guarantee that the project shall not be damaged in future due to natural calamity. Accordingly, the Commission is of the view that it would not be appropriate to carry out more additional protection works. The Petitioner is advised to cover up any such further losses/damages, if any, through insurance instead of carrying out further capital expenditure in lieu of protection works in future resulting in burdening the beneficiary/end consumers by recovery of cost of such additional capital expenditure through tariff.

De-Capitalisation and Insurance claim

3.2.8 The Petitioner has submitted that the diversion weir, feeder channel, RCC Channel, Pipe, D Tank etc were damaged or/and washed away. However, the Commission observed from the audited accounts of FY 2013-14 that these assets were still part of the gross block as no amount pertaining to the above mentioned assets had been de-capitalized. In this regard, the Commission directed the Petitioner to clarify the treatment of the capital cost of damaged assets and also directed the Petitioner to submit Fixed Assets Register. In reply, the Petitioner submitted that there was no substantial basis for arriving at the cost of the abandoned assets as it appeared in the books of accounts since in the books of accounts it appeared as block of asset and from this block of asset it was not possible to segregate/identify the cost of abandoned assets out of the block. The Commission analysed the Fixed Asset Register and observed that the value of block of asset say the cost of pipeline also included the cost of control valves, Sluice gates, steel surge including cost of approach road relating to MS Pipe line and RCC Channel. Therefore, it will not be appropriate to consider cost from Fixed Asset Register as it includes the cost of other assets also within the asset block.

Accordingly, the Commission decided to analyse the insurance claim to work out the cost of de-capitalised assets. The Petitioner was directed to submit the survey investigation report and the same was submitted vide letter dated 15.06.2017. It was observed from the report that the insurance claim has been made according to the replacement cost and not as per the historical cost. The Petitioner vide letter dated 14.09.2017 submitted that it has received an amount of Rs. 5.57 Crore against the claim of Rs. 7.34 Crore. In this context, Respondent vide its letter dated 28.10.2017 submitted that against the total claim of Rs. 7.34 Crore, gross loss was of Rs. 6.53 Crore and the same should be considered as paid by the Insurer. In this regard, it is pertinent to mention that as per the insurance surveyor final report, Rs. 7.34 Crore was the gross amount claimed against which the insurance surveyor assessed the gross loss of Rs. 6.53 Crore and finally settled the claim at Rs. 5.57 Crore.

Ideally the asset which is not usable or does not exist should be written off from the GFA at the original cost/WDV. However, instead of submitting actual/

historical cost of assets written off, the Petitioner submitted an estimate of Rs. 7.34 Crore as amount claimed from insurance company at the replacement or current market cost. The current cost cannot be deducted from the gross block as it is an indicator of what would be the replacement cost of an asset and cannot be the historical cost at the time of commissioning of the project earlier. Besides, if the cost of an asset damaged would have been higher than what the insurance company settled, even in such scenario such loss will have to be allowed as uncontrollable in accordance with the prudent accounting principles and the same would apply vice-versa.

Hence, as discussed above, the Commission has decided to reduce the amount of loss equivalent to the claim settled by the insurance company of Rs. 5.57 Crore as that was the amount which was part of the capital cost as on the date of commissioning on which the tariff has already been fixed earlier. Now since the amount of loss does not form part of the GFA of the Petitioner and to recoup the same the Petitioner has claimed additional capitalisation, hence, it would not be reasonable to allow any portion of the lost asset as part of the GFA. Accordingly, the same has been reduced from the additional capitalisation allowed to the Petitioner.

Time Overrun

3.2.9 With regard to the schedule completion period of the works, the DPR dated 03.11.2013 states that 'the estimate of time required for completion of works may be around two years. Most of the site is not accessible through mechanical means of transport, therefore, it may take longer period'. It is pertinent to mention that the completion period for the project needs to be specific and any infinite time provided in the DPR will not make the developer accountable. Accordingly, as per DPR the schedule completion period of two years, i.e. by 03.11.2015, for the restoration and protection work has been considered. The Commission vide Order dated 15.03.2017 directed the Petitioner to submit the justification of time over run. In reply, the Petitioner vide letter dated 03.04.2017 submitted that the entire work was to be completed within two years, however, the work could not be completed within two years as the working sites were extremely difficult requiring carrying of material through head load to distance upto 2 km over the existing pipeline. There was extreme paucity of funds to

complete the works in time stipulated in the DPR. The access road was cut for long period of time, therefore, it was not possible to transport materials. Subsequently, the Petitioner vide letter dated 06.10.2017 submitted that there was no time overrun in the repairs and it was able to complete the work early as the entire stretch of the area was not approachable through any type of mechanical vehicle.

It is to be noted that as per DPR dated 03.11.2013, the scheduled completion period for restoration and protection works was set as two years. Further, the Petitioner itself has mentioned in the Petition that it could start assessment of the damages in August 2013 only and thereafter it was able to prepare methodology for restoration of the Project. In the DPR, the Petitioner has also discussed the ways and means to access the location of works at the project site. The relevant extract of the DPR is as follows:

“Access to the Project Site at the location of Works

... therefore it was decided after discussion with the engineers to construct a ropeway across the river having a length of about 300 m and elevation difference of about 80m to carry the material at the pipe. Further, small ropeways were required to be constructed to carry the material at the various locations of the site which is otherwise inaccessible”

All the facts and geographical status of the Plant area was very well known to the Petitioner and the Petitioner itself has set such target to complete the restoration work as well as protection works considering all scenarios as mentioned in DPR.

Further, as far as the lack of funds is concerned, it is pertinent to mention that the Petitioner has made financial arrangements with M/s L&T Infra. The Petitioner has submitted that it had approached M/s L&T Infra to extend further loan to carry out the restoration works and M/s L&T Infra vide letter dated 12.09.2013 sanctioned the loan of Rs. 22 Crore by way of conversion of one year debt including interest obligation of the existing facilities into Fresh Loan due to natural calamity and funds for critical repair and maintenance of the Existing projects. Further, the Petitioner should have made proper financial planning prior to execution of the work. Financial crunch is an internal matter of the company and time overrun on account of lack of funds cannot be justified.

As discussed above, the Petitioner was very well aware of the geographical

situation of the project site as well as its financial position and therefore, the Petitioner itself, considering the factual position, had set the schedule period of two years for completion of the restoration and protection works. Further, the Petitioner was given an opportunity to submit the reasons for delay in completion of the restoration and protection work, however, the Petitioner submitted general statements without providing any documentary evidence. Accordingly, time overrun is not allowable.

Interest During Construction (IDC)

3.2.10 The Petitioner submitted that the funds received from the financial institutions have been utilized both for the restoration of the project as well as for servicing of the loan therefore it was not possible to work out the interest during construction directly attributable to the restoration work. The Petitioner requested the Commission to consider the IDC worked out based on normative 70% debt month to month of the actual cost incurred on restoration. Accordingly, the Petitioner has claimed the IDC of Rs. 1.91 Crore.

3.2.11 The Commission vide Order dated 15.03.2017 directed the Petitioner to submit the loan documents alongwith other debt related information w.r.t. additional loan of Rs. 22 Crore. In reply, the Petitioner vide letter dated 03.04.2017 submitted the Loan document along with the drawl schedule of additional loan of Rs. 22 Crore and submitted that actual interest amount charged by bank of the additional loan is amounting to Rs. 7.11 Crore. From all the loan documents submitted by the Petitioner, it is observed that initially an additional loan of Rs. 22 Crore was sanctioned by L&T Infra which was a conversion of outstanding one year principal and interest obligation of existing facilities into a fresh loan for works to be carried out to restore the damages due to natural calamity and for critical repair and maintenance of the existing projects. Subsequently, the Petitioner refinanced all the loans pertaining to Vanala Projects from Axis Bank limited as a consolidated loan which was again refinanced from L&T Infra.

As far as capitalising IDC based on the normative debt of 70% of expenditure incurred is concerned, it is pertinent to mention that the interest during construction is worked out based on the actual interest paid corresponding to the loan amount drawn and utilised for capital expenditure based on prudent phasing of the funds. In the current petition, the total amount of Rs 7.11 Crore has been charged by the bank

including the additional interest and delayed interest which was payable due to delay in creation of security and late payment of principal & interest respectively. The Licensee/consumers cannot be burdened with interest charged by the financial institution due to such delays attributable to the Petitioner. Accordingly, the Commission has worked out the Interest During Construction Rs. 6.34 Crore.

Further, as discussed under the head of Time Overrun, since the delayed period has not been allowed to the Petitioner, accordingly, IDC for the delayed period has not been allowed to the Petitioner and the admissible IDC works out to Rs. 5.02 Crore against the IDC claimed by the Petitioner of Rs. 1.91 Crore.

Incidental Expenditure During Construction (IEDC)

3.2.12 As mentioned above in Table-5, the Petitioner has claimed IEDC amounting to Rs. 9.09 Crore till 07.07.2016 out of which the major amount pertains to Salary and Wages i.e. Rs. 7.44 Crore. The Petitioner was directed to submit the details pertaining to salary & wages and from the submissions of the Petitioner it is observed that the Petitioner has claimed capitalisation of Rs. 6.49 Crore, Rs. 0.14 Crore and Rs. 0.82 Crore for Direct Labour, Contracted Labour and Managerial Staff respectively.

With regard to Managerial staff, it is to be noted that the Commission vide its Order dated 10.04.2014 had allowed normative O&M expenses based on the prevailing Regulations wherein such expenses had already been factored in while specifying the norms for O&M expenses. Further, if the amount as claimed for Managerial Staff is considered for tariff determination, it will eventually result in double recovery of the same expenses. Accordingly, expenses pertaining to Managerial Staff have not been considered.

Further, the delayed period has been considered as controllable factor as discussed under the head of Time Overrun, accordingly, IEDC for the delayed period has not been allowed to the Petitioner.

Based on the above discussion, details of the IEDC claimed and the admissible IEDC is as follows:

Table-6: Detail of IEDC claimed and allowed (Rs. in Crore)

S. No.	Particular	Claimed	Approved
1	Salary & Wages	7.44	4.38
2	Hire Charges of Equipment & Vehicles	1.10	0.68
3	Repair & Maintenance of Equipments & Vehicles	0.23	0.18
4	Vehicle Running Expenses	0.23	0.19
5	Freight & Cartage	0.06	0.04
6	Mining Royalty	0.02	0.02
	Sub-Total	9.09	5.48

Based on the above discussion, the additional capital expenditure claimed and approved is as follows:

Table-7: Detail of the Capital Expenditure Claimed and Approved (Rs. in Crore)			
S. No.	Particulars	Claimed	Approved
(A)	HARD COST		
1	Cement	4.74	4.74
2	Structural Steel	0.44	0.44
3	Reinforcement	0.36	0.36
4	Other Materials & Consumables	3.11	3.11
5	Land	0.12	0.12
6	Electro Mechanical Equipments	0.54	0.54
7	Wire Screens	0.28	0.28
8	Payment to Contractors- Ramose Infra (P) Ltd.	7.03	7.03
	Sub-Total	16.61	16.61
	Less: Amount Received from Insurance Company	5.57	5.57
(B)	NET COST	11.04	11.04
(C)	Incidental Expenditure During Construction		
1	Salary & Wages	7.44	4.38
2	Hire Charges of Equipment & Vehicles	1.10	0.68
3	Repair & Maintenance of Equipments & Vehicles	0.23	0.18
4	Vehicle Running Expenses	0.23	0.19
5	Freight & Cartage	0.06	0.04
6	Mining Royalty	0.02	0.02
	Sub-Total	9.09	5.48
(D)	Interest during Construction	1.91	5.02
(E)	GRAND TOTAL (B)+(C)+(D)	22.05	21.55

3.3 Debt-Equity Ratio

3.3.1 The Commission noted that the Petitioner has considered a Debt-Equity ratio as 70:30. In this regard, Regulation 16(2)(b) of RE Regulations, 2010 specifies as under:

“(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.

Provided further that subsidy available from MNRE, to the extent specified under Regulation 25, 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."

3.3.2 The Petitioner has considered 70% of the total spending as debt and the balance amount as equity. It is to be noted that the Petitioner has got the loan amounting to Rs. 22 Crore sanctioned from L&T Infra for the purpose of critical repair and maintenance for the Vanala Project. In this regard, the Regulation specifies that where equity actually deployed is less than 30% of the capital cost, the actual equity shall be considered for determination of tariff. The Commission has observed from the books of accounts that during FY 2014-15 and FY 2015-16 funds through equity amounting to Rs. 0.50 Crore and Rs. 0.55 Crore have been raised. Further, the Petitioner has received an amount of Rs. 5.57 Crore on account of Material Loss and Rs. 8.20 Crore on account of Loss of Profit from the insurance company due to natural calamity occurred in Year 2013.

Further, it is to be noted that the Petitioner has incurred total hard cost of Rs. 11.04 Crore net of amount received from insurance company on account of material loss and IEDC of Rs. 9.09 Crore & IDC of Rs. 1.91 Crore. With regard to IDC, as mentioned under the head of Interest During Construction, the Petitioner has requested the Commission to consider the IDC worked out based on normative 70% debt month to month of actual expenditure incurred whereas based on the submission of the Petitioner, IDC worked out to Rs. 6.34 Crore (excluding penal interest and additional interest).

Accordingly, based on the above discussion, total additional capital cost incurred works out to Rs. 26.48 Crore considering the IDC worked out of Rs. 6.34. Further, considering the sanctioned loan from L&T Infra amounting to Rs. 22.00 Crore and the balance, i.e. Rs. 4.48 Crore has been considered as equity based on which Debt: Equity ratio works out to 83.07:16.93. The same has been applied on the approved additional capital cost of Rs. 21.55 Crore.

3.3.3 Accordingly, based on the above discussion, Debt-Equity claimed by the Petitioner and approved by the Commission is as follows:

Table-8: Debt:Equity Ratio Claimed and Approved

Particular	Claimed		Approved	
	Rs. In Crore	%	Rs. In Crore	%
Debt	15.44	70.00	17.90	83.07
Equity	6.62	30.00	3.65	16.93
Total	22.05	100.00	21.55	100.00

3.4 Adjustment in existing tariff

3.4.1 Since the Petitioner had adopted project specific levelled tariff in accordance with the RE Regulations, 2010 as amended from time to time, hence, additional capitalisation for restoration work and protection works, as approved above, shall be adjusted by way of providing additional tariff for recovery of AFC on account of such additional capitalisation till the balance life of the project in accordance with the Regulations. The AFC in this regard would include depreciation, RoE, interest on loan and corresponding interest on working capital based on the norms specified in RE Regulations, 2010.

3.4.2 The Petitioner submitted that since beginning the O&M Charges have been allowed as percentage of capital cost as it is accepted that the O&M expenses are proportionate to the capital cost. Accordingly, the Petitioner requested the Commission to allow the proportionate O&M expenses as the capital cost of the project has increased due to additional capitalisation. The Petitioner has claimed the O&M expenses @ 2.77% of the capital cost and subsequently vide letter dated 06.10.2017 requested the Commission to consider O&M Expenses @ 3.75% of the capital cost from the date of notification of third amendment to RE Regulations, 2013. Further, the Petitioner has also requested the Commission for adjustment of the existing tariff based on the revised O&M expenses notified vide third amendment to RE Regulations, 2010.

The Commission has dealt with the request of the Petition for adjustment of existing tariff based on the third amendment in the subsequent Paras. Further, with regard to the claim of the O&M expenses for the additional capitalisation is concerned, Regulation 21 of the RE Regulations, 2010 specifies as follows:

“Operation and Maintenance expenses

(1) Operation and maintenance expenses for the year of commissioning shall be determined

based on normative O&M expense for the base Year FY 2009-10 as specified under Chapter 5 for different technologies. These expenses shall be escalated/de-escalated @ 5.72% p.a. to arrive at O&M expenses during the year of Commissioning.

- (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."

Further, Regulation 29 of RE Regulation, 2010 (third amendment) provides the normative O&M expenses for the base Year FY 2009-10 for small hydro power plants which specifies as follows:

"Small Hydro Generating Plant

The technology specific parameters for determination of generic tariffs for Small Hydro Generating Stations shall be as below:

Projects Commissioned after 01.01.2002 to 31.03.2007

Project Size	Capital Cost	O&M Expenses for the year of commissioning	Capacity Utilization Factor	Auxiliary Consumption
	(Rs. Lakh/MW)	(Rs. Lakh/MW)	(%)	(%)
Upto 5 MW	550	24.75	40%	1%
5 MW to 10 MW	550	23.38		
10 MW to 15 MW		22.00		
15 MW to 20 MW		20.63		
20 MW to 25 MW		19.25		

Projects Commissioned during FY 2007-08 to 2008-09

Project Size	Capital Cost	O&M Expenses for the year of commissioning	Capacity Utilization Factor	Auxiliary Consumption
	(Rs. Lakh/MW)	(Rs. Lakh/MW)	(%)	(%)
Upto 5 MW	600	27.00	40%	1%
5 MW to 10 MW	600	25.50		
10 MW to 15 MW		24.00		
15 MW to 20 MW		22.50		
20 MW to 25 MW		21.00		

Projects Commissioned on or after 01.04.2009

Project Size	Capital Cost	O&M Expenses for the year of commissioning	Capacity Utilization Factor	Auxiliary Consumption
	(Rs. Lakh/MW)	(Rs. Lakh/MW)	(%)	(%)
Upto 5 MW	700	31.50	40%	1%
5 MW to 10 MW	685	29.11		
10 MW to 15 MW	670	26.80		
15 MW to 20 MW	650	24.38		
20 MW to 25 MW	630	22.05		

"

It is pertinent to mention that the Normative O&M expenses are linked to the

capacity of the Small Hydro Plant and not with the capital cost of the plant. Further, the Petitioner vide Para 3.22 of the Petition has admitted that the work of restoration did not create any new asset capable of generating additional power capacity and no new generation capacity was added to the project. The capacity to generate power remains the same as before at 15 MW. The new assets were appended to the existing assets. According, the Petitioner's project is not eligible for any additional normative O&M expenses as no increase in installed capacity has resulted from these restoration and protection works.

Further, as far as the submission of the Petitioner regarding extra O&M expenses towards additional capitalisation incurred, the Commission is of the view that under the RE Regulations, 2010, there is no separate provision for O&M expenses on additional capitalisation.

3.4.3 Based on the approved additional capitalisation and tariff structure specified under RE Tariff Regulations, 2010, determination of the components is discussed in subsequent paras.

3.4.3.1 Depreciation

For the purpose of computation of depreciation, Regulation 18(1) of RE Regulations, 2010 specifies as under:

"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 10 years of the Tariff Period shall be 7% per annum and the remaining depreciation shall be spread over the remaining useful life of the project from 11th year onwards.*
- (d) Depreciation shall be chargeable from the first year of commercial operation.*
- (e) Provided that in case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis."*

The Petitioner has claimed capitalisation till 07.07.2016, hence, the remaining

useful life of the project is 28 years. Accordingly, depreciation has been computed on additional capitalisation by applying the rate of 7% for the first 10 years from the date of additional capitalisation to the project and the remaining depreciation has been spread over the remaining useful life of the project, i.e. for remaining 18 years.

In accordance with the above referred Regulations, depreciation has been computed on the approved additional capitalisation. Depreciation as approved by the Commission has been shown in enclosed **Appendix-I**.

3.4.3.2 Return on Equity (RoE)

With regard to computation of RoE, Regulation 19 of the RE Regulation, 2010 specifies as under:

“(1) The value base for the equity shall be as determined under Regulation 16(2).

(2) The Return on Equity shall be:

(a) Pre-tax 19% per annum for the first 10 years.

(b) Pre-tax 24% per annum 11th year onwards.”

As mentioned under the head of ‘Debt-Equity Ratio’, the Petitioner has considered 30% of the total expenditure as Equity whereas the Commission has considered Rs. 3.65 Crore as equity which is 16.93% of the admissible additional capitalisation as approved above. The said project was put to commercial operation in FY 2009-10 and accordingly, 10 years for the project gets completed in FY 2018-19. Therefore, return on equity on the equity deployed towards the additional capital cost has been computed considering pre-tax rate of 19% p.a. till FY 2018-19 and pre-tax rate of 24% p.a. from FY 2019-20 for the balance useful life of the project in accordance with the RE Regulations, 2010. The approved RoE has been shown in enclosed **Appendix-I**.

3.4.3.3 Interest on Loan

Computation of interest on loan has been worked out in accordance with Regulation 17 of RE Regulations, 2010 which is reproduced hereunder:

“17. Interest on loan capital

(1) The loans arrived at in the manner indicated in Regulation 16(2) shall be considered as gross normative loan for calculation for interest on loan. The normative loan outstanding as on April 1st of every year shall be worked out by deducting the cumulative repayment up to

March 31st of previous year from the gross normative loan.

(2) For the purpose of computation of tariff, the normative interest rate shall be considered as average prime lending rate (PLR) (rounded off to 25 basis points) of State Bank of India (SBI) prevalent during the previous five years immediately preceding the control period plus 150 basis points, which works out to be 13.25%.

(3) 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.

(4) Normative period of loan repayment shall be taken as 10 years."

Accordingly, the Commission has worked out the interest on loan including interest on normative loan at the rate of 13.25%. The approved interest on working capital has been shown in enclosed **Appendix-I**.

3.4.3.4 Interest on Working Capital

Regulation 20 of RE Regulations, 2010 specifies as under:

20. Interest on Working Capital

(1) The Working Capital requirement in respect of wind energy projects, small hydro power, Solar PV and Solar thermal 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;

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

.....

3) Interest on Working Capital shall be at interest rate equivalent to average State Bank of India PLR (rounded off to 25 basis points) of State Bank of India (SBI) prevalent during the previous five years immediately preceding the control period plus 100 basis points, which works out to be 12.75%.

In accordance with the above mentioned Regulations, components of working capital for each financial year during the tariff period have been computed. Further, as specified in above mentioned Regulation, the rate of interest has been considered as 12.75% p.a. for working out the interest on working capital. Interest on Working Capital (IWC) as approved by the Commission is given in enclosed

Appendix-I.

3.4.4 Design Energy

The Commission vide Order dated 10.04.2014 has calculated the design energy and the same has been considered for the purpose of computation of increase in annual tariff due to additional capitalisation. However, as mentioned earlier, in case the CUF of the generating plant remains higher than approved CUF in Order dated 10.04.2014, due to extension of D-Tank, consecutively for three years, the beneficiary may approach the Commission for upward revision of the CUF for the purpose of recovery of approved AFC.

3.4.5 Discounting Factor

Regulation 15 of the RE Regulations, 2010 specifies as under:

“... ”

(6) For the purpose of levellised tariff computation, the discount factor equivalent to weighted average cost of capital shall be considered.

(7) For determination of weighted average cost of capital, the pre-tax return on equity would be adjusted for tax at the applicable rates...”

Based on the above referred Regulation, the Discounting Factor for remaining 28 years have been computed after considering the applicable rates of MAT & corporate tax and the same has been shown in enclosed **Appendix-I**.

3.4.6 Based on the above discussion, additional tariff to be charged for additional capitalisation of Vanala SHP has been detailed in the enclosed **Appendix-I**. Accordingly, the Commission approves the levellised tariff of Rs. 0.56/kWh against the Petitioner’s claim of Rs. 0.80/kWh over and above the approved levellised tariff of Rs. 4.00/kWh by the Commission vide Order dated 10.04.2014 in respect of its Vanala SHP and the same will be applicable w.e.f. 07.07.2016.

3.5 Adjustment on Existing Tariff of the Project due to third amendment to RE Regulations 2010

3.5.1 As mentioned earlier, the Petitioner vide letter dated 06.10.2017 requested the Commission to allow the adjustment of the existing tariff approved by the Commission vide Order dated 10.04.2014 in accordance with the third amendment to

RE Regulations, 2010.

It is to be noted that the Commission vide Order dated 10.04.2014 while determining the project specific tariff for Vanala SHP having capacity of 15 MW had considered the O&M expenses @ Rs. 18 Lakh/MW in accordance with the prevailing RE Regulations, 2013 at that time. The relevant portion of the Order is reproduced as below:

“3.8.2 For projecting the O&M expenses, relevant provisions of RE Regulations, 2010 are as under:

“21. Operation and Maintenance expenses

(1) Operation and maintenance expenses for the year of commissioning shall be determined based on normative O&M expenses for the base Year FY 2009-10 as specified under Chapter 5 for different technologies. These expenses shall be escalated/de-escalated @ 5.72% p.a. to arrive at O&M expenses during the year of Commissioning.

(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.”

3.8.3 Further, Regulation 29 of RE Regulations, 2010 specifies O&M expenses @ Rs 18 Lakh/MW for the SHPs commissioned on or after April 01, 2009 with the Capacity in the range of 10 MW to 15 MW. In accordance with the above referred Regulations O&M expenses as approved by the Commission for the tariff period of the project is shown in enclosed Appendix-I.”

3.5.2 Subsequently, the Commission vide third amendment to RE Regulations, 2010 amended Regulation 29 of the RE Regulation as discussed above. In view of the said amendment, Regulation 29 of RE Regulations, 2010 specifies O&M expenses @ Rs. 26.80 Lakh/MW for the SHPs commissioned on or after April 01, 2009 having capacity in the range of 10MW to 15MW. In accordance with the aforesaid amendment in the RE Regulations, 2010 the O&M expenses now approved by the Commission for the Tariff Period of the generator is shown in enclosed **Appendix-II**.

3.5.3 Further, with respect to Interest on Working Capital, Regulation 20(1) of RE Regulations, 2010 specifies as under:

"20. Interest on Working Capital

(1) The Working Capital requirement in respect of wind energy projects, small hydro power, Solar PV and Solar thermal 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;

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

..."

3.5.4 In accordance with the above mentioned Regulations, components of working capital for each financial year during tariff period have also been re-worked to give effect for the changes in the O&M expenses as brought out by the third amendment to the RE Regulations, 2010. Interest on Working Capital (IWC) now approved by the Commission is given in enclosed **Appendix-II**.

3.5.5 In light of the above discussions & computation under the Para 3.5, revised levellised tariff for the entire life of the project has been computed which comes out to Rs. 4.18/kWh per unit against the already approved levellised tariff of Rs 4.00/kWh. The tariff so determined will be applicable w.e.f 23.09.2017.

3.6 Accordingly, increase in levellised tariff (i.e. Rs. 0.56/kWh) due to additional capitalisation shall be applicable w.e.f. 07.07.2016 and increase in levellised tariff (i.e. Rs. 0.18/kWh) due to third amendment to RE Regulations, 2010 shall be applicable w.e.f. 23.09.2017. The Commission directs UPCL to pay the arrears to the Petitioner for the additional levellised tariff determined by this Order in six equal monthly instalments commencing from December, 2017.

3.7 Ordered accordingly.

(Subhash Kumar)
Chairman

Particulars	Unit	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Year		1	2	3	4	5	6	7	8	9	10	11	12
Installed Capacity	MW	15	15	15	15	15	15	15	15	15	15	15	15
Net Generation	MU	60.56	60.56	60.56	60.56	60.56	60.56	60.56	60.56	49.66	49.66	49.66	49.66
Annual Fixed Charges (AFC)													
O&M Expenses	Rs. Crore	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Depreciation	Rs. Crore	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	0.38	0.38
Interest on Term Loan	Rs. Crore	2.29	2.12	1.96	1.79	1.62	1.46	1.29	1.13	0.96	0.79	0.71	0.71
Interest on Working Capital	Rs. Crore	0.09	0.09	0.08	0.09	0.08	0.08	0.07	0.07	0.07	0.06	0.04	0.04
Return on Equity	Rs. Crore	0.69	0.69	0.69	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Total Fixed Cost	Rs. Crore	4.33	4.16	3.99	4.00	3.83	3.66	3.50	3.33	3.16	2.99	2.01	2.01
Per Unit Tariff Components													
PU O&M Expenses	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
PU Depreciation	Rs. p.u.	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.06	0.06
PU Interest on Term Loan	Rs. p.u.	0.38	0.35	0.32	0.30	0.27	0.24	0.21	0.19	0.16	0.13	0.12	0.12
PU Interest on Working Capital	Rs. p.u.	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
PU Return on Equity	Rs. p.u.	0.11	0.11	0.11	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Total Fixed PU Components	Rs. p.u.	0.71	0.69	0.66	0.66	0.63	0.61	0.58	0.55	0.52	0.49	0.33	0.33
Levellised Tariff													
WACC (%)		11.35%	11.40%	11.46%	11.26%	11.39%	11.54%	11.72%	11.94%	12.21%	12.55%	12.75%	12.75%
Discounting Factor	Rs./kWh	1.00	0.90	0.81	0.72	0.65	0.58	0.52	0.47	0.42	0.37	0.33	0.29
Levellised Tariff	Rs./kWh	0.56											

Particulars	Unit	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Balance Life		13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Installed Capacity	MW	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Net Generation	MU	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66	49.66
Annual Fixed Charges (AFC)																	
O&M Expenses	Rs. Crore	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
Depreciation	Rs. Crore	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38	0.38
Interest on Term Loan	Rs. Crore	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Interest on Working Capital	Rs. Crore	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Return on Equity	Rs. Crore	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Total Fixed Cost	Rs. Crore	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01	2.01
Per Unit Tariff Components																	
O&M Expenses	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
Depreciation	Rs. p.u.	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
Interest on Term Loan	Rs. p.u.	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
Interest on Working Capital	Rs. p.u.	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Return on Equity	Rs. p.u.	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Total Fixed PU Components	Rs. p.u.	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Levellised Tariff																	
WACC (%)		12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%	12.75%
Discounting Factor	Rs./kWh	0.26	0.23	0.20	0.18	0.16	0.14	0.13	0.11	0.10	0.09	0.08	0.07	0.06	0.05	0.05	0.04

O&M expenses & Interest on Working Capital approved by the Commission for Vanala SHP pursuant to third amendment to the RE Regulations, 2010

Particulars		Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Year			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
O&M Expenses	Approved vide order dated 10.04.2014	Rs. Lakh	146	285	302	319	337	357	377	399	421	445	471	498	526	556	588	622	657	695
Interest on Working Capital			12	65	64	63	61	60	59	58	57	56	55	55	46	47	49	50	52	54
O&M Expenses	Now approved pursuant to sixth amendment in RE Regulations, 2013	Rs. Lakh	146	285	302	319	337	357	377	438	627	663	701	741	784	828	876	926	979	1035
Interest on Working Capital			12	65	64	63	61	60	59	60	67	67	67	67	58	60	63	65	68	71

Particulars		Unit	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044
Year			19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
O&M Expenses	Approved vide order dated 10.04.2014	Rs. Lakh	735	777	821	868	918	970	1026	1085	1147	1212	1282	1355	1432	1514	1601	1693	1789
Interest on Working Capital			58	60	62	65	67	70	73	76	79	83	86	90	94	98	103	108	113
O&M Expenses	Now approved pursuant to sixth amendment in RE Regulations, 2013	Rs. Lakh	1094	1157	1223	1293	1367	1445	1528	1615	1707	1805	1908	2017	2133	2255	2384	2520	2664
Interest on Working Capital			77	80	83	87	91	95	99	104	109	114	119	125	131	137	144	151	158