CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Petition No. 315/GT/2018

Coram:
Shri P.K. Pujari, Chairperson
Dr. M.K. Iyer, Member

Date of Order: 26th June, 2019

In the matter of

Approval of tariff of Rampur Hydroelectric Project (412 MW) for the period from actual COD of first unit (13.5.2014) to 31.3.2019

And

In the matter of

SJVN Limited
SJVN Corporate Office Complex,
Shanan, Shimla-171006,
Himachal Pradesh …...**Petitioner**

Vs

1. Uttaranchal Power Corporation Ltd.
Urja Bhawan, Kanwali Road,
Dehradun- 248001

2. Power Development Department
Government of J&K,
Mini Secretariat, Jammu

3. Jaipur Vidyut Vitran Nigam Ltd.
Vidyut Bhawan, Janpath,
Jaipur – 302005

4. Ajmer Vidyut Vitran Nigam Ltd.
Old Power House, Hathi Bhata,
Jaipur Road, Ajmer

5. Jodhpur Vidyut Vitran Nigam Ltd.
New Power house, Industrial Area,
Jodhpur

6. Haryana Power Purchase Centre,
Shakti Bhawan, Sector VI,
Panchkula - 134019

7. Himachal Pradesh State Electricity Board Ltd,
Vidyut Bhawan, Shimla – 171004

8. Government of Himachal Pradesh,
H.P. Secretariat, Shimla -171002

9. Uttar Pradesh Power Corporation Ltd.
Shakti Bhawan, 14, Ashoka Road,
Lucknow – 226001

10. Punjab State Power Corporation Ltd.
The Mall, Patiala – 147001

11. Power Department
Union Territory of Chandigarh,
Additional Office Building, Sector 9D,
Chandigarh **......Respondents**

Parties Present:

Shri Romesh Kapoor, SJVNL
Shi Rajeev Aggarwal, SJVNL
Shri Sanjay Kumar, SJVNL
Shri Atul Harkat, SJVNL

ORDER

This petition has been filed by the Petitioner, SJVNL for approval of generation tariff of Rampur Hydroelectric Project (412 MW) ('the generating station') for the period from the actual date of commercial operation of Unit-I (13.5.2014) to 31.3.2019, in accordance with the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 ('the 2014 Tariff Regulations').

Background

2. The generating station is located on the river Satluj in the State of Himachal Pradesh and developed as a tail race extension of upstream project (Nathpa Jhakri) and is to be run in tandem with it. The project was sanctioned by Ministry of Power, Government of India on 25.1.2007 at an estimated cost of ₹2047.05 crore, including Interest During Construction (IDC) and Financing Charges (FC) of ₹260.41 crore and

₹1.46 crore respectively, at March, 2006 Price Level with a completion schedule of 60 months. The dates of commercial operation of these units of the generating station are as under:

Units	Actual COD
I	13.5.2014
II	13.5.2014
III	8.8.2014
IV	18.6.2014
V	13.5.2014
VI	16.12.2014

3. The Petitioner has entered into PPAs with the Respondents for the capacity generated from the project. The allocation of power from the generating station was notified on 12.5.2014 by the Ministry of Power, Govt. of India.

4. The Petitioner had filed Petition No.244/GT/2013 during July, 2013 for approval of tariff of the generating station from the anticipated date of commercial operation (COD) of the six units of the generating station till 31.3.2014, based on the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2009 (hereinafter referred to as the 2009 Tariff Regulations). Considering the fact that none of the units of the generating station were declared under commercial operation during the period 2009-14 for which the 2009 Tariff Regulations was applicable, the Commission by its order dated 6.5.2014 disposed of the said petition with liberty to the Petitioner to approach the Commission with a fresh petition for approval of tariff for the units / generating station which are declared under commercial operation during 2014-19, in accordance with the provisions of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2014 (hereinafter referred to as the 2014 Tariff Regulations), taking

into account the revised capital expenditure on account of rescheduling of the units of the generating station. The relevant portion of the order is extracted hereunder:

> *"9. Accordingly, this petition is disposed of with a direction that the Petitioner is at liberty to approach the Commission with a fresh petition for approval of tariff for the unit/generating station which are declared under commercial operation during 2014-19, in accordance with the provisions of the 2014 Tariff Regulations, taking into account the revised capital expenditure on account rescheduling of the units of the generating station, which would be considered in accordance with law. We also direct that the petition shall be posted in the web-site of the Petitioner and copy be served on the Respondents, who are at liberty to file their replies thereafter.*
>
> *10. The filing fees deposited by the Petitioner in respect of this tariff petition would however be adjusted against the tariff petition to be filed in terms of the liberty granted above."*

5. Pursuant to the liberty granted by the Commission as above, the Petitioner filed Petition No. 184/GT/2014 for approval of generation tariff and submitted that three units of the generating station had been declared under commercial operation on 13.5.2014 and the remaining three units were expected to be declared under commercial operation during June, 2014. The Petitioner also prayed for grant of interim/adhoc tariff, pending submission of RCE and the DIA report on time overrun. Accordingly, the Commission by order dated 27.1.2015 granted interim annual fixed charges based on actual COD of Units I to VI for the period from 13.5.2014 to 31.3.2016, subject to adjustment after determination of final tariff of the generating station for 2014-19. The interim annual fixed charges approved by the Commission vide order dated 27.1.2015, based on the capital cost is as under:

Capital Cost

(₹ in lakh)

Capital cost as on COD of 3 units (On COD of Unit Nos. I, II and V (13.5.2014))	155480.06
Capital cost for 4 units (On COD of Unit-IV (18.6.2014)	207306.75
Capital cost for 5 units (On COD of Unit-III (8.8.2014)	259133.43
Capital cost for Unit-VI & generating station	**310960.12**

Annual fixed charges (interim)

(₹in lakh)

13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	2015-16
(3 Units)	(4 Units)	(5 Units)	(All 6 Units)	(All 6 Units)
2521.65	**4864.08**	**15462.84**	**15089.99**	**52076.42**

6. Thereafter, the interim tariff granted vide order dated 27.1.2015 was extended till 31.8.2016 or till determination of final tariff for 2014-19 whichever was earlier, vide Commission's order dated 30.3.2016. Subsequently, the Commission by order dated 15.2.2017 disposed of the said petition as under:

> "*13. In line with the above decision, we dispose of this petition, with liberty to the Petitioner to approach the Commission with fresh petition for determination of tariff for the period 2014-19 in respect of the generating station after approval of RCE by the Central Government. We direct accordingly. We also direct that the interim tariff granted by order dated 27.1.2015 shall continue to be in force till the tariff of the generating station for 2014-19 is determined based on the DIA report and the approved RCE. The filling fees deposited by the Petitioner shall be adjusted against the fresh petition to be filed for determination of tariff for the period 2014-19 in terms of the liberty granted above.*

7. While so, the Commission vide letter dated 3.7.2018 directed the Petitioner to file tariff petition in respect of the generating station for the period 2014-19 within a period of two months enclosing the following documents:

> *(a) Board approval of the actual capital cost of the Company;*
>
> *(b) At least one of the following documents namely- the DIA Report or Cost approved by CEA/PIB: or*
>
> *(c) Cost approved by CCEA*

8. The Petitioner, in terms of the Commission's order dated 15.2.2017 and in compliance with the directions in letter dated 3.7.2018, has filed this petition for approval of tariff for the period from actual COD of first unit till 31.3.2019 based on actual expenditure duly audited upto 31.3.2018 and projected expenditure for 2018-19 in accordance with the provisions of the 2014 Tariff Regulations. The DIA on

10.2.2016 has submitted its recommendations and report on the capital cost of the generating station as on COD and the Petitioner has furnished the same to the Commission on 12.2.2016 with copy to the beneficiaries. Accordingly, the annual fixed charges claimed by the Petitioner in the present petition for the period from actual COD of the units till 31.3.2019 are summarized as under:

(₹ in lakh)

	13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
Depreciation	803.51	1623.84	5434.62	5646.95	20324.46	21091.01	20874.37	21581.67
Interest on Loan	386.85	692.99	2696.72	2481.40	9542.30	11794.54	10891.28	13722.56
Return on Equity	1231.78	2364.79	7662.66	7023.77	25162.60	26173.89	26549.39	27027.23
Interest on Working Capital	8.50	23.09	195.56	153.80	1882.41	2016.06	2042.53	2181.47
O&M Expenses	582.48	1100.24	3505.65	3430.15	11146.27	11886.38	12675.63	13517.30
Total	**3013.12**	**5804.95**	**19495.22**	**18736.06**	**68058.04**	**72961.89**	**73033.20**	**78030.23**

9. In compliance with the directions of the Commission, the Petitioner has filed the additional information and has served copies of the same on the Respondents. Reply to the petition has been filed by the Respondents, UPPCL & PSPCL and the Petitioner has filed its rejoinder to the said replies. Based on the submissions of the parties and the documents available on record, we proceed to determine the tariff of the generating station for the period 2014-19, on prudence check, as stated in the subsequent paragraphs.

Capital Cost

10. As stated, the execution of the Project was sanctioned by the MOP, GOI on 25.1.2007 at an estimated cost of ₹2047.05 crore including IDC and Financing charges of ₹260.41 crore and ₹1.46 crore respectively at March, 2006 Price level with a completion schedule of 60 months. The cost of the Project is being financed

on debt equity ratio of 70:30. The Petitioner vide its letter dated 23.11.2012 submitted the Revised Cost Estimate (RCE) of ₹3397.07 crore at March, 2012 Price Level. However, NITI Ayog (*the erstwhile Planning Commission*) vide letter dated 7.7.2014 directed the Petitioner to submit the Completion cost of the project, since RCE proposal at March, 2012 Price level was outdated by more than 2 years as the project was nearing completion. In the 240th meeting of Board of Directors of the Petitioner Company held on 30.7.2015, the Completion cost was approved as ₹4233.21 crore and the Petitioner vide letter dated 24.4.2015 submitted the Completion cost of the Project as ₹4233.21 crore including IDC, FC and ERV of ₹619.04 crore to MoP, GoI for approval. Also, CEA vide its letter dated 12.10.2015 vetted the Completion cost of the Project for ₹4233.21 crore. In the meanwhile, the DIA, M/s Aquagreen Engineering Management Pvt. Ltd, in its report dated 10.2.2016, had recommended the capital cost of the Project as ₹3996.00 crore as on COD. Subsequently, the Standing Committee constituted by MOP, GOI approved the time and cost overrun contained in RCE and PIB, in its meeting dated 12.5.2017, has recommended RCE (Cost to Completion) of the Project for ₹4233.21 crore including IDC, FC and ERV amounting to ₹619.04 crore.

Time overrun

11. The project was scheduled to be commissioned during January, 2012. However, the generating station has been declared under commercial operation on 16.12.2014. Thus, there is time overrun of 34.43 months in the completion of the Project. The detailed break-up for time overrun as submitted by the Petitioner is as under:

Sl. No.	Description	Total Months
1.	Delay in completion of Kasholi Adit	6.16
2.	Delay in completion of heading excavation works	19.83
3	Delay on account of slow progress due to deformations in HRT during benching activity	0.72
4.	Delay in lining activity	7.21
5.	Time gain by contractor in succeeding activities of civil works	(-)2.96
6.	Differential time between sanctioned period & contractual period bid by BHEL for commissioning of units	1.22
7.	Delay in E&M works	2.24
	Total	**34.43**

Cost Overrun

12. The Petitioner has submitted the following heads under which cost overrun of ₹2186.17 crore has occurred:

(₹ in crore)

Sl. No.	Description	Sanctioned Cost	Cost to completion	Variation
A.	A-Preliminary	30.02	90.72	60.70
	B- Land and R&R	62.15	134.64	72.49
	C-Works	18.26	22.80	4.55
	J-Works	805.52	2030.21	1224.69
	K-Buildings	65.17	98.25	33.08
	M-Plantation	0.98	0.18	(-)0.80
	O-Miscellaneous	19.55	59.55	40.00
	P-Maintenance during construction	9.18	3.99	(-)5.19
	Q-Special tools & plants	3.99	2.20	(-)1.80
	R-Communications	8.86	26.90	18.04
	X-Environment & Ecology	29.20	51.26	22.06
	Y-Losses on Stock	0.92	0.00	(-)0.92
	II-Establishment	69.52	235.71	166.19
	III-Tools & Plants	10.54	4.54	(-)6.00
	Indirect charges	11.01	6.50	(-)4.51
	Less receipt & recoveries	(-)5.75	(-)0.44	5.31
	Total for Civil Works	**1139.11**	**2767.01**	**1627.90**
B.	**E&M Works**	646.06	857.23	211.17
C.	**IDC & FC**			
	Interest during Construction	260.41	47.76	(-)212.64
	Guarantee Fee/ Financing charges	1.46	89.84	88.38
	Upfront fee to world bank	0	4.02	4.02
	Interest on SBI Loan	0	17.39	17.39
	Interest acquired on World bank disbursement	0	(-)25.80	(-)25.80
	ERV on world bank loan	0	485.84	485.84
	Total IDC & FC	**261.86**	**619.04**	**357.18**
D.	**Infirm Power**	0	(-)10.08	(-)10.08
	Grand Total	**2047.03**	**4233.21**	**2186.17**

13. The Petitioner has submitted that cost to completion of the Project for ₹4233.21 crore including ODC, FC and ERV was submitted to DIA for vetting. However, the DIA in its report dated 10.2.2016 recommended a capital cost of ₹3996 crore as on COD. The Petitioner has submitted that the DIA has not vetted some of the cost on account of Establishment, J-Power Plant Civil Works and has deducted IDC & FC on account of E&M works. The Petitioner has submitted that the establishment cost booked in civil and E&M works is for justifiable reasons and may be allowed based on the actual expenditure incurred. As regards J-Plant Civil Works, the Petitioner has stated that the rate revision was carried out strictly as per contract provisions which was subsequently approved by the Board of the Petitioner Company, which has been vetted and recommended by CEA while forwarding the same to MOP, GOI for approval. As regards the deduction of ₹35.23 crore by the DIA towards IDC & FC on account of time overrun of 68 days taken by contractor for commissioning of all units, after the availability of water, the Petitioner has submitted that the said amount should form part of the capital cost as vetted by CEA/PIB. It has also submitted that the Standing Committee constituted by MOP, GOI has approved the time and cost overrun contained in the completion cost of the Project.

Submissions of Respondent, UPPCL

14. The Respondent, UPPCL has submitted that there is time overrun of 1156 days and the DIA has allowed time overrun of 940 days (from original completion of water filling (17.8.2011) to actual water filling (14.3.2014) mainly attributable to geological conditions encountered in the Project. Therefore, the time overrun of 216 days should not be condoned. Accordingly, the Respondent has submitted that the Commission may deduct IDC for 216 days from the capital cost of the Project. As

regards Cost overrun, the Respondent has submitted that the Commission may direct the Petitioner to put up RCE covering the capital cost claimed for ₹4367.88 crore, failing which the cost overrun of ₹134.67 crore may be deducted at ₹26.93 crore/year from capital cost from 2014-19.

Submissions of Respondent, PSPCL

15. The Respondent, PSPCL has pointed out referring to the DIA report on Establishment cost, that the Petitioner ought to justify the huge escalation in establishment and E&M works which the Petitioner has failed to do so in the petition. The Respondent has also submitted that the DIA had conducted a detailed study of the cost variations of each of the aspects under the head 'J-Power Plant Civil Works' and has attributed an amount of ₹39.84 crore on the Petitioner while approving ₹1990.37 crore. Accordingly, it has submitted that the Petitioner cannot, without any justification, claim amounts over and above the amounts vetted by DIA. As regards the deduction of ₹35.23 crore towards IDC & FC on account of E&M works, the Respondent has stated that the delay caused on account of BHEL is a matter between the Petitioner and BHEL and the consumers of the Petitioner cannot be burdened with these costs. The Petitioner in its rejoinder has submitted that the CEA vide its letter dated 12.10.2015 had vetted the completion cost of the Project for ₹4233.21 crore. It has further submitted that the Standing Committee has approved the time and cost overrun contained in RCE and the PIB on 12.5.2017 has recommended RCE of the Project for ₹4233.21 crore.

Analysis

16. We have considered the matter. The observations of the Standing Committee on time and cost overrun are reproduced here as under:

"1. The project was declared under commercial operation w.e.f 16.12.2014.

2. The Committee noted that because of the tandem operation with upstream Nathpa Jhakri Hydro Power Station, the project is one of its own kind of hydro development in the country.

3. The Committee noted that the project was scheduled to be completed in a period of 60 months i.e. by 24.1.2012 whereas the project was commissioned on 4.12.2014. thus, there is a total time overrun of 34 months as per the details given ar para 4.2 above which were found convincing by the Committee based on facts put forth by SJVN.

4. The Committee noted that the cost to completion of the project amounting to Rs 4233.21 crore has implied an excess cost of Rs 2186.17 crore i.e. 107% of sanctioned cost of Rs 2047.03 crore. After excluding price escalation, statutory levies and ERC, within the original approved time cycle, the cost overrun works out to Rs 1859.66 crore which is 90.85% higher than the sanctioned cost. The Committee has observed that out of this 1859.66 crore, major factor for increase is towards change in design, change in scope and over/under provision amounting to Rs 1021.39 crore which are explained in the report.

5. The Committee noted that the time overrun of 34 months and 10 days has resulted in an increase of ₹910.72 Crore, out of which ₹754.93 Crore is due to IDC & FC, Price escalation, Statutory Duties and Exchange Rate Variation and ₹155.79 crore due to administrative expenses.

6. On examining the reasons of cost and time overrun, Committee is of the considered opinion that such overruns were beyond the control of of any agency or person, hence no individual / agency can be held responsible for the same."

17. After analysing the reasons for time and cost overrun, the Standing Committee has made the following recommendations:

> *"8. Recommendations of the Standing Committee-*
>
> *In view of above deliberations, Standing Committee recommends the cost to completion of Rampur HEP project amounting to Rs 4233.21 crore including IDC, FC & ERV amounting to Rs 619.04 crore at completion cost with time overrun of 34 months for consideration of the PIB."*

18. We have examined the submissions of the parties along with the observations and recommendations of the Standing Committee on time and cost overrun and recommendations of PIB. We notice that the Standing committee, after detailed analysis of the submissions of the Petitioner have brought out the various factors responsible for time and cost overrun like delay in completion of heading excavation works (on account of poor geology), delay in lining activity (on account of increase in reinforcement lining & concrete), delay in E&M works etc., and has based its

recommendations on the same. Also, the Standing Committee has examined the reasons which attributed to the increase of ₹2186.17 crore over the sanctioned cost. Accordingly, after detailed scrutiny of report of the Standing Committee, we accept the recommendations of the Standing Committee that the time overrun of 34.43 months and the cost overrun on account of the same were beyond the control of any agency or person and no individual can be held responsible for the same. The PIB in its meeting dated 12.5.2017 has recommended the RCE of the Project for ₹4233.21 crore, including IDC, FC & ERV of ₹619.04 crore. Accordingly, the same is allowed for the purpose of tariff, subject to actual cash expenditure. In the event of RCE being approved by CCEA/ MOP GOI, the same shall be brought to the notice of the Commission.

Capital cost for 2014-19

19. Regulation 9 of the 2014 Tariff Regulations provides as under:-

> ***"9. Capital Cost:***
>
> *(1) The Capital cost as determined by the Commission after prudence check in accordance with this regulation shall form the basis of determination of tariff for existing and new projects.*
>
> *(2) The Capital Cost of a new project shall include the following:*
>
> *(a) the expenditure incurred or projected to be incurred up to the date of commercial operation of the project;*
>
> *(b) Interest during construction and financing charges, on the loans (i) being equal to 70% of the funds deployed, in the event of the actual equity in excess of 30% of the funds deployed, by treating the excess equity as normative loan, or (ii) being equal to the actual amount of loan in the event of the actual equity less than 30% of the funds deployed;*
>
> *(c) Increase in cost in contract packages as approved by the Commission;*
>
> *(d) Interest during construction and incidental expenditure during construction as computed in accordance with Regulation 11 of these regulations;*
>
> *(e) capitalised Initial spares subject to the ceiling rates specified in Regulation 13 of these regulations;*
>
> *(f) expenditure on account of additional capitalization and de-capitalisation determined in accordance with Regulation 14 of these regulations;*

(g) adjustment of revenue due to sale of infirm power in excess of fuel cost prior to the COD as specified under Regulation 18 of these regulations; and

(h) adjustment of any revenue earned by the transmission licensee by using the assets before COD."

20. The Petitioner has claimed capital cost of the Project vide Form 1(i) (Statement showing claimed capital cost), Form 5B (Break-up of capital cost) and Form 9E (Statement of capital cost) as detailed under:

Form 1(i)

(₹ in lakh)

	13.5.2014 to 17.6.2014 Unit-I,II,V	18.6.2014 to 7.8.2014 Unit-IV	8.8.2014 to 15.12.2014 Unit-III	16.12.2014 to 31.3.2015 Unit-VI/ Station	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
Opening Capital Cost	164765.16	234068.12	306417.79	380647.38	391724.25	407972.55	423864.38	419906.24
Add: Addition	69302.96	72349.67	74229.60	11076.86	4823.46	8233.50	5247.56	8418.25
Less: De-capitalization	0.00	0.00	0.00	0.00	2503.34	194.64	7734.78	0.00
Less: Reversal	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Add: Discharges	0.00	0.00	0.00	0.00	13928.19	7852.97	(-)1470.91	8463.59
Closing capital cost	**234068.12**	**306417.79**	**380647.38**	**391724.25**	**407972.55**	**423864.38**	**419906.24**	**436788.08**

As per Form 5B

(₹ in lakh)

	13.5.2014	18.6.2014	8.8.2014	16.12.2014
Capital Cost including IDC, FC, FERV & Hedging Cost (cash basis)	159502.37	227011.10	297550.79	369916.53
Add: Normative IDC	5262.79	7057.02	8867.00	10730.86
Capital cost including IDC, Normative IDC, FC, FERV & Hedging Cost (on cash basis)	164765.16	234068.12	306417.79	380647.39
Liability	26322.78	25547.27	25512.65	29254.58
Actual expenditure on accrual basis	**191087.94**	**259615.39**	**259615.39**	**409901.96**

As per Form 9E

(₹ in lakh)

	13.5.2014	18.6.2014	8.8.2014	16.12.2014
a) Opening gross Block Amount as per books	**159503.00**	**227011.73**	**297551.42**	**369917.16**
Amount of capital liabilities in (a) above	26322.78	25547.27	25512.65	29254.58
Amount of IDC in (a) above	2039.62	2242.38	2420.03	2663.44
Amount of FC in (a) above	6582.31	6970.15	7271.71	7610.98
Amount of FERV in (a) above	38263.43	40004.82	45393.46	48584.16
Amount of Hedging Cost in (a) above	0.00	0.00	0.00	0.00
Amount of IEDC in (a) above	**30573.51**	**40875.55**	**51339.03**	**62241.41**

21. It is noticed that the capital cost as on COD of the generating station as per Form 9E (₹369917.16 lakh) is more by ₹0.63 lakh as against the capital cost as per Form 5B (₹369916.53 lakh, including IDC, FC, FERV and IEDC and excluding normative IDC). The Petitioner has indicated that the capital cost as on each COD in Form 5B is on cash basis. However, in Form 9E, the same amounts (with a difference of ₹0.63 lakh), have been claimed on accrual basis. It is further noticed that the same capital costs as on each COD have been claimed vide Form 1(i) as cash costs only. As there is lack of clarity in the presentation as to whether the claimed capital cost is on cash basis or accrual basis, the gross block position as per balance sheets as on COD of each unit has been referred to, which is as below:-

(₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
159503.00	227011.73	297551.42	369917.16

22. It is observed that the gross block as per balance sheet, which is on accrual basis, matches with the capital cost as per Form 9E. This clarifies that the capital cost as per Form 1(i) and Form 5B are also on accrual basis, i.e. including the un-discharged liabilities and not on cash basis as claimed by the Petitioner. Accordingly, the capital cost claimed is considered on accrual basis as per Form 9E.

IDC

23. The Petitioner has claimed IDC as on COD of each of the units as under:

(₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
2039.62	2242.38	2420.03	2663.44

24. The Petitioner has availed loans from IBRD and SBI and has submitted the respective loan agreements dated 15.1.2008 and dated 11.1.2014. It is observed that the Petitioner has earned interest on the investments made from unused funds out of

the IBRD loan drawn and has deducted the same from the IDC of such period. The amount of interest earned till COD of each unit is as under:

(₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
2122.81	4311.07	6403.31	8473.42

25. The Petitioner vide affidavit dated 5.9.2018 has furnished details with respect to drawl, repayment and rate of interest etc. The interest earned on the investment out of the unused IBRD loan amount has been deducted from the IDC amount accrued during the respective period for calculation of the net IDC as under:

(₹in lakh)

	13.5.2014	18.6.2014	8.8.2014	16.12.2014
Interest on SBI loan	168.35	386.19	721.12	1739.09
Add: Interest on IBRD Loan	4235.51	4317.31	4440.01	4650.33
Less: Interest earned	2122.81	2188.27	2347.77	2580.22
Total IDC (net)	**2281.05**	**2515.24**	**2813.36**	**3809.20**

26. It is noticed that the Petitioner while capitalizing IDC has allocated the accrued IDC only to gross block after charging to revenue, without considering the allocation to CWIP. As this is inconsistent with the accounting principles, accordingly, as per the methodology adopted by the Commission, the net IDC calculated has been allocated to the Gross Block and CWIP after charging to revenue in proportion to the number of operational units. Thus, IDC allowed for capitalisation is as under:-

((₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
966.56	1828.04	2353.80	2638.19

27. The IDC allowed as above is subject to revision based on submission of the details of unit-wise allocation of IDC as on COD of each unit, duly certified by the Auditor, at the time of truing up exercise. The Petitioner is also directed to furnish details such as (i) the amount of unused IBRD loan, (ii) the amount invested, (iii) the rate of interest with respect to such investment, (iv) the duration of the

investments, all duly certified by Auditor (v) the certified reconciliation statement between the actual cash expenditure incurred and the sources of finance during the period when such unused portion of IBRD loan was invested, at the time of truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations. Accordingly, the IDC of ₹25.25 lakh disallowed above, has been excluded from the completion cost of the project.

Financing Charges

28. The Financing Charges claimed by the Petitioner are as under:

((₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
6582.31	6970.15	7271.71	7610.98

29. It is observed that the claim for financing charges vide Form 9E is duly certified by Chartered Accountant. The Petitioner vide its affidavit dated 5.9.2018 has also submitted the detailed calculations for the financial charges claimed. Accordingly, on prudence check, the claim is allowed.

Foreign Exchange Rate Variation (FERV)

30. The Petitioner has claimed amount of Foreign Exchange Rate Variation (FERV) loss to be capitalised, as under:

((₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
38263.43	40004.82	45393.46	48584.16

31. It is observed that the claim for FERV vide Form 9E which has been duly certified by the Chartered Accountant. The Petitioner has also submitted the Chartered Accountant's certificate with respect to the calculations for FERV claimed. Based on this, the FERV claimed is allowed, on prudence check.

Normative IDC

32. The Petitioner has claimed normative IDC amounts as under:

((₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
5262.79	7057.02	8867.00	10730.86

33. The Petitioner vide affidavit dated 5.9.2018 has submitted Form 14 A (actual cash expenditure) and the Statement of calculations, duly certified by Chartered Accountant. The normative IDC has been calculated on the equity portion more than 30% of the actual cash expenditure for the period from 2004-05 i.e. 1st infusion of funds till COD of the generating station. The actual cash expenditure as on the COD of each units, based on which normative IDC has been calculated by the Petitioner is as under:

(₹in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
348761.00	352271.00	357243.00	369916.00

34. It is observed that the actual cash expenditure as on 16.12.2014 (COD of generating station) as per Form 14A matches with the capital cost as on date, despite there being CWIP and capital advances existing on that date, which is evident from the balance sheet. Whereas, the actual cash expenditure for the purpose of calculation of normative IDC, being the total cash expenditure towards the project, shall be inclusive of capital advances and CWIP.

35. As stated in para 22 above, the capital cost as on COD of the generating station (₹369917.16 lakh) is on accrual basis as evident from Form 9E and the balance sheet, and not on cash basis as claimed by the Petitioner. Since the Petitioner has claimed normative IDC on the basis of ₹369917.16 lakh, considering it as actual cash expenditure, it is apparent that the Petitioner has calculated the normative IDC on

the capital expenditure, which is admittedly on accrual basis. Thus, the actual capital expenditure claimed by the Petitioner for the purpose of normative IDC includes undischarged liabilities on one hand but excludes CWIP and capital advances on the other. It is further noticed that in absence of the balance sheets since 1st infusion of fund and complete notes to the balance sheet as on each COD, it is not possible to derive the exact amounts of the actual cash expenditures which would otherwise include CWIP/ capital advances and exclude undischarged liabilities, for revising the normative IDC claimed by the Petitioner. In such a scenario, the normative IDC has been allowed based on the actual cash expenditure as claimed by the Petitioner. However, the same is subject to revision at the time of truing- up exercise based on the actual cash expenditure along with the balance sheets since 1st infusion of fund and reconciliation thereof with Form 14-A to be furnished by the Petitioner.

36. It is further observed that the Petitioner has calculated the normative IDC by applying the weighted average rate of interest for the entire period upto COD. In this regard, the submission of the Petitioner in the statement of calculation of normative IDC is as under:

> *"Before 2008-09 there was no withdrawal of project specific loan, hence the weighted average rate of interest on the company loan as on for the year 2007-08 has been considered. Further the same rate has been considered for the remaining years since the foreign currency loan although lower rate of interest (including Guarantee fee payment to GOI) but involves exchange rate variation also."*

37. Clause (5) of Regulation 25 of the 2014 Tariff Regulations provides as under:

> *"(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
>
> *Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered.*

Further, that if the generating station or the transmission system, as the case may be, does not have actual loan, then the weighted average rate of interest of the generating company or the transmission licensee as a whole shall be considered."

38. In terms of the above regulations, in case of absence of actual loan, weighted average rate of interest of the company shall be applied. Accordingly, the Petitioner has applied the same for the period prior to actual drawl of the loan, i.e. from 2004-05 to 2007-08. However, as per the Regulations, the rate of interest for the actual loan should have been used after the 1st drawl of the IBRD loan, instead of the rate of interest for the company as a whole. Accordingly, for the period after the 1st drawl of the loan, the weighted average rate of interest claimed by the Petitioner has not been considered and the same has been re-worked out in respect of the actual loan for allowance of normative IDC. The rate of interest claimed by the Petitioner vis-a vis allowed by the Commission for the period after drawl of actual loan are as under:

Year/ period	Weighted average rate of interest claimed	Weighted average rate of interest allowed
2008-09	9.72%	2.74%
2009-10	9.72%	1.13%
2010-11	9.72%	0.56%
2011-12	9.72%	0.61%
2012-13	9.72%	0.66%
2013-14	9.72%	0.84%
2014-15 (pro-rata for the periods)		
1.4.2014 to 12.5.2014	2.46%	0.09%
13.5.2014 to 17.6.2014	2.82%	0.08%
18.6.2014 to 7.8.2014	2.64%	0.11%
8.8.2014 to 15.12.2014	3.22%	0.28%

39. Accordingly, the normative IDC allowed is as under:

(₹ in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014
3031.91	3065.69	3115.25	3249.21

Un-discharged liabilities

40. The Petitioner has claimed un-discharged liabilities as on COD of each units and as on end of the financial year vide Form 9E (upto 31.3.2015) and vide Form 16 (entire period upto 31.3.2018) as under:

(₹ in lakh)

13.5.2014	18.6.2014	8.8.2014	16.12.2014	31.3.2015	31.3.2016	31.3.2017	31.3.2018
26322.78	25547.27	25512.65	29254.58	28773.83	14845.64	6992.67	8463.59

41. As Form 9E and Form 16 (liability flow statement) have been certified by the Chartered Accountant, the un-discharged liabilities as claimed by the Petitioner are considered.

Discharge of liabilities

42. The year-wise discharge of liabilities claimed by the Petitioner vide Form 1 is as under:

((₹in lakh)

1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
13928.19	7852.97	(-)1470.91	8463.59

43. The Petitioner has furnished details as regarding the discharge of liabilities for 2015-16, 2016-17 and 2017-18 vide Form 16, duly certified by the Chartered Accountant, based on Audited financial statements and projections. The same is allowed for the purpose of tariff. It is noticed that the Petitioner has not furnished any details for the projected discharge during the year 2018-19. However, as the claim for 2018-19 is made vide Form 1(I) duly certified by Chartered Accountant, the same is allowed on projected basis. The Petitioner is directed to furnish details for the same, duly certified by the Chartered Accountant, at the time of truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations.

Initial Spares

44. Regulation 13 (c) of the 2014 Tariff Regulations, provides as under:

> *"13. Initial spares shall be capitalised as a percentage of the Plant and Machinery cost upto cut-off date, subject to following ceiling norms:*
>
> *(c) Hydro generating stations including pumped storage hydro generating station - 4.0%"*

45. The Petitioner in Form 5(B) has claimed initial spares for ₹6524 lakh and Plant & Equipment cost of ₹63442 lakh. In terms of the above regulation, the permissible amount for initial spares, works out to ₹2372 lakh. Therefore, initial spares have been restricted to ₹2372 lakh for this generating station and the excess amount of ₹4152 lakh has been deducted from capital cost as on COD of the generating station (16.12.2014). This works out to ₹376495.38 lakh (380647.38 – 4152.00). The excess amount of ₹4152 lakh has been reduced from the RCE of ₹423321.00 lakh. Accordingly, the completion cost of the generating station after considering the amount of IDC disallowed and excess initial spares disallowed comes to ₹419143.75 lakh (423321.00–25.25- 4152.00). The same shall be subject to true-up based on the actual additional capital expenditure.

Capital cost allowed as on COD

46. Based on the discussion in the foregoing paragraphs, the capital cost allowed as on COD of each units for the purpose of tariff is as below:-

(Rs in lakh)

	13.5.2014	18.6.2014	8.8.2014	16.12.2014
(a) Capital Cost claimed including IDC, FC, FERV & Hedging Cost and un-discharged liabilities as per form 9E	159503.00	227011.73	297551.42	369917.16
(b) Less:				
Amount of capital liabilities above	26322.78	25547.27	25512.65	29254.58
Amount of IDC claimed	2039.62	2242.38	2420.03	2663.44
Amount of FC claimed	6582.31	6970.15	7271.71	7610.98
Amount of FERV claimed	38263.43	40004.82	45393.46	48584.16
Amount of Hedging Cost claimed	0.00	0.00	0.00	0.00
Excess Initial Spares claimed	0.00	0.00	0.00	4152.00

(c) Add:				
IDC allowed	966.56	1828.04	2353.80	2638.19
FC allowed	6582.31	6970.15	7271.71	7610.98
FERV allowed	38263.43	40004.82	45393.46	48584.16
Notional IDC	3031.91	3065.69	3115.25	3249.21
2. Capital cost (a-b+c)	**135139.07**	**204115.82**	**275087.78**	**339734.54**

Additional capital Expenditure

47. Clause (3) of Regulation 7 of the 2014 Tariff Regulations provides that the application for determination of tariff shall be based on admitted capital cost including any additional capital expenditure already admitted upto 31.3.2014 (either based on actual or projected additional capital expenditure) and estimated additional capital expenditure for the respective years of the tariff period 2014-19.

48. Regulation 14 of the 2014 Tariff Regulations provides as under:

"14 (1) The capital expenditure in respect of the new project or an existing project incurred or projected to be incurred, on the following counts within the original scope of work, after the date of commercial operation and up to the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Un-discharged liabilities recognized to be payable at a future date;

(ii) Works deferred for execution;

(iii) Procurement of initial capital spares within the original scope of work, in accordance with the provisions of Regulation 13;

(iv) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law; and

(v) Change in law or compliance of any existing law:

14(2) The capital expenditure incurred or projected to be incurred in respect of the new project on the following counts within the original scope of work after the cut-off date may be admitted by the Commission, subject to prudence check:

(i) Liabilities to meet award of arbitration or for compliance of the order or decree of a court of law;

(ii) Change in law or compliance of any existing law;

(iii) Deferred works related to ash pond or ash handling system in the original scope of work; and

(iv) Any liability for works executed prior executed prior to the cut off date, after prudence check of the details of such undischraged liability, total estimated

cost of package, reasons for such withholding of payment and release of such payments etc.

49. The year-wise breakup of the actual/projected additional capital expenditure claimed by the Petitioner for the period 2014-19 is as under:

(₹in lakh)

13.5.2014 to 17.6.2014 (36 days) Unit-I,II,V	**18.6.2014 to 7.8.2014 (51 days) Unit-IV**	**8.8.2014 to 15.12.2014 (130 days) Unit-III**	**16.12.2014 to 31.3.2015 (106 days) Unit-VI**	**2015-16**	**2016-17**	**2017-18**	**2018-19**
69302.96	72349.67	74229.60	11076.86	4823.44	8233.50	5247.56	8418.25

Inter-unit Additional capital expenditure

50. The Petitioner has claimed additional capital expenditure of ₹69302.96 lakh for the period from 13.5.2014 to 17.6.2014. It is noticed that the additional capital expenditure pertains to Unit-IV which has achieved COD on 18.6.2014. As such, the said additional capital expenditure forms part of the actual expenditure as on 18.6.2014. Therefore, the same has not been considered as additional capital expenditure for the period from 13.5.2014 to 17.6.2014. Similarly, the additional capital expenditure of ₹72349.67 lakh claimed for the period from 18.6.2014 to 7.8.2014 pertaining to Unit-III and hence the same has not been considered for the period 13.5.2014 to 17.6.2014, as it forms a part of the capital expenditure as on 8.8.2014. Further, the additional capital expenditure of ₹74229.60 lakh claimed by the Petitioner for the period from 8.8.2014 to 15.12.2014 for Unit-VI which had achieved COD on 16.12.2014. Therefore, the additional capital expenditure of ₹69302.96 lakh form part of the actual expenditure as on 16.12.2014 and hence the same is not considered as additional capital expenditure for the period from 8.8.2014 to 15.12.2014. In our view, the additional capital expenditure claimed as above can only be considered corresponding to the COD of the generating station.

Accordingly, the expenditure claimed as prior period additions and liabilities is not justified considering the fact that interest on loan portion of these capitalized amounts (70%) form part of IDC till COD (16.12.2014) of the generating station. Accordingly, the claims for ₹11076.86 lakh pertaining to additional capital expenditure for the period from 16.12.2014 to 31.3.2015 is being considered for the period 2014-15. Based on the above discussions, the additional capital expenditure for the period 2014-19 has been considered and examined as under:

(₹ in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
11076.86	18751.63	16086.47	1910.34	16881.84

51. It is observed that an amount of ₹82658.42 lakh, i.e. the revised completion cost excluding the capital cost allowed as on COD of the station and the normative IDC (419143.75–339734.54-3249.21) is available for consideration in respect of the balance works/assets under original scope of work of the project. In view of this, the additional capital expenditure claimed by the Petitioner has been restricted to the amount of ₹82658.42 lakh for assets/works under original scope of the project. Accordingly, the claims of the Petitioner for additional capital expenditure are examined as under:

2014-15

52. The break-up of the additional capital expenditure of ₹11076.86 claimed (after COD of the generating station) are as under:

(₹ in lakh)

Heads for Additional Capitalization	**Amount claimed**	
Additional capital expenditure under original scope within cut-off date	(a1) Accrual Basis	39850.69
	(b1) Un-discharged liabilities	28773.83
	(c1=a1-b1) Cash basis	**11076.86**
Discharge of liabilities	**c2**	0.00
Total (c3)	(c3=c1+c2)	**11076.86**

53. The claim of the Petitioner for additional capital expenditure for the year 2014-15 broadly consists of expenditure towards works executed before the COD of the generating station, such as land, EM works, Civil/hydraulic works, building, electrical equipments, vehicles, office furniture and light fittings. Since the additional capital expenditure for ₹11076.86 lakh claimed is towards balance payments for works/assets under the original scope of work and is within the cut-off date and the ceiling limit of ₹82658.42 lakh, the same is allowed for the purpose of tariff. Accordingly, the balance limit of admitted completion cost of the project works out to be ₹71581.56 lakh (82658.42-11076.86).

2015-16

54. The break-up of additional capital expenditure ₹18751.65 lakh claimed is as under:

(₹in lakh)

Heads for additional capitalization	**Amount claimed**	
Works/assets under original scope within cut-off date	(a1) Accrual Basis	4823.44
	(b1)Un-discharged liabilities	0.00
	(c1=a1-b1) Cash basis	**4823.44**
Discharge of liabilities	**c2**	13928.19
Total (c3)	(c3=c1+c2)	**18751.65**

55. The Petitioner has claimed additional capital expenditure of ₹18751.65 lakh (including liability discharged for ₹13928.19 lakh upto 31.3.2016) for payments towards works executed before COD which mainly comprises of Land, EM works, Civil/hydraulic works, building, electrical equipments, vehicles, office furniture and light fittings. The expenditure incurred is mostly in the form of discharge of liabilities as they relate to payments made towards work executed under the original scope and within the cut-off date. Since the additional capital expenditure of ₹18751.65

lakh (including discharge of liability of ₹13928.19 lakh upto 31.3.2016) claimed during this year is within the allowable ceiling limit of ₹42327.62 lakh, the same is allowed for the purpose of tariff. Accordingly, the balance limit of admitted completion cost of the project works out to be ₹52829.93 lakh (71581.56-18751.65).

2016-17

56. The break-up of additional capital expenditure of ₹18751.65 lakh claimed is as follows:

(₹ in lakh)

Heads for additional capitalization	Amount claimed	
Works/assets under original scope within cut-off date	(a1) Accrual Basis	8233.50
	(b1) Un-discharged liabilities	0.00
	(c1=a1-b1) Cash Basis	**8233.50**
Discharge of liabilities	c2	7852.97
Total (c3)	(c3=c1+c2)	**16086.47**

57. The Petitioner has claimed additional capital expenditure of ₹16086.47 lakh, which includes an amount of ₹8233.50 lakh for payments made towards works executed within the cut-off date and within the original scope and ₹7852.97 lakh towards liabilities discharged during 2016-17.

58. The Petitioner has claimed additional capital expenditure of ₹16086.47 lakh (including liability discharged of ₹7852.97 lakh upto 31.3.2017) for payments towards work executed before COD which broadly consists of Land, EM works, Civil/ hydraulic works, building, electrical equipment's, vehicles, office furniture and light fittings. It is observed that the additional capital expenditure claimed by the Petitioner is mostly towards payments for works (discharge of liabilities) executed under the original scope and within the cut-off date. Since the additional capital expenditure

of ₹16086.47 lakh (including discharge of liability of ₹7852.97 lakh upto 31.3.2017) claimed by the Petitioner is within the allowable ceiling limit of ₹23575.97 lakh, the same is allowed. Accordingly, the balance limit of admitted completion cost of the project works out to be ₹36743.46 lakh (52829.93-16086.47).

2017-18

59. The break-up of additional capital expenditure for ₹1910.34 lakh claimed by the Petitioner is as follows:

(₹ in lakh)

Heads for Additional Capitalization	**Amount claimed**	
For works executed before COD, but payment for the same made after COD	(a1) Accrual basis	5247.87
	(b1)Un-discharged liabilities	1866.62
	(c1=a1-b1) Cash basis	**3381.25**
Discharge of liabilities	**c2**	(-) 1470.91
Total (c3)	(c3=c1+c2)	**1910.34**

60. The Petitioner has claimed an additional capital expenditure of ₹1910.34 lakh for the year 2017-18. This includes an expenditure of ₹3381.25 lakh for payments towards execution of works within the original scope of Project including expenditure of ₹125.02 lakh for purchasing of items under Plant and Machinery and (-) ₹1470.91 lakh towards discharge of liabilities. The justification and admissibility of the claims are examined and allowed as under:-

(₹ in lakh)

Works/ Items	**Amount claimed**	**Justification furnished by Petitioner**	**Remarks on admissibility**
Land	6.17	Land acquired before COD. However payments made after COD due to certain formalities.	The additional capital expenditure claimed by the Petitioner under this head is towards balance payments for works completed prior to the COD of the generating station. Accordingly, the
Civil works	760.55	Work executed. However certain payment made after COD as per payment terms.	
Building	1587.41		
Generating Plant & Machinery	790.25		

Overhead lines/ electrical works	37.66	Procurement action made before COD. However payment after COD due to certain formalities.	same is **allowed** in terms of Regulation 14 (2) (iv) of the 2014 Tariff Regulations.
Vehicles	52.72		
Office furniture	7.56		
Communication/IT equipment's	13.92		
Plant & Machinery	125.02	Certain essential items under plant & machinery acquired after COD.	No justification or break-up details furnished. The expenditure is **not allowed** as the assets claimed are in the nature of spares.
Total amount claimed	**3381.25**		
Total amount allowed			**3256.23**

61. Thus, additional capital expenditure of ₹3256.23 lakh is allowed for 2017-18 in respect of works completed prior to the COD of the generating station, but payments for which were made after the COD.

62. In addition, the Petitioner has claimed an amount of (-) ₹1470.91 lakh towards discharge of liabilities in the year 2017-18. The negative entry in discharges, as indicated, if considered would become un-discharged liability, thereby reducing the cash claim for the current year. In the absence of any clarification, we have considered the same as discharge of liabilities and allowed. This is however subject to the Petitioner furnishing clarification at the time of truing-up exercise.

63. Based on the above, a net expenditure of ₹1785.32 lakh is allowed during the year 2017-18. The balance limit of admitted completion cost of the project works out to be ₹34958.14 lakh (36743.46 -1785.32)

2018-19

64. The break-up of the additional capital expenditure claimed for the period 2018-19 is as follows:

(₹in lakh)

Heads for Additional Capitalization	Amount claimed	
Works completed before COD but payments made after COD	(a1) Accrual basis	8418.25
	(b1)Un-discharged liabilities	0.00
	(c1=a1-b1) Cash basis	**8418.25**
Discharge of liabilities	c2	8463.59
Total (c3)	(c3=c1+c2)	**16881.84**

65. The Petitioner has claimed total additional capital expenditure of ₹16881.84 lakh which includes an expenditure of ₹8418.25 lakh towards payments made for execution of works within the original scope and ₹8463.59 lakh for discharge of liabilities during this year.

Works completed before COD but payments made after COD

66. The Petitioner has claimed additional capital expenditure of ₹8418.25 lakh for works executed prior to the COD of the generating station, but payments made after COD .The justification and admissibility of the said claims are examined under:

Works/ Items	Amount Claimed *(₹ in lakh)*	Justification furnished by Petitioner	Remarks on admissibility
Civil works	2027.23	Work executed. However certain payment made after COD as per payment terms.	The additional capital expenditure claimed by the Petitioner under this head is towards balance payments for works completed prior to the COD of the generating station. Accordingly, the same is **allowed** in terms of Regulation 14 (2) (iv) of the 2014 Tariff Regulations. As the balance limit of cost of the project which can be allowed is ₹34958.14 lakh (as stated above) the additional capital expenditure claimed under these heads is allowed.
Building	3592.66		
Generating Plant & Machinery	2776.02		
Overhead lines/ electrical works	9.78	Procurement action made before COD. However payment after COD due to certain formalities.	
Plant & Machinery	12.53	Certain essential items	No justification or break-up

Total amount claimed	**8418.25**	under plant & machinery acquired after COD.	details furnished. The expenditure is not allowed as the assets claimed are in the nature of spares.
Total amount allowed			**8405.72**

67. As such, the total amount of ₹8405.72 lakh is allowed during 2018-19.

De-capitalization

68. Regulation 14(4) of the 2014 Tariff regulations provides as under:

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

69. The Petitioner has claimed the following de-capitalization (as per Form 9Bi) during the period 2014-19:

(₹in lakh)

2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
0.00	2503.34	194.64	7734.78	0.00

70. Since, these assets are not in use, the year-wise de-capitalization as claimed by the Petitioner is allowed in terms of the said Regulation.

Additional capital expenditure (net) allowed for 2014-19

71. Accordingly, the additional capital expenditure (net) allowed for the purpose of tariff is as under:

(₹ in lakh)

	2014-15	**2015-16**	**2016-17**	**2017-18**	**2018-19**
Additional capitalization allowed	11076.86	4823.44	8233.50	3256.23	8405.72
discharge of liabilities	0.00	13928.19	7852.97	(-)1470.91	8463.59
Less: De-capitalization	0.00	2503.34	194.64	7734.78	0.00
Additional capital expenditure allowed	**11076.86**	**16248.29**	**15891.83**	**(-)5949.46**	**16869.31**

72. Considering the capital cost as on COD, the additional capitalization (net), the de-capitalization and the discharge of liabilities as allowed in the preceding paragraphs, the capital cost of the generating station from COD is as under:

(₹ in lakh)

	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
Opening Capital cost	339734.54	350811.40	367059.69	382951.53	377002.07
Add: Net additional capital expenditure allowed	11076.86	16248.29	15891.83	(-)5949.46	16869.31
Closing Capital Cost	**350811.40**	**367059.69**	**382951.53**	**377002.07**	**393871.38**

Debt Equity ratio

73. Regulation 19 of the 2014 Tariff Regulations provides as under:

"(1) For a project declared under commercial operation on or after 1.4.2014, the debt-equity ratio would be considered as 70:30 as on COD. 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:

(i) where equity actually deployed is less than 30% of the capital cost, actual equity shall be considered for determination of tariff:

(ii) the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

(iii) any grant obtained for the execution of the project shall not be considered as a part of capital structure for the purpose of debt-equtiy ratio.

Explanation - The premium, if any, raised by the generating company or the transmission licensee, as the case may be, while issuing share capital and investment of internal resources created out of its free reserve, for the funding of the project, shall be reckoned as paid up capital for the purpose of computing return on equity, only if such premium amount and internal resources are actually utilised for meeting the capital expenditure of the generating station or the transmission system.

(2) The generating Company or the transmission licensee shall submit the resolution f the Board of the company or approval from Cabinet Committee on Economic Affairs (CCEA) regarding infusion of fund from internal resources in support of the utilisation made or proposed to be made to meet the capital expenditure of the generating station or the transmission system including communication system, as the case may be.

(3) In case of the generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, debt-

equity ratio allowed by the Commission for determination of tariff for the period ending 31.3.2014 shall be considered.

(4) In case of generating station and the transmission system including communication system declared under commercial operation prior to 1.4.2014, but where debt:equity ratio has not been determined by the Commission for determination of tariff for the period ending 31.3.2014, the Commission shall approve the debt:equity ration based on actual information provided by the generating company or the transmission licensee as the case may be.

(5) Any expenditure incurred or projected to be incurred on or after 1.4.2014 as may be admitted by the Commission as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in clause (1) of this regulation."

74. The Petitioner has claimed debt equity ratio of 70:30 for calculation of normative debt and equity. The financial package as on COD of the generating station is as under:

	Amount *(₹ in lakh)*	**Percentage (%)**
Debt	256101.14	67.28%
Equity	124546.24	32.72%
Total funds raised	**380647.38**	**100.00%**

75. As per Form-14, the actual debt equity as on COD is as under:

(₹ in lakh)

	13.5.2014	**(%)**	**18.6.2014**	**(%)**	**8.8.2014**	**(%)**	**16.12.2014**	**(%)**
Total loan	204148.34	58.50	200756.62	56.96	207034.42	57.92	207710.38	56.12
Equity	144806.00	41.50	151707.72	43.04	150401.92	42.08	162398.96	43.88
Total Fund	**348954.3**	**100.00**	**352464.3**	**100.00**	**357436.3**	**100.00**	**370109.3**	**100.00**

76. It is noticed that the Petitioner has not furnished the complete notes to the Balance sheets as on COD of each units and therefore the debt equity ratio could not be verified from the balance Sheet. Moreover, in the absence of any details regarding the capital advances and capital liabilities, a prudent view could not be taken on the actual cash expenditure and investments made by the Petitioner out of the unutilized IBRD loan portion. As such, the debt equity ratio has been considered based on the debt equity position furnished in Form-14 of the petition duly certified by the Chartered Accountant. Accordingly, the normative debt equity ratio of 70:30

is allowed, as the equity deployed is more than 30% of the total funds. This is however subject to revision based on submission of the balance sheet along with the complete notes by the Petitioner at the time of truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations.

<u>Return on Equity</u>

77. Regulation 24 of the 2014 Tariff Regulations provides as under:

> *"24. Return on Equity: (1) Return on equity shall be computed in rupee terms, on the equity base determined in accordance with regulation 19.*
>
> *(2) Return on equity shall be computed at the base rate of 15.50% for thermal generating stations, transmission system including communication system and run of the river hydro generating station, and at the base rate of 16.50% for the storage type hydro generating stations including pumped storage hydro generating stations and run of river generating station with pondage:*
>
> *Provided that:*
>
> *i) in case of projects commissioned on or after 1st April, 2014, an additional return of 0.50 % shall be allowed, if such projects are completed within the timeline specified in Appendix-I:*
>
> *ii) the additional return of 0.5% shall not be admissible if the project is not completed within the timeline specified above for reasons whatsoever:*
>
> *iii) additional RoE of 0.50% may be allowed if any element of the transmission project is completed within the specified timeline and it is certified by the Regional Power Committee/National Power Committee that commissioning of the particular element will benefit the system operation in the regional/national grid:*
>
> *iv) the rate of return of a new project shall be reduced by 1% for such period as may be decided by the Commission, if the generating station or transmission system is found to be declared under commercial operation without commissioning of any of the Restricted Governor Mode Operation (RGMO)/ Free Governor Mode Operation (FGMO), data telemetry, communication system up to load dispatch centre or protection system:*
>
> *v) as and when any of the above requirements are found lacking in a generating station based on the report submitted by the respective RLDC, RoE shall be reduced by 1% for the period for which the deficiency continues:*
>
> *vi) additional RoE shall not be admissible for transmission line having length of less than 50 kilometers*

78. Regulation 25 of the 2014 Tariff Regulations provides as under:

> ***"25. Tax on Return on Equity:*** *(1) The base rate of return on equity as allowed by the Commission under Regulation 24 shall be grossed up with the effective tax rate of the respective financial year. For this purpose, the effective tax rate shall be*

considered on the basis of actual tax paid in the respect of the financial year in line with the provisions of the relevant Finance Acts by the concerned generating company or the transmission licensee, as the case may be. The actual tax income on other income stream (i.e., income of non generation or non transmission business, as the case may be) shall not be considered for the calculation of "effective tax rate".

(2) Rate of return on equity shall be rounded off to three decimal places and shall be computed as per the formula given below:

Rate of pre-tax return on equity = Base rate / (1-t)

Where "t" is the effective tax rate in accordance with Clause (1) of this regulation and shall be calculated at the beginning of every financial year based on the estimated profit and tax to be paid estimated in line with the provisions of the relevant Finance Act applicable for that financial year to the company on pro-rata basis by excluding the income of non-generation or non-transmission business, as the case may be, and the corresponding tax thereon. In case of generating company or transmission licensee paying Minimum Alternate Tax (MAT), "t" shall be considered as MAT rate including surcharge and cess.

(3) The generating company or the transmission licensee, as the case may be, shall true up the grossed up rate of return on equity at the end of every financial year based on actual tax paid together with any additional tax demand including interest thereon, duly adjusted for any refund of tax including interest received from the income tax authorities pertaining to the tariff period 2014- 15 to 2018-19 on actual gross income of any financial year. However, penalty, if any, arising on account of delay in deposit or short deposit of tax amount shall not be claimed by the generating company or the transmission licensee as the case may be. Any under-recovery or over-recovery of grossed up rate on return on equity after truing up, shall be recovered or refunded to beneficiaries or the long term transmission customers/DICs as the case may be on year to year basis."

79. The Petitioner has claimed MAT rate of respective year for grossing up of the RoE. In this regard, it is observed that the regulation provides for the application of effective tax rate on the basis of the tax paid. As the effective tax rate has not been furnished by the Petitioner, we deem it proper to allow the grossing up of the RoE on projected basis with MAT rate for 2013-14 as per prevailing practice of the Commission. Accordingly, return on equity has been computed as under:

(₹ in lakh)

	13.5.2014 to 17.6.2014	**18.6.2014 to 7.8.2014**	**8.8.2014 to 15.12.2014**	**16.12.14 to 31.3.2015**	**1.4.2015 to 31.3.2016**	**1.4.2016 to 31.3.2017**	**1.4.2017 to 31.3.2018**	**1.4.2018 to 31.3.2019**
Gross Notional Equity	40541.72	61234.74	82526.33	101920.36	105243.42	110117.91	114885.46	113100.62
Addition due to Additional Capitalisation	0.00	0.00	0.00	3323.06	4874.49	4767.55	(-)1784.84	5060.79

Closing Equity	40541.72	61234.74	82526.33	105243.42	110117.91	114885.46	113100.62	118161.41
Average Equity	40541.72	61234.74	82526.33	103581.89	107680.66	112501.68	113993.04	115631.02
Return on Equity (Base Rate)	16.500%	16.500%	16.500%	16.500%	16.500%	16.500%	16.500%	16.500%
Tax rate for the year	20.961%	20.961%	20.961%	20.961%	20.961%	20.961%	20.961%	20.961%
Rate of Return on Equity (Pre Tax)	20.876%	20.876%	20.876%	20.876%	20.876%	20.876%	20.876%	20.876%
Return on Equity (Pro-rata)	**834.76**	**1786.17**	**6136.07**	**6279.78**	**22479.42**	**23485.85**	**23797.19**	**24139.13**

80. The Petitioner is however directed to submit the effective tax rates along with the tax audit report for the period 2014-19 at the time of revision of tariff based on truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations.

Interest on Loan

81. Regulation 26 of the 2014 Tariff Regulations provides as under:

> *"**26. Interest on loan capital:(**1)The loans arrived at in the manner indicated in regulation 19 shall be considered as gross normative loan for calculation of interest on loan.*
>
> *(2) The normative loan outstanding as on 1.4.2014 shall be worked out by deducting the cumulative repayment as admitted by the Commission up to 31.3.2014 from the gross normative loan.*
>
> *(3) The repayment for each of the year of the tariff period 2014-19 shall be deemed to be equal to the depreciation allowed for the corresponding year/period. In case of de-capitalization of assets, the repayment shall be adjusted by taking into account cumulative repayment on a pro rata basis and the adjustment should not exceed cumulative depreciation recovered upto the date of de-capitalisation of such asset.*
>
> *(4) Notwithstanding any moratorium period availed by the generating company or the transmission licensee, as the case may be, the repayment of loan shall be considered from the first year of commercial operation of the project and shall be equal to the depreciation allowed for the year or part of the year.*
>
> *(5) The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio after providing appropriate accounting adjustment for interest capitalized:*
>
> *Provided that if there is no actual loan for a particular year but normative loan is still outstanding, the last available weighted average rate of interest shall be considered:*

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

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

(7) The generating company or the transmission licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the beneficiaries and the generating company or the transmission licensee, as the case may be, in the ratio of 2:1.

(8) The changes to the terms and conditions of the loans shall be reflected from the date of such re-financing.

(9) In case of dispute, any of the parties may make an application in accordance with the Central Electricity Regulatory Commission (Conduct of Business) Regulations, 1999, as amended from time to time, including statutory re-enactment thereof for settlement of the dispute:

Provided that the beneficiaries or the long term transmission customers /DICs shall not withhold any payment on account of the interest claimed by the generating company or the transmission licensee during the pendency of any dispute arising out of re-financing of the loan."

82. In terms of the above regulations, interest on loan has been calculated as under:

a) The opening gross normative loan as on COD of each unit has been arrived at in accordance with Regulation 26 of the 2014 Tariff Regulations.

b) The weighted average rate of interest has been worked out on the basis of the actual loan portfolio of respective year applicable to the project.

c) The repayment for the year of the period 2014-19 has been considered equal to the depreciation allowed for that year.

d) The interest on loan has been calculated on the normative average loan of the year by applying the weighted average rate of interest.

83. Accordingly, interest on loan for the purpose of tariff is as under:

(₹ in lakh)

	13.5.2014 to 17.6.2014	**18.6.2014 to 7.8.2014**	**8.8.2014 to 15.12.2014**	**16.12.2014 to 31.3.2015**	**1.4.2015 to 31.3.2016**	**1.4.2016 to 31.3.2017**	**1.4.2017 to 31.3.2018**	**1.4.2018 to 31.3.2019**
Gross Notional Loan	94597.35	142881.07	192561.45	237814.18	245567.98	256941.79	268066.07	263901.45
Cumulative Repayment of loan upto previous year	0.00	657.56	2070.82	6941.00	11787.91	29640.52	48270.76	67129.38

Net Opening loan	94597.35	142223.51	190490.63	230873.18	233780.07	227301.26	219795.31	196772.07
Addition due to additional capitalization	0.00	0.00	0.00	7753.80	11373.81	11124.28	(-)4164.62	11808.52
Repayment of loan	657.56	1413.26	4870.18	4846.91	17852.61	18630.23	18858.62	19011.49
Net Closing Loan	93939.79	140810.25	185620.45	233780.07	227301.26	219795.31	196772.07	189569.09
Average Loan	94268.57	141516.88	188055.54	232326.62	230540.67	223548.29	208283.69	193170.58
Weighted Average Rate of Interest on Loan	2.82%	2.64%	3.22%	3.29%	3.72%	4.78%	4.72%	6.40%
Interest on Loan (*Pro-rata*)	**262.00**	**522.88**	**2155.01**	**2220.32**	**8584.26**	**10680.12**	**9833.77**	**12353.67**

Depreciation

84. Regulation 27 of the 2014 Tariff Regulations provides as under:

"27. Depreciation:

(1) Depreciation shall be computed from the date of commercial operation of a generating station or unit thereof or a transmission system including communication system or element thereof. In case of the tariff of all the units of a generating station or all elements of a transmission system including communication system for which a single tariff needs to be determined, the depreciation shall be computed from the effective date of commercial operation of the generating station or the transmission system taking into consideration the depreciation of individual units or elements thereof.

Provided that effective date of commercial operation shall be worked out by considering the actual date of commercial operation and installed capacity of all the units of the generating station or capital cost of all elements of the transmission system, for which single tariff needs to be determined.

(2) The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission. In case of multiple units of a generating station or multiple elements of transmission system, weighted average life for the generating station of the transmission system shall be applied. Depreciation shall be chargeable from the first year of commercial operation. In case of commercial operation of the asset for part of the year, depreciation shall be charged on pro rata basis.

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

Provided that in case of hydro generating station, the salvage value shall be as provided in the agreement signed by the developers with the State Government for development of the Plant:

Provided further that the capital cost of the assets of the hydro generating station for the purpose of computation of depreciated value shall correspond to the percentage of sale of electricity under long-term power purchase agreement at regulated tariff:

Provided also that any depreciation disallowed on account of lower availability of the generating station or generating unit or transmission system as the case may be, shall not be allowed to be recovered at a later stage during the useful life and the extended life.
(4) Land other than the land held under lease and the land for reservoir in case of hydro generating station shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the asset.

(5) Depreciation shall be calculated annually based on Straight Line Method and at rates specified in Appendix-II to these regulations for the assets of the generating station and transmission system: Provided that the remaining depreciable value as on 31st March of the year closing after a period of 12 years from the effective date of commercial operation of the station shall be spread over the balance useful life of the assets.

(6) In case of the existing projects, the balance depreciable value as on1.4.2014 shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to 31.3.2014 from the gross depreciable value of the assets.

(7) The generating company or the transmission license, as the case may be, shall submit the details of proposed capital expenditure during the fag end of the project (five years before the useful life) along with justification and proposed life extension. The Commission based on prudence check of such submissions shall approve the depreciation on capital expenditure during the fag end of the project.

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

85. The Petitioner, while calculating the weighted average rate of depreciation, has considered normative interest on notional loan as a separate asset. In this regard, it is observed that though normative interest is a component of capital cost for tariff, the same cannot be considered as an asset for the purpose of calculation of weighted average rate of interest for depreciation. Accordingly, normative interest on notional loan has not been considered as an asset for the purpose of calculation of weighted average rate of interest for depreciation.

86. It is further noticed that the Petitioner has not considered value of freehold land for the purpose of calculation of weighted average rate of interest. As such, the rate has been reworked considering the same.

87. Necessary calculation for depreciation is as under:

(₹ in lakh)

	13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
Opening Gross Block	135139.07	204115.82	275087.78	339734.54	350811.40	367059.69	382951.53	377002.07
Addition due to Projected Additional Capitalisation	0.00	0.00	0.00	11076.86	16248.29	15891.83	-5949.46	16869.31
Closing Gross Block	135139.07	204115.82	275087.78	350811.40	367059.69	382951.53	377002.07	393871.38
Average Gross Block	135139.07	204115.82	275087.78	345272.97	358935.55	375005.61	379976.80	385436.72
Value of Freehold Land included in Gross Block	1415.33	1887.11	2358.88	2830.66	2850.49	3543.23	3549.40	3549.40
Rate of Depreciation	4.93%	4.96%	4.97%	4.83%	4.97%	4.97%	4.96%	4.93%
Depreciation value including amortisation of lease land in 25 years	120351.36	182005.84	245456.01	308198.08	320476.55	334316.14	338784.66	343698.59
Remaining Depreciable value	120351.36	181348.28	243385.19	301257.08	308688.64	304675.62	290513.90	276569.21
Depreciation (Pro-rata)	**657.56**	**1413.26**	**4870.18**	**4846.91**	**17852.61**	**18630.23**	**18858.62**	**19011.49**

O&M expenses

88. Regulation 29 (3) (d) of the 2014 Tariff Regulations provides as under:

> *"In case of the hydro generating stations declared under commercial operation on or after 1.4.2014, operation and maintenance expenses shall be fixed at 4% and 2.50% of the original project cost (excluding cost of rehabilitation & resettlement works) for first year of commercial operation for stations less than 200 MW projects and for stations more than 200 MW respectively and shall be subject to annual escalation of 6.64% per annum for the subsequent years."*

89. The Petitioner has claimed O&M expenses for the period 2014-19 as under:

(₹ in lakh)

Units-I, II & V (3 units) 13.5.2014 to 17.6.2014 (36 days)	Unit-IV (4 units) 18.6.2014 to 7.8.2014 (51 days)	Unit-III (5 units) 8.8.2014 to 15.12.2014 (130 days)	Unit-VI/ Station COD (6 units) 16.12.2014 to 31.3.2015 (106 days)	2015-16	2016-17	2017-18	2018-19
582.48	1100.24	3505.65	3430.15	11146.27	11886.38	12675.63	13517.30

90. The Respondent UPPCL has submitted that tariff consists of different components and hence profit in one element compensates the loss in other components. Therefore, the Respondent has submitted that the issue of revision of O&M subsequent to the wage revision cannot be considered in isolation. Accordingly, the Respondent has submitted that the actual figure of all components may be considered after wage revision and their net effect may be merged with the tariff.

91. The Petitioner has clarified that pay/wage revision of all employees have not been finalised till date, which is due from 1.1.2017 and therefore the total financial implication on this count cannot be determined at this stage. It has also stated that the impact of pay/salary revision was already indicated under clause 30.18 and 30.20 of the Statement of Reasons to the 2014 Tariff Regulations. Accordingly, the Petitioner has sought liberty of the Commission to seek enhancement in O&M expenses for increase in salary on account of salary revision based on actual payments, whenever paid to employees.

92. The COD of the generating station is 16.12.2014. The project cost as on cut-off date of the generating station (31.3.2017) allowed as above is ₹382951.54 lakh. The Petitioner has indicated an amount of ₹5774.87 lakh towards Rehabilitation and Resettlement cost and the same is considered for calculation of the admissible O&M expenses. Based on the above, the admissible O&M expenses are worked out as under:

(₹ in lakh)

Capital Cost	382951.52
Less: R & R Cost	5774.87
Capital Cost for the purpose of O & M	377176.65
O & M for the 1st year @2.5% for 6 units	**9429.42**

93. Accordingly, the O&M Expenses for the period 2014-19 are allowed as below:-

(₹ in lakh)

13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
465.01	878.36	2798.69	2738.41	10055.53	10723.22	11435.24	12194.54

94. As regards the prayer of Petitioner for enhancement of O&M expenses due to pay/salary revision, the same may be examined by the Commission, on a case to case basis, subject to the implementation of pay revision as per DPE guidelines and the filing of an appropriate application by the Petitioner in this regard.

Interest on working capital

95. Sub-section (c) of Clause (1) of Regulation 28 of the 2014 Tariff Regulations provides as under:

> *"28. Interest on Working Capital:*
>
> *(1) The working capital shall cover*
>
> *(c) Hydro generating station including pumped storage hydro electric generating Station and transmission system including communication system:*
>
> *(i) Receivables equivalent to two months of fixed cost;*
>
> *(ii) Maintenance spares @ 15% of operation and maintenance expense specified in regulation 29; and*
>
> *(iii) Operation and maintenance expenses for one month."*

96. Accordingly, receivables equivalent to two months of fixed cost is worked out and allowed as under:

(₹ in lakh)

13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
380.90	789.15	2736.25	2757.32	10108.88	10887.84	10960.79	11608.35

97. Maintenance spares @ 15% of the O&M expenses is worked out and allowed as under:

(₹ in lakh)

13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
69.75	131.75	419.80	410.76	1508.33	1608.48	1715.29	1829.18

98. O&M Expenses for one month is allowed as under:

(₹ in lakh)

13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.3019
38.75	73.20	233.22	228.20	837.96	893.60	952.94	1016.21

Rate of interest on working capital

99. Clause (3) of Regulation 28 of the 2014 Tariff Regulations provides as under:

> *"**Interest on working Capital**: (3) Rate of interest on working capital shall be on normative basis and shall be considered as the bank rate as on 1.4.2014 or as on 1st April of the year during the tariff period 2014-15 to 2018-19 in which the generating station or a unit thereof or the transmission system including communication system or element thereof, as the case may be, is declared under commercial operation, whichever is later."*

100. In terms of the above regulations, the Bank Rate of 13.50% (Base Rate + 350 Basis Points) as on 1.4.2014 has been considered by the Petitioner. This has been considered in the calculations for the purpose of tariff. Accordingly, Interest on working capital is allowed are as under:

(₹ in lakh)

	13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 to 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
O&M expenses - 1 month	38.75	73.20	233.22	228.20	837.96	893.60	952.94	1016.21
Maintenance spares	69.75	131.75	419.80	410.76	1508.33	1608.48	1715.29	1829.18
Receivables -2 months	380.90	789.15	2736.25	2757.32	10108.88	10887.84	10960.79	11608.35
Total	489.40	994.10	3389.28	3396.28	12455.17	13389.93	13629.01	14453.74
Rate of Interest	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%	13.50%
Interest on Working Capital	**66.07**	**134.20**	**457.55**	**458.50**	**1681.45**	**1807.64**	**1839.92**	**1951.25**

Annual Fixed Charges

101. Based on the above discussions, the fixed charges approved for the generating station for the period 2014-19 is summarized as under:

(₹ in lakh)

	13.5.2014 to 17.6.2014	18.6.2014 to 7.8.2014	8.8.2014 To 15.12.2014	16.12.2014 to 31.3.2015	1.4.2015 to 31.3.2016	1.4.2016 to 31.3.2017	1.4.2017 to 31.3.2018	1.4.2018 to 31.3.2019
Return on Equity	834.76	1786.17	6136.07	6279.78	22479.42	23485.85	23797.19	24139.13
Interest on Loan	262.00	522.88	2155.01	2220.32	8584.26	10680.12	9833.77	12353.67
Depreciation	657.56	1413.26	4870.18	4846.91	17852.61	18630.23	18858.62	19011.49
Interest on Working Capital	66.07	134.20	457.55	458.50	1681.45	1807.64	1839.92	1951.25
O&M Expenses	465.01	878.36	2798.69	2738.41	10055.53	10723.22	11435.24	12194.54
Total	**2285.40**	**4734.87**	**16417.50**	**16543.91**	**60653.27**	**65327.06**	**65764.73**	**69650.08**

Normative Annual Plant Availability Factor (NAPAF)

102. The Petitioner in this petition has submitted that the generating station is a tail race extension of its upstream project (NJHPS) and is operative only in tandem with the diurnal storage of NJHPS. It has also submitted that water coming out from the tail race of NJHPS is diverted in the generating station through TRT Pond. There is no balancing reservoir in between the two facilities and is having a small storage in the Jhakri tail Race pond, from where the water enters the Head Race Tunnel of the generating station. The Petitioner has further added that for implementation of tandem operation of NJHPS and this project, teething problems were faced during initial years before stabilization of machines. Accordingly, the Petitioner has proposed NAPAF of 82% for 2014-19 in line with the NAPAF fixed for NJHPS by the Commission.

103. The Respondent UPPCL has submitted that the NAPAF of 90% may be fixed for the generating station as (i) the declaration of COD of the units of the generating station is after ascertaining the tactical capability and hence the units are very well stabilised and no further allowance may be given for NAPAF (ii) the units of the station run in tandem with the units of NJHPS of the Petitioner, and (iii) the problem

of silt content, if any, in the water feeding NJHPS has already been taken care of while fixing NAPAF of NJHPS as 90%.

104. The Respondent PSPCL has submitted that the Petitioner has been achieving an average NAPAF of 92% for 2017-18 and this leads to huge recovery of incentive by the Petitioner. Accordingly, NAPAF may be fixed as 92% and not 82% as claimed by the Petitioner. The Petitioner has clarified that the probable effect on operation of this generating station in tandem with NJHPS cannot be assessed till the stabilisation of the units of this station as well as auto mode operation in tandem.

105. The matter has been examined. It is observed that the Commission vide order dated 27.1.2015 had approved NAPAF of 82% for the period 2014-16 as under:

> *"25. The Petitioner has claimed NAPAF of 77%, in consideration of the tandem operation of Nathpa Jhakri HEP with this generating station and the teething problems likely to be faced during initial years before stabilization of machines of the generating stations. NAPAF of 82% was allowed in respect of upstream Nathpa Jhakri hydro-electric project during the initial years before stabilization of machines and during the tariff period 2009-14. However, the same has been revised to 90% during the tariff period 2014-19, based on actual performance of the station during tariff period 2009-14. Thus, keeping in view the teething problems likely to be faced during initial years before stabilization of machines of this generating station, due to its tandem operation, as envisaged by the Petitioner, we allow NAPAF of 82% for a period of two years i.e. from 2014 to 2016. However, the NAPAF shall be reviewed after 2 years based on actual performance of the generating station, considering the fact that the Petitioner may not unduly earn any incentive, after teething problems are resolved."*

106. Accordingly, in line with the above decision, NAPAF of 82% is allowed for the period 2014-16. However, for the period 2016-19, we allow the NAPAF of 90% considering the actual PAF for the said period.

<u>Design Energy</u>

107. The Petitioner has submitted that the actual energy generated from the plant from actual COD of first unit i.e. 13.5.2014 to 31.3.2015 is 1257.469 MU. Thus, the

actual energy is less in the generating station on account of unit wise commissioning of the plant during 2014-15 as well as running in tandem with upstream project.

108. The Respondent, UPPCL has submitted that during the period 13.5.2014 to 31.3.2019, the effective weighted average no. of machines was 5 and accordingly the proportionate design energy for the said period will be 1565.06 MU and not as claimed by the Petitioner.

109. As regards Design Energy for the year 2014-15, the Commission vide order dated 27.1.2015 had allowed the Design Energy of 1417 MUs. Accordingly, the same is allowed for the year 2014-15. CEA vide letter no. 201/18/2014-HPA/3218 dated 3.7.2014 has approved annual Design Energy as 1878.08 MU. Accordingly, the same has been considered for the generating station as detailed under:

Months	10 days monthly	Design Energy (MUs)
April	1-10	27.26
	11-20	29.38
	21-30	31.97
May	1-10	55.73
	11-20	86.78
	21-31	100.30
June	1-10	68.34
	11-20	88.38
	21-30	64.39
July	1-10	77.21
	11-20	68.38
	21-31	96.17
August	1-10	98.47
	11-20	98.54
	21-31	107.41
September	1-10	98.35
	11-20	77.48
	21-30	58.40
October	1-10	46.21
	11-20	43.59
	21-31	44.19
November	1-10	38.54
	11-20	36.78
	21-30	34.00

December	1-10	31.85
	11-20	27.86
	21-31	30.09
January	1-10	25.86
	11-20	25.32
	21-31	27.46
February	1-10	22.04
	11-20	21.92
	21-29	18.09
March	1-10	22.35
	11-20	21.68
	21-31	27.31
Total		**1878.08**

Application Fee and Publication Expenses

110. The Petitioner has sought reimbursement of filing fee and also the expenses incurred towards publication of notices for application of tariff for the period 2014-19. The Petitioner has deposited the filing fees for the period 2014-19 in terms of the provisions of the Central Electricity Regulatory Commission (Payment of Fees) Regulations, 2012. The Petitioner has also incurred charges towards publication of the tariff petition in the newspapers. Accordingly, in terms of Regulation 52 of the 2014 Tariff Regulations, the Petitioner is entitled to recover the filing fees and the expenses incurred on publication of notices for the period 2014-19 directly from the Respondents. Accordingly, the expenses incurred by the Petitioner towards tariff application filing fees and publication of notices in connection with the present petition shall be directly recovered from the Respondent beneficiaries on pro rata basis. Excess fees, if any, paid by the Petitioner, shall be adjusted against the petition to be filed in future before this Commission.

111. Similarly, RLDC Fees & charges paid by the Petitioner in terms of the Central Electricity Regulatory Commission (Fees and Charges of Regional Load Despatch Centre and other related matters) Regulations, 2015, shall be recovered from the beneficiaries.

112. The fixed charges approved as above after adjustment of the for the period 2014-19 as above are subject to revision based on the truing-up exercise in terms of Regulation 8 of the 2014 Tariff Regulations.

113. Petition No. 315/GT/2018 is disposed of in terms of the above.

Sd/-	***Sd/-***
(Dr. M.K.Iyer)	**(P.K.Pujari)**
Member	**Chairperson**