

**CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI**

Petition No. 249/GT/2016

**Coram:
Shri Gireesh B. Pradhan, Chairperson
Shri A.K.Singhal, Member
Shri A.S. Bakshi, Member
Dr. M.K. Iyer, Member**

Date of Order: 23.5.2017

IN THE MATTER OF

Grant of interim tariff for Teesta III Hydroelectric Power Project (1200 MW) for the period from 23.2.2017 to 31.3.2019

AND

IN THE MATTER OF

Approval of tariff in respect of Teesta III Hydroelectric Power Project (1200 MW) for the period from the anticipated date of commercial operation (COD) of the units till 31.3.2019

AND

IN THE MATTER OF

Teesta Urja Ltd
2nd Floor, Vijaya Building,
17, Barakhamba Road
New Delhi-110001

...Petitioner

Vs

1. PTC India Ltd., New Delhi
2. Energy and Power Department, Govt. of Sikkim
3. Punjab State Power Corporation, Patiala
4. Uttar Haryana Bijli Vitran Nigam Limited, Panchkula
5. Dakshin Haryana Bijli Vitran Nigam Limited, Hisar
6. Haryana Power Purchase Centre, Panchkula
7. Ajmer Vidyut Vitran Nigam Limited, Ajmer
8. Jaipur Vidyut Vitran Nigam Ltd, Jaipur
9. Jodhpur Vidyut Vitran Nigam Limited, Jodhpur
10. Rajasthan Urja Vikas Nigam Limited, Jaipur
11. Uttar Pradesh Power Corporation Limited, Lucknow

....Respondents

Parties present:

Shri Jaideep Lakhtakia, TUL
Ms. Swati Jindal, TUL
Shri Vishrov Mukerjee, Advocate, PTC
Shri Rohit Venkat, Advocate, PTC
Ms. Raveena Dhamija, Advocate, PTC
Shri Manish Garg, UPPCL



Shri M.G.Ramachandran, Advocate, Rajasthan Discoms
Shri Shubham Arya, Advocate, Rajasthan Discoms
Shri Alok Pareek, RUVNL
Shri Anand Ganesan, Advocate, PSPCL

ORDER

This petition has been filed by the petitioner, TeestaUrja Limited for approval of tariff of Teesta III Hydroelectric Project (1200 MW) ('the generating station/project') for the period from the anticipated date of commercial operation (COD) of the units till 31.3.2019, based on the provisions of the Central Electricity Regulatory Commission (Terms & Conditions of Tariff) Regulations, 2014 ('the 2014 Tariff Regulations').

2. The Government of Sikkim, as a part of national drive for 50,000 MW Hydro Initiative of the country, awarded several hydro-electric projects to various Independent Power Producers (IPPs). 1200 MW Teesta III Hydro-electric Project was a part of overall development of the Teesta basin undertaken by the Govt. of Sikkim through six hydro projects having cumulative capacity of about 3000 MW. In February 2005, the Government of Sikkim issued a letter of Intent to the Consortium led by M/s Athena Projects Pvt. Ltd. for implementation of the Project on a Build, Own, Operate and Transfer ('BOOT') basis in Joint Sector with the Govt. of Sikkim. The petitioner and the Govt. of Sikkim entered into an Implementation Agreement on 18.07.2005 for implementation of the Project. Based on the provisions of the said Agreement, Govt. of Sikkim is entitled to free power at the rate of 12% for initial period of 15 years commencing from the date of Commercial Operation of the Project and at the rate of 15% for the balance period of 20 years. On 12.5.2006, Central Electricity Authority ('CEA') accorded concurrence to the Project at an estimated Completion Cost of ₹5705.55 crore. CEA amended the Concurrence vide letter dated 14.6.2010 to make changes in the Project features due to difficulties encountered by the Petitioner in construction of the Spillway Arrangement as approved earlier. CEA in the Original Concurrence dated 12.5.2006 had approved Design Energy of 5183 MU. However, the Design Energy was revised by CEA to 5213.82 MU in the Addendum to Concurrence dated 14.06.2010 due to changes in the Project features. The petitioner entered into a Power Purchase Agreement (PPA) on 28.7.2006 with M/s. PTC India Ltd. for a period



of 35 years from COD for sale of entire power from the project excluding auxiliary consumption, freepower and the transmission issues incurred upto the delivery point. Thereafter, PTC entered into power supply agreements with beneficiaries for sale of power on long term basis for 35 years. Subsequently, CTU granted LTOA to the project vide letter dated 26.5.2009.

3. The petitioner in this petition has submitted that the anticipated date of commercial operation of the units of the generating station as under:

Units	Anticipated date of Commercial Operation
Unit-I	29.12.2016
Unit-II	18.1.2017
Unit-III	5.2.2017
Unit-IV	23.2.2017
Unit-V	13.3.2017
Unit-VI	31.3.2017

4. Thereafter the petitioner vide affidavit dated 24.3.2017 has submitted the actual date of commercial operation of the units/ generating station as under:

Unit-II, III & IV	23.2.2017
Unit-I, V & VI (generating station)	28.2.2017

5. The petitioner has filed this application in terms of Regulation 7(1) of the 2014 Tariff Regulations and has prayed for issuance of interim order to facilitate interim arrangement for billing of energy supplied to various beneficiaries after COD of Units of the generating station based on the capital cost claimed. The petitioner has also made publication of the notice of application for determination of tariff in compliance with Regulation 3(6) of the Central Electricity Regulatory Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004. Copies of the petition have also been served on the respondents.

6. The capital cost claimed by the petitioner from the anticipated COD of the Station till 31.3.2019 is as under:



(₹ in lakh)		
31.3.2017 (Anticipated COD)	2017-18	2018-19
1180877.00	1365532.90	1382980.63

7. Accordingly, the annual fixed charges claimed by the petitioner from the anticipated COD of Units till 31.3.2019 is as under:

	2016-17						(₹ in lakh)	
							2017-18	2018-19
	29.12.2016 to 17.1.2017	18.1.2017 to 4.2.2017	5.2.2017 to 22.2.2017	23.2.2017 to 12.2.2017	13.2.2017 to 30.3.2017	31.3.2017		
	Unit-I	Unit I - II	Unit I-III	Unit I-IV	Unit I-V	Unit I-VI		
Depreciation	745.35	1349.24	2045.51	2754.71	3477.59	234.12	83632.58	68240.00
Interest on Loan	1082.94	1961.86	2934.63	3896.84	4837.76	319.18	114626.52	103413.44
Return on Equity	514.92	466.76	473.09	479.08	485.08	27.28	60178.83	60630.27
Interest on Working Capital	67.57	112.04	163.40	214.81	266.05	17.60	7559.23	7116.98
O&M Expenses	315.23	567.41	851.11	1134.81	1418.52	94.57	36809.16	39253.29
Total	2726.00	4457.30	6467.73	8480.25	10484.99	692.75	302806.31	278653.98

8. The petitioner has filed this application in terms of Regulation 7(1) of the 2014 Tariff Regulations and has prayed for issuance of interim order to facilitate interim arrangement for billing of energy supplied to various beneficiaries after COD of Units of the generating station based on the capital cost claimed. The petitioner has also made publication of the notice of application for determination of tariff in compliance with Regulation 3(6) of the Central Electricity Regulatory Commission (Procedure for making of application for determination of tariff, publication of the application and other related matters) Regulations, 2004. Copies of the petition have also been served on the respondents.

9. Reply to the petition has been filed by the respondents, UPPCL, PSPCL, the discoms of Haryana (UHBVNL & DHBVNL) and the discoms of Rajasthan (JVVNL, JdVVNL and AVVNL). The petitioner has filed its rejoinder to the reply filed by the respondent, UPPCL and discoms of Rajasthan. Objection to the petition has also been filed by M/s. All India Power Engineers Federation Ltd. (AIPEFL)

10. The petition was heard on 14.2.2017 and during the hearing the petitioner prayed for grant of interim tariff for billing of energy supplied to the respondents.



11. The present petition is required to be revised based on the capital expenditure as on the actual COD of the units/ generating station and DIA report on the vetting of capital cost of the project in terms of the Commission's order dated 4.6.2012. While the petitioner has incurred expenditure for the generating station, the respondent beneficiaries are reaping the benefits of such expenditure by way of supply of power. In this background and in order to enable the petitioner to meet its ongoing financial obligations through reasonable recovery of cost of supply of electricity by the petitioner, we consider the grant of interim tariff for the generating station for the period from 23.2.2017 to 31.3.2019, as stated in the subsequent paragraphs.

Time and Cost overrun

12. The scheduled COD of the project was envisaged by the petitioner as 31.10.2011 (60 months from the start of construction activities i.e. October, 2006). As the actual COD of the generating station is 28.2.2017 there is time overrun of 64 months from the scheduled COD. The major reasons for time overrun as submitted by the petitioner are as under:

- (a) Delay in forest clearance by the Ministry of Environment & Forests, Govt. of India
- (b) Earthquake
- (c) Geological Surprises
- (d) Change in Design and Construction Methodology due to poor geology

13. The petitioner has furnished the reasons/ justification for the time and cost overrun involved in the commissioning of the project. The respondents UPPCL, discoms of Rajasthan and Haryana, including the objector, AIPEF have raised objections over the time and cost overrun of the project. However the question of time overrun and cost overrun involved in the project would be examined along with the DIA report on the capital cost along with the submissions of the parties at the time of determination of final tariff of the generating station.

Capital Cost

14. The petitioner has submitted that the detailed project report was submitted to CEA and the estimated completed cost of ₹5705.55 crore was concurred by CEA with the commissioning schedule of 60 months from the effective zero date of start of the project. The Board of Directors of



the Petitioner Company had approved the investment approval on 28.6.2006 and the project achieved closure on 28.9.2007. Thereafter the Board of Directors of the Petitioner Company had revised the cost of the project as ₹8581 crore which was thereafter revised as ₹11382 crore on 28.2.2014. Subsequently, the Board of Directors of the Petitioner Company vide Resolution dated 5.8.2015 approved the revised cost of the project as ₹13965 crore which includes an amount of ₹148 crore towards working capital margin which was not considered as part of the capital cost by the petitioner. The petitioner in the petition has submitted that the capital cost of the project (including projections upto COD) is ₹1379963.32 lakh (after deduction of the margin money for working capital). The petitioner vide affidavit dated 14.2.2017 has submitted the audited actual capital expenditure as on 31.12.2016 as under:

<i>(₹ in lakh)</i>	
Infrastructure works	47653
Major Civil Works	391263
Hydro Mechanical Equipment	45214
Plant & Equipment	132546
Construction and pre-commissioning expenses	15808
Overheads	50721
Total Hard Cost	683205
IDC, FC, FERV & Hedging Cost	
Interest During Construction (IDC)	563334
Financing Charges (FC)	8865
Notional IDC on Equity excess of 30%	493
Total of IDC, FC, FERV & Hedging Cost	572692
Total Capital cost	1255897
Un-discharged liability in above	75020
Cash expenditure	1180877

15. It is observed that in case of Parbati HEP-III of NHPC (Petition No. 228/GT/2013), wherein time and cost overrun was involved and RCE was yet to be approved by the Central government, the Commission by order dated 28.3.2016 had granted interim tariff for the said generating station based on 85% of the capital cost as claimed by the petitioner. In line with this decision we grant interim tariff of this generating station based on 85% of the capital cost as on COD of the units as under:



(₹ in lakh)

	23.2.2017 to 27.2.2017 (COD of Unit-II, III & IV)	28.2.2017 to 31.3.2017 (COD of Unit-I, V & VI)	2017-18	2018-19
Capital cost as on COD	590438.50	1180877.00	0.00	0.00
85% of the above capital cost	501872.73	1003745.45	1003745.45	1003745.45
Additional Capital expenditure	0.00	0.00	0.00	0.00
Closing capital cost	501872.73	1003745.45	1003745.45	1003745.45

16. The debt equity ratio as on 31.12.2016 based on the provisional balance sheet and auditor's certificate works to 79.68:20.32 and the same has been considered for the purpose of interim tariff. The rate on return on equity and depreciation has been worked out in terms of the provisions of the 2014 Tariff Regulations. Similarly, the interest on loan has been computed considering the weighted average rate of interest on loan of 11.75% calculated as per the said regulations.

O&M Expenses

17. In terms of Regulation 29 (3) (d) of the 2014 Tariff Regulations, the O&M expenses has been worked out after *pro rata* deduction of R&R expenses from the capital cost. Accordingly, the O&M expenses for the period from 23.2.2017 to 31.3.2019 is worked out and allowed as under:

(₹in lakh)

23.2.2017 to 27.2.2017	
Capital cost as on 23.2.2017	501872.73
Less: R&R cost	744.92
capital cost for the purpose of O&M cal.	501127.81
O&M exp (annualised) @2.50% of above	12528.20
O&M exp pro-rata for the period 23.2.2017 to 27.2.2017	171.62
28.2.2017 to 31.3.2017	
Capital cost as on 28.2.2017	1003745.45
Less: R&R cost	1489.83
capital cost for the purpose of O&M cal.	1002255.62
O&M exp(annualised) @2.50% of above	25056.39
O&M exp pro-rata for the period 28.2.2017 to 31.3.2017	2196.72
O&M Exp for 2017-18 escalated @6.64%p.a.	26720.13
O&M Exp for 2018-19 escalated @6.64%p.a.	28494.35

18. After carrying due prudence check, the fixed charges allowed for the purpose of interim tariff for the period from 23.2.2017 to 31.3.2019 is as under:



(₹in lakh)

	2016-17		2017-18	2018-19
	23.2.2017 to 27.2.2017	28.2.2017 to 31.3.2017		
Return on Equity	293.02	3750.62	42780.54	42780.54
Interest on Loan	643.40	8212.73	90450.19	84517.80
Depreciation	345.81	4426.38	50488.40	50488.40
Interest on Working Capital	0.52	42.81	5704.93	5666.39
O & M Expenses	171.62	2196.72	26720.13	28494.35
Total	1454.37	18629.27	216144.19	211947.48

Normative Annual Plant Availability (NAPAF)

19. The NAPAF of the generating station is considered as 85% as per the 2014 Tariff Regulations.

Design Energy

20. CEA while granting Techno-Economic Clearance for the project has approved the Design Energy (DE) of 5213.82 MU. The month-wise breakup for the same is as under:

Month	10 days monthly Design Energy	Design Energy (MUs)
April	I	196.25
	II	273.60
	III	273.60
May	I	273.60
	II	273.60
	III	300.96
June	I	273.60
	II	273.60
	III	267.75
July	I	273.60
	II	241.33
	III	204.49
August	I	173.48
	II	165.30
	III	166.68
September	I	101.45
	II	82.46
	III	71.48
October	I	65.77
	II	57.83
	III	65.68



November	I	57.51
	II	52.58
	III	55.44
December	I	51.65
	II	49.17
	III	42.62
January	I	54.58
	II	62.76
	III	87.43
February	I	84.42
	II	109.91
	III	89.42
March	I	93.92
	II	115.75
	III	130.55
Total		5213.82

21. The petitioner is directed to revise the petition taking into consideration the actual COD of the units of the generating station. The interim fixed charges granted above are subject to adjustment after determination of final tariff of the generating station for the period from 23.2.2017 to 31.3.2019.

22. We also direct the petitioner to approach the CEA for vetting of the expenditure of the generating station on payment basis. CEA is requested to take expeditious action and vet the completion cost of the generating station within a period of 3 months. The petitioner is directed to submit the same prior to the determination of the tariff of the generating station.

Sd/-
(Dr.M.K.Iyer)
Member

Sd/-
(A.S. Bakshi)
Member

Sd/-
(A.K. Singhal)
Member

Sd/-
(Gireesh B. Pradhan)
Chairperson

