CENTRAL ELECTRICITY REGULATORY COMMISSION
NEW DELHI

Review Petition No 7/RP/2013
in
Petition No 250/2010

Coram
Shri V.S. Verma, Member
Shri M. Deena Dayalan, Member

Date of Hearing: 27.8.2013
Date of Order: 7.1.2014

In the matter of

Review of order dated 16.4.2013 in Petition No. 250/2010 pertaining to approval of generation tariff of Tehri Hydroelectric Power Project (1000 MW) for the period from 22.9.2006 to 31.3.2009.

And in the matter of

THDC India Ltd
Bhagirath Puram,
Rishikesh-249001
Uttarakhand **.....Petitioner**

Vs

1. Punjab State Power Corporation Ltd,
The Mall, Patiala-147001

2. (a) Dakshin Haryana Bijili Vitaran Nigam Ltd,
(b) Uttar Haryana Bijili Vitaran Nigam Ltd
Shakti Bhawan, Sector – 6
Panchkula – 134 109(Haryana)

3. Uttar Pradesh Power Corporation Ltd
Shakti Bhavan, 14, Ashok Marg,
Lucknow – 226001(Uttar Pradesh)

4. Delhi Transco Ltd,
Shakthi Sadan, Kotla Road,
New Delhi-110002

5. BSES-Rajdhani Power Ltd
BSES Bhawan, Nehru Place,
New Delhi – 110019

6. BSES-Yamuna Power Ltd.,
Shakti Kiran Building, Karkardooma, Delhi- 110072

7. Tata Power Delhi Distribution Ltd.,
Hudson Lines, Kingsway Camp,
Delhi-110009

8. Engineering Department,
Chandigarh Administration
1st Floor, UT Secretariat, Sector, 9-D
Chandigarh-160009

9. Uttarakhand Power Corporation Ltd,
Urja Bhawan, Kanwali Road,
Dehradun-248001(Uttarakhand

10. Himachal Pradesh State Electricity Board,
Vidut Bhavan, Kumar House
Shimla-171004 (Himachal Pradesh)

11. Jaipur Vidyut Vitaran Nigam Ltd.,
Vidut Bhavan, Janpath,
Jyoti Nagar, Jaipur-302005(Rajasthan)

12. Jodhpur Vidyut Vitaran Nigam Ltd.,
New Power House,
Industrial Area, Jodhpur-342003

13. Ajmer Vidyut Vitaran Nigam Ltd.,
Vidut Bhavan, Janpath,
Jyoti Nagar, Jaipur-302005(Rajasthan)

14. Power Development Department,
Government of J& K,
Civil Secretariat, -180001 (J&K) **....Respondents**

Present:

For Petitioner:
1. Shri M. Siddiqi, THDC
2. Shri Anil Ragheswaran, THDC
3. Shri Ajay K Mathur, THDC
4. Shri M.K.Tyagi, THDC
5. Shri J.K. Hatwal, THDC
6. Shri A.B.Goel, THDC
7. Shri L.P. Joshi, THDC
8. Shri H. Chakraborty, THDC
9. Shri Anand Baba, THDC
10. Shri R.Sanjeev, THDC

For Respondents:
1. Ms. Poorva Saigal, PSPCL
2. Shri Padamjit Singh, PSPCL
3. Shri T.P.S.Bawa, PSPCL
4. Shri R.B.Sharma, Advocate, BRPL

ORDER

The petitioner seeks review of the order dated 16.4.2013 in Petition No. 250/2010 (**'the** impugned order') whereby the Commission approved the tariff of Tehri Hydroelectric Power Project ('the generating station') for the period from 22.9.2006 to 31.3.2009 in terms of the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2004 ('the 2004 Tariff Regulations'). According to the petitioner, the impugned order suffers from certain errors apparent on the face of record. The aspects on which review of the impugned order has been sought by the petitioner are as under:

(a) Debt-equity ratio,

(b) Condonation of time overrun of 3 months,

(c) Capital cost of the shared assets, and

(d) Secondary energy benefits.

2. The review petition was admitted on 16.7.2013 and notice was ordered on the respondents. The respondents BRPL and UPPCL have filed reply to the petition and the petitioner has filed its response to the same. Based on the directions of the Commission during the hearing on 27.8.2013, the petitioner has filed submissions vide its affidavit dated 17.9.2013.

3. Heard the parties. Based on the submissions and the documents available on record, we proceed to examine the issues raised by the petitioner as stated in the subsequent paragraphs.

Debt - Equity Ratio

4. It is observed that the petitioner has raised two issues as regards review of debt-equity ratio. Firstly, according to the petitioner, the Commission ought to have considered debt-equity ratio of 60.70:39.30 as on the date of commercial operation instead of debt-equity ratio of 62.78:37.22 as on the cut-off date i.e 31.3.2009. The second grievance of the petitioner on debt-equity ratio is that for additional capital expenditure, debt and equity should be considered in the ratio of 70:30 in terms of clause (2) of Regulation 36 of the 2004 Tariff Regulations or if

the equity is less than 30%, the actual equity deployed in place of considering the entire additional capitalisation as debt funded.

5. The petitioner while seeking approval for tariff in the original petition had claimed the debt-equity ratio of 62.78:37.22. Considering the justification submitted by the petitioner in support of its claim for the debt-equity ratio of 62.78:37.22, the Commission in the impugned order considered the capital cost of ₹651513.00 lakh as on COD of the station i.e. 9.7.2007 and approved the additional capital expenditure of ₹5545.62 lakh for the period 9.7.2007 to 31.3.2008 and ₹30184.42 lakh for the year 2008-09. The Commission, on an analysis of the debt and equity structure of the project since the beginning of its construction, concluded that the debt-equity ratio of 62.78: 37.22 claimed by the petitioner was in the overall interest of the beneficiaries of the generating station. However, the additional capital expenditure approved was treated as loan so as to bring the overall debt-equity ratio closer to the normative debt-equity ratio of 70:30. The relevant portion of the impugned order is extracted hereunder:

> *"37. It is noticed that ₹1166.17 crore had been deployed as equity in the project upto 1996-97, which constitutes around 20% of the project cost. Subsequently, equity of ₹1389.68 crore had been deployed from the year 1997-98 till 2007-08. Only from the year 1997-98, debt has been deployed in the project and ₹3959.24 crore was deployed from 1997-98 till 2007-08. Deployment of debt and equity show that till the year 2001-02, more equity was deployed as compared to debt, which had been slowly brought down with the exception for the year 2004-05. Had the project been funded strictly in accordance with the debt equity ratio of 70:30 from the beginning, it would have resulted in accumulation of substantial amount of IDC which would have further inflated the capital cost. Therefore, initial deployment of equity of the project till 1996-97 has resulted in lower IDC which is in the interest of the beneficiaries/consumers. In the above background, we allow the debt equity ratio of 62.78:37.22 as claimed by the petitioner in deviation of the 70:30 debt equity norm keeping in view the interest of the beneficiaries. This is in line with the methodology adopted by the Commission in respect of some of its orders pertaining to the hydro generating stations of NHPC.*
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> *38. As regards the rates for apportionment of the additional capital expenditure between debt and equity, Note 1 and Note 3 under Regulation 34 of the 2004 Tariff Regulations provides as under:-*
>
> *"Note 1*
> *Any expenditure admitted on account of committed liabilities within the original scope of work and the expenditure deferred on techno-economic grounds but falling within the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 36.*
>
> *Note 3*
> *Any expenditure admitted by the Commission for determination of tariff on account of new works not in the original scope of work shall be serviced in the normative debt-equity ratio specified in regulation 36."*

39. It may be seen that any expenditure incurred on account of liabilities within the original scope of work and any expenditure incurred on account of new works not in the original scope of work shall be serviced in the normative debt equity ratio as specified in Regulation 36. Since equity more than the 30% has been allowed in respect of original cost, the entire amount of additional capitalisation has been treated as loan, as this would lead to an overall debt equity ratio closer to the debt equity ratio of 70:30 during the period 2004-09 and onwards."

6. According to the petitioner, the debt-equity ratio is to be determined based on the capital cost employed, namely, from equity or debt, as on the date of COD and accordingly, the amount of equity deployed amounting to ₹255863 lakh may be allowed for determination of tariff as on COD of the generating station. The petitioner has pointed out that consideration of the debt equity ratio as on cut-off date instead of the date of Commercial operation has resulted in wrong computation of equity amount of ₹240111 lakh in place of ₹255863 lakh which was incurred on COD of the generating station. The petitioner has also submitted that in Page-3 of Annexure to Form-1 filed in the original tariff petition, the debt equity ratio of 60.70:39.30 has been calculated as on date of COD of the generating station for determination of Return on Equity. The petitioner has further submitted that the Commission having adjusted the entire amount of additional capitalisation towards debt, should have logically considered the debt equity ratio as prevalent as on COD (9.7.2007) and not prevalent as on the cut-off date (31.3.2009). The respondents, BRPL and UPPCL have objected to the submissions of the petitioner and have prayed that the same may be rejected.

7. We have considered the submissions of the parties. The petitioner has urged that the debt-equity ratio at a higher percentage of equity as considered for the capital expenditure incurred as on the date of COD is to be considered in accordance with second proviso to clause (2) of Regulation 36 of the 2004 Tariff Regulations. Regulation 36 (2) of the 2004 Tariff Regulations provides as under:

*"36. **Debt-Equity Ratio** (1)*

(2) In case of the generating stations for which investment approval was accorded prior to 1.4.2004 and which are likely to be declared under commercial operation during the period 1.4.2004 to 31.3.2009, debt and equity in the ratio of 70:30 shall be considered:

Provided that where equity actually employed to finance the project is less than 30%, the actual debt and equity shall be considered for determination of tariff:

Provided further that the Commission may in appropriate cases consider equity higher than 30% for determination of tariff, where the generating company is able to establish to the satisfaction of the Commission that deployment of equity higher than 30% was in the interest of general public".

8. It can be seen in accordance with the second proviso, in appropriate cases, the Commission can consider equity higher than 30% in case the generating company is able to establish that deployment of higher equity served the interest of general public. The following two conditions have to be met before invoking of the second proviso, namely-

(a) Equity higher than 30% had been deployed, and

(b) Such deployment was in the interest of general public.

9. The petitioner has in the tariff petition submitted justification for equity higher than 30% which was considered by the Commission and was found to be justified in the interest of general public and accordingly, the Commission allowed the debt equity ratio of 62.78:37.22 prevalent as on cut-off date, instead of debt equity ratio of 60.70:39.30 as on COD. Since the capital cost of a project is determined as on the date of commercial operation, it is appropriate that the debt equity ratio as on the COD is taken into consideration which is in conformity with clause (2) of Regulation 36 of the 2004 Tariff Regulations. Accordingly, in rectification of our order dated 16.4.2013, we allow the debt equity ratio of 60.70:39.30 to be considered as on COD of the generating station (9.7.2007) in terms of clause (2) of Regulation 36 of the 2004 Tariff Regulations read with the second proviso there under.

10. Secondly, the petitioner has submitted that the reference to additional capitalisation would necessarily imply all capital cost after the commercial operation date as per provisions of Regulation 34 of the 2004 Tariff Regulations. It has added that the capital cost upto the date of commercial operation is considered in Regulation 4 read with Regulation 33 of the 2004 Tariff Regulations and anything after the commercial operation is considered as additional capitalisation. The petitioner has contended that there is error apparent on the face of the record in treating the debt equity ratio of 62.78:37.22 by including the part of additional capitalisation from the date of COD to the cut-off date in capital cost, whereas the clear intention of the Commission in para 39 of the impugned order is to treat all expenditure whether

incurred prior to or after the cut-off date as additional capitalisation. The petitioner has submitted that the debt equity ratio prevalent as on COD (9.7.2007) ought to have been allowed. The respondents BRPL and UPPCL have objected to the prayer of the petitioner on the ground that the Commission has given a clear finding on the issue which cannot be considered as an error apparent on the face of the record.

11. We have considered the submissions of the parties. We have decided in this order that the debt equity ratio of 60.70:39.30 as on COD would be applicable for apportioning the capital cost between debt and equity as on the COD. It follows as a natural corollary that any expenditure incurred after COD shall be considered as additional capital expenditure. As regards the servicing of the additional capital expenditure through debt or equity, we are of the view that the entire amount of additional capitalisation should be treated as loan so as to bring overall debt equity ratio closer to the debt equity of 70:30 during the period 2004-09. This is in line with the methodology adopted in respect of tariff orders pertaining to some of the hydro generating stations of NHPC for the period 2004-09. We order accordingly.

Condonation of Time Overrun of 3 months

12. The issue of cost and time overrun involved for execution of the generating station were placed before the Standing Committee constituted by the Central Government. On the question of time overrun, the Standing Committee had observed as under:

> *"10.3 As brought out in para 7, the time overrun of 20 months is mainly on account of delay in closure of diversion tunnel T-2 due to delay in completion of T-3 circuit because of the rock fall in the vertical shaft of T3 Tunnel and on account of the stay granted by Hon'ble High Court of Uttarakhand on the PIL's filed against closure of the T2 Tunnel to start filling up the reservoir.*
>
> *10.4 The Committee is of the opinion that the time overrun and the cost overrun were beyond the control of THDC and no individual can be held responsible for the same."*

13. The Commission after taking note of the above observations of the Standing Committee had concluded in the impugned order as under:

> "22..... *As regards the delay of 23 months between the period from the completion schedule envisaged as per RCE-I (July, 2005) and the actual COD of the generating station (9.7.2007), we have considered the findings/recommendations of the Standing Committee as quoted in para 19 above and are of the view that the delay of 20 months from July, 2005 to March, 2007 is not attributable to the petitioner. However, while agreeing with the concerns*

raised by the respondents as regards the delay in achieving of CODs of the units of the generating station, we are of the view that with extra efforts on the part of the petitioner, specially, in view of the fact that the project had already suffered substantial time overrun, the petitioner could have managed the early declaration of commercial operation of successive units after the COD of Unit No. IV on 22.9.2006. Even if two months' time is considered reasonable for the declaration of COD of the units after the COD of Unit No. IV on 22.9.2006, in our view, the generating station would have achieved commercial operation on 22.3.2007. In the RCE –II approved by the Ministry of Power, Govt. of India on 11.11.2010, it has been stated that the generating station had been commissioned and is under commercial operation since the year 2006-07. Considering the above factors in totality and in view of the fact that the Standing Committee had concluded that the delay of 20 months is not attributable to the petitioner, we allow the Time overrun of the generating station up to 30.3.2007 (i.e for 20 months) against the actual Time overrun of 23 months. Consequent upon this, the IDC claimed by the petitioner shall be restricted to the above said date, which works out to `112699 lakh and the same is allowed against the claim of `118605 lakh (as on 9.7.2007).

14. The Commission condoned the time overrun of 20 months, that is, up to 19.3.2007 and allowed IDC up to that date. Accordingly, the Commission considered IDC of ₹112699 lakh as against the petitioner's claim for IDC of ₹118605 lakh.

15. The petitioner has submitted that the Commission while allowing the time overrun of 20 months has based its decision on the recommendations of the Standing Committee. The petitioner has further submitted that the Standing Committee considered the delay of 20 months with respect to commissioning of the generating station, and not with reference to its date of commercial operation. The petitioner has urged that there was no occasion for it to approach the Standing Committee to seek condonation of the delay beyond the date of commissioning which took place on 19.3.2007. The petitioner has explained in its additional submissions that the period between 19.3.2007 and 9.7.2007 was taken to align the project and declare commercial operation after resolving the issues occurring during such period. Accordingly, the petitioner has averred, decision of the Commission to proceed on the basis of the report of the Standing Committee and allow condonation of delay of 20 months only instead of 23 months, without taking into consideration the difference between the date of commissioning and the date of commercial operation of the station, is an error which may be rectified after review. The respondents BRPL and UPPCL have opposed the petitioner's attempt to seek review of the decision on the issue of time overrun. It has been stressed by them that the petitioner cannot be allowed to rake up the issues on which the Commission has taken considered views. It has been argued by the respondents that the Commission has taken conscious decisions based on

overall consideration of facts of the case and as such there is no error on the face of the record in disallowance of 3 months time overrun by the Commission.

16. The submissions have been examined. The Commission has condoned the delay of 20 months after considering the report of the Standing Committee. It is noticed that the Standing Committee has dealt with the issue of time overrun till the commissioning of the generating station. However, in order to examine the delay in the declaration of commercial operation, the petitioner was directed to furnish justification giving reasons for the said delay. In response, the petitioner vide Annexure-I of its affidavit dated 17.9.2013 has submitted the details of the activities between the date of commissioning (19.3.2007) and the date of Commercial operation (9.7.2007) of Unit-I as under:

Sr. No.	Major Activity	Commencement Date	Completion Date	Remarks
1.	Commissioning of Unit-I		19.3.2007	
2.	Conductance of requisite checks/tests before pre-COD.	19.3.2007	26.3.2007	
3.	Test Run for COD	26.3.2007		Unit Tripped on 29.3.2007 due to blast in LAVT and NGT Cubicles.
4.	Assessment of damage, identification of equipment/items necessitating replacement and action for procurement.	29.3.2007	16.5.2007	Enquired from OEMs/other suppliers for effecting the supplies of new equipment/items at plant in least delivery period so as to achieve COD of Unit-1 as quickly as possible.
5.	Progressive placement of POs of identified damaged equipment/items on different suppliers.	10.4.2007	17.5.2007	
6.	Progressive receipt of newly procured equipment/items and subsequent installation, testing and commissioning at site.	5.6.2007	30.6.2007	
7.	Conductance of pre-checks/tests of newly installed equipments/items and commissioning activities of unit with newly installed equipment/items.	15.6.2007	4.7.2007	
8.	Final Test Run for COD	4.7.2007	8.7.2007	
9.	Declaration of COD		9.7.2007	

17. After commissioning, the commercial operation of the unit took time on account of the difficulties as narrated above. We are of the view that the time lag between the date of commissioning and the date of commercial operation is for the reasons beyond the control of the petitioner. In consideration of the fact that the delay from the date of commissioning (19.3.2007) to the date of Commercial operation (9.7.2007) of Unit-I is for reasons beyond the control of the petitioner, we allow the prayer of the petitioner to condone the time overrun of 23 months and allow IDC upto the said date. We order accordingly.

Cost of Shared Assets

18. On the question of apportionment of the capital cost of common assets like dam and spillways between the four units, the Commission in the impugned order observed as follows:

> *"23. It is observed that the capital expenditure claimed by the petitioner as at para 10 above, does not depict the capital expenditure till the CODs of the respective units of the generating station. Beginning from the capital expenditure as on 8.7.2007, the petitioner has claimed the same expenditure as on the CODs of the respective units under the major heads like Infrastructure works, Major civil works including hydro mechanical equipment and Overheads. The expenditure under these major heads is more than 50 % of the total cost claimed as on the COD of the generating station. As such, the unit wise break-up of the capital cost with reasonable apportionment of common facilities, has not been made available by the petitioner. However, the unit wise break-up for other major expenditure under the head 'Plant and Equipment' has been submitted by the petitioner."*

19. The petitioner in the review petition has submitted that in the tariff petition it filed the detailed justification for considering the total capital cost of the shared/common assets including dam spillways and power house from the date of commercial operation of Unit 4, commissioned first, as it had to service the loan and equity based on the capital expenditure actually incurred. The petitioner has submitted that it had not been in a position to defer servicing of the debt and equity till commercial operation of other units, including Unit No. 1, which was last to be commissioned. It has been alleged that the Commission in the impugned order, has not considered the justifications given by the petitioner. Therefore, there is sufficient cause for the Commission to review the order.

20. The cost of common facilities was apportioned equally between the four units of the generating station in view of the specific provision of clause (2) of Regulation 4 of the tariff regulations, extracted hereunder:

> *"(2) For the purpose of tariff, the capital cost of the project shall be broken up into stages and by distinct units forming part of the project. Where the stage-wise, unit-wise, line-wise or sub-station-wise breakup of the capital cost of the project is not available and in case of ongoing projects, the common facilities shall be apportioned on the basis of the installed capacity of the units and lines or sub-stations. In relation to multipurpose hydro electric projects, with irrigation, flood control and power components, the capital cost chargeable to the power component of the project only shall be considered for determination of tariff.*

21. During the course of hearing held on 27.8.2013, the petitioner submitted that the methodology of apportioning the capital expenditure on common facilities like dam, spillways, etc. as adopted by the Commission was acceptable to it. According to the petitioner, however, upward revision of IDC is called for as IDC claimed in the petition had been worked out on the basis of capitalisation of expenditure on common facilities on the date of commercial operation of Unit No 1. The petitioner vide affidavit dated 18.9.2013 has submitted that the impact on IDC of such apportioning of the capital cost between the units, works out to ₹10409 lakh, bur without submitting the details of calculation in support of its claim of increase in IDC. The petitioner's claim for upward revision of IDC cannot be taken as a ground for review of the impugned order.

Secondary Energy Benefits

22. The generating station was originally approved by CEA for design energy of 2797 Million Units (MU). In the proceedings in the tariff petition the petitioner explained the difficulties in achieving the approved design energy level as the State Government had not permitted Full Reservoir Level (EL 830.00 m) during 2006-07, 2007-08 and 2008-09. The petitioner informed that generating station could achieve the design energy of 818.76 MU for the period 22.9.2006 to 31.3.2007, including infirm energy generated by Unit Nos. I, II & III, on the basis of actual flows during 2006-07. Similarly, the petitioner worked out the design energy for the years 2007-08 and 2008-09 at 2430.30 MU and 2720.86 MU respectively, against the approved design energy of 2797 MU. In the impugned order, the Commission allowed the lower design energy

as indicated by the petitioner, subject to the condition that secondary energy benefits would be available to the petitioner beyond the approved design energy level of 2797 MU. In other words, in accordance with the impugned order, the petitioner can claim the Secondary Energy Charge for generation of electricity exceeding 2797 MU. The relevant para from the impugned order is extracted below:

> *"58. The petitioner has submitted the detailed calculations for arriving at the modified design energy which have not been challenged by any of the beneficiaries. As such, the modified design energies as indicated in the table under para 56 are being allowed with the stipulation that secondary energy benefits shall be recoverable by the petitioner only beyond the design energy level of 2797 MU approved by the CEA."*

23. The petitioner has submitted that the reservoir filling limitation is based on the directives of the State Government and the petitioner should not be deprived of secondary energy benefits on achieving the revised design energies. The respondent, BRPL has opposed the plea of the petitioner on the ground that the Commission took a conscious decision based on overall consideration of facts of the case which cannot be remedied through the review petition as there is no error on the face of the record. The representative of PSPCL during the hearing submitted that restricted level of reservoir filling was on account of non-completion of R&R works which was the responsibility of the petitioner. It has been urged on behalf of PSPCL that on one hand the beneficiaries are deprived of the energy benefits due to restricted filling of the reservoir and on the other hand petitioner wants incentive to be available for generation beyond relaxed design energies. The representative of PSPCL supported the decision of the Commission to allow the secondary energy benefits after achieving the CEA approved design energy.

24. The petitioner has stressed that restricted level of reservoir filling is not attributable to the petitioner and this was on account of the direction by the State Government considering the delay in the part of Government of in finalising the rehabilitation, though the petitioner had paid the amount of rehabilitation to the State Government who is to disburse the amount and physical removal of the habitation is the obligation of the Government. Therefore, the operation

was available only at EL 815 meters/EL 820 meters for the relevant periods considered for fixation of annual charges as against EL 830 meters.

25. We have considered the submissions of the contesting parties. In line with the tariff regulations, the petitioner is entitled to Secondary Energy Charges for generation in excess of the design energy. The Commission has relaxed the design energies corresponding to level of reservoir filling i.e 815 m and 820 m approved by the State Government to enable the petitioner to recover energy charges/AFC. However, considering the fact that higher inflows than normal may allow generation of higher energy as compared to modified design energies, the secondary energy benefits/incentives were allowed only beyond the CEA approved design energy of 2797 MUs to provide relief to the beneficiaries who are already at disadvantageous position in terms of lower generation due to restricted level of reservoir filling. The view taken was a conscious decision. Therefore, the prayer of the petitioner for review of the impugned order is outside the scope of review.

26. Accordingly, review petition is disposed of in terms of the above. Based on the directions contained in this order, the tariff of the generating station for the period from 22.9.2006 to 31.3.2009 shall be revised by a separate order.

Sd/-
(M. Deena Dayalan)
Member

Sd/-
(V.S. Verma)
Member