

**BEFORE THE UTTAR PRADESH ELECTRICITY REGULATORY COMMISSION
LUCKNOW**

Petition No.443/2007

IN THE MATTER OF: Approval of tariff for supply of electricity from 400 MW Vishnu Prayag Hydroelectric Project.

AND

IN THE MATTER OF:

Petitioner:

M/s Jaiprakash Power Ventures Ltd
113 Rajpur Road,
Dehradun-248101

Respondents :

1. UP Power Corporation Ltd
Shakti Bhawan,
14, Ashok Marg,
Lucknow
2. Govt. of UP
through Principal Secretary (Energy)
Lucknow
3. Govt. of Uttarakhand
through Principal Secretary (Irrigation & Power)
Dehradun

The following were present:

1. Sri. Suresh Kumar MD, JPVL
2. Sri. M.A Siddiqui, Director, JPVL
3. Sri. Sanjiv Goel, Deputy FC, JPVL
4. Sri. S.N. Dubey, Chief Engineer, PPA, UPPCL
5. Sri.S.P.Pandey, EE, PPA, UPPCL

ORDER

(Date of Hearing 30.3.07)

- (1) The Petitioner has sought approval of capital cost incurred by it up to the date of commissioning and tariff for the sale of electricity to UP Power Corporation Ltd. (UPPCL) generated at Vishnu Prayag HEP as per the terms & conditions of Power Purchase Agreement (PPA) signed on 16.1.07 with UPPCL. In this petition, the petitioner has also sought approval of additional capital expenditure to be incurred after commissioning of last unit and up to June,08.

- (2) The dates of Commissioning of units and the project are as below:

Unit no.	As per PPA	Actual	As per implementation agreement
I	31.12.06	17.7.06	Commissioning of project by Sept, 07
II	31.01.07	14.7.06	
III	28.2.07	31.8.06	
IV	31.3.07	13.10.06	

- (3) The Commission directed vide order dt.19.7.06 passed in Pet no.351/06, to file financial package prior to submission of the final tariff because UPPCL had not filed the same earlier. The financial package is contained in Form-4, 6 & 7 of the petition. UPPCL has not commented on the financial package. The weighted average rate of interest on loan is 10.27% as compared to 15.82% considered in TEC. **The financial package brought in this petition is not inferior to that approved in TEC. The Commission approves the financial package submitted by the petitioner for capital cost of Rs.1682.72 Cr. as on COD of the project and directs that financing of the additional capital expenditure, as and when allowed by the Commission, shall also be admitted in the debt & equity ratio of 70:30.**

- (4) Subsequently, the petitioner has made an additional submission on an affidavit dt.24.3.07 filing therewith capital cost certified by auditor and revised tariff due change in the rate of interest on working capital to 10.25% instead of 11% taken earlier.

- (5) (a) The Central Electricity Authority (CEA) accorded Techno Economic Clearance (TEC) to the project on 30.6.97 at cost Rs.1615 Cr. (equity Rs.400 Cr + debt Rs.778.48 Cr & 122.89 m US\$ at Rs.35.5) which would be Rs.1716 Cr. at actual average foreign exchange rate of Rs.44.90 at present. The Petitioner has submitted that the cost of the project as on 12.10.06, date of commissioning, is Rs.1682.72 Cr. which includes an additional amount of Rs.14.57 Cr. due to capitalization of additional interest on account of cost of apportionment of common facility. The details of the

expenditure is given in Form 5 B of the petition, which in comparison to the cost approved by CEA is as below:

Heads of work	Estimated cost approved by CEA (Rs.Cr.) at US\$=Rs.44.90	Actual capital expenditure as on 12.10.06 (Rs.Cr.)
(a) E&M works	394.92	317.98
Taxes & duties	59.89	47.38
Overhead Charges	83.86	14.50
Construction and pre-commissioning expenses		98.72
Total (a)	538.67	478.57
(b) Civil works	689.57	675.14
Overheads Charges	78.98	14.50
Infrastructure works		89.31
Hydro-mechanical equipment		25.53
Construction and pre-commissioning expenses		9.58
Total (b)	768.55	814.06
(c) FC& IDC	408.36	390.08
Total (a+b+c)	1715.58	1682.72

The petitioner has shown construction and pre-commissioning expenses of Rs.108.29 Cr., the head of expenditure not reflected in TEC but is incidental to electro-mechanical and civil works as such the Commission considers it appropriate to allocate erection, testing & commissioning expenses of Rs.72.84 Cr. and site supervision charges of Rs.16.30 Cr. as part of E&M works while construction insurance of Rs.19.15 Cr. is attributed to E&M and Civil Works in fifty-fifty percent. The cost of infrastructure works is considered to be included in the Civil Works. As a consequence above, the total cost of E&M and Civil Works comes out to be Rs.478.57 Cr. and Rs.814.06 Cr. respectively. The total cost of E&M works and FC & IDC are less than the estimated cost approved by CEA at current rate of US\$. The cost of civil works is higher by 5.92% than that worked out on the basis of cost approved by CEA. It is observed that the cost of civil works was approved by CEA in 1997 with commissioning of the project stipulated within 68 months (after accounting 8 months for financial closure) of the date of TEC but the project has been commissioned in Oct,06, within the time frame provided in the Implementation Agreement signed by the petitioner with the Govt.

of UP& Uttarakhand. On account of above, the cost of civil & infrastructure works was bound to increase. **Therefore, the cost of civil works is reasonable and acceptable.**

The total cost of the project is less than that arrived at on the basis of the cost approved by the CEA. UPPCL has not objected to the capital cost incurred by the Petitioner as on 12.10.06.

In consideration of above, the actual capital expenditure of Rs. 1682.72 Cr. incurred up to COD of the project (i.e.13.10.06) is approved for the purpose of computation of tariff.

(b)The petitioner has prayed in the petition to allow capital expenditure worth Rs.28.63 Cr. to be incurred from 13.10.06 to 31.6.08 as result of which the cost of the project would be Rs.1711.35 Cr. During hearing, Sri. Suresh Kumar, MD, JPVL has submitted that due to high head of about 1 Km., the erosion of rotor of turbine and other hydro-mechanical parts have been excessive due to quartz particles present in the water than that envisaged and accounted for at the design stage of the project. Sri. Kumar further submitted that, the requirement of spares have increased due to excessive erosion and an additional capitalization of Rs.28.63 Cr. might also be approved along with higher percent of initial spares then provided in PPA.

The capital cost of Rs.1682.72 Cr. includes Rs.11.92 Cr. for initial spares and Rs.2.36 Cr. duties on it. It is observed that Hydro mechanical equipments, costing Rs.25.53 Cr, have not been included in the cost of plants and equipments. If this cost is included in the cost of E&M works, then it works out to Rs.504.10 Cr. and accordingly, the cost of initial spares of Rs.14.28 Cr. comes out to be 2.8%, within 5% limit specified in the PPA.

PPA provides for cost of spares as 5% of the cost of equipment. UPPCL, in its reply to the petition, have submitted in reference to UPERC (Terms and conditions of Generation Tariff), Regulations, 2004 (hereinafter to as Generation Regulation) that while approving the capital cost of the project, the compliance of Regulation 33 might be ensured. The Regulation 33 of the said Regulations provides that, *“Subject to concurrence of the Authority or prudence check by the Commission, as the case may be, the actual expenditure incurred on completion of the project shall form the basis for determination of final tariff. The final tariff*

shall be determined based on the admitted capital expenditure actually incurred up to the date of commercial operation of the generating station and shall include initial capital spares subject to a ceiling norm of 1.5% of the original project cost as on the cut off date.” UPPCL has further submitted that the additional expenditure which is likely to be incurred may be allowed in the year in which it is actually spent and the petitioner should furnish the proof of expenditure for that year and necessary adjustments in the tariff may be made. UPPCL has also submitted to put a ceiling on the capital cost of the project keeping in view the TEC of CEA.

The petitioner requires additional expenditure on spares due to peculiarity of excessive erosion experienced by it after commissioning of the project. **In view of above, the petitioner is directed to submit industrial practices for requirement of spares and desirability of additional O&M expenses under similar conditions, if any. Since additional expenditure has not been incurred as such the same could be allowed in the relevant year after the requirement of additional spares is established. The petitioner is directed to submit information in this regard for consideration of the Commission.**

The petitioner is likely to close the additional expenditure if any, by 30th June,08, 9 months later than the month of scheduled commissioning as per the Implementation Agreement, as such the Commission has no objection for additional capitalization subject to prudence check by the Commission. **After the requirement of additional capitalization is established, the total capital cost of the project shall not exceed Rs.1715.58 Cr.**

- (6) The Commission has, in Order dt.19.7.06 passed in Pet no.351/06 filed by the petitioner for determination of provisional tariff, determined 1545.88 MU as saleable design energy to UPPCL after deduction of 0.5% transformation losses, 0.5% auxiliary consumption and 12% free energy to the State of Uttaranchal from total design energy of 1774.42 MU. The petitioner has, for the purpose of computation of saleable design energy of 823.26 MU for the year 2006-07, considered river discharges available from the month of June to March of year as provided by CWC based on 90% dependable year. UPPCL finds the design energy arrived at by the petitioner in order.

The units have been commissioned from June, 06 onward, as such the methodology adopted by the petitioner to arrive at design energy for the period starting from the month of commercial operation of 1st unit to the end of year i.e. 31.3.07 is acceptable. Accordingly, the Commission approves 823.26 MU saleable design energy, however, the total recoverable energy charges shall correspond to electricity actually supplied.

The saleable design energy after year 2006-07 shall be as determined by the Commission in above-mentioned order dt.19.7.06.

- (7) The petitioner has proposed the tariff for the year 2006-07, based on audited accounts, as below:

Particular	Amount (Rs. Cr.)
Capacity charges	117.893
Energy charges	76.754 (Rs.0.9323/KWh at saleable design energy)

UPPCL has filed reply to the petition and accepts the tariff proposal submitted by the Petitioner.

The Commission finds the computation of capacity charges and energy charges for 2006-07 in order and approves the same. The energy charges include advance payment of income tax of Rs.5.014 Cr. as such the petitioner is directed to make necessary adjustment in the energy charges based on tax on income actually paid by it certified by auditor as provided under terms and conditions of PPA.

- (8) (a) The Commission determined the provisional tariff for the petitioner, vide order dt.19.7.06, subject to retrospective arrangements on determination of final tariff commissioning of all four units. The petitioner may bill UPPCL for electricity supply based on tariff approved in this order with adjustment of tariff earlier charged. The petitioner may also raise bills for project specific charges including taxes, duties and cess etc. as per the terms & conditions of PPA.

(b) Incentive for plant availability and secondary energy charge, if any, may be claimed as per terms & conditions of PPA.

(c) UPPCL shall pay bills without demur.

(9) For the period 1.7.04 onward, the petitioner shall calculate tariff in accordance with the provisions of PPA based on capital cost of Rs.1682.72 Cr. and in case of any capital addition, prior approval of the Commission shall be obtained. The weighted average rate of interest for computation of interest on loan shall be taken as prevailing at the beginning of the tariff year and adjustment in the tariff shall be made at the end of every year based on actual weighted average rate of interest during the respective tariff year.

(10) The Petition is disposed of.

(R. D. Gupta)
Member

(P.N.Pathak)
Member

(Vijoy Kumar)
Chairman

Lucknow; Dated: 5th April, 2007