**Before**

**UTTARAKHAND ELECTRICITY REGULATORY COMMISSION**

**In the matter of:**

Petition no. 01 of 2008 dated 05.12.2007 filed by M/s Chamoli Hydro Power Private Limited.

……..……….Petitioner

**And**

**In the matter of:**

Determination of Final Tariff for Debal Small Hydro Power Project for 2007-08 u/s 62(1) (a) and 86 of the Electricity Act, 2003.

**Coram**

| | |
|---|---|
| **Shri V.J. Talwar** | **Chairman** |
| **Shri V.K. Khanna** | **Member** |

**Date of Order: 28.03.2008**

**ORDER**

This Petition has been filed by M/s Chamoli Hydro Power Private Limited (hereinafter referred to as "Petitioner") under sections 62 and 86 of the Electricity Act, 2003 (hereinafter referred to as "Act") read with relevant regulations and guidelines of the Commission for determination of final tariff of Petitioner's Small Hydro Power (SHP) Project on River Kaliganga, a tributary to Pinder river in District Chamoli, Uttarakhand with an installed capacity of 5 MW under the name Debal Small Hydro Power Project.

# 1 Procedural History

(2) The Petitioner Company was incorporated on June 19, 2003. The Petitioner has established a small hydropower generating station on river Kailganga, a tributary to Pinder river in the District of Chamoli, Uttarakhand, having an

installed capacity of 5 MW under the name Debal small hydropower project. The said generating station started commercial operation on 01.09.2007, the date of Commercial Operation (CoD), and is supplying electricity to Uttarakhand Power Corporation Ltd (UPCL).

(3) The Petitioner had initially applied for fixation of provisional tariff before the Commission. The Commission had issued its order approving provisional tariff for the Petitioner on 05.06.2007. The Petitioner has filed this Petition on 05.12.2007 for determination of final tariff for the Project which has been in commercial operation from 1st September 2007. The Petition was admitted by the Commission on 18.02.2008 and a copy of the Petition was sent to UPCL for comments. The Petition was also placed on the Commission's website for response from stakeholders.

(4) The Petitioner having traced out the history of the project has in an unambiguous terms opted for the relaxed regulations spelt out in the Order dated 10.11.05 for SHPs with capacity 1-25 MW issued by the Commission. It has, accordingly, worked out a tariff of Rs. 5.29 per unit for sale of energy to UPCL and prayed for its approval.

## 2 Commission's Scrutiny & Analysis

(5) The Petitioner, having once opted for relaxed regulations, is bound by the terms and conditions stipulated in the Order dated 10.11.2005 including sale of entire power to UPCL for at least 20 years. Accordingly, the Commission is determining the final Tariff as per terms of the said Order on relaxed regulations read with original regulations viz. Uttaranchal Electricity Regulatory Commission (Terms & Conditions for Determination of Hydro Generation Tariff) Regulations, 2004 (Regulations).

(6) Apart from the rate determined herein, taxes are allowed to be passed through in the Tariff and recovered separately from the beneficiaries as per the Regulations.

(7) The Petitioner has claimed expenses and tariff for the entire year, while the Petitioner's project attained CoD on 01.09.2007. However, the Commission has considered expenses for last 7 months of 2007-08 as all the expenditure prior to CoD of the plant ought to have been capitalised and are not required to be

considered for determination of tariff for 2007-08. The generation has also been accordingly reduced on pro-rata basis.

(8) The proposals made by the Petitioner are discussed hereafter alongwith the Commission's analysis on the same while examining different elements of the Petitioner's annual fixed charges.

## 2.1 Capital Cost and Financing thereof

(9) The Petitioner has taken the capital expenditure on the project as Rs. 32.69 Crore on the date of commercial operation, i.e. 01.09.2007, which has been supported by the certificate of the Chartered Accountant dated 15.11.2007, against the cost of Rs. 28.63 Crore taken in approved DPR. It is clear that there has been substantial cost overrun in the project. The Petitioner has also got an additional term loan to meet a part of the cost overrun.

(10) The Petitioner has not deducted the revenue from infirm power from its capital cost in accordance with the Regulations. The Commission is making this correction. Total infirm power supplied to UPCL during July 2007 and August 2007 was 0.90 MUs and revenue from the same was Rs. 0.23 Crore. Thus, the capital cost for tariff purposes works out to Rs. 32.46 Crore.

(11) The actual capital cost per MW works out to Rs. 6.49 Crore/MW, which is above the ceiling of Rs. 6 Crore/MW for 2007-08 derived by considering the ceiling of Rs. 5.50 crore/MW specified in Order dated 10.11.2005 for 2005-06 and thereafter escalating it by annual escalation factors determined on the principles laid down in UERC (Terms and Conditions for Determining Escalation Factor) Regulations, 2008. Although the Petitioner has provided break-up of cost overrun in each head of capital cost, the Commission cannot accept the entire cost of Rs. 32.46 Crore for determination when the ceiling for the same is defined in the Regulations and the Petitioner was expected to have control over the cost components. The Commission has, therefore, restricted the capital cost to Rs. 30 Crore based on the ceiling of Rs. 6 Crore/MW as per Regulations

(12) The project has been financed through long term loans from State Bank of India (SBI) and State Bank of Hyderabad (SBH). The balance portion of the cost has been funded through unsecured loans and Petitioner's equity. The

original financing plan approved by State Bank of India (SBI) envisaged a debt:equity ratio of 71.18%: 28.82% (SBI loans of Rs. 7.5 Crore @ 10.25% & Rs. 4 Crore @ 11%, SBH loans of Rs. 5.10 Crore @ 10.25% & Rs. 2.65 Crore @ 11%, Unsecured loan of Rs. 1.13 Crore and Equity of Rs. 8.25 Crore) in the total approved project cost of Rs. 28.63 Crore. However, the Petitioner managed to draw an additional loan of Rs. 2.75 Crore from SBI (Rs. 1.65 Crore) and SBH (Rs. 1.10 Crore) to finance the cost overrun in the project. Thus, the total term loan worked out to Rs. 22 Crore. Original equity was stipulated to be Rs. 8.25 Crore which the Petitioner has also claimed for the completed project. However, since the Capital Cost has been restricted to Rs. 30 Crore, out of which Rs. 22 Crore was financed out of term loans, the balance of Rs. 8.00 Crore is deemed to be funded through Equity. Summary of original, claimed and approved financing plan of the project as on 01.09.2007, i.e. CoD, is given hereunder:

**Table 1: Financing Plan of the Project**

| **Particulars** | **Originally approved by Financial Institutions** | **As per Petitioner's submission** | **Approved by the Commission** |
|---|---|---|---|
| | **(Rs. Crore)** | **(Rs. Crore)** | **(Rs. Crore)** |
| **1. Loans** | | | |
| ***[A] Term Loans*** | | | |
| State Bank of India (I) | 7.50 | 7.50 | 7.50 |
| State Bank of India (II) | 4.00 | 4.00 | 4.00 |
| State Bank of India (III) | | 1.65 | 1.65 |
| ***Sub-Total SBI*** | ***11.50*** | ***13.15*** | ***13.15*** |
| State Bank of Hyderabad (I) | 5.10 | 5.10 | 5.10 |
| State Bank of Hyderabad (II) | 2.65 | 2.65 | 2.65 |
| State Bank of Hyderabad (III) | | 1.10 | 1.10 |
| ***Sub-Total SBH*** | ***7.75*** | ***8.85*** | ***8.85*** |
| ***[B] Unsecured Loans*** | 1.13 | 2.44 | 0.00 |
| ***Total Loans*** | ***20.38*** | ***24.44*** | ***22.00*** |
| **2. Equity** | **8.25** | **8.25** | **8.00** |
| **Total** | **28.63** | **32.69** | **30.00** |

## 2.2 Interest on loans

(13) The Petitioner has claimed an interest of Rs. 3.06 Crore for the entire year. The opening loans considered by the Commission have been discussed above in

financing of the project cost. As per the approval of the lenders, the term loan has to be repaid in 114 equal instalments commencing from January 2008 and short term loan for financing the cost overrun has to be repaid in 33 monthly instalments commencing from January 2008. Accordingly, the repayments due during 2007-08 work out to Rs. 0.76 Crore for 3 months against the Petitioner claim of Rs. 2.21 Crore being taken for the whole year. The interest rates as levied on the loans are linked to Advance Rates of the Bank. However, the Petitioner has claimed interest at the rate of 13% on SBI loans and at the rate of 12% on SBH loans and unsecured loans. The Petitioner has also erred in calculating interest on opening loans and has ignored repayments made during the year. The advance rate of the bank varies during a year. Hence, for this exercise the Commission is accepting the rates as projected by the Petitioner and any variations in the interest liability due to change in interest rates may be trued up subsequently. The interest for 7 months, accordingly works out to Rs. 1.52 Crore against Petitioner claim of Rs. 3.06 Crore.

**Table 2 : Interest on Loans (Rs. Crore)**

<table>
<tr><th rowspan="3">Loan Agency<br>(Source of Loan)</th><th rowspan="3">Rate of Interest (%)</th><th colspan="2" rowspan="2">Claimed</th><th colspan="5">Approved</th></tr>
<tr><th rowspan="2">Balance at the beginning of the year</th><th rowspan="2">Additions during the year</th><th rowspan="2">Principal due during the year</th><th rowspan="2">Balance at the end of the year</th><th rowspan="2">Interest</th></tr>
<tr><th>Loan</th><th>Interest</th></tr>
<tr><td>State Bank of India (I)</td><td>13%</td><td rowspan="3">13.15</td><td rowspan="3">1.71</td><td>7.50</td><td>0.00</td><td>0.20</td><td>7.30</td><td>0.56</td></tr>
<tr><td>State Bank of India (II)</td><td>13%</td><td>4.00</td><td>0.00</td><td>0.11</td><td>3.89</td><td>0.30</td></tr>
<tr><td>State Bank of India (III)</td><td>13%</td><td>0.00</td><td>1.65</td><td>0.15</td><td>1.50</td><td>0.06</td></tr>
<tr><td>State Bank of Hyderabad (I)</td><td>12%</td><td rowspan="3">8.85</td><td rowspan="3">1.06</td><td>5.10</td><td>0.00</td><td>0.13</td><td>4.97</td><td>0.35</td></tr>
<tr><td>State Bank of Hyderabad (II)</td><td>12%</td><td>2.65</td><td>0.00</td><td>0.07</td><td>2.58</td><td>0.18</td></tr>
<tr><td>State Bank of Hyderabad (III)</td><td>12%</td><td>0.00</td><td>1.10</td><td>0.10</td><td>1.00</td><td>0.07</td></tr>
<tr><td>Un-Secured Loan</td><td>12%</td><td>2.44</td><td>0.29</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></tr>
<tr><td>Sub-Total (A)</td><td></td><td>24.44</td><td>3.06</td><td>19.25</td><td>2.75</td><td>0.76</td><td>21.24</td><td>1.52</td></tr>
</table>

## 2.3 Depreciation including Advance against Depreciation (AAD)

(14) The Petitioner has claimed a depreciation of Rs. 1.12 Crore for the entire year. In addition, an AAD of Rs. 1.09 Crore has also been claimed on rates other than those specified in the Regulations.

(15) As per the rates specified by the Commission in its Regulations, the depreciation for 7 months in the year 2007-08 works out to Rs. 0.46 Crore and not Rs. 1.12 Crore as claimed by the Petitioner. Since the total repayment of Rs.

0.76 Crore is within the permissible limit of 10% of loan, the balance amount is being allowed through AAD of Rs. 0.30 Crore.

## 2.4 Return on Equity

(16) The Petitioner has claimed return on equity as Rs. 1.16 crore @ 14% on the equity of Rs. 8.25 Crore.

(17) As per the financing plan of the project approved by the Commission, the equity considered works out to Rs. 8.00 Crore. Further, the return has to be limited to 7 months for 2007-08. Thus, the return on equity for 2007-08 works out to Rs. 0.65 Crore.

## 2.5 Operation & Maintenance (O&M) Expenses

(18) The Petitioner has claimed O&M expenses of Rs. 3.23 Crore without giving any basis for the same. Petitioner's claim works out to about 10% of the capital cost admitted by the Commission which is excessive and cannot be allowed. Even the O&M expenses considered in the approved DPR are only 3%.

(19) The Commission is bound by the Regulations unless there are genuine reasons to deviate from the same, the Commission has to adhere to the Regulation. This is the first year of operation of the Petitioner's plant and there is no historical data to look behind into actual expenditure incurred. Also, the Petitioner is expected to bring efficiency and economy in its operations right from the beginning.

(20) Thus, the Commission has worked out O&M expenses @ 4%, inclusive of insurance expenses @ 1%, of the approved capital cost as specified in its order dated 10.11.2005, which work out to Rs. 0.70 Crore for 7 months.

## 2.6 Interest on Working Capital

(21) The interest on working capital has been estimated as per Regulations, which comes to Rs. 0.11 Crore against a claim of Rs. 0.19 Crore.

## 2.7 Annual Fixed Charges (AFC)

(22) Based on the above, the AFC for the Petitioner's generating station for 7 months in 2007-08 works out to Rs. 3.74 Crore against a claim of Rs. 9.85 Crore for the entire year 2007-08.

## 3 Tariff for 2007-08

(23) Full recovery of the Petitioner's AFC is to be allowed from the saleable energy at 45% PLF for 7 month (11.50 MUs) as stipulated in the Order dated 10.11.2005, which gives a rate of Rs. 3.25/kWh. However, the Petitioner has to recover its entire AFC from saleable energy at 45% PLF which will cause hardship to the Petitioner since generation from hydro stations drops in winter months due to less water availability. Total design energy for 7 months from September to March is 17.58 MUs out of the total design energy of 34.31 MUs. At 45% PLF, the saleable energy works out to 19.71 MUs for 12 months for Petitioner's plant. Hence, the Commission has reduced the design energy given in the approved DPR for relevant seven month proportionately in relation to the Saleable Energy at 45% PLF which is in line with the actual generation during this period. Thus, the relaxed saleable energy works out to 10.10 MUs. Since the saleable energy is computed after auxiliary consumption and transformation losses, Petitioner's claims of auxiliary consumption and transformation losses are of no relevance.

(24) Accordingly, the Commission approves the tariff of Debal Small Hydro Power Plant of the Petitioner for 2007-08 as Rs. 3.70/kWh for energy sold upto 10.10 MUs and 26 p/kWh for sale beyond this limit. This tariff shall continue to be the approved rate for sales to UPCL till revised by the Commission.

(25) The Petition is disposed off accordingly.

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|---|---|
| **(V.K. Khanna)** | **(V.J. Talwar)** |
| **Member** | **Chairman** |