ASSAM ELECTRICITY REGULATORY COMMISSION

FILE NO. AERC. 312/2008 PETITION NO. 6/2008

ORDER SHEET

24.09.2009	The present petition has been filed by the M/s Manas Hydel Power Company Pvt. Ltd. for the approval of tariff & Power Purchase Agreement for Rupahi Hydroelectric project of 0.4 MW in Baksa District. The said project is a multi purpose project. BTC and IL&FS have signed an MoA on 28th September, 2005 and formed a Joint Venture company named as Bodoland Infrastructure Development Company Pvt. Ltd (BIDC) to develop various infrastructure projects on commercial principles in BTC area. BIDC has formed a special purpose Vehicle (SPV) named as M/s Manas Hydel Power Company Pvt. Ltd. for development of a Hydro Power Project on the existing Rupahi Irrigation scheme. The installed capacity of the Rupahi HEP is 0.4 MW and is located on Rupahi Irrigation scheme, in District Baksa, Village Rajabil, BTC, Assam. The benefits of the project besides power generation are Tourism, Fisheries, Employment Generation & other indirect benefits. The Commission admitted the petition of M/s Manas Hydel Power Company Pvt. Ltd. and registered the same as petition No. 6/2008 on 27.10.2008.The Commission then directed the petitioner to serve a copy of the instant petition to the ASEB & LAEDCL and also directed the ASEB & LAEDCL to serve a copy of reply petition to the representative of M/s Manas Hydel Power Company Pvt. Ltd. for their comments. It is important to mention here that on 19/12/2008, Sri Shyam Kanu Mahanta, the Chief Executive Officer of Bodoland Infrastructure Development Company Private Limited informed the Commission that Public Notice has already been issued in local newspapers and as such the Commission should take appropriate and necessary steps for approval of tariff for the purchase of power from Rupahi Hydro Electric power project. Thereafter on 30/12/2008, one of the respondents, Chief General Manager (D), LAEDCL, submitted their reply in connection with Petition for determination of tariff for purchase of power from Rupahi Hydroelectric project of 0.4 MW in Baksa District before the Commission.

Accordingly the Commission fixed the hearing of the said petition on 11.2.2009 and the representatives of both parties had submitted their respective copies to each other on 11.2.2009.

During the course of hearing, the representatives of the petitioner submitted that although the respondent, LAEDCL, has already submitted copy of submission against the present petition for tariff & others on 30/12/2008 before the Commission, no copy of the said submission petition has been served upon the petitioners by the respondent.

Thereafter, the respondent submitted a copy of submission against the present petition to the petitioners on the said hearing day, i.e. 11/02 /2009.

After receiving the copy of the submission from the respondents, the representative of the Petitioner prayed for sometime before the Commission to file a reply against the submission petition of the respondent.

The Commission after hearing the parties allowed 7 (seven) days time to the petitioner to submit their reply against the submissions filed by the respondents. The Commission further directed the petitioner to serve a copy of reply against submission to the respondents.

Accordingly, on the basis of the material available on record/documents, the Commission has now issued an order approving the tariff for purchase of power from Rupahi Hydroelectric project of 0.4 MW in Baska District by the M/s Manas Hydel Power Company Pvt. Ltd.

The Commission calculated the tariff taking into consideration financial and operational norms stipulated in the AERC (T&C for determination of tariff regulations), 2006 with minor deviations for the following items. The following table shows the position of the petition vis a vis stipulation in the Tariff Regulation and also the observation of the Commission.

Sl. No.	**Parameters**	**As per Regulation**	**As per Petition**	**As per ASEB/LAEDCL**	**Remarks**
1.	Availability/ PLF	85% for purely ROR project. No specific provision for irrigation based project	The average annual energy expected to be generated in a 90% dependable year is 1.66 MU and the net energy for sale is expected is 1.57 MU with a Plant Load Factor of 50.57%	The Plant Load Factor of 50.6% is on much lower side . This is not agreeable by the Respondent . This should be as per norms as prescribed by the Commission itself	In hydro station, Capacity Utilisation Factor (CUF) is dependent on hydrology of the stream in ROR / Canal based project. Overall 45% CUF is considered in single part tariff structure which is in line with Uttaranchal Order for Small

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					Hydro Projects.
2.	Aux . Consumption	0.5%	0.5%	No Comments	As per AERC regulations.
3.	Transformation Loss	0.5%	0.5%	No Comments	As per AERC regulations.
4.	Depreciation	Straight line method with expected life with 10% salvage value	Depreciation has been calculated on an useful life span of 35 Years by straight line method	Depreciation has been calculated on an useful life span of 35 Years by straight line method	Depreciation has been considered as 90% of approved cost during useful life in straight line method.
5.	Interest on term loan	On actual on debt component of asset	10%	No Comments	The petitioner's claim of 10% has been considered.
6.	O&M	Not specifically mentioned. CERC Regulation recommended 1.5% with 4% annual escalation	O&M Cost includes the employees Cost ,repairs & maintenance cost and administrative expenses inclusive of insurance cost . This cost has been assumed @ of 2% the project cost escalating @4% per annum	O&M Cost @2% of the project cost considering 4% yearly escalation is also not as per Regulation	As per CERC regulation for 2004-09, O&M Cost is considered as 1.5% of Capital Cost with 4% escalation per annum. However, small hydro projects are liable to adverse weather conditions. The electromechanical equipment may suffer major damages from the accumulated debris carried by the flash floods, etc. The cost involved in repair and ensuring availability of the machine at all times for power generation results in extra expenditure. Therefore this percentage of 1.5 % of the capital cost may not adequately cover some of the extra expenses /

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					losses incurred due to adverse weather conditions. Further, keeping in mind the difficult geographical location of the project and transportation bottlenecks apart from infrastructural deficiencies, the Commission has considered the O&M cost at 2% of the Project Cost with 4% escalation every year.
7.	Interest on Working Capital	a. O&M for one month b. 1% of historical cost escalated at 6% per annum c. Receivable with two month of fixed charge at normative capacity index	The working capital has been worked out on the basis of the following assumptions in accordance with the regulations of the Assam State Electricity Regulatory Commission : a. O&M expenses for one month b. Cost of maintenance and spares @1% of the historical cost escalated @6% per annum c. Receivable equivalent to two months fixed charges for sale of electricity	No Comments	Considered as per AERC regulations.
8.	Debt Equity Ratio	70:30	70:30	No Comments	As per AERC regulations.
9.	Tax	As expenditure and pass through	As per Govt. of India Policy Income Tax holiday for first ten (10) years of	No Comments	As per AERC regulations.

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			operation is available . However, Minimum Alternative tax is leviable @ 11.2% per annum which has been considered for the first ten(10)years of operation . Thereafter , corporate tax @33.6% has been considered		
10.	ROE	14% max	14%	No Comments	As per AERC regulations.
11.	Tariff	Two part with annualized calculation	Single part at normative level levelised for 35 years at Rs. 3.20 pKwhr.	The levelised tariff of Rs.3.20 pKwh quoted by the petitioner seems to be high	Since in the SHP almost all the costs are fixed in nature, hence a single part tariff will be more appropriate. Also, single part tariff offers high level of investment certainity by guaranteeing a fixed price for every unit delivered. The Commission therefore has considered levelised tariff for 35 Years.
12.	Capital Cost	The actual expenditure in the case of new investment shall be subject to prudence check by the Commission with reference to DPR and such other document	The estimated Capital Cost of the project is Rs. 370 lakhs including interest during construction	a. The estimated Capital Cost of the project is shown as Rs. 370.00 lakh including IDC. The project cost appears to be too high. As a thumb rule per MW cost of a Hydro Project should lie around Rs. 4 Crore/ MW b. The Premium to be paid by the developer is to be deducted from the Project Cost	Per MW Cost as per filling and as per DPR are Rs 925 lakh & Rs 1028 lakh respectively. Capital Cost including IDC of 2.25 MW Champamati project of similar nature was approved at Rs. 766Lakh/MW in 2007 by the Commission without MNRE grant. The

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				c. The following items are considered on hypothetical basis: (i) O-Miscellaneous: Rs. 6.37 lakh ii) Y-Losses on Stock:@0.25% on certain expenditures (iii)Establishment:As Supervising Charge on construction @4% of I-Works (iv) Indirect Charges- Audit and Accounts: @1% on I-Works also appears to be fictitious	Commission considers this assessment of Rs 766 lakh/MW as benchmark for capital cost including IDC for similar projects with 5% escalation per annum. Hence taking 5% escalation per year of capital cost , the capital cost of Rupahi Project is considered at Rs.337.12 lakhs, which comes to Rs.844.71 lakh/MW.

The petitioner submitted an estimated Capital Cost of the project at Rs. 370 lakh which included the IDC Component of the project. The Commission however approved the Capital Cost of Rs 337 lakh as narrated above. The levelised tariff thus calculated for a period of 35 years with average depreciation of 2.57% is Rs 3.13303 / KWh including income tax component as per prevailing income tax rules. The one time subsidy granted by the Ministry of Non Conventional Energy Sources (MNES), Government of India to improve economic viability of small hydro projects has not been considered while calculating the tariff. However, such grant shall be taken into account when it is actually received by the petitioner.

The Commission therefore approves levelised tariff of Rs 3.133 / KWh for the Rupahi Small H.E. Project of 0.4 MW capacity.

Inform all concerned accordingly.

Sd/-
(H. Dutta)
Member, AERC

Sd/-
(Jayanta Barkakati)
Chairperson, AERC