

| S. No. | Plant | Agreement on (Tenure) | Estimated Cost (in Cr) | Actual Expenditure (in Cr) as per audited accounts | SCOD | Contract Period (months) | Date of Commissioning | Time overrun (in Years) | Reason of Cost over-run time over-run |
|--------|-------|-----------------------|------------------------|--|------|--------------------------|-----------------------|-------------------------|--|
| | | | | | | | | | <p>Corporation, Japan. All the major equipment was imported from Japan. Transportation of heavy equipment to the site was a big issue. There were virtually no roads for bringing these equipments to site. There were no suitable culverts/bridges in between Bettiah to work site as such separate pathways were constructed for transportation of heavy equipment which resulted in considerable time over run.</p> <p>d) The project was to be funded by Govt. of Bihar, however during execution of project, the flow of fund stopped. BHPC took loan from PFC to complete the project.</p> |

- 8.4. The cost per MW of 5 plants (Agnoor, Dhelabagh, Jainagara, Nasriganj& Triveni) is comparatively high owing to cost overrun, low capacity (in the range of 1-3 MW) whereas for the 3 plants (Valmikinagar, Dehri On Sone & Barun) have a comparatively high capacity range (range of 3 to 15 MW) and hence have a comparatively lower cost per MW.
- 8.5. The average cost of the first five plants is also higher because these plants faced cost overrun.
- 8.6. The detailed cost break-up is given in Annexure.

9. Case of KosiKataiya plant

- 9.1. Koshi-Kataiya plant was commissioned on 1970-75. The plant was handed over to BHPC in the year 2003 which also marked the ending of useful life of plant (i.e. 35 years of operation). Hence, the work of residual life assessment was assigned to AHEC, Roorkee of Koshi-Kataiya plant on July 2005 by BHPC. AHEC, Roorkee submitted the report on Dec 2006 with the recommendation for major R&M works of units to increase the useful life of plant. On the basis of the recommendation of AHEC, Roorkee, the matter was placed before the Govt. of Bihar and government sanctioned INR 35 crores and released INR 32.84 crores for R&M work in the year 2007. Based on the recommendation, BHPC invited the tender for R&M work which was awarded in the year November 2010. Considering increased useful life of plant due to R&M work, we have included this project in our revised petition.
- 9.2. The claim for Interest on loan and O&M expense is made because operation & maintenance was done. O&M is required even if the plan is in shutdown mode for safety reasons along with regular maintenance which is critical for its future performance.

10. Cost breakup

- 10.1. The cost breakup of each project is tabulated below. It defines the sources of fund in the construction of plants.
- 10.2. This table also justify the equation of –

$$\text{Gross Fixed Assets (GFA)} = \text{Equity} + \text{Grant} + \text{Loan \& Interest}$$

Table 3: Cost break-up of BHPC plants

| Sl. No. | Name of projects | Equity | Grant | Loan and Interest | GFA |
|---------|------------------|-----------------|---------------|-------------------|------------------|
| 1 | Dhelabagh | 0 | 121.87 | 996.98 | 1,118.84 |
| 2 | Nasriganj | 0 | 112.50 | 874.00 | 986.5 |
| 3 | Triveni | 0 | 150.00 | 2,255.12 | 2,405.12 |
| 4 | Jainagara | 0 | 122.50 | 940.90 | 1,063.40 |
| 5 | Barun | 1,240.84 | 0 | 261.27 | 1,502.10 |
| 6 | KosiKataiya | 0 | 0 | 0 | 0 |
| 7 | Valmikinagar | 5,312.56 | 0 | 415.78 | 5,728.33 |
| 8 | Dehri-On-sone | 1,018.77 | 0 | 2,310.40 | 3,329.17 |
| 9 | Agnoor | 0 | 0 | 1,961.10 | 1,961.10 |
| | Total | 7,572.17 | 506.87 | 10,015.54 | 18,094.56 |

***All values are in INR Lakhs**

10.3. As mentioned in the table above, funds sources are NABARD loan, PFC loan and MNRE Grant and GoB loan. GoB loan was received on consolidated basis (not plant-wise) and hence plant-wise segregation is not given in above table.

D. Scope of the present petition

11. Scope

11.1. This petition is for truing-up of ARR and finalization of provisional tariff as approved by the Hon'ble Commission vide its order dated 22nd Dec 2009 for the year 2009-10.

11.2. This petition has been filed considering:

- a. BERC (Terms and conditions for determination of Tariff) Regulations, 2007
- b. Provisional Tariff order for FY 2009-10 issued by Hon'ble Commission passed on 22nd Dec 2009 in reference to case no. TP-01 of 2009, and
- c. Statutory Audited annual accounts up to FY 2009-10.

E. True-up for FY 2009-10

12. Regulatory context

12.1. The true-up exercise is to be adopted as per the clause 22 – 'Review and Truing up' of Tariff regulation, 2007. Hon'ble Commission shall undertake this exercise based on final actual figures as per the audited accounts.

12.2. The following section covers the calculation of all the parameter of annual fixed charge. As per clause 54 of Tariff regulation, 2007, it comprises of –

- a. Return on equity
- b. Interest on capital/loan
- c. Depreciation, including Advance Against Depreciation
- d. Operation & Maintenance expenses
- e. Interest on Working capital

13. Return on Equity (RoE)

13.1. As per clause no. 55 (3) of Tariff regulation, 2007, RoE shall be computed on the equity base @14% per annum.

13.2. The petitioner would like to submit that it didn't claim any RoE in the last submitted ARR for FY 2009-10 and hence the same was not considered by the Hon'ble Commission in its order of the same which needs to be revised.

13.3. For the calculation of equity proportion, it is considered as 30% of GFA value (as given in Table-3). Then, RoE is calculated by considering @14% return.

Table 4: Plant-wise RoE calculation

| S. No. | Plants name | GFA | Equity base (@30% of GFA) | RoE (@14% of Equity) |
|--------|-------------|---------|---------------------------|----------------------|
| 1 | Agnoor | 1961.10 | 588.33 | 82.37 |
| 2 | Barun | 1502.11 | 450.63 | 63.09 |

| S. No. | Plants name | GFA | Equity base (@30% of GFA) | RoE (@14% of Equity) |
|--------|---------------|-----------------|------------------------------|-------------------------|
| 3 | Dehri-on-Sone | 3329.17 | 998.75 | 139.83 |
| 4 | Dhelabagh | 1118.85 | 335.66 | 46.99 |
| 5 | Jainagara | 1063.40 | 319.02 | 44.66 |
| 6 | Koshi-Kataiya | 0.00 | 0.00 | 0.00 |
| 7 | Nasriganj | 986.50 | 295.95 | 41.43 |
| 8 | Triveni | 2405.12 | 721.54 | 101.02 |
| 9 | Valmikinagar | 5728.34 | 1718.50 | 240.59 |
| | Total | 18094.59 | 5428.38 | 759.97 |

*All values are in INR Lakhs

13.4. We request the hon'ble Commission to approve the RoE of INR 759.97 Lakhs.

14. Interest on capital/loans

14.1. Interest calculation includes the following components –

- 'Opening loan' which is taken from the column of 'Interest & loan' of Table-3
- Loans during year is kept as null as no addition was there
- Repayment is considered to be equal to depreciation on normative basis whereas 'depreciation' is considered on actual basis as arrived in Audited accounts of FY 2009-10.
- Interest rate is calculated on average basis of all the loans

14.2. The calculation of interest on loan considering abovementioned parameters is tabulated below.

Table 5: Interest on loan calculation

| S. No. | Plant name | Opening loan | (+) Loans during year | (-) Repayment | Net closing balance | Average | Interest rate | Interest expense |
|--------|---------------|-----------------|-----------------------|---------------|-----------------------|-----------------|---------------|------------------|
| (A) | (B) | (C) | (D) | (E) | (F) = (C) + (D) - (E) | (G) = (C + F)/2 | (H) | (I) = (G) X (H) |
| 1 | Agnoor | 996.98 | 0 | 70.15 | 926.82 | 961.90 | 12% | 115.43 |
| 2 | Barun | 261.27 | 0 | 53.71 | 207.56 | 234.41 | 12% | 28.13 |
| 3 | Dehri-on-Sone | 2,310.40 | 0 | 120.58 | 2,189.82 | 2,250.11 | 12% | 270.01 |
| 4 | Dhelabagh | 996.98 | 0 | 38.04 | 958.93 | 977.96 | 12% | 117.35 |
| 5 | Jainagara | 940.90 | 0 | 36.13 | 904.77 | 922.83 | 12% | 110.74 |
| 6 | Koshi-Kataiya | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 12% | 0.00 |
| 7 | Nasriganj | 874.00 | 0 | 33.54 | 840.46 | 857.23 | 12% | 102.87 |
| 8 | Triveni | 2,255.12 | 0 | 79.96 | 2,175.16 | 2,215.14 | 12% | 265.82 |
| 9 | Valmikinagar | 415.78 | 0 | 234.04 | 181.73 | 298.75 | 12% | 35.85 |
| | Total | 9,051.41 | 0 | 666.16 | 8,385.25 | 8,718.33 | | 1,046.20 |

***All values are in INR Lakhs**

14.3. We request the Hon'ble Commission to approve Interest on loan of INR 1,046.20 Lakhs.

15. Depreciation

15.1. The value of depreciation is considered on actual basis and taken from Annual Audited accounts of FY 2009-10. It is tabulated below for reference.

Table 6: Depreciation value for plants

| S. No. | Plant name | Depreciation |
|---------------|-------------------|---------------------|
| 1 | Agnoor | 70.15 |
| 2 | Barun | 53.71 |
| 3 | Dehri-on-Sone | 120.58 |
| 4 | Dhelabagh | 38.04 |
| 5 | Jainagara | 36.13 |
| 6 | Koshi-Kataiya | 0.00 |
| 7 | Nasriganj | 33.54 |
| 8 | Triveni | 79.96 |
| 9 | Valmikinagar | 234.04 |
| | Total | 666.16 |

***All values are in INR Lakhs**

15.2. We request the Hon'ble Commission to approve depreciation of INR 666.16 Lakhs.

16. Operation & Maintenance (O&M) expenses

16.1. The value of O&M expense is considered on actual basis and taken from Annual Audited accounts of FY 2009-10. It is tabulated below for reference.

Table 7: O&M expenses of plants

| S. No. | Plants name | O&M expense |
|---------------|--------------------|------------------------|
| 1 | Agnoor | 42.39 |
| 2 | Barun | 79.90 |
| 3 | Dehri-on-Sone | 146.34 |
| 4 | Dhelabagh | 26.36 |
| 5 | Jainagara | 6.13 |
| 6 | Koshi-Kataiya | 109.17 |
| 7 | Nasriganj | 14.99 |
| 8 | Triveni | 45.51 |
| 9 | Valmikinagar | 172.29 |
| | Total | 643.08 |

***All values are in INR Lakhs**

16.2. The detailed break-up of O&M expense is given below.

Table 8: O&M expense break-up

| S. No. | Particulars | Agnoor | Barun | Dehri-on-sone | Dhelabagh | Jainagara | Nasriganj | Koshi-Kataiya | Triveni | Valmikinagar | Total |
|--------|---|-----------|-----------|---------------|-----------|-----------|-----------|---------------|-----------|--------------|-------------|
| 1 | Operation & Maintenance of P.H. | 12,57,865 | 28,64,662 | 40,17,129 | 19,88,352 | 0 | 5,58,306 | 30,74,333 | 27,00,000 | 51,60,000 | 2,16,20,647 |
| 2 | Repair & Maintenance of Powerhouse | 3,84,982 | 4,91,159 | 11,95,204 | 1,33,987 | | 1,05,370 | 6,96,017 | | 42,70,160 | 72,76,879 |
| 3 | Administrative & Management | | | | | | | | | | |
| | Salary & Allowance - Managing Director/Chairman | | | | | | | | | | 0 |
| | Salary & Allowance | 18,59,078 | 37,22,708 | 68,30,373 | 1,07,289 | 66,248 | 5,86,633 | 47,02,540 | 2,34,290 | 46,47,178 | 2,27,56,337 |
| | Gratuity Premium under L.I.C. Scheme | | | | | | | | | | 0 |
| | Provident Fund administrative Charges | | | | | | | | | | 0 |
| | Uniform & Liveries | | 4,728 | -1,906 | | | | | | 0 | 2,822 |
| | Reimbursement of Medical & Edu. Exps. | 9,825 | 11,662 | 1,33,296 | | | | 2,400 | | 0 | 1,57,183 |
| | Account Computerisation | | | | | | | | | | 0 |

| S. No. | Particulars | Agnoor | Barun | Dehri-on-sone | Dhelabagh | Jainagara | Nasriganj | Koshi-Kataiya | Triveni | Valmikinagar | Total |
|--------|--------------------------------|----------|----------|---------------|-----------|-----------|-----------|---------------|----------|--------------|-----------|
| | Rent | | | 25,000 | | | 39,000 | 39,000 | | 30,000 | 1,33,000 |
| | Electricity | 0 | 24,024 | 2,89,350 | | | | 1,492 | | 4,76,278 | 7,91,144 |
| | Travelling & Conveyance | 39,808 | 39,759 | 1,17,382 | | | | 1,28,476 | 0 | 94,718 | 4,20,143 |
| | Petrol, Oil & Lubricants | 2,37,636 | 3,32,161 | 6,00,985 | 1,03,950 | 1,50,000 | 1,127 | 1,92,512 | | 3,93,903 | 20,12,273 |
| | Insurance | | | | | | | | | | 0 |
| | Advertisement for Tender/other | | 0 | 1,05,200 | 2,75,000 | | | 0 | | 14,480 | 3,94,680 |
| | Telephone & Telex Charges | 4,971 | 6,638 | 58,172 | 0 | | 0 | 23,823 | | 33,677 | 1,27,281 |
| | Internet Expenses | | | | | | | | | | 0 |
| | Printing & Stationary | 1,805 | 5,219 | 50,052 | | | 105 | 7,397 | | 13,158 | 77,736 |
| | Postage | | 0 | 258 | | | 30 | 564 | | 2,612 | 3,464 |
| | Conference and Seminar | | | | | | | | | | 0 |
| | Bank Charge | | 8,796 | 28,467 | 0 | | 0 | 4,061 | 2,783 | 20,350 | 64,457 |
| | Repairs - Vehicle | 0 | 0 | 6,298 | 0 | | 0 | 0 | 0 | 11,729 | 18,027 |
| | Repairs - Building | 13,045 | 1,63,900 | 1,85,448 | 0 | | 0 | 9,33,354 | 0 | 13,86,431 | 26,82,178 |
| | Repairs - Plant | 0 | 53,112 | 1,02,377 | 0 | | 1,03,950 | 2,43,744 | 0 | 0 | 5,03,183 |
| | Repairs - Other | 0 | 31,449 | 37,631 | 0 | | 1,027 | 13,292 | 0 | 10,247 | 93,646 |
| | Road Tax | | | | | | | | | | 0 |
| | Hire & Rental Charges | 1,26,050 | 1,44,212 | 5,67,852 | | | | 1,51,220 | 2,55,500 | 17,460 | 12,62,294 |
| | Licence & Registration Fee | 0 | 4,500 | 5,500 | 0 | | 0 | 7,500 | 0 | | 17,500 |

| S. No. | Particulars | Agnoor | Barun | Dehri-on-sone | Dhelabagh | Jainagara | Nasriganj | Koshi-Kataiya | Triveni | Valmikinagar | Total |
|--------|---------------------------------------|----------|--------|---------------|-----------|-----------|-----------|---------------|----------|--------------|-----------|
| | Consultancy Charges/ Legal Expenses | 2,60,512 | 0 | 18,000 | 26,250 | 1,03,460 | 48,310 | 5,36,698 | 6,96,662 | 4,79,806 | 21,69,698 |
| | D.P.R Expenses | | | | | | | 0 | | | 0 |
| | Statutory Auditors Fee | | | | | | | | | | 0 |
| | Internal Auditors Fee | | | | | | | | | | 0 |
| | Tax Audit Fees | | | | | | | | | | 0 |
| | Entertainment | 1,140 | 41,754 | 1,08,519 | 900 | | 3,640 | 9,065 | | 1,15,707 | 2,80,725 |
| | Survey & Investigation | | | | | | | | | | 0 |
| | News Paper | 3,253 | 2,842 | 826 | | | 228 | 1,752 | | 1,710 | 10,611 |
| | Transportation Charges | | 1,920 | 6,802 | | 4,812 | 16,406 | 16,830 | | | 46,770 |
| | Grant for Purchase of Computer | | | | | | | | | | 0 |
| | Donation & Contribution | | | | | | | 81,909 | | 10,000 | 91,909 |
| | Capital Maintenance of Powerhouse w/o | | | | | | | | | | 0 |
| | Plantation | | | 13,750 | | | | 0 | | 7,000 | 20,750 |
| | Testing & Commissioning | | | | | 2,87,178 | | | 6,61,800 | | 9,48,978 |
| | Miscellaneous Expenses | 39,488 | 35,065 | 1,31,801 | | 1,610 | 34,431 | 49,029 | | 32,567 | 3,23,991 |