

CERC Order dtd: 03.11.2005

Petition No: 66/2005

In the matter of: Tariff for sale of Electricity by Damodar Valley Corporation and the Interstate Transmission of Electricity.

Detailed information as sought for in the said CERC order has been furnished below in seriatim:-

- (a) *Sanction letters issued by the competent authority in support of the project cost of the generating stations, multipurpose dams and the transmission lines/sub-stations in respect of which approval for tariff is sought.*

From the records readily available copy of the recommendation of the Public Investment Board (PIB) in respect of 1x210MW Bokaro – “B” TPS (Stage - I) and copies of relevant Orders of Approval of the Ministry of Power, Government of India, in respect of 2x210 MW Bokaro – “B” TPS (Stage – II) and 3x210 MW Mejia TPS are placed at Appendix – I.

- (b) *Rajamannar Committee Report and the award of arbitrator on apportionment of capital cost of multipurpose dams, including Konar dam, scheme of operation of dams and the reservoir operation policy.*

In spite of the meticulous search of the old records neither the award of the Arbitrator Dr. P. B. Rajamannar, retired Chief Justice of Madras High Court nor the award of the Arbitrator Shri B. Jagannathdas, retired judge of the Supreme Court of India submitted in the year 1958 are currently traceable. The search is still being continued. However the details of allocation under major heads in respect of Multipurpose Dams as submitted can be seen in the preamble of the “Budget Estimates” of DVC submitted before the parliament each year for approval. Relevant portion of the preamble of the “Budget Estimate” containing “Allocation under Major Heads” is placed at Appendix – II.

The Konar reservoir (one of the four dams constructed by DVC) is a part of DVC water resource management system. The Konar Dam is situated on river Konar (a Tributary of Damodar river) at upstream of Panchet Dam. Though the primary function of Konar dam is Flood control and Irrigation, as no hydel generation plant is directly connected with the dam. The conservation storage of Konar dam is being utilized for the Bokaro TPS of DVC. After utilization of water by the Bokaro TPS the excess water flows to Damodar river and ultimately reaches the Panchet reservoir. The water of Konar reservoir is thus utilized indirectly for power generation (both Thermal and Hydel).

- (c) *Nature of functions of Directions office, other offices and central offices.*

- **Direction Office:** Includes the office of the Director (Generation), Director (System) and Director (commercial) at Kolkata, and Office of the Sr. Chief Engineer (Generation) & Sr. Chief Engineer (System) at Maithon.

Functions: Director (Generation) is the technical head of all generation related activities and is directly answerable to the Corporation. Senior Chief Engineer (Generation) at Maithon is the administrative head of all the Generating Stations and Central Services Organization & Mechanical Fabrication Shop at Maithon directly connected with the O&M of the power houses and is answerable to Director (Technical). Director (System) is the technical head of all system related activities and is directly answerable to the Corporation. Senior Chief Engineer (System) at Maithon is the administrative head of the entire Transmission and Distribution systems as well as

Central Testing Circle etc. and is directly answerable to Director (system). Director (Commercial) is the head of Commercial Department at Kolkata and Central Load Dispatch at Maithon and is directly answerable to the Corporation in all System Control and Commercial related matters.

- **Other Offices:** Includes Central Testing Circle, Maithon, Central Mechanical Fabrication Shop, Maithon, Central Services Organization, Maithon and Central Load Dispatch, Maithon,

Functions:

Central Testing Circle at Maithon - has two distinct divisions namely Central Relay and Instrument Testing Laboratory (CRITL) and Central Relay and Instrument Testing Mobile (CRITM). The above two divisions take care of commissioning and proper maintenance of the entire protection and metering system, fault analysis as well as periodical testing of all types of relays and meters including tariff meters of the entire DVC network including power houses.

Central Mechanical Fabrication Shop at Maithon - mainly takes care of different types of mechanical maintenance work including casting and fabrication of typical parts for power houses and also for the transmission wing.

Central Services Organization at Maithon - mainly takes care of varied types of electrical maintenance work such as over-hauling and rewinding of large motors, transformers etc. both for power houses and transmission & distribution wing.

Central Load Dispatch at Maithon – is engaged in system control and its functions are similar to that of a State Load Dispatch Centre (SLDC) for the entire DVC system in conjunction with Eastern Regional Load Dispatch Centre (ERLDC).

Central Offices: Central administration office, Central Stores and Disposal Wing under the control of the project head at Maithon.

(d) ***Detailed justification in support of debt-equity ratio of 15:85 claimed in the petition.***

DVC by statute is an equity-oriented company. The Participating Governments were supposed to provide capital for all projects undertaken by DVC as per Section 30 of the DVC Act. As such, projects were not structured with any debt in mind. Debt in form of bonds raised by DVC have only supplemented internal resources wherein internal resources were insufficient to meet the project costs or working capital requirement of the year. Therefore with a GFA approach of CERC, equity base for projects of DVC's vintage should not be considered at only 30 % of the cost, but a ratio that would reflect the investments already made. DVC would request for relaxation as also granted to NTPC plants commissioned prior to 31.3.2004.

The present Debt-Equity structure is an actuality that DVC cannot change. In the absence of capital contribution from the participating governments and high debtors position, cash reserves for DVC were strained. The poor financial condition of DVC constrained it to raise market borrowings at attractive rates to fund the project cost of its various power projects (esp. the older power plants). Prudential norms viz. DSCR were not favourable for DVC to raise debt at attractive rates. Further, DVC was also not in a position to tap the equity market, due to the provisions of the DVC Act. The capital structure of DVC, as on March 31, 2004, at 15:85 (Debt: Equity); Equity at Rs.3844

crores comprising of Rs. 1105 crores as Paid-up Capital, Rs.2328 crores as Reserves & Rs.411 crores as Surplus is an outcome of all the above. Rs.1617 crores is the amount outstanding on account of dues from SEBs for energy supplied. Effectively, these dues have been securitized into 15 (fifteen) years State Bond under the Securitization Scheme of GOI. In this connection, it is worth mentioning that DVC's liabilities are under stated to the tune of Rs.1100 Crs. on account of PG Fund liabilities in respect of existing employees for the past years. This had so happened as DVC have not adopted AS-15 so far. DVC Board based on recommendation of consultants M/S A.F.Ferguson, Chartered Accountant, has now approved adoption of AS-15 inter alia. With the adoption of AS-15, the liabilities on this account will shoot up by about Rs.1100 Crs. which will be firming up by actuarial valuation. Since the entire capital and reserves are already deployed except dues securitized/ to be securitized by SEBs by way of issue of 15 (fifteen) year bonds of Rs.1617 Crs., the matching investment against enhanced liabilities on account of accumulated pension and gratuity liabilities for the past years will be funded from these securitized dues.

In the above backdrop, no static debt equity ratio is applicable in respect of the project of DVC prior to 2004. Moreover any capital based tariff will be reasonable if there is a true and fair assessment of capital. In case of DVC, the GFA does not include IDC (Interest during construction) as per accounting system followed so far based on C&AG's approval. The capital of DVC is also rated by a wide range of price levels starting with the year of inception i.e. 1948 till 2004. Fairness of applicability of any uniform discount factor on the replacement value of these assets at the current price level is not beyond doubt.

DVC has for current projects structured debt-equity at 70:30 and therefore for projects commissioned post 2004, a 70:30 debt-equity would be acceptable.

It is a fact that over the past few years, DVC has been improving its operational performance, and, it is DVC's sincere endeavour to continue to maintain this trend, in future, as well. However, this improvement in performance shall be gradual. In such an event, while we have already requested the Hon'ble Commission to allow us a transition period of another 3 years (beyond the present FY 2005-06) for the operating parameters to achieve industry norms, we, also, request the Hon'ble Commission to take an approach that provides internal resources to DVC at least for the next 3 years such that progress of ongoing projects of DVC are not brought to a halt for want of adequate internal resources. In such a case, DVC shall be subject to the norms of CERC from the year 2009-10.

While we agree that CERC's order in the tariff petition of NTPC plants at Talcher etc. on debt: equity pattern was derived from the Govt.'s order, it is pleaded before the Hon'ble Commission that it may consider DVC's unique situation and the facts as brought out above, to give relaxation to DVC from application of any static debt equity ratio for plants commissioned prior to 31.3.2004.

(e) *Details of assets/units and transmission lines/sub-stations not in use as on 1.4.2004, in respect of hydro generating stations and transmission system.*

All assets relating to transmission lines/sub-stations commissioned prior to 01.04.2004 are in use. As on 01.04.2004 the Unit # II of Maithon Hydel Station was under long shutdown for Renovation and Modernization (R&M).

- (f) ***In case of Durgapur TPS, gross book value of 2x75 MW units presently not in operation.***

Gross Book Value of 2x75 MW units of Durgapur TPS presently not in use is Rs.14.94 crores.

- (g) ***Station-wise details of cumulative depreciation recovered in tariff till 31.3.2004 and the asset-wise depreciation of assets in use recovered as on 1.4.2004.***

May please refer Annexure 'G', Page 134 of Additional Details against CERC order dated 29.07.2005.

The asset-wise depreciation of assets in use recovered as on 1.4.2004 is placed at Appendix - III

- (h) ***Documentary evidence relating to re-rating of different units of the generating stations.***

Placed at Appendix - IV

- (i) ***Details of nature of work carried out and item-wise expenditure incurred as part of administrative expenses for Maithon and Panchet hydro stations.***

Detailed O&M expenses in respect of Hydro Power stations and Communication are placed at Appendix - V

- (j) ***Justification for present employee strength at the hydro stations and the scheme, if any, formulated by the petitioner for reduction in employee strength.***

May refer item u (II) at page "h" of the submission text submitted against CERC Order dated 21.06.05. However the sanctioned and held strength of the hydro power stations namely Maithon, Panchet and Tilaiya are placed at Appendix – VI. It may be seen that there is practically no scope for further reduction in manpower at hydro power stations. However, an overall plan for redeployment of manpower in the upcoming units of DVC viz. Mejia and Chandrapura Extension Units is under progress.

- (k) ***Actual generation at each of the hydro station for the years 1996 to 2005.***

May refer Annexure 'H', Page 63 of Submission of Additional Information against CERC order dated 21.06.05.

- (l) ***Annual Design Energy of Tilaiya hydro station.***

Requisite data not available.

- (m) ***Revised details of O&M expenses for the period 1998-99 to 2002-03, excluding O&M expenses related to non-performing assets in case of Bokaro TPS, Chandrapura TPS and Durgapur TPS.***

Accounting system followed in DVC is not unit-wise, but for the consolidated station. As such, the O&M expenses related to units including non-performing units at Bokaro TPS and Chandrapura TPS are not ascertainable. In future DVC plans to have accounting system to account for unit wise costs also.

Total O&M expenses shown against the respective stations may be considered for the operating units only as the excess manpower of the units under long shut-down have been redeployed for O&M of the running units leaving aside a skeleton strength for up-keep of the units under long shut-down. As such, the total O&M expenses actually incurred may be attributed to the performing units only.

- (n) ***Break up of employee cost indicating incentive and ex gratia payments, separately for the generating stations and proportionate share of Directions offices, general overheads and central offices in O&M expenses.***

May refer account codes 655/01 & 02 of DVC at Annex 'B', Submission of Additional Details against CERC order dated 29.07.2005. There was no incentive scheme in vogue during the period from 1998 to 2003 for which details of O&M expenses have been furnished.

- (o) ***Details of colony services in O&M expenses.***

Colony Services provided by DVC include water supply, sanitation, maintenance of Office buildings, Hospitals, Staff quarters, Schools along with other infrastructures such as Roads, Market, Parks, Clubs etc. for the entire colony of the project. The expenditures incurred on account of the above are booked under the cost centre of colony services and are included at Annex 'B', Submission of Additional Details against CERC order dated 29.07.2005.

- (p) ***Details of administrative expenses in O&M expenses.***

Administrative services include the expenditure incurred by the Administrative office of the respective operation wings of different Projects. Details of such administrative expenses are booked under the cost centre of Administration and are included at Annex 'B', Submission of Additional Details against CERC order dated 29.07.2005.

- (q) ***Justification/reasons for abnormal increase in different years under different heads of O&M expenses.***

The O&M expenses is the aggregation of total accounting transactions taking place in the various operation wings and service departments located in 11 (eleven) number of different projects of DVC apart from the Grid Operation & Maintenance Divisions under the Transmission and Distribution Wing. The project Accounts offices compile the O&M data at the respective projects based on the transactions incurred by various operation wings and service departments. As such detailed justification for annual variation in O&M expenses under different category requires a detailed exercise of scrutinizing and analyzing of voluminous old accounting records for previous 5 (five) years. The exercise as mentioned may require not less than one month's time period. It is therefore prayed before the Hon'ble Commission to grant at least one month's time for submission of these details.

- (r) ***Reasons for high general overhead expenses along with details of such expenses.***

The general overhead expenses include the expenditure booked for pension to retirees on pay as you go basis who have retired from respective projects and headquarter and this bears the major share under the head of general overhead expenses. May refer items 12 & 13 under A of schedule XVIII at page 157 of the Annual Performance Report 2003-04. In the said schedule it may be seen that the overhead expenditure under the

head 'contribution to Pension & Gratuity Fund' amounts to the tune of Rs 78.50 Crs and that against 'Relief paid to pensioners' amounts to the tune of Rs 27.96 Crs totaling Rs 106.46 Crs which is equivalent to 73 % of the General administrative Charge of Rs 145.58 Crs . It is worth mentioning here that DVC has not yet adopted AS-15 which requires provision for pension and gratuity liabilities of the existing employees based on actuarial valuation. DVC Board based on recommendation of M/s. A. F. Furgusion, Chartered Accountants Firm appointed as consultant to DVC, has now approved adoption of AS-15, inter alia. The above element of contribution to PG Fund is in respect of DVC's existing pensioners only. The under provision of PG Fund liabilities in respect of the existing employees in the past years, therefore, need to be brought to books in the next year with the adoption of AS-15. The estimated financial incidence pending actuarial valuation is about Rs.1000 Crs.

- (s) ***Details of energy supplied to and consumed by DVC in the States of West Bengal and Jharkhand on annual basis during the last three years.***

Year	Energy Supplied in West Bengal (MU)	Energy Supplied in Jharkhand (MU)	Energy consumed by DVC (MU)**
2002-03	2714	5178	160 (61 + 99)
2003-04	2621	5319	157 (58 + 99)
2004-05	2764	5896	247 (145 + 102)
** This includes station losses and colony cons. but excludes Aux. Cons.			

- (t) ***Technical justification for having relaxed norms of station heat rate, auxiliary energy consumption specific fuel oil consumption, target availability for operational norms for 210 MW units, 140 MW units and lower size units along with heat balance diagram expected degradation and specific features, if any.***

Placed at Appendix - VII

- (u) ***In the case of O&M expenses for the transmission system: The details of expenditure incurred on account***
- i. Direction and other office and***
 - ii. General overhead charges***

May refer Schedule XIV and Schedule XVIII of the Annual Performance Report 2003-04 for details of expenses under Direction and other offices and General overhead charges. Allocation of expenses to all projects including transmission system has been done in the ratio of direct O&M expenses.

- (v) ***With reference to affidavit dated 12.9.2005 submitted by the petitioner (page No.119 to 128), expenditure incurred on the following during the period 1999-00 to 2003-04***
- T. Subsidy***
 - Energy Allowance***
 - Education Service***
 - Damage by fire and***
 - Compensation.***

The relevant data already furnished against Accounting code Nos 603/20-Transport Subsidy, 603/11-Energy Allowance, 643/03-Education Service, 646/02-Damage by Fire,

646-Compensation in the referred pages of the submission against CERC order dated 29.7.05. Also may refer reply against item (w) below.

(w) *In the case of depreciation for the transmission system:*

- ***Asset-wise (Line/sub-station) date of commercial operation, balance useful life of the assets for calculation of depreciation. [In case asset-wise date of commercial operation is not available, lump the complete assets in smaller groups and indicate balance useful life of these groups].***

The Transmission network of DVC has been developed in stages during last five/six decades. Majority of the old lines and sub-stations have been constructed departmentally right from planning till commissioning. To match with technological development and requirement of the day the old lines and sub-stations have been repeatedly augmented through replenishment of control equipments and protection system as well as re-conductoring of lines with higher size conductors. In view of above the balance useful life of the assets for calculation of depreciation for the transmission system is not precisely ascertainable.

- ***Asset-wise annual cost for calculation of spares in IWC.***

Spares have been taken at 1% of Capital Cost escalated at 6% annually.

- ***Variation of more than 20% in the individual heads of O&M expenses.***

May refer reply under item (q) above.

- ***Matching of O&M expenses year-wise (1999-2000 to 2003-04) in Part III, Form-18 (Additional form) submitted earlier with detailed T&D expenditure submitted subsequently.***

Transmission and Distribution O&M (may refer Schedule XIV of the Annual Performance Report 2003-04) include expenses under (a)T&D, (b)Communication Division, (c)Flood Warning Station and (d)Tele Communication Unit. Detailed T&D expenditure submitted subsequently include expenses only under (a) T&D whereas Part III Form 18 include all expenses under (a)T&D, (b)Communication Division, (c)Flood Warning Station and (d)Tele Communication Unit and therefore the difference. Detailed O&M expenses under other heads are placed at Annex -XI

(x) *Percentage availability of Transmission System (excluding the distribution system)*

Percentage Availability of Transmission System comprising of 220 KV and 132 KV transmission lines for the year 2004-05 is 98.51%

(y) *Allocation of costs in multi-purpose Dams and basis of such allocation.*

Multi-purpose dams have been allocated to Hydro projects only. Respective dams (Maithon, Tilaiya and Panchet) have been allocated to the respective hydro projects (Maithon, Tilaiya and Panchet). Konar has been allocated in the ratio of direct capital costs of Maithon, Tilaiya and Panchet hydro project.