

## CHAPTER III

### 3 WEST BENGAL STATE ELECTRICITY BOARD

#### MATERIAL MANAGEMENT AND INVENTORY CONTROL

##### Highlights

During 1996-97 to 2000-2001 the Board incurred 19.37 per cent of its total revenue expenditure on purchase of stores and materials for operation and maintenance of its power generating units, transmission and distribution lines. But it neither prepared material budget nor followed the procedure prescribed in the manual.

*(Paragraphs 3.1 & 3.4.1)*

The Board sustained extra expenditure of Rs 3.49 crore due to acceptance of highest rate for purchase of meters and purchased materials for Rs 1.57 crore in excess of requirement.

*(Paragraph 3.4.3)*

The Board sustained extra expenditure of Rs 5.22 crore due to non-acceptance of lowest offer, delay in finalisation of tender, opting of firm price instead of variable price, non-inclusion of penal clause and lack of planning before procurement.

*(Paragraph 3.4.4)*

The stock holding of coal varied from 3.2 months' to 6.2 months' consumption resulting in excess holding of coal varying from Rs 74.37 crore to Rs 117.98 crore while stock holding of oil varied from 2 months' to 7.2 months' consumption resulting in excess holding varying from Rs 0.89 crore to Rs 10.83 crore. Excess holding of stores and spares varied from Rs 102.44 crore to Rs 175.70 crore. Excess holding resulted in average annual inventory carrying cost of Rs 36.52 crore.

*(Paragraph 3.5.1)*

Due to use of light diesel oil instead of furnace oil, the Board incurred additional expenditure of Rs 27.53 crore.

*(Paragraph 3.5.3)*

Stores and spares valuing Rs 4.98 crore in different stores for periods ranging from three to 18 years.

*(Paragraph 3.5.5)*

The Board sustained loss of Rs 25.64 crore due to transit loss of coal in excess of permissible limit.

*(Paragraph 3.8)*

**The Board sustained loss of Rs 1.06 crore due to issue of materials to the contractors over and above the requirement.**

*(Paragraph 3.9)*

### **3.1 Introduction**

Material management and inventory control is an integrated management approach to the planning, acquisition, transportation, storage and utilisation of material inputs with a view to controlling material cost and inventories and ensuring an uniform flow of materials at requisite quantity at the appropriate time at the desired locations and at the right price. In West Bengal, three State-owned utilities operate in the power sector of which West Bengal State Electricity Board (Board) was constituted in May 1955 under Section 5(1) of the Electricity Supply Act, 1948. The Board generates, transmits and distributes power in its command area, as well as purchases power from WBPDC<sup>1</sup>, DPL<sup>2</sup>, NTPC<sup>3</sup> and DVC<sup>4</sup>.

The Board operates two thermal power stations at Bandel (BTPS) and Santaldih (STPS) with aggregate capacity of 1010 MW and three major hydel power stations at Jaldhaka, Rammam and Teesta Canal Fall (123.50 MW), while Purulia Pumped Storage Project is under implementation. The Board also maintains 1.51 lakh kilometres of transmission and distribution lines, a Central Store, six regional stores as well as 61 divisional stores and stores at each project.

**Board spent 19.37 per cent of its revenue expenditure on purchases**

The average annual outgo on account of purchases during 1996-97 to 2000-2001 for the Board constituted 19.37 per cent of average revenue expenditure. The average inventory held by the Board was Rs 320.35 crore during the same period. This calls for efficient and scientific material management so that there is optimum use of scarce resources.

### **3.2 Organisational set up**

The purchase wing of the Board is headed by a Material Controller (MC) in the rank of Chief Engineer who is assisted by two Deputy Chief Engineers, four Superintending Engineers (three in charge of Purchases and one in charge of Inspection, Stores and Co-ordination) and three Divisional Engineers, one each in charge of claims, customs clearance and movements. The MC is also assisted by a Deputy Financial Advisor and Chief Accounts Officer.

<sup>1</sup> West Bengal Power Development Corporation Limited

<sup>2</sup> The Durgapur Projects Limited

<sup>3</sup> National Thermal Power Corporation Limited

<sup>4</sup> Damodar Valley Corporation

### 3.3 Scope of Audit

A review on the Material Management and Inventory Control featured in the Report of the Comptroller and Auditor General of India for the year ended 31 March 1995 (Commercial). The review was not discussed by the Committee on Public Undertakings (COPU). The present review conducted during December 2000 to February 2001 covers the performance of the Board with regard to assessment, planning, procurement, transportation, storage of materials and physical verification of stores and spares at two thermal power stations (BTPS & STPS), three hydel power stations (Jaldhaka, Rammam and Teesta Canal Fall), M. C. office along with one Central and five regional stores as well as 18 divisional stores. The audit findings as a result of test check of records for the period from 1996-97 to 2000-2001 are discussed in the succeeding paragraphs.

### 3.4 Material Management

**Material Management techniques not adopted by the Board**

The Board had not adopted requisite material management techniques *viz.* (i) classification of items for management reporting and fixation of norms, (ii) forecasting of material requirements and indenting procedure, (iii) fixation of responsibilities for undertaking various inventory analysis, (iv) review and monitoring inventory status with reference to norms and levels for various items or category of items, (v) inventory control techniques and procedural guidelines for their application and (vi) computerisation of inventory system. This led to procurement of material without assessment and in excess of requirement, excess holding of inventory, non-determination of non-moving/slow-moving/surplus stores etc. as discussed in the succeeding paragraphs.

The Government/ Board stated (September 2001) that Tata Consultancy Services was appointed to develop a Material Management and Inventory system which was under progress.

#### 3.4.1 Material Budget

**Absence of material budget**

The Board had not introduced material budgeting. In the absence of material budgets, funds were allocated in the financial budget for procurement of material on ad hoc basis. The financial budget was approved by the Board.

The budget cell of the Board commented on the revised financial budget for 2000-2001 that material cost constituted a significant component of expenditure on 'Repairs & maintenance' and budgetary control over the material cost was largely ineffective in absence of material budget. Scrutiny of revised estimates (RE) *vis-à-vis* actual expenditure on repair and maintenance revealed that the actual expenditure was less than the RE during 1997-98 and 1998-99 by 29.10 *per cent* and 10 *per cent* respectively. However, during 1999-2000 the actual expenditure exceeded the RE by 16.56 *per cent*. This is indicative of the fact that even RE were not realistic.

The position of the procurement of stores *vis-à-vis* total revenue expenditure of the Board during last five years ending March 2001 is given below :

Description	1996-97	1997-98	1998-99	1999-2000	2000-2001	Total
	(Rupees in crore)					
Procurement	421.08	488.93	520.70	462.18	617.34	2510.23
Total revenue expenditure	1863.96	2356.60	2817.88	2969.76	2948.53	12956.73
Percentage of procurement to revenue expenditure	22.59	20.74	18.48	15.56	20.94	19.37

It would be seen from the above that the procurement increased from Rs 421.08 crore in 1996-97 to Rs 617.34 crore in 2000-2001. The percentage of expenditure on procurement of stores as compared to total revenue expenditure of the Board varied from 15.56 to 22.59 *per cent*.

### 3.4.2 Vendor rating

As per the Material Manual, Additional Material Controller (AMC) was responsible for maintaining the Vendor Performance Evaluation Sheets in order to evaluate and rate the performance of different vendors for future tenders. However, AMC did not maintain the evaluation sheets. Despite maintaining a list of approved vendors, the Board failed to evaluate their performance.

**Board did not claim contractual compensation of Rs 1.26 crore**

Scrutiny in audit revealed that, despite premature failure (December 1996 to June 1999) of 16 out of 24 grinding sets supplied (1996) by Mukand Limited at Bandel Thermal Power Station and in the absence of vendor rating the Board placed further order in April 1998 for 10 grinding sets on the same vendor. Of these, seven sets suffered (September 1999 to August 2000) premature failure. Though all the 23 sets failed before the guaranteed minimum working hours, the Board had not claimed the contractual compensation of Rs 1.26 crore for premature failure of 23 sets from the vendor for reasons not on record. The Government/ Board stated (September 2001) that failure of grinding rings started seriously from 27 August 1997 and processing of order of April 1998 had started earlier than 27 August 1997. However, it was observed that only five sets were commissioned, of which 3 prematurely failed within 27 August 1997 which belied the contention of the Government/ Board.

### 3.4.3 Purchase procedure

The material manual adopted (June 1978) by the Board prescribes the guidelines and procedure for purchase and control of inventory. Purchases are made centrally by the M.C. based on the indents placed by user departments excepting local purchases. Purchases in excess of Rs 50 lakh and Rs 2 crore in each case require the approval of the standing tender committee (STC) and the Board respectively. Purchases of Rs 5 lakh to Rs 10 lakh fall within the powers of the Chief Engineer, General Manager and Additional Chief Engineer. Field officers make local purchases under their delegated powers ranging from Rs 5000 to Rs 5 lakh in each purchase under emergent circumstances after obtaining non-availability certificate from the Central and Regional stores. The policy of the Board is to procure materials through open

and limited tenders, and proprietary items from the original manufacturers. However, the Board had not fixed any monetary limit for inviting open, limited or single tender. Further, the Board formulated a policy that 20 *per cent* of the tendered quantity was to be placed in favour of parties from outside the State which were the lowest tenderers and the balance 80 *per cent* was to be allocated amongst state based parties who agree to supply at the lowest price of the tender.

In this connection the following points were noticed in audit :-

**(a) Procurement at higher rates**

**Board incurred extra expenditure of Rs 3.49 crore due to for purchase of meters at highest rate**

The Board invited (April 1999) tender for procurement of 240000 single phase energy meters. Out of the nine technically suitable offers received, M/S VXL Landis & Gyr Limited (VXL) quoted the highest rate of Rs 1013.02 per meter (landed cost) against the lowest negotiated rate of Rs 663.88 per meter. Though the rate of VXL was 52.6 *per cent* above the negotiated price, maximum quantity (one lakh meters) were placed on VXL on the plea of proven performance. Thus, placement of order at the highest rate resulted in avoidable extra expenditure of Rs 3.49 crore.

**(b) Procurement of material without immediate requirement**

**Procurement of materials for Rs 1.57 crore in excess of requirement**

Material Manual of the Board prescribes that, in respect of purchase of high value items, purchases should be made as frequently as possible with staggered deliveries. No such procedure was followed by the Board and materials were procured as and when indents were received. Further, the Chief Engineers (CEs) in charge of transmission and distribution were required to assess six months' requirement before procurement of operation and maintenance stores. However, CEs failed to undertake such assessment during the past five years, leading to procurement in excess of requirement as discussed below :-

**(i)** Chief Engineer (Distribution) of the Board advised (May 1994) the MC to procure 10 sets of 11 KV automatic line sectionalisers without assessment of requirement. However, Deputy Chief Engineer advised (June 1994) not to purchase the sectionalisers as the Central Stores, Shantipur and Malda regional stores held 10 sectionalisers already. Nevertheless, MC procured (November 1995) 10 sets from Andrew Yule & Company Limited at a total cost of Rs 13.69 lakh of which only two sets, were issued to Baruipur Construction (Distribution) Division in June 1999 after a delay of more than three years. However, these two sets were also not used and remained in stock (September 2001). Thus, procurement of materials by MC without considering stock position resulted in blocking up of Board's scarce funds of Rs 13.69 lakh and loss of interest of Rs 12.32 lakh (calculated at the rate of 18 *per cent* per annum).

**(ii)** 4711 metres of 1.1 KV cable (185 Sq. mm) were procured by GM, Headquarters on the indent of Superintending Engineer (Renovation and Modernisation) between August 1997 and March 1998 at a cost of Rs 15.01 lakh. Out of 4711 metres, only 10 metres was issued (August 2000) and the

balance quantity valued at Rs 14.98 lakh were lying in stock. Thus, procurement of cable without requirement by the General Manager resulted in blocking up of fund to the tune of Rs 14.98 lakh. The Government/ Board stated (September 2001) that these cables would be utilised to meet up emergency requirement and for different purposes.

(iii) The Board procured (December 1995) two types of XLPE power cable single core, 630 Sq.mm suitable for 6.6 KV (4119 metres) and 3.3 KV (8142 metres) from Fort Gloster Limited at a cost of Rs 1.16 crore for use of Superintending Engineer (O&M - Electrical), BTPS. The supplies were received in BTPS between August 1996 and August 1997. The user section, however, did not utilise the cable suitable for 3.3 KV so far (March 2001). Only 190 metres of cable suitable for 6.6 KV were consumed in March 1997 and the balance quantity of 3929 metres was lying idle (August 2001). The Government/ Board stated (September 2001) that these cables were not utilised due to delay in preparation of the cable schedule and the laying of cables would commence after preparation of cable schedule and associated cable trench.

This indicates that cables were procured without planning for utilisation leading to locking up of Board's scarce fund of Rs 1.13 crore.

(iv) At the instance of Chief Engineer (Transmission), three current transformers (CTs) of 400 KV capacity were procured in September 1994 at a cost of Rs 15.13 lakh without ascertaining the requirement. Scrutiny in audit revealed that the Board had only one 400 KV substation at Jeerat, which did not have any requirement for these CTs. The Government/ Board stated (September 2001) that these transformers were kept as spare for Jeerat Sub-station.

The contention is not acceptable. The Superintending Engineer, Jeerat Transmission Circle intimated (February 2001) that there was no requirement of these transformers at the Sub-station.

(v) 600 metres of conveyor belt (100 mm) was procured (January 1998) on the basis of indent of CHP<sup>e</sup> at BTPS for Rs 11.19 lakh while 300 metres of the same was in stock. Between January 1998 and January 2001, only 300 metres was utilised leaving the balance of 600 metres unused. The Government/ Board stated (September 2001) that as the procurement of conveyor belt took about six to eight months to get the materials at store from the placement of indent it was found desirable to maintain adequate quantity of stock of this critical item. The contention is not acceptable as locking up of idle inventory would not have occurred had the EOQ been determined considering the lead time.

(c) In 61 cases out of 88 test checked, orders valued Rs 77.67 crore were placed without approval of the Board (six cases: Rs 27.01 crore) as well as STC (55 cases: Rs 50.66 crore) in contravention of the rules. These orders were later regularised by obtaining post facto approval.

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<sup>e</sup> Coal Handling Plant

### 3.4.4 Order execution position

The Board had no system for assessing the total quantum of pending orders. However, the status for specific items only was assessed before placement of further orders. Points emerged as a result of test check of purchase orders are discussed below :-

#### 3.4.4.1 Rejection of lowest offer

**Extra expenditure of Rs 0.22 crore on procurement of transformers due to rejection of lowest offer**

(a) The Board invited (September 1999) tenders for procurement of 44 transformers (capacity 6.3 MVA) with the stipulation that the offerer should submit type test reports of identical transformer which should not be beyond five years old. Of 12 offers received (including 4 from state based parties) the Board rejected five lowest offers due to their failure to submit the requisite test reports. M/S IMP Power Limited (L<sub>2</sub>) which quoted Rs 14.14 lakh per transformer approached the Board to carry out type test on all the transformers at an extra cost of Rs 3.75 lakh, which was not considered by the Board. However, the offer of M/S Crompton Greaves Limited (CGL) (L<sub>6</sub>) at Rs 14.72 lakh per transformer was accepted by the Board although the test report submitted by the party was beyond five years old. The same rate was also negotiated with four state based parties. Accordingly orders were placed (May 2000) on CGL and all the four State based parties for supply of 44 transformers at Rs 6.48 crore. Had the rate of M/s IMP of Rs 14.23 lakh including test report per transformer been accepted and negotiated with the state based parties, the Board could have saved an amount of Rs 21.56 lakh..

(b) The Board invited (July 1996) a tender for supply of 6.3 MVA and 3.15 MVA Power Transformers (PTs) and received quotations from 13 manufacturers all of whom were new to the Board. Consequently, quality of the PTs was not known and type test would have to be conducted for which at least four/ five months was necessary.

**Rejection of lowest offer resulted in extra expenditure of Rs 0.56 crore in procurement of power transformers**

The lowest offer from M/S Accurate Transformers Limited, UP (ATL) at Rs 11.80 lakh per 6.3 MVA PT and Rs 7.60 lakh per 3.15 MVA PT was rejected as ATL was unable to arrange type test during the earlier purchase. The Finance Wing of the Board observed (November 1996) that the offers of new manufacturers needed to be technically evaluated by the Central Planning and Engineering Department which was not done. Further, the Member (F&A) opined (December 1996) that lack of type testing was not a valid reason for rejection of ATL's offer.

Nevertheless, the Board rejected the offer of L1 (ATL) and placed (March 1997) letters of intent on five manufacturers for supply of twenty four 6.3 MVA PTs and twenty one 3.15 MVA PTs at rates higher by 4 to 16 *per cent* than those offered by ATL resulting in extra expenditure of Rs 55.79 lakh. It was seen in audit that one of the successful bidder (M/S Mirzapur Electricals) had also failed in the type test against an earlier order and two suppliers did not submit the test reports along with their offer thereby frustrating the contention of the Board for rejecting offer of ATL.

#### **3.4.4.2 Delay in finalisation of offer**

The MC received (September 1999) 32 offers from manufacturers for procurement of 7404 High Tension Stay sets, 12238 Low Tension Stay sets and 18168 G.I earth spikes. Three different parties submitted the lowest offers for H.T stay sets (Rs 237.54 per set), L.T. stay sets (Rs 135.52 per set) and G.I earth spike (Rs 101.93 per set) valid up to 22 January 2000. On the Board's request validity was extended up to March 2000. However, MC failed to finalise the tender and on request these firms extended the validity of the offers up to April 2000 through identical letters on the condition that the goods should be inspected by a neutral authority. The proposal was not agreed to by the Board. The reasons for the non-finalisation of the order within the validity period up to March 2000 though sought for (August 2001) were not intimated by the Board.

Ultimately fresh tenders (July 2000) were invited and 36 parties submitted offers of which the same three firms submitted their offers for HT stay sets, LT stay sets and GI earth spike at Rs 257.43, Rs 150.60 and Rs 114.65 respectively. The Board approved (November 2000) the proposal and orders were placed on all the firms. As a result, the Board had to purchase at increased rate due to non finalisation of offers by March 2000 thereby sustaining an additional expenditure of Rs 8.83 lakh.

#### **3.4.4.3 Extra expenditure due to opting for firm price**

**Extra expenditure of Rs 0.45 crore on procurement of conductors due to opting for firm price instead of variable price**

The MC invited (March 1997) limited tenders for supply of 16400 kms conductors of five different specifications for the distribution wing. Though the normal practice was to invite rates with price variation clause (PVC), this tender notice, however, stipulated offers on firm price. The reasons though called for (August 2001) were not intimated. The prices varying from Rs 6935 to Rs 17340 per km offered by 13 firms were 15 *per cent* higher than the prices with PVC obtained in the last tender (July 1996) updated to April 1997. Negotiations were held with the parties (April 1997) to reduce their rates and the parties asked to submit revised offer. The revised quotations were received (April 1997) from all parties and on further negotiation the parties reduced their prices by about four *per cent*. Orders were placed (June 1997) on 12 firms for supply of 16400 km conductors at a cost of Rs 16.53 crore on firm price basis even though the prices were higher by eight to nine *per cent* than the prices updated up to April 1997. It was observed in audit that in subsequent order of September 1998, the Board reverted to price variation clause where the rates ranged from Rs 6731 to Rs 16634 per kilometer for identical conductors. Thus, the Board incurred additional expenditure of Rs 44.58 lakh due to deviation from normal practice and calling for rate on firm prices basis.

#### **3.4.4.4 Non-inclusion of penal clause**

A purchase order placed by GM, Generation Headquarters (February 1999) for supply of imported spares for hot gas path for gas turbine at Rs 1.56 crore within 26 weeks from the date of placement of order. The supplier delivered the materials after delays of six to 23 weeks but the Board failed to recover



liquidated damages to the tune of Rs 6.22 lakh due to deletion of the enabling clause from the general terms and conditions of purchase.

#### **3.4.4.5 Lack of planning before procurement**

The Board placed two orders (October 1996) on M/S Andrew Yule & Co. Limited – one for design, manufacture, testing and supply of 33 KV switch yard equipment for Teesta Canal Fall Hydel Project at Rs 4.18 crore and the other for erection/ commissioning of the said equipments at Rs 28.84 lakh. The order included equipment for three workshops, to be delivered within 60 days from the date of despatch clearance for installation in three power houses.

**Materials valued at Rs 0.26 crore remained unutilised for four years due to lack of planning before procurement**

The equipment valued at Rs 25.78 lakh were received (October 1997) at site and were awaiting installation (August 2001) as the Board failed to decide whether three workshops as initially planned were economically viable. However, no feasibility study was conducted again. As a result, the materials valued Rs 25.78 lakh had been lying idle for four years indicating lack of planning before the procurement.

#### **3.4.4.6 Non-installation of meters**

**Meters procured at an additional expenditure of Rs 3.59 crore were not entirely used**

The matter of pending connections was discussed in a meeting by Hon'ble Minister-in-charge (MIC), Power and Secretary, Department of Power, Government of West Bengal with officers of the Board. As a follow up the Board decided (March 2000) that no connection should remain pending as on 31 March 2001 due to shortage of meters and that defective meters should be replaced by 01-01-2001. As such a requirement of 623878 meters (333878 for new connections and 290000 for replacement) was worked out (May 2000). Considering the meters in stock and pipeline it was decided to procure 546454 meters. Accordingly, the Board floated (June 2000) tender for 450000 meters against which 11 parties participated. BHEL quoted lowest rate of Rs 655.42 per meter and L<sub>2</sub> rate quoted by two outside firms was Rs 749.94 per meter. The State based parties did not agree to supply meters at L<sub>1</sub> rate. As such, they were offered L<sub>2</sub> rate considering the urgency of the procurement. The Board placed (August 2000) orders for 430000 meters at the cost of Rs 31.77 crore (50000 on BHEL @ Rs 655.42 being L<sub>1</sub> and 380000 on other firms @ Rs 749.94 being L<sub>2</sub> rates) incurring additional expenditure of Rs 3.59 crore. The supplies scheduled to be received by November 2000 were actually received by June 2001 (420000 numbers) and balance (10000 numbers) are yet to be received (August 2001). It was noticed in audit that against a target of 623878 meters the Board could use only 453756 meters up to 31 March 2001. Thus, the purpose of procurement of meters at higher rate was not achieved.

### **3.5 Inventory Control**

#### **3.5.1 Inventory holding**

Scrutiny in audit revealed that the power generating units had neither specified inventory norms of their own nor devised any procedure/ system for

determination of maximum, minimum and re-ordering levels of each item of stores. No stock limit has also been fixed for each field unit having stores wing. No system had been evolved to determine the normal requirement of stores and the lead-time for procurement. There is no categorisation of materials as critical and non critical items and no efforts were also made to categorise the materials under high and low value items in order to implement effective control over the procurement and issue. Though Cardex and Bin Card System is in vogue a combination of cardex and ledger is being maintained. The Government/ Board stated (September 2001) that the computerisation of store items was underway.

The opening balance, receipt, consumption and closing balance of coal, oil, stores, spares and consumables of the Board (excluding those in respect of ongoing capital projects) during 1996-97 to 2000-2001 is shown at Annexure-18.

In this connection the following points were noticed in audit :-

(i) Except for coal and oil the Board did not fix maximum and minimum level of inventory. Against the norm of 30 days stock of coal the stock holding ranged from 3.2 months' to 6.2 months' consumption resulting in excess holding of coal ranging from Rs 73.91 crore to Rs 117.98 crore during the period 1996-97 to 2000-2001.

(ii) As against the norms of 1500 KL of oil at any point of time the stock holding ranged between 2.0 months' (3928 KL) to 7.2 months' (8386 KL) consumption resulting in excess stock holding varying between 928 KL (Rs 0.89 crore) in 1997-98 to 7329 KL (Rs 10.83 crore) in 2000-2001. The Government/ Board stated (September 2001) that in terms of quantity, stock holding of coal did not exceed 30 days' consumption on an average and the same for oil did not exceed six months' consumption on an average. The contention is not acceptable as the quantitative figures furnished by the Government/ Board were not reconciled.

(iii) In case of stores and spares, the stock holding increased from 10.4 months' to 19.4 months' consumption in 1998-99 and came down to 9.7 in 1999-2000 and again increased to 13.5 months' consumption in 2000-2001 against NTPC's average norm of 4 months'.

**Excess stock holding resulted in average annual inventory carrying cost of Rs 36.52 crore**

The excess stock holding resulted, on an average in additional inventory carrying cost (towards interest charges only) of Rs 36.52 crore per *annum*.

### **3.5.2 Excess consumption of coal**

Against the standard consumption of heat of 2703 and 3036 kilocalories per KWH as recommended (May 1997) by Heat Rate Committee of the State Government, there was excess consumption of heat of 33.46 lakh MKcal during the last three years up to March 2001. This led to excess consumption of coal of 6.49 lakh MT valued at Rs 121.52 crore. Poor condenser vacuum, operation of the units below the design pressure and temperature, etc. were cited as reasons for excess consumption of coal and the Government/ Board

stated (September 2001) that these reasons would be taken care of during overhauling of the units or during Repair and Maintenance schedule works.

### 3.5.3 Use of Light Diesel Oil in lieu of Furnace Oil

At BTPS and STPS, Light Diesel Oil (LDO) is used for lighting up of boiler and flame stabilisation though provision of storage tanks for use of furnace oil (FO) also exist since inception of the plants.

**Board incurred additional expenditure of Rs 27.53 crore due to use of LDO instead of FO. No cost benefit analysis was made**

Both STPS and BTPS continued to use LDO instead of FO and incurred additional expenditure of Rs 27.53 crore during 1996-97 to 2000-2001. The Government/ Board stated (May/ September 2001) that LDO is technically more suitable for the plants due to low viscosity, high calorific value and easy ignition. No documents in support of management's contention was shown to Audit.

### 3.5.4 Reconciliation of Stores Ledger

In Board, there is no system of reconciliation of quantitative stores ledger with the priced stores ledger and with the financial accounts of the power generating units. As a result, Audit identified significant variations of Rs 4.22 crore as on 31 March 2001 between quantitative stores ledger and priced stores ledger at MC level. Similarly, a variation of Rs 25.58 crore (BTPS : Rs 2.06 crore and STPS : Rs 23.52 crore) between the Accounts and the Combustion and Fuel Efficiency (C&FE) wing of the power stations at the end of 2000-2001 was noticed in audit. In both the cases, store/ user sections showed less quantity in stock which casts doubt about the physical existence of assets valued at Rs 29.80 crore.

### 3.5.5 Slow moving, non-moving, un-serviceable and obsolete stores material

The Board had no effective system of periodical identification of slow moving, non-moving and idle materials in store. Audit noticed the following deficiencies / discrepancies in the identification / disposal of stock.

(i) 1244 items of scrap and obsolete materials valued Rs 1.13 crore identified by the Board during January 1998 to July 2000 in 13 units were yet to be disposed of for reasons not on record.

(ii) Till March 2001, non-moving stores worth Rs 4.98 crore were lying in Central Stores, four Regional Stores and eight Divisional Stores for the period ranging from three to 18 years. No action had yet been taken for fruitful utilisation/ disposal of the same. Further, 4503 items of stores were identified in STPS as non-moving, but no value could be assigned as these materials were procured prior to 1985.

**Non moving stores worth Rs 4.98 crore were lying in different stores from 3 to 18 years**

(iii) Further, 171 defective transformers of different ratings are lying in Malda Regional Store for the last 20 years. Similarly, 301 defective transformers (25 KVA) valued at Rs 45 lakh were lying in four divisional/ sub-divisional stores since May 1997 with no action being taken either for

repair or disposal of the same. The Government/ Board stated (September 2001) that reasons for delay in disposal may be the need to comply with a lot of formalities. The process for disposal was going on. The reply is not tenable as according to the Material Manual surplus/ unserviceable materials are to be disposed of twice each year.

### **3.5.6 Disposal of Scrap**

(i) The Central Stores and Purchase wing of the Board disposed of (June 1996) 32.100 MT of scrap ACSR conductor under custody of Tamluk Transmission Construction division at a total cost of Rs 14.33 lakh. At the time of actual delivery, 11.768 MT valued Rs 5.25 lakh were found short. The shortfall was, however, made good from the old scrap stock lying at Haldia and Hizli substations. The shortage was attributed (April 1997) to theft and FIR lodged in August 1998 on the recommendation of the Committee constituted to investigate the matter. Departmental enquiry was in progress (September 2001).

(ii) For sale of two DG sets (3500 KVA) reserve price was fixed at Rs 78.25 lakh by the Chartered Engineer appointed by the Board. In response to the tender (September 1995), Ramesh Kumar Rajendra Kumar stood highest at Rs 50.01 lakh and accordingly sale order was placed (March 1996) on the said buyer for Rs 51.66 lakh (including sales tax). Instead of depositing the sale proceeds the buyer, after a lapse of seven months, prayed (November 1996) for reduction of sale price to Rs 40.02 lakh on the ground that DG sets were of an old model. The Chartered Engineer recommended for acceptance of the offered price as Rs 40 lakh plus and the Board accepted the recommendation and issued modified sale order in September 1997 for Rs 41.31 lakh. Thus the Board sustained a loss of Rs 10.35 lakh due to unauthorised reduction of sale price of DG sets.

### **3.5.7 Theft of materials**

The object of security system is to minimise theft, fire and leakage of classified information. Audit noticed that despite availability of security arrangement in Board's stores, 64 instances of theft occurred in nine stores<sup>#</sup> between January 1997 and June 2001 involving materials worth Rs 48.41 lakh. No departmental enquiries were conducted and only FIR's were lodged, the final reports were still awaited (August 2001).

### **3.5.8 Retention of surplus stores**

As per the Material Manual, the Board was required to constitute half-yearly survey boards at unit level for identification of surplus stores for disposal. However, no such committee was constituted by the Board for identification/review of surplus stores during the last five years up to 2000-2001.

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<sup>#</sup> Burdwan Transmission Construction Division, Kharagpur (O&M) Sub-Division, Garbeta Construction (D) Sub-Division, Shantiniketan Group Electric Supply, Suri (O&M) Division, Krishnagar Construction (D) Division, Baruipur Construction Division, STPS, Siliguri Regional Stores and Chord Road Central Stores

(i) 1735 M.T of steel materials valued Rs 2.42 crore and 86134 metres of cables valued at Rs 1.31 crore were lying unused in Teesta Canal Fall Hydel Project of the Board since 1995-96. Although, the project was completed in October 1999, the materials were declared as surplus only in October 2000. No action for disposal or for utilisation of the same by other units of the Board has been taken so far. The Government/ Board stated (September 2001) that 698 MT of steel and five km of cables had been sent to other hydel projects and the balance would be diverted to other units or retained for maintenance.

(ii) 1445 km of PVC wire (2.5 sq.mm) valued at Rs 16.12 lakh (Central Stores, Malda and Siliguri Regional Stores) and 1047.160 km of PVC wire (four sq.mm) valued Rs 32.67 lakh (Central Stores) were lying unutilised since 1985 due to change of procedure of supplying service connection materials to the respective consumers. No effective steps had yet been taken by the Board for utilisation of the same.

(iii) 14.724 kilometre underground and submarine cables valued at Rs 35.65 lakh were lying unutilised in two regional stores\* and in two divisions\* of the Board for 15 years.

### 3.5.9 Inter Unit Transfer

**Materials for  
Rs 12.40 crore  
remained unadjusted  
over the past decade**

Materials issued from one store to other stores were not acknowledged in time by the recipient stores. As a result as on 31 March 2001, materials worth Rs 77.63 crore issued to different stores of the Board were awaiting acceptance for final adjustment. Test check of records of Burdwan Regional stores under Material Controller office revealed that materials issued to 16 divisions during 1989-90 to 1999-2000 amounting to Rs 12.40 crore remained unadjusted so far. Despite being pointed out in the Separate Audit Reports of the Board, no action was taken to undertake reconciliation of inter unit balances. Reasons for non-adjustment though sought for (August 2001) were not intimated to Audit. The possibility of pilferage/ defalcation of stores can not be ruled out in the event of non-reconciliation of such transfers.

### 3.5.10 Inspection of material

Materials valued Rs 84.57 lakh against 45 purchase orders (issued during June 1995 and July 1999) were delivered at Bandel Thermal Power Station Stores but were not accounted for as the same were still awaiting inspection till March 2001. Similarly, in Santaldih Thermal Power Station materials valued Rs 5.10 lakh received during October 1994 were yet to be taken to stock due to non-inspection by the receiving departments. No time limit was fixed for inspection of stores and spares after their arrival in stores. The Government/ Board stated (September 2001) that though there was some delay in inspection of materials at BTPS due to non-availability of shut-down for testing/ matching the materials, efforts were made to reduce the delay. At STPS, materials were not inspected due to oversight. The contention is not acceptable as the materials could have been matched/ tested during outages.

\* Malda, Siliguri Regional Store and Malda Construction (D) Division, Baruiapur (O&M) Division

### 3.6 Stores Management

Though the system of requisitioning of materials by the consuming department was in vogue, there was no control over the issue of materials by the respective stores of the Board.

Materials worth Rs 99.22 lakh (MC office) issued to fabricators prior to 1990-91 remained unadjusted till date (March 2001). In absence of detailed records receipts of materials could not be traced out.

Materials worth Rs 59.78 lakh were issued (1996-97) to parties on loan and remained unadjusted for five years. However, the details thereof were not made available to Audit.

During shifting (1998-99) of stores from one store to another, 33 store materials valued Rs 5.02 lakh were found short. No action had yet been taken for write off of the same.

### 3.7 Physical verification of stores by the Board

Material Manual of the Board prescribes three types of verification independent of each other viz. annual internal physical verification by MC, sample checking of stores at regional and divisional stores conducted locally by one store keeper checking the stores of another store keeper and by the internal audit wing of the Board to ensure coverage of all items at least once during a year. Scrutiny in audit revealed that in five divisional stores, out of 921 items, 415 (45 per cent) were physically verified during 1999-2000. Further, the Accounts Manual provides for annual physical verification of stock of coal and oil on the closing date of the accounting year, however, no such verification was conducted during the last five years up to 2000-2001. Stores and spare parts at BTPS and STPS were verified during 1997-98 and 1999-2000 respectively. The physical verification reports though called for were not produced to Audit. The Government/ Board stated (September 2001) that BTPS had an inventory of about 32000 items and hence it was not possible to conduct verification of all items every year. However, periodical verification and checking of some major items was undertaken. At STPS, physical verification of all items was not done during 1999-2000 due to heavy engagement of stores department. In absence of coverage of all items, their physical existence could not be verified.

#### 3.7.1 Shortages/ Losses detected during Physical verification

Shortages and excess found during physical verification, in respect of stores are transferred to a suspense account (Fuel stock, material stock Excess/shortage) pending investigation and final adjustment. In the absence of investigation and adjustment material valued at Rs 72.39 crore (including Rs 28.98 crore related to period prior to 1995-96) were awaiting final adjustment as on 31 March 2001 (Fuel Rs 71.19 crore and Material Rs 1.20

**Shortage and excess of materials valued at Rs 72.39 crore were awaiting final adjustment**

crore). However, during last five years stock shortages increased by Rs 19.67 crore but no investigation was conducted and responsibility fixed for materials found short during physical verification in 1989-90 (Rs 19.98 lakh) and 1999-2000 (Rs 73.41 lakh) in respect of one and seven stores respectively.

### 3.8 Transit loss

The Government of West Bengal allowed (August 1997) all thermal power plants to write off transit loss up to four *per cent* of coal to be received as per Railway receipt (RR) during the year by actual weighment at the power stations.

Mention was made in paragraph 3A.5.4 of the Report of the Comptroller and Auditor General of India for the year ended 31 March 1998 that weighing system commissioned at BTPS in February 1996 were found defective since installation. However, it remained inoperative till date.

In the absence of any weighment facility at BTPS, the quantity of coal was determined on the basis of weight recorded in the RR in case of linked wagons and on the basis of carrying capacity in case of diverted wagons. BTPS received 67.39 lakh MT of coal during the last five years up to 2000-2001 of which four *per cent* (2.66 lakh MT) valued Rs 42.42 crore was written off without actual weighment contrary to the Government order.

**Board sustained a loss of Rs 25.64 crore due to non lodging of claim for short receipt of coal**

In STPS, the two existing weighbridges fitted with digital display and computer printout systems were non-functional since installation. The manual records of digital display of weighbridges as regards the quantity of coal received indicated short receipt of 3.15 lakh MT (nine *per cent*) of coal valued Rs 44.75 crore during 1996-97 to May 2000. Thereafter, the weighing machine went out of order (June 2000) and the Board was unable to determine quantum of transit loss. As a result, the Board had to sustain loss of Rs 25.64 crore beyond the limit of four *per cent*. Further, the Board writes off four *per cent* every year towards transit loss and transit loss beyond four *per cent* is reflected as stock shortage pending verification.

The Government/ Board stated (September 2001) that while the computers were being upgraded at BTPS, at STPS there was no scope to claim short supply since Railways bear no responsibility for such loss.

### 3.9 Materials issued to contractors

As per terms and conditions of erection/ work orders, materials required for the works were to be supplied by the Board. As against actual requirement of materials, Board issued material in excess of requirement. Neither were any bill of materials prepared nor the works register maintained by works divisions, in the absence of which the materials issued and consumed there against could not be monitored by the divisions.

**Board sustained loss of Rs 1.06 crore due to issue of materials to contractors in excess of requirement**

Scrutiny in audit revealed that materials worth Rs 1.06 crore issued to 21 contractors in excess during April 1989 to 1995 could not be recovered by the Board as the contractor left the work. As no bills were pending with the Board, there is no possibility of recovery of the same from the contractors. The Government/ Board stated (September 2001) that the cost of excess materials issued would be adjusted against the security deposit and pending final bill. However, it was seen that either no bill was pending or the security deposit was inadequate.

### **3.10 Advance to suppliers/ contractors**

**Advances of Rs 153.00 crore not adjusted**

The terms and conditions of supply/ purchase orders provide for payments in advance to suppliers which are adjusted as and when supplies/ services are received/ rendered. The Board pays 90-100 *per cent* advance to suppliers on the basis of receipted challan. Scrutiny in audit revealed that huge advances were outstanding against suppliers and such unadjusted advances rose by 36 *per cent* from Rs 207.73 crore (March 1996) to Rs 282.24 crore (March 2001), out of which Rs 153.00 crore related to central purchase wing of the Board. There was no system of review of old outstanding cases and party wise sub-ledgers were not maintained. As such, the year wise, party wise break up of advances outstanding as on March 2001 could not be analysed in Audit.

However, Audit noticed that main reasons for outstanding advances in the Board were that advance payments were made on the basis of receipted challan and store receipt vouchers when received were not linked with the respective advances.

Test check of 131 centralised purchase orders revealed that Rs 4.03 crore relating to BHEL, Easun Reyrolle Relays & Devices Limited and Marsons Limited remain unadjusted for period ranging from two to 10 years. In STPS and BTPS advances paid during May 1986 to September 1998 amounting to Rs 58.18 lakh remained unadjusted as no adjustment vouchers were preferred by the purchasing department. The reply of the Government/ Board did not mention regarding adjustment of these old advances mentioned by audit.

### **Conclusion**

**The Board spent every year on an average Rs 502 crore on purchase of material which constituted 19.37 *per cent* of average revenue expenditure. Such huge expenditure required efficient material management and inventory control. However, the purchase procedure had not specified any monetary ceilings for inviting single, limited or open tenders. Moreover, the system of procurement was deficient inasmuch as there were instances of improper assessment of requirement, non-acceptance of the lowest offer, delay in finalisation of offer, deviation from the general practice in calling the tenders with price variation clause, failure to**



**include penal clause in the purchase orders. Similarly, the inventory control mechanism was deficient in the areas of consumption of coal in excess of norm, huge stock-piling, delay in investigating the reasons for shortages found in physical verification and non-reconciliation of inter-stock adjustment.**

**It is suggested that the Board**

- **starts preparing material budget to have a more meaningful check on material purchase,**
- **starts evaluating vendors' performance,**
- **fixes minimum, maximum and re-order levels for various items of stock,**
- **conducts physical verification regularly and fixes responsibility for shortages and**
- **regularly reviews surplus stock and disposes them expeditiously.**