

CHAPTER - III

3. Review relating to Statutory corporation

Gujarat Electricity Board

Material Management and Inventory Control in Thermal Power Stations

Highlights

Gujarat Electricity Board owns and operates six thermal power stations which constituted 97 per cent of the total power generated by the Board during 1999-2004.

(Paragraph 3.1)

Restricted supply of low sulphur heavy stock oil on account of abnormal delay in finalisation of its price with Indian Oil Corporation Limited resulted in generation loss of Rs.102.45 crore.

(Paragraph 3.7)

Delayed purchase of cupro nickel tubes (Rs.1.93 crore) and economiser coils (Rs.4.25 crore) coupled with delayed replacement resulted in generation loss of Rs.25.32 crore.

(Paragraphs 3.10 and 3.11)

Non availability of spare generator transformer resulted in generation loss of Rs.122.08 crore.

(Paragraph 3.12)

Non maintenance of stock of induced draft fans impellers resulted in generation loss of 43.42 million units valuing Rs.8.48 crore.

(Paragraph 3.13)

Procurement of material without planning resulted in blocking of Rs.82 lakh with consequential interest loss of Rs.29.52 lakh.

(Paragraph 3.16)

Introduction

3.1 Gujarat Electricity Board (Board) owns and operates six thermal power stations (TPS). Four^Y TPSs are coal based, one TPS (Panandhro) is lignite based and one TPS (Dhuvaran) is operated on low sulphur heavy stock (LSHS) oil. The only gas based power station at Utran (UGBPS) was transferred (August 2002) to Gujarat State Electricity Corporation Limited (GSECL), a subsidiary of the Board. As of March 2004 the total installed capacity of all the six TPSs was 3,759^U Mega Watt (MW). The power generated from six TPSs was 1,07,350 MU[♦] and constituted 97 per cent of total power of 1,10,866 MU generated in the State by the Board during 1999-2004.

Organisational set up

3.2 The Board of members of Gujarat Electricity Board consisted of three nominated members and three full time members headed by the Chairman. The generation section of the Board looks after the purchase of generation materials (May 2000), which was earlier looked after by Store Purchase Section. The materials utilised commonly by generation, distribution and transmission sections are procured by store purchase section. The Chief Engineer (Generation) under the administrative control of the Executive Director (Generation, Project and Planning) and Member (Technical) heads the generation section and is assisted in purchase function by two Superintending Engineers (SE), four Executive Engineers (EE) and eleven Deputy Engineers (DE):

Scope of Audit

3.3 Matters related to 'Fuel Costs' and 'Material Management and Inventory control of Transmission and Distribution Materials' were last reviewed in the Reports of the Comptroller and Auditor General of India for the year ended 31 March 2001 and 31 March 2002 (Commercial) – Government of Gujarat respectively. The review on 'Fuel Costs' has been taken up for discussion by the Committee on Public Undertakings (COPU), while the review on 'Material Management and Inventory control of Transmission and Distribution Materials' was pending for discussion (September 2004).

The observations of the present review conducted during October 2003 to March 2004 covers the procurement, consumption and utilisation of generation materials (including fuel during 2001-04), inventory control, disposal of scrap and accounting of generation materials of six TPSs covering a period of five years up to 2003-04 which were not reported in the earlier reviews. The audit findings as a result of test check of records of six TPSs are discussed in succeeding paragraphs.

^Y Gandhinagar (GTPS), Sikka (STPS), Ukai (UTPS), Wanakbori (WTPS).

^U Dhuvaran 534, Gandhinagar 660, Panandhro 215, Sikka 240, Ukai 850, Wanakbori 1260.

[♦] Million Unit.

The audit findings of the present review were reported to Government/ the Board in May 2004 with a specific request for attending the meeting of Audit Review Committee for State Public Sector Enterprises (ARCPSE) so that viewpoints of Government/ Board could be taken into account before finalising the review. The meeting of ARCPSE was held on 10 September 2004 with officials of State Government and the Board and their viewpoints have been duly incorporated in the review.

Material management

3.4 Material management is an integrated management approach to efficient planning, economic procurement and effective utilisation of material inputs with a view to control material cost and inventories to ensure uniform flow of materials of requisite quality and quantity at the appropriate time with minimum storage cost.

Purchase procedure

3.5 The Board has a store purchase code detailing the purchase procedure in relation to invitation and finalisation of tenders, delegation of powers and bifurcation of materials between centralised and local purchases. The Board adopted a purchase policy in October 2000 to streamline the purchase procedure like classification of new and regular parties, price evaluation, requirement of technical specifications, negotiations and quantity distribution. With the introduction of purchase policy, vendor registration was made compulsory. For scrutiny of tenders, the Board adopted the dual bid system. The price bid of a firm was opened only when declared technically acceptable as per technical bid.

Deficiencies in purchases

3.6 A review of the purchase procedure followed for centralised and local purchases revealed following system deficiencies:

- Delay in finalisation of tenders against prescribed norms,
- Incorrect assessment of requirement by user departments leading to delayed purchase and
- Absence of procedure of pre-despatch inspection of materials.

Fuel purchase

Generation loss due to short receipt of oil

3.7 DTPS mainly uses low sulphur heavy stock oil (LSHS) as the primary fuel for generation of electricity. The LSHS was supplied by Indian Oil Corporation Limited, Vadodara (IOC) after advance payment at mutually agreed (20 April 1998) rate of Rs.4,200/4,400 *per* MT valid for 60 days. The Board was required to take up the issue with Ministry of Petroleum, Government of India (GOI) within the validity period for finalisation of the

price acceptable to IOC. The Board, however, did not take up the matter with GOI to get the prices fixed in lieu of *ad hoc* prices within the validity period and continued payment at *ad hoc* rates.

The short receipt of LSHS oil resulted in power generation loss of Rs.102.45 crore.

Due to non finalisation of the price, IOC restricted the supply of LSHS oil to 20,000 MT *per* month against the requirement of 50,000-60,000 MT *per* month during June-December 2001. Consequently, DTPS was operated either on partial load or by closing down one or more units. The prices were finalised (24 November 2001) with retrospective effect (1 October 2001) and the supply of LSHS oil could be normalised by December 2001. The short receipt of LSHS oil resulted in loss of power generation of 463.592 MUs valuing Rs.102.45 crore during June-December 2001.

The Government/ Board accepted (August/October/November 2004) that the generation was restricted due to restricted supply of LSHS oil by IOC pending finalisation of LSHS oil prices.

Procurement of materials

3.8 The bulk of materials are purchased centrally by the head office of the Board based on annual/ urgent indents received from power stations. The material purchased is delivered to the power station depending on the indents. Items not specified for bulk purchase are procured locally.

The year wise material purchased for TPS during 1999-2004 was Rs.174.11 crore, Rs.93.29 crore, Rs.113.08 crore, Rs.163.96 crore and Rs.160.23 crore respectively.

Delay in finalisation of tenders

Delay in finalisation of tenders ranged between 31 and 380 days.

3.9 Store purchase code requires finalisation of tenders within the validity period of 120 days from the date of opening of tenders. In exceptional cases the firms may be requested to extend the validity period where the finalisation is likely to get delayed. A test check of tenders finalised during 1999-2004 revealed that there was delay in 29 (45 *per cent*) out of 65 tenders. This included 20 tenders (28 *per cent*) where the delay ranged from 31 to 380 days. This led to generation loss of Rs.258.33 crore, as discussed in the succeeding paragraph.

Loss due to delay in procurement of condenser tubes

3.10 Bharat Heavy Electricals Limited (BHEL)'s manual for stage I of Wanakbri thermal power station (WTPS) provided that the condenser tubes fitted in stage I comprising unit I, II and III were to be replaced by complete set of new tubes whenever the pluggings exceeded ten *per cent* of the total installed quantity of condenser tubes. The WTPS was experiencing leakages in condenser tubes since 1994 in all the three units of stage I. So, WTPS planned to replace the condenser tubes in annual overhaul (AOH) schedule to be carried out during 1998-99.

WTPS placed (July 1998) indent with head office for procurement of 15,620 cupro nickel condenser tubes (tubes) and for early receipt of the same, proposed to place repeat order on previous suppliers, who were to supply tubes for replacement in unit III. WTPS reviewed and revised (December 1998) the already indented quantity to 9000 tubes and enquired (17 July 1999) for procurement of tubes from suppliers of previous purchase orders for supply of 9000 tubes on the same terms and conditions. Though the suppliers agreed to supply the requisite quantity on existing terms and conditions, orders could not be placed due to lack of approval of the competent authority. Due to non-availability of tubes the capital overhaul (COH) of unit I scheduled from 15 October 1999 was postponed to December 1999.

The Board issued (November 1999) letters of intent (LOI) to three[†] parties for supply of 9000 tubes. Gujarat Cypromet Limited, Mumbai (GCL) accepted the LOI and the Board placed (December 1999/April 2000) two orders for supply of 2550 tubes. The complete supplies were received during July - November 2000. On receipt, tubes were partially replaced in unit I to the extent of availability and the shortfall was met by refitting 364 number plugged leaky condenser tubes.

Chief Engineer (Gen.), head office sought (April 2000) confirmation of exact requirement of tubes from WTPS. The requirement of 6800 tubes was informed (April 2000) for unit I and II. The Board received complete supplies of tubes costing Rs.1.93 crore during July-November 2001.

Due to phased receipt of supplies the tubes of unit I were partially replaced in AOH of July-August 2001 and balance tubes in AOH of June-July 2002 and total replacement of tubes of unit II in AOH of February-March 2003.

Delay in procurement of condenser tubes resulted in generation loss of Rs.4.12 crore.

Thus, non placement of repeat orders on previous suppliers and abnormal delay in procurement of condenser tubes during 1998-2003 resulted in delayed replacement of tubes. This resulted in forced outages during May 1999 to May 2003 in unit I and II of WTPS with consequential generation loss of 21.405 MUs amounting to Rs.4.12 crore.

The Government/ Board accepted (August/October/November 2004) that delayed finalisation of tenders resulted in phased replacement of tubes and stated that the generation loss was due to high ambient temperature in summer season and air ingress in vacuum system due to 15 years of operation.

The reply was not tenable as generation loss was not suffered due to high ambient temperature in summer season but due to ageing effect of set of tubes and cooling system coupled with abnormal delay in replacement of set with new tubes that resulted in air ingress in vacuum system.

[†] 2250 tubes each to Gujarat Cypromet Limited, Sanand and Multimetal Limited, Kota and 4500 tubes to Alcobex Metals Limited, Jodhpur.

Loss due to delay in procurement of economiser coils

3.11 The economiser coils of unit I, II and III of WTPS were of continuous finned type which got eroded fast due to flue gas passing through it. The erosion was faster as the flue gas contained more ash particles than designed which resulted in thinning of tubes and consequent operational failures.

Power Finance Corporation (PFC) sanctioned (November 1998) a loan of Rs.7.92 crore for replacement of economiser coils in unit I, II & III at WTPS under renovation and modernisation programme (Phase-II) of IX five year plan. Government of Gujarat approved (December 1998) the proposal in principle. The Board administratively approved (February 1999) and planned to replace existing continuous finned type coils with fin free coils in all three units during AOH of 1999-2000 to avoid unexpected failures from non-approachable locations at an estimated cost of Rs.10.10 crore. The Board placed (August 1999) orders on BHEL for design, supply, erection and commissioning of economiser coils of unit I and II only at the end cost of Rs.8.83 crore to meet the immediate requirement. The work of unit III was deferred for next year's programme to consider other parties. The work of unit I and II was completed in February and October 2000 respectively. The Board decided (February 2001) to replace economiser coils of unit III at the end cost of Rs.4.25 crore and placed (March 2001) the order on BHEL as the job was of critical nature and BHEL being the original designer, manufacturer and supplier. The coils (182 nos.) were supplied (April 2001) and replaced during COH (August-December 2002) of unit III.

Non placement of combined order for economiser coils of all the units resulted in generation loss of Rs.21.20 crore.

Thus, non placement of order for economiser coils of unit III along with unit I and II delayed the purchase of coils. Consequently replacement thereof was delayed resulting in forced outages during February 2001 to July 2002 due to which the Board suffered generation loss of 94.22 MUs amounting to Rs.21.20 crore.

The Government/ Board stated (August/October/November 2004) that the replacement work of economiser coil in unit III could not be taken up along with the work of unit I and II as all machines could not be taken out of service to meet the power demand. The performance of replaced coils of unit I and II was also to be observed.

The reply was not tenable as all the units are never taken out of service simultaneously and coils could be replaced in ensuing AOH (January-February 2001) of unit III to avoid further generation loss. The site engineer never reported satisfactory performance but reported (November 2000) satisfactory completion of replacement of coils in unit I and II.

Loss due to non-maintenance of spare generator transformer

3.12 A generator transformer (GT) of 140 MVA 13.8/ 240 Kilo Volt (KV) failed at Ukai thermal power station (UTPS) during synchronisation of 120 MW unit I on 23 August 2001 and the unit was not available for generation of electricity. The said GT was used for stepping up the electricity generated at 13.8 KV to 220 KV suitable for transmission. The Board did not keep spare

GT between four identical units wherein same ratings GT were in operation in spite of past experience of GT failures at Wanakbori and Dhuvaran TPS in January 1989 and February 1999 respectively, wherein spare GTs were maintained to avoid generation loss. The Board issued (September 2001) limited tender enquiry for procurement of GT within three months or earlier. The tender was finalised (20 December 2001) in four months (6 September 2001 to 20 December 2001) when Asea Brown Boveri Limited (ABB) offered to supply the GT within least delivery period of five months and at the least cost of Rs.2.73 crore. The Board agreed and issued (21 December 2001) LOI and the detailed order was issued (2 February 2002) at the end cost of Rs.2.73 crore with delivery period of five months from date of LOI. The new transformer was finally commissioned in unit I at UTPS on 24 May 2002.

Lack of spare GT resulted in generation loss of Rs.122.08 crore.

Thus, due to lack of spare GT, the unit I of UTPS remained idle for 274 days (23 August 2001 to 23 May 2002). This resulted in generation loss of 552.38 MUs amounting to Rs.122.08 crore.

The Government/ Board stated (August/October/November 2004) that GT is not kept spare unless and until the exigency arises. The reply was not acceptable as non-maintenance of spare GT for contingencies involving huge generation losses lacked planning. Further, necessity of spare GT was evident from GT failures at Wanakbori and Dhuvaran for which spare GT were kept at respective TPS. The repaired GT of Ukai TPS was commissioned in lieu of failed GT at Gandhinagar TPS (GTPS) unit II within one month.

Loss due to non-maintenance of spare impellers

3.13 Unit I and II of GTPS have two induced draft (ID) fans in each unit. These ID fans handle flue gas alongwith ash contents beyond the designed parameters on continuous basis. Therefore, impellers were subject to heavy wear and tear resulting in vibrations beyond specified limits, which damaged the shafts and bearings of ID fans. So bearings of ID fans were required to be changed frequently causing forced outages. Since no stock of spare impellers was maintained and supply of new impeller was likely to take longer time, the Board decided (November 1999) to re-blade the impellers to avoid forced outages/ generation loss. Accordingly, the work of re-blading was awarded in batches of three impellers in two spells (February 2000 and June 2000) which were received back (27 December 2002 and 3 May 2001) after 844 and 116 days respectively. This exercise was carried out due to non-maintenance of spare impellers being a critical spare for smooth functioning of the units.

Lack of spare impellers resulted in generation loss of Rs.8.48 crore.

Thus, lack of spare impellers resulted in forced outages in unit I and II of GTPS during May 2000 and April 2001. This resulted in generation loss of 43.42 MUs amounting to Rs.8.48 crore[®].

The Government/ Board accepted (August/October/November 2004) that there was no spare ID fan impeller as per the original power plant design, hence the generation loss could not be avoided.

[®] At the average realisation rate of respective years.

Inventory control and store management

Non-fixation of stock limits

Stock levels were not fixed to have effective control over inventory.

3.14 The stock position of the six[◇] TPSs for the five years ending March 2004 is given in *Annexure-12*. The closing stock represented 623 to 1,115 days consumption in respect of Panandhro TPS with generation capacity of 215 MW as against the closing stock of 55 to 307 days consumption in terms of value during the same period in Wanakbori TPS with generation capacity of 1,260 MW. The Board had not fixed inventory levels *viz.*, safety stock, reordering level, minimum and maximum level for effective control over inventory in TPSs. As a result, there was wide variation in closing stock levels without relevance to generation capacity during 1999-2004.

The Government/ Board stated (August/October/November 2004) that purchases are controlled for minimum periodical requirements after considering quantity in stock, orders placed and pending orders. The reply was not tenable as non-fixation of inventory levels resulted in high closing stock levels between 55 and 1,115 days' consumption in terms of value.

Stagnant Stores

3.15 The table below indicates position of closing stock of six[◇] TPSs stores reported in monthly inventory control return (MICR) held at the end of each year during 1999-2004:

(Rupees in lakh)

Particulars	1999-00	2000-01	2001-02	2002-03	2003-04 ^Ω
Stagnant stores:					
Slow moving stores	859.23	950.54	1,025.28	1,300.76	1,343.14
Non moving stores	761.65	722.15	1,340.66	1,262.85	1,032.49
Defective and repairable stores	6.30	6.30	6.30	6.30	3.47
Total stagnant stores	1,627.18	1,678.99	2,372.24	2,569.91	2,379.10
Active stores	4,637.87	4,488.93	4,718.78	4,597.68	4,254.49
Total inventory	6,265.05	6,167.92	7,091.02	7,167.59	6,633.59
Percentage of stagnant stores to total inventory	25.97	27.22	33.45	35.85	35.86

Stagnant stores increased from 25.97 to 35.86 per cent during 1999-2004.

It may be seen from the above table that stagnant stores increased from 25.97 to 35.86 *per cent* during 1999-2004. This resulted in blocking of fund of Rs.23.79 crore during 2003-04 in stagnant inventory as against Rs.16.27 crore in 1999-2000.

An analysis of the stock held in TPS revealed that no norms were prescribed for classification of stock into active, slow and non-moving but off late the

[◇] Dhuvaran, Gandhinagar, Panandhro, Sikka, Ukai, Wanakbori.

^Ω Figures for 2003-04 are provisional.

Board decided (February 2003) that items of power station store office (PSSO) be classified as:

- Active for the period up to one year from the date of recording;
- Items lying idle for period exceeding one year be classified as slow moving; and
- Items remaining idle for period exceeding four years may be classified as non-moving.

In the absence of any uniform policy, all TPSs followed different basis for above mentioned classification and the decision of February 2003 was also not implemented (August 2004). In a test check of TPS stores records, Audit noticed the following deficiencies/ discrepancies in classification of stock:

- In GTPS, aluminum and copper cable valuing Rs.12.39 lakh were issued in December 2003 from PSSO but the same were classified as non-moving instead of active.
- In UTPS, various items valued rupees five crore were received from BHEL in April 2003 to be commissioned in the forthcoming shut down of unit III and IV were classified as non-moving instead of active.

This shows that there was no system of proper classification of stores material and the inventory position was not effectively monitored through MICR.

The Government/ Board accepted (August/October/November 2004) that the deviations observed were due to system deficiency, which would be improved on implementation of new computerised system.

Procurement of material without immediate requirement

3.16 The Board placed (December 2000) an order on BHEL for supply, erection and commissioning of damaged internals of Pass-B^o at GTPS unit V at a cost of Rs.1.29 crore. The work was to be completed within 45 days from the date of issue of work commencement order. BHEL supplied material valuing Rs.82 lakh during January-March 2001. The Board had not issued any work commencement order on the ground that time asked by BHEL for supply and erection was very long (105 days) and it was not possible to shut down the machine.

Procurement of materials without proper planning resulted in interest loss of Rs.29.52 lakh.

Thus, procurement of material without planning for its utilisation resulted in blocking of Rs.82 lakh with consequential interest loss of Rs.29.52 lakh^s. Besides, performance guarantee which was valid for 18 months from the date of supply has also lapsed.

^o A part of electrostatic precipitators.

^s Worked out @ 12 per cent per annum at the minimum borrowing rate during 1999-2004.

The Government/ Board stated (August/October/November 2004) that due to system demand the necessary outage was not given. The material is proposed to be utilised in ensuing capital overhaul of the unit planned in 2005-06. The reply was not acceptable as orders were placed without proper planning.

Non-reconciliation of stores ledger with financial accounts

3.17 There is no system of reconciliation of quantitative stores ledger with the priced store ledger and with financial accounts of the power generating units.

The table below shows value of closing stock as per financial accounts and stores ledger in six TPSs at the end of each year during 1999-2004:

(Rupees in lakh)

Closing stock as per:	1999-2000	2000-01	2001-02	2002-03	2003-04[∇]
Financial accounts	6,917.50	7,093.30	7,321.59	7,280.38	7,852.45
Store accounts	6,265.05	6,167.92	7,091.02	7,167.59	6,633.59
Difference	652.45	925.38	230.57	112.79	1,218.86

As seen from the above, the value of stock as per financial accounts was excess by Rs.6.52 crore to Rs.12.19 crore during 1999-2004. Lack of reconciliation resulted in incorrect accounting of stores.

Operation and maintenance expenditure

3.18 *Annexure-13* indicates the TPS wise power generated, operation and maintenance expenditure and cost per MU of generation during 1999-2004.

A review of the O and M expenditure of six TPSs during 1999-2004 revealed that the expenditure *per* MU of generation varied widely and ranged from Rs.5.88 lakh to Rs.27.16 lakh. Further, the expenditure on store and spares against *per* MU of generation was also varying and ranged between Rs.8,000 to Rs.56,000. The Board had not fixed any norms as a result no control on such expenditure could be exercised.

Store management

3.19 Efficient store management requires maintenance of adequate quantity of materials in stock, issue of material without delay and regular monitoring of utilisation of materials, timely replacement of rejected materials and disposal of scrap material at regular intervals to prevent deterioration in quality and value of scrap. A test check of the six PSSO revealed the following deficiencies:

Non replacement of rejected materials

3.20 The thermal power stations place orders locally for purchase of materials required by TPS. The user department verifies the material to ascertain that the material is in accordance with the technical specifications of

[∇] Figures for 2003-04 are provisional.

Rejected materials valuing Rs.63.40 lakh were lying unreplaced.

the order. Stores purchase code of the Board prescribes that stores not received in accordance with the technical specifications, should be rejected outright and the firm should be informed accordingly within ten days from the date of receipt of material. As on 31 March 2004, material costing Rs.63.40 lakh received through 165 purchase orders up to November 2003 were lying rejected in four TPSs. The details are given below:

(Amount rupees in lakh)

Name of TPS	Number of purchase orders	Material received during	Amount
Ukai	37	Up to September 2003	9.95
Gandhinagar	73	May 1999 to October 2003	34.06
Sikka	11	April 2000 to November 2003	12.33
Panandhro	44	June 1996 to October 2003	7.06
Total	165	--	63.40

Of these 165 cases, intimation of rejection in 29 cases was given within the prescribed time of 10 days, in 103 cases, the intimation of rejection was given between 11 and 728 days and in the remaining 33 cases details regarding intimation of rejection were not available on records. Thus, rejected material remained in TPS stores mainly due to delay in giving intimation of rejection to suppliers. Besides, store purchase code did not prescribe any procedure to deal with such rejected material. Audit noticed that the above mentioned materials were purchased locally by respective TPS and there was no system of pre-despatch inspection. The Board did not make concerted efforts for replacement of the rejected materials.

The Government/ Board stated (August/October/November 2004) that actions were being taken for finalising the orders.

Delay in disposal of scrap

3.21 Periodical review and disposal of accumulated scrap augments working capital, releases space and reduces pressure on inventories. Timely disposal also prevents deterioration in quality and value of the scrap. The position of scrap as at the end of each year during 1999-2004 in five* TPSs is tabulated below:

(Rupees in lakh)

Year	Opening balance	Addition during the year	Total	Value of scrap sold	Closing balance
1999-2000	467.32	491.79	959.11	445.47	513.64
2000-01	513.64	421.84	935.48	517.21	418.27
2001-02	418.27	590.40	1,008.67	442.20	566.47
2002-03	566.47	627.38	1,193.85	733.95	459.90
2003-04	459.90	546.00	1,005.90	476.25	529.65

Delay in disposal of scrap resulted in blocking of fund.

It may be seen from the above table that during the last five years, scrap valuing Rs.4.18 crore to Rs.5.66 crore was lying in the stores resulting in blocking of fund. The accumulation of scrap was due to procedural delays

* Gandhinagar, Panandhro, Sikka, Ukai, Wanakbori.

coupled with delayed decision and absence of fixed timetable for timely disposal as discussed in succeeding paragraph.

The Government/ Board stated (August/October/November 2004) that scrap disposal was being geared up by re-delegation of powers for disposal of scrap to TPS Chief Engineers. The fact remained that accumulation of scrap was due to procedural delays coupled with delayed decision.

Loss due to delay in disposal of shaft of circulating water pump

3.22 The Board approved (November 2000) auction for disposal of scrap materials including 8,300 Kg. shaft of circulating water pump. The Board estimated its sale value at Rs.16.60 lakh; against which it received (December 2000) highest bid of Rs.31.66 lakh including tax for shaft of pump from M/s.Anil Metals, Ahmedabad with 60 days validity. The Board instead of selling the material to the highest bidder decided (March 2001) to get the material valued through Government approved valuer (GAV). The GAV while assessing the value at Rs.16.18 lakh stated (January 2002) that the price at the time of actual disposal would depend on market conditions. The shaft of pump was sold (October 2002) for Rs.21.34 lakh including taxes after a delay of 21 months (December 2000 to October 2002). Thus, absence of specific guidelines of the Board for valuation of scrap resulted in short recovery of Rs.10.32 lakh besides blocking of fund.

Absence of specific guidelines for valuation of scrap resulted in short recovery of Rs.10.32 lakh.

The Government/ Board stated (August/October/November 2004) that there was no procedure for valuation of scrap material through Government approved valuer. There was also no difference between valuation of Board and GAV.

The reply was not acceptable as the price bid received for auction was higher by 91 *per cent* from its own estimates, due to absence of system wherein prevalent market conditions were not considered for valuation of scrap. This deprived the Board of the benefit of higher prices.

Advances to suppliers/contractors

3.23 The terms and conditions of supply order/ contract at times provide for payment of advance to suppliers/ contractors which are adjusted as and when supplies/ services are received/ rendered. As on 31 March 2004, an amount of Rs.21.97 crore was pending for adjustment in the books of six^e TPSs which included Rs.14.45 crore outstanding for 2-18 years and above.

Advances of Rs.14.45 crore were pending for adjustment for 2-18 years and above.

During test check, Audit noticed that the advances were not being adjusted promptly/ correctly due to improper coordination between stores and accounts section of the TPS. Audit noticed that due to incorrect adjustments, WTPS accounts showed credit balance of Rs.43.90 lakh in advance to suppliers account.

^e Dhuvaran, Gandhinagar, Panandhro, Sikka, Ukai, Wanakbori

This shows that there was no system for review of these advances to facilitate pursuance for settlement where advances were outstanding for long periods, also the extent to which materials were received from suppliers and the amounts actually recoverable *etc.*, were not readily ascertainable.

The Board stated (August/October/November 2004) that action was being taken after verification of old records for adjustment of outstanding advances.

Non-commissioning of fire protection system

Fire protection system valued at Rs.1.46 crore could not be commissioned even after a lapse of 12 years.

3.24 The Board placed an order (August 1991) on Mather and Platt (India) Limited, Bombay (M&P) for supply, erection and commissioning of fire protection and alarm system at Utran Gas Based Power Station (UGBPS) at a total price of Rs.1.46 crore. Though the entire work was to be completed by 22 April 1992, the system has not been commissioned in toto (August 2004). Earlier M&P had expressed inability (June 1993) to provide Halon fire protection system (to be imported from USA), as manufacture of the system was stopped in view of Montreal protocol acceded to by India to phase out all ozone depleting substances by 2010.

The Board had earlier consulted Desein Private Limited who opined (May 1993) that Board should go for conventional CO₂ system where Halon protection system was still to be installed. However, Board continued its insistence for implementation of Halon system. During a meeting (March 1995) with Central Electricity Authority, it was clarified to the Board that Halon system will be phased out in India by 2003.

The Board issued (15 March 1997) Amendment V extending the time limit up to 2 November 1997 and deleted the Halon system from the scope of work. Even after the extension of time limit, the work was restarted only in December 2000 and after executing part of work M&P expressed inability (October 2003) to execute the balance work. The Board encashed the bank guarantee (28 November 2003) of Rs.13.89 lakh and the contract was closed with payments made to the extent of Rs.1.14 crore (February 2004).

Thus, Board's delayed decision to delete Halon fire protection system despite being aware of its phasing out in near future delayed the execution of fire protection system besides depriving UGBPS of critical fire protection facility.

The Government/ Board (August/October/November 2004) stated that the work was not completed in toto but the installed part could be operated and plant could be safeguarded in emergency. The reply was not acceptable as the fact remained that the fire protection system remained uninstalled in toto even after a delay of more than 12 years due to lack of Board's foresight, inaction and non-acceptance of experts' advice to go for conventional CO₂ system in place of Halon system.

Conclusion

The Board took excess time in purchase of vital spares and finalisation of the price of fuel, which resulted in avoidable expenditure and generation loss. The Board has not laid down effective inventory control system by stipulating the minimum, maximum and re-ordering level for effective control on procurement and consumption of spares and materials; this led to short/ delayed procurement of stores and resulted in generation loss. In the absence of specific norms for classification of stock into active, slow and non-moving, the power stations were following different norms resulting in incorrect classification and ineffective control on inventory.

The Board needs to evolve a system to fix stocking norms and review all the classified and unclassified non-moving stock lying at the power station stores and initiate immediate action for their utilisation/ disposal. Further, the system of emergency purchase needs to be reviewed and revamped.