

CHAPTER IX: MINISTRY OF HEAVY INDUSTRIES AND PUBLIC ENTERPRISES

Bharat Heavy Electricals Limited

9.1 Avoidable payment of compensation

Designing transformers without ascertaining actual operational requirements of the client, coupled with failure to undertake corrective measures resulted in avoidable payment of ₹163.17 crore.

M/s Bharat Heavy Electricals Limited (BHEL) received (May 2003) an order from M/s Zesco Limited, Zambia for supply and installation of 10 numbers of main transformers, rehabilitation of two existing auxiliary transformers and training for their Kafue Gorge Power Station at a contract price of US\$ 5.96 million. BHEL supplied and installed the transformers between March 2006 and May 2008. However, subsequent to premature failure of three transformers in 2006 and another one in 2008, M/s Zesco commissioned consultants to undertake “dissolved gas in oil” (DGA) analyses on all the transformers. The consultants concluded (January/February 2009) that the DGA signatures of eight out of 10 transformers were ‘*unacceptable*’ indicating an actual thermal fault or ‘*suspect*’ indicating either the ‘*the development of a thermal fault*’ and/or ‘*unusual levels of hydrocarbons*’ or ‘*high moisture content and low dielectric strength*’. Accordingly, M/s Zesco served (March 2009) notice to BHEL pursuant to Clause 27.4 of the General Conditions of Contract (GCC) of an overheating defect for the purpose of Clause 27.2 of GCC. Since both the parties failed to resolve the issues, M/s Zesco preferred (May 2012) arbitration against BHEL.

Audit observed that BHEL accepted (September 2009) that it had designed the transformers assuming that both the LV windings would be simultaneously loaded with equal capacity, since there was no mention of single LV loading condition or unequal loading of LV winding by the two generators, and heating of clamp plates seemed to be the reason for high DGA gases in transformers. On the other hand, M/s Zesco opined (November 2009) that the specification might not have mentioned unequal loading, but neither did it mention equal loading. Thus, the assumption made by BHEL was a material one and the same should have been cleared with them before actual design of the transformers.

The Arbitration Tribunal examined the evidence presented to it, heard arguments of both the parties and concluded (December 2014) that BHEL had failed to take prompt remedial action in coordination with M/s Zesco. It concluded that in a period of 16 months since March 2009, BHEL (i) maintained that there was no design defect, (ii) continued to press its proposal to run the transformers on an equal loading basis, and (iii) had failed to produce either the promised R&D department electromagnetic analysis of equal vs. unequal loading or the permitted loading unbalances limits, or to produce any reports or undertake any investigations responsive to the series of consultant reports, nor made any other concrete proposal. As such, the arbitration was awarded (December

2014) in favour of M/s Zesco, directing (June 2015) BHEL to pay compensation, which worked out to ₹ 163.17 crore (as of 31 December 2015), towards replacement cost of 10 transformers and other costs related to arbitration.

BHEL stated (November 2015) that the three failures in 2006 outside the active part of transformers were rectified. There was a failure in 2008 due to inadvertent admission of a copper strip during repair work carried out in 2006, and M/s Zesco was sceptical about the quality of transformer and appointed consultant in 2009, while the defects claimed by the customer were suspected and not proved. The Arbitration Tribunal awarded the case against BHEL due to presence of black marks in flitch plates and felt that this was due to inherent design defect, which was a common factor for all the transformers. It was added that as per the opinions taken from the Zambian Law firm and BHEL Counsel at London, option of challenging the award was very bleak and as per the award, BHEL has to pay the dues to M/s Zesco.

The reply is to be viewed against the fact that BHEL had failed to provide corrective measures even within three years of receiving the notice of fault, though it accepted (September 2009) that the transformer was designed assuming that both the LV windings would be simultaneously loaded with equal capacity without ascertaining the actual operational requirements of M/s Zesco.

Thus, designing transformers without ascertaining the actual operational requirements of M/s Zesco assuming that the transformers would be operated on equal loading basis, coupled with failure of BHEL to undertake corrective measures even within three years from the notice of default resulted in avoidable payment of ₹163.17 crore towards compensation.

The matter was reported to the Ministry in January 2016; their reply was awaited (March 2016).

9.2 Avoidable expenditure on payment of sales tax

Failure to include enabling clause in the agreement for reimbursement of taxes for Away Centre Fabrication (ACF) despatches resulted in the Company bearing an avoidable expenditure of ₹ 11.27 crore.

Bharat Heavy Electrical Limited (Company) secured (April 2008) two contracts from Chhattisgarh State Power Generation Company Limited (CSPGCL) for supply of Boiler Turbine Generator, Electricals, Station Control & Instrumentation and mandatory spares for Marwa and Korba West Thermal Power Project for ₹ 1845 crore and ₹ 942 crore (exclusive of all taxes and duties) respectively. Accordingly, the Company entered into an agreement (September 2009) with CSPGCL and allocated ₹ 851 crore to its High Pressure Boiler Plant (Unit) Tiruchirappalli for the supply of 62369 MT of structural and ducting items. These were to be manufactured by Away Centre Fabrication (ACF) vendors using their own material as per drawings of the Company and to be despatched direct to site from ACF vendors.

As per the terms of the agreement and General Conditions of Contract (GCC), 100 *per cent* taxes and duties as applicable on BHEL manufactured items including

mandatory spares would be reimbursed by CSPGCL at actuals on production of satisfactory documentary evidence. GCC also stipulated that CSPGCL would reimburse all applicable taxes and duties at actuals in respect of direct transactions between the CSPGCL and the Company. However, the reimbursement of sales tax on the ACF supplies was not covered under the contracts signed with CSPGCL.

The proposal for ACF operations was taken up (January /February 2009) by the company during the stage of Billing Break up (BBU) approval and after receipt of BBU approval, the company started ACF supplies. Initially CSPGCL reimbursed sales tax amounting to ₹ 11.27 crore towards VAT/CST on the ACF supplies (Marwa ₹ 7.14 crore and Korba ₹ 4.13 crore). But later on it recovered (October 2010) the sales tax already reimbursed citing that reimbursement of Sales tax on ACF items was not in conformity with GCC/agreement.

Audit observed that despite knowing (January 2009) that sales tax on ACF dispatched items were not reimbursable as per GCC, BHEL did not take action for including suitable clause to cover it while entering into agreement with CSPGCL which resulted in payment of avoidable sales tax of ₹ 11.27 crore.

While admitting the audit observation BHEL in its reply stated (August 2015) that the concept of Away Centre Fabrication (ACF) was in nascent stage in 2008, and that proposal for ACF operations was taken up during the stage of Billing Breakup (BBU) approval itself. Further, it would follow up with customer along with Power Sector marketing, New Delhi for realisation of the same.

The reply of the company needs to be viewed in light of the following facts:

- Though the contract was awarded in April 2008 the agreement was signed only in September 2009.
- The company spelt out the specific terms on reimbursement of taxes and duties in the agreement with CGSPCL but failed to incorporate a clause for reimbursement of taxes for ACF despatches to Marwa and Korba Thermal power projects.
- Further, in a similar contract placed (February 2009) with MP Power Generating Company Ltd, BHEL resorted to ACF despatches after obtaining (July 2009) approval from the customer for reimbursement of tax.
- Getting realisation without obtaining amendments to the contract (which at this stage will not be possible) is remote.

Thus, BHEL's failure to include enabling clause in the agreement for reimbursement of taxes for ACF despatches resulted in the Company bearing an avoidable expenditure of ₹ 11.27crore towards payment of sales tax.

The matter was reported to the Ministry in December 2015; their reply was awaited (March 2016).

Recommendation:

- ***The company may incorporate suitable clause for recovery/reimbursement of Sales tax for items supplied/manufactured by sub-vendor/ACF unit works.***

9.3 Unfruitful expenditure on procurement of rail wagon

Deficient planning and subsequent non-utilisation of special rail wagon by BHEL resulted in unfruitful expenditure of ₹ 8.07 crore on procurement of the wagon.

Bharat Heavy Electricals Limited – High Pressure Boiler Plant – Tiruchirappalli (Unit) owns a 24 Axle Special Wagon with carrying capacity of 260 Tons (acquired in 1984 at a cost of ₹ 56.04 lakh) designed exclusively for transporting boiler drum from the Trichy Unit to other parts of the country as over-dimensional consignments (ODCs). This wagon was grossly under-utilized as only three boiler drums were transported in 2009-10 and no boiler drum was transported from 2010-11 onwards.

Power Sector Marketing of BHEL (2006) made a business projection for procurement of 300 tons Drum Transportation Railway Wagon under Capacity Augmentation of Boiler shop Phase II at HPBP due to projection of increased numbers of sub-critical boilers and due to unsuitable road infrastructures in India for heavy consignments. The scheme was approved by the Board of Directors on 25.05.2007.

Despite under-utilization of the wagon, under the scheme for Capacity Augmentation of Boiler Shop (Phase-2), the Trichy Unit procured (July 2009) 300 Ton Drum Transportation Railway Wagon from the Company's Jhansi Unit at a cost of ₹ 8.07 crore and the same was commissioned in August 2013.

Audit observed that:

- One of the objectives of the Capacity Augmentation Scheme (Phase-2) was to enhance capability to build higher rating boilers through "Once Through Super Critical Technology" from 800 MW to 1000 MW in which no drum is involved. Thus, the procurement of 300 Ton Drum Transportation Railway Wagon was not need-based.
- The management placed the purchase order for 300 tons drum transportation wagon on BHEL, Jhansi in July 2009 without reassessment of its requirement in the changed scenario of road infrastructure in India.
- Not even a single boiler drum was transported by this wagon so far (August 2014).

BHEL justified the procurement (February 2013) on the ground that prior to 2009-10, the road infrastructure in India was not suitable for transportation of heavy consignments and only mechanical trailers were available in the country. In the mean time, road infrastructure started developing and vehicles with hydraulic axles were introduced and transportation of boiler drums by road was found successful and economical. Further, annual savings of ₹ 86 lakh in hire charges to BHEL would accrue by the use of the drum. BHEL further stated (August 2014) that since all running orders were super critical boilers in which no drum was involved, the 300 Ton Drum Wagon could not be utilized. BHEL reiterated (November 2014) that in the 13th five year plan scenario, where super critical technology was adopted, the utility of special railway wagons for drum transportation has reduced.

The reply is to be viewed against the fact that the procurement order for the wagon was placed in July 2009 based on the business projection made in 2006 without reassessment of the situation prevailing at the time of placement of order.

Thus, defective planning for procurement of wagon resulted in unfruitful expenditure of ₹ 8.07 crore.

The matter was reported to the Ministry in October 2015; their reply was awaited (March 2016).