

**METRO RAILWAY, CALCUTTA—  
PROCUREMENT OF  
SOPHISTICATED SIGNALLING  
EQUIPMENT**

**MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

**PUBLIC ACCOUNTS  
COMMITTEE  
1993-1994**

**TENTH LOK SABHA**



**LOK SABHA SECRETARIAT  
NEW DELHI**

**SIXTY-SECOND REPORT**  
**PUBLIC ACCOUNTS COMMITTEE**  
**(1993-94)**

**(TENTH LOK SABHA)**

**METRO RAILWAY, CALCUTTA—  
PROCUREMENT OF SOPHISTICATED  
SIGNALLING EQUIPMENT**

**MINISTRY OF RAILWAYS  
(RAILWAY BOARD)**

[Action Taken on 9th Report of Public Accounts Committee  
(10th Lok Sabha)]



*Presented to Lok Sabha on 3.3.1994*  
*Laid in Rajya Sabha on 3.3.1994*

**LOK SABHA SECRETARIAT  
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**COMPOSITION OF PUBLIC ACCOUNTS COMMITTEE  
(1993-94)**

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## INTRODUCTION

I, the Chairman of the Public Accounts Committee, as authorised by the Committee, do present on their behalf this Sixty-Second Report on action taken by Government on the recommendations of the Public Accounts Committee contained in their Ninth Report (Tenth Lok Sabha) on Metro Railway, Calcutta—Procurement of Sophisticated Signalling Equipment.

2. In their earlier Report, the Committee had found that there was an inordinate delay in the procurement of a sophisticated signalling equipment for the Metro Railway Calcutta. They had found that the Metro Railway had foreclosed their contract with Electronic Corporation of India Ltd. (ECIL) entered into in 1977 after a period of eight years and had chosen to import the equipment. The foreclosure of the contract with ECIL, apart from allowing an investment of Rs. 1.93 crores going idle had also caused a setback to the indigenous efforts made in the development of the technology. The Committee had arrived at the conclusion that all issues connected with the development of the system including the exact specifications etc. had not been clearly identified and laid down thus resulting in avoidable delay and defeating the very objective of promoting indigenous development as was envisaged by Railways while entering into a contract with ECIL in 1977. The Committee had, therefore, recommended that the matter should be investigated fully and responsibility fixed in this regard. They had also desired that proper and adequate planning taking due note of the specifications to be fulfilled are clearly laid down before embarking on projects of this kind so as to avoid time and cost overrun and unnecessary imports. In this Report the Committee have arrived at the conclusion that the Railways had not conducted any meaningful investigation so as to find out as to how and why the planning process had failed and as to who were responsible for the same. They have, therefore, reiterated their earlier recommendation.

3. The Committee, in their original report, had while emphasising the need for indigenous development of the equipment had recommended that ECIL should be closely associated with commissioning of the equipment in phase I so that they were able to successfully undertake the work assigned to them in Phase II. The Committee have in this Report noted that contrary to the above, ECIL's further association in the project has now been discontinued. They are deeply distressed to note that even after having spent a considerable amount of resources, the indigenous efforts to absorb the technology for CATC equipment had received a second setback in the same project and the expectation that the experience gained by ECIL in the process would help in upgrading the indigenous technology and thereby in meeting the future requirements of the country has been

totally belied. The Committee have desired that the reasons for not associating fully ECIL in Phase I work should be thoroughly enquired into and the Committee apprised of the same.

4. This Report was considered and adopted by the Public Accounts Committee at their sitting held on 16 February, 1994. Minutes of the sitting form Part II of the Report.

5. For facility of reference and convenience the recommendations of the Committee have been printed in thick type in the body of the Report and have also been reproduced in a consolidated form in Appendix to the Report.

6. The Committee place on record their appreciation of the assistance rendered to them in the matter by the office of the Comptroller and Auditor General of India.

NEW DELHI;  
21 February, 1994  

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2 Phalgun, 1915 (Saka)

BHAGWAN SHANKAR RAWAT,  
*Chairman,*  
*Public Accounts Committee*

## CHAPTER-I

### REPORT

This Report of the Committee deals with the action taken by the Government on Committee's recommendations and observations contained in their Ninth Report (10th Lok Sabha) on Paragraph 3.15 of the Report of C & AG of India for the year ended 31st March, 1989 (No. 10 of 1990), Union Government (Railways) relating to Metro Railway, Calcutta procurement of Sophisticated Signalling Equipment.

2. The Ninth Report which was presented to Lok Sabha on 27 February, 1992 contained 11 recommendations. Action taken notes have been received in respect of all the recommendations and these have been categorised as follows:

- (i) Recommendations/observations which have been accepted by Government;  
Sl. Nos. 2, 3, 4, 5, 9 and 10.
- (ii) Recommendations/observations which the Committee do not desire to pursue in view of replies received from the Government;  
Sl. Nos. 1, 6 and 7.
- (iii) Recommendations/observations the replies to which have not been accepted and which require reiteration;  
Sl. Nos. 8 and 11
- (iv) Recommendations/observations in respect of which the Government have furnished interim replies;  
NIL

3. In the succeeding paragraphs the Committee will deal with action taken on some of their recommendations.

*Dealy in procurement of equipment due to inadequate planning.*  
(Sl. No. 8—Paragraph 67)

4. The Project Report of Metro Railway, Calcutta approved by the Railway Board in 1972 had provision for a Continuous Automatic Train Protection Type of Signalling System (CATP) for the underground Metro Railway. The CATP which consists of signalling and continuous speed control by automatic application of brakes helps in maintaining an adequate distance between successive trains.



5. In their Ninth Report (1991-92, Tenth Lok Sabha), the Committee had observed that Metro Railway Administration had not been able to acquire CATP Signalling system for the underground Railway although a part thereof had been functioning for more than six years. The work of developing the system was entrusted to Electronic Corporation of India Ltd. (ECIL) in April, 1977 only, although by end of 1973, the earlier decision to import the system from Soviet Union had been changed in favour of developing the system indigenously for want of adequate funds. Even after entrusting the work late to ECIL, the development work progressed at a very slow pace and after eight years of indigenous efforts, the Railways chose to foreclose the contract with Electronic Corporation of India Ltd. in April, 1985. The foreclosure of the contract with Electronic Corporation of India Ltd. had resulted in the investment of Rs. 1.93 crores including grants-in-aid and value of equipments supplied going idle. Further this also had the effect of virtual abandonment of indigenous research in this area. The Committee had also noted that there was considerable delay in the installation of the CATP system imported subsequent to the foreclosure of contract with ECIL. The Committee had considered this undue long delay in procurement of this important equipment for the underground Railway as unjustified which could have been avoided by a careful and systematic planning.

6. Commenting on the manner in which the development of the system was planned, the Committee in Paragraph 67 of the Report had recommended:

“The Committee feel that in order to encourage indigenous production it is absolutely necessary to ensure that such developmental works are conceived and planned so that efforts and time expended are fruitfully utilised and investment made does not become infructuous or sub-optimal in terms of objectives achieved. The Committee regret to observe that in this case the indigenous efforts had a setback on account of the controversy regarding the interpretation of the multi-component failure tests. The ECIL's plea that they could not meet the specification in the way the Railways described the multi-component failure and the final acceptance being based on acceptance test procedure which did not initially exist proves that all issues connected with the development of the system including the exact specifications etc. had not been clearly identified and laid down thus resulting in delay and defeating the very objective of promoting indigenous development. The Committee recommend that the matter should be investigated fully and responsibility fixed in this regard. They also desire that proper and adequate planning taking due note of the specifications to be fulfilled are clearly laid down before embarking on projects of this kind so as to avoid time and cost over-run and unnecessary imports.”

7. In their action taken note the Ministry of Railways have stated as follows:

“As desired by the Committee, the matter has been investigated.

As already brought out in the Committee's Report, Railways were keen on the indigenous development of CATP/CATC. All out support was accordingly given by the Railways to ECIL to develop, the CATP indigenously. The indigenous development, however, could not succeed due to the fact that no prior experience or expertise in the development of a complex system like CATP/CATC was available in the country. Calcutta Metro Railway is the first project of its kind. As a result it took some time to evolve specifications, test procedures and also plan for the different activities. Sometime was also lost due to the suspension of trials on account of the flooding of Calcutta Metro Railway. Meanwhile CATP/CATC technology in the developed countries of the world had got upgraded involving use of digital electronics and micro processors. As ECIL were unable to develop the equipment to the State of-the-art technology within the time frame then envisaged, import had to be resorted to. However, the indigenous efforts made by ECIL in this regard will enable them to quickly absorb the state-of-the-art technology between them and GEC-ALSTHOM. The efforts will, thus, not be wasted.

It may, therefore, be appreciated that the delay in the procurement of the CATP/CATC was as a result of the above factors which were beyond the control of the Railways.

However, instructions have been issued to all concerned to avoid time and cost over-run and also unnecessary imports in future projects of this nature.”

8. The Department of Atomic Energy in their action taken note states as under:

“GEC-ALSTHOM had initially offered Analog technology to Indian Railways. Subsequently, we were informed that GEC-ALSTHOM were giving digital technology for Phase-I and hence ECIL was asked to negotiate with GEC-ALSTHOM for amending the contract accordingly. Consequently, GEC-ALSTHOM increased their prices which could not be settled between ECIL, Railways and GEC-ALSTHOM. This resulted in enormous delay of more than two years and now Railways wants to delete the entire supply portion of the contract which amounts to cancellation of CATC Phase-II contract on ECIL, and thereby it defeats the sole purpose of promoting indigenous technology.

Regarding multicomponents failure tests, ECIL in not aware of whether or not the technology offered by GEC-ALSTHOM to Railways for Phase-I meets these requirements in the manner in which ECIL's indigenous CATP equipment was subjected to. ECIL

was also not involve by Metro Railways in the Evaluation of GEC-ALSTHOM'S prototype for Phase-I."

9. In their earlier Report, the Committee had found that there was an inordinate delay in the procurement of a sophisticated signalling equipment for the Metro Railway Calcutta. They has observed that the contract for the same which was entered into in April, 1977 between Railways and Electronic Corporation of India Ltd. (ECIL) had to be foreclosed by Railways after a period of eight years. Subsequently, the Railways had chosen to import the equipment. The Committee had found that the foreclosure of the contract with ECIL, apart from allowing an investment of Rs. 1.93 crores going idle had also caused a setback to the indigenous efforts made in the development of the technolgy. This had happened mainly on account of a controversy between the Railways and ECIL regarding the interpretation of an acceptability test termed as "multi-component failures test". ECIL had pleaded that they could not meet the specifications in the way the Railways described the multi-component failure and that the final acceptance was being based on a text procedure which was not prescribed initially. The Committee had arrived at the conclusion that all issues connected with the development of the system including the exact specifications etc. had not been clearly identified and laid down thus resulting in avoidable delay and defeating the very objective of promoting indigenous development as was envisaged by Railways while entering into a contract with ECIL in 1977. The Committee had, therefore, recommended that the matter should be investigated fully and reponsibility fixed in this regard. They had also desired that proper and adequate planning taking due note of the specifications to be fulfilled are clearly laid down before embarking on projects of this kind so as to avoid time and cost overrun and unnecessary imports. The Ministry of Railways have in their action taken note while stating that the matter has been investigated have sought to explain the circumstances leading to the delay in the procurement of the equipment and have added that the delay was beyound their control and that instructions have now been issued to all concerned to avoid time and cost overrun and also unnecessary imports in future projects of this nature. The Committee are constrained to point out that the arguments now advanced by the Ministry are in no way different from what was adduced earlier and that the action taken note is completely silent about the nature of the investigation conducted by the Railways, their actual findings and the level at which they have been accepted. The Committee regret to conclude from the above that the Railways had not conducted any meaningful investigation so as to find out as to how and why the planning process had failed and as to who were responsible for the same. The Committee, therefore, reiterate their earlier recommendations and would like to be informed of the concrete action taken in the matter.

*Indigenous Development of the Equipment (S.No.11—Para 70)*

10. In their Ninth Report the Committee had also noted that there was considerable delay in entering into a contract for the import of the equipment after the contract with Electronic Corporation of India Ltd. was foreclosed. While the said contract with ECIL was foreclosed by April, 1985 a fresh contract with a foreign firm M/s. ALSTHOM, France (now GEC-ALSTHOM) for Phase I was finalised on 30.10.89 and for Phase II in February 1990. The contract with the foreign firm was for design, manufacture, supply, installation, testing and commissioning of CATP system for phase I with transfer of technology and know how to ECIL to cover the system for Phase II. Emphasising the need for indigenous development of the technology the Committee in Para 70 of the Report had recommended as follows:

“According to the Railways the trials on the prototype received from M/s. ALSTHOM are likely to start from March, 1992 and the approval to the prototype is to be given in two months time. CATC system for phase I would be available and fully installed by June, 1992 as per the time schedule given by the Contractor. ECIL after absorbing the technology from M/s. ALSTHOM is expected to supply the equipment for the Phase II requirement by June, 1994. Commenting on the point made by ECIL that they should be given a chance to participate in the scrutiny of design with M/s. ALSTHOM, the Railways have clarified that the Phase I design was finalised in consultation with ECIL. As stipulated by Department of Electronics, ECIL were associated while approving the CATC system in the specifications, formulations as well as technical evaluation of the offers received against CATC tender. In fact, ECIL had confirmed in June, 1987 that the offer of M/s. ALSTHOM fully complied with the specification and was of the state of art technology. According to the agreement with M/s. ALSTHOM, ECIL will get all technical documents and drawings required to enable them to produce CATC equipment for Phase II which will be similar to that of Phase I and hence all the information will be available to ECIL. While taking note of the assurance given by Railways in this regard, the Committee desire that ECIL should be closely associated so that they are able to imbibe the technology, design, formulations, specifications etc. and are able to manufacture equipment for Phase II requirement without any difficulty. The Committee expect ECIL to gainfully utilise their experience in indigenous research and that likely to be gained by transfer of technology from M/s. ALSTHOM in meeting the future requirements of the country in this regard.”

11. In their action taken note the Ministry of Railways (Railway Board) have state as follows:

“It may be stated that ECIL are being closely associated in matters connected with the approval of prototype, installation and commissioning work for Phase I so that they are able to absorb the technology. This will enable them to successfully commission the equipment for Phase II without any difficulty. The expertise required by ECIL for Phase II work will be utilised for meeting the future requirements of such equipment in the country.”

12. The Department of Atomic Energy in their note stated:

“Although ECIL was associated alongwith RITES in the framing of specification, and with Metro Railways in the evaluation of the offers received against the CATC tender, ECIL has not been involved when GEC-ALSTHOM has changed the technology from Analog to Digital. Further, ECIL was not involved either in the design of Phase I CATC or in the evaluation of the prototype.

Now Railways have backed out on the Phase II contract on ECIL i.e. from TOT absorption manufacture and supply of equipment. This proves that Railways are not serious about indigenous research and development.

Therefore, the Action Taken by the Govt. recorded & audited as of 28.8.92 is unlikely to be put into practice in view of the latest communication received from Metro Railway.

ECIL has paid the first instalment to GEC-ALSTHOM on July, 1991 Rs. 82 lakhs for TOT and requested them to give the schedule of TOT.”

13. When enquired about the latest position the Ministry of Railways (Railway Board) in a communication dated 4.2.1994 stated as follows:

“A contract was awarded by Metro Railway, Calcutta to M/s ECIL, Hyderabad on 31.12.1990 for supply of GATC equipment for Phase II at a cost of Rs. 21.47 crores. ECIL were to get transfer of technology from French Firm M/s GEC-ALSTHOM and to manufacture the equipment in India, for its supply and installation in the North section of Calcutta Metro. As submitted in the Action Taken Note, ECIL were being closely associated in matters connected with the approval of prototype, installation and commissioning work for Phase I, so as to enable them to absorb the technology. However, except the payment of certain advances by ECIL to GEC-ALSTHOM in July, 1991, no further progress was made in acquisition of technology due to dispute regarding prices of the SKD/CKD components to be supplied by GEC-ALSTHOM.

In the meanwhile, a study conducted by RITES revealed that the anticipated volume of traffic on Calcutta Metro could be much lower than what had been originally anticipated in the Project Report. With this traffic projection, the required headway could be only 4 to 5 minutes instead of 90 second, as envisaged earlier. Ministry of Railways, therefore, took a decision not to procure the remaining 88 Metro coaches for the time being. The CATC equipment for these 88 coaches were to be part of Phase-II contract. Non-procurement of coaches meant reduction in both the train borne equipment as well as track side equipment. It was also felt that the requirement for Phase II could be more or less not by utilising the surplus equipment of Phase-I and any more equipment needed could be procured from GEC ALSTHOM direct. Since there was a steep decrease in the requirement of imported materials, the transfer of technology was found to be unviable.

With this changed scenario, the scope of the contract with ECIL had to be reduced to that of supply of indigenous mterials, installation and commissioning, Since ECIL were not willing to perform the contract at the resultant reduced cost of Rs. 2.5 crores, the contract for CATC Phase-II with ECIL has since been rescinded in April, 1993. With these developments, ECIL's further association in the CATC work for Calcutta Metro stands discontinued."

14. In their earlier report the Committee had observed that after the foreclosure of the agreement with Electronic Corporation of India Ltd. (ECIL) in April, 1985 Metro Railway, Calcutta had entered into a fresh agreement with a foreign firm M/s. ALSTHOM France for the import of the CATC equipment. The contract with the foreign firm was for design, manufacture, supply, installation, testing and commissioning of CATP system for Phase-I with transfer of technology and know-how to ECIL to cover the system for Phase-II. The contract for supply of equipment for Phase-II was awarded to ECIL on 31.12.1990 at a cost of Rs. 21.47 crores. The Committee were assured by the Ministry of Railways earlier that the Phase-I design was finalised in consultation with ECIL so that they were able to absorb the technology and enable them to successfully commission equipment for Phase-II without any difficulty. While taking note of this assurance the Committee had in their earlier report desired that ECIL should be closely associated in the process so that they were able to imbibe technolgy, design, formulations, specifications, etc. and were able to manufacture equipment for Phase-II requirements without difficulty. They had also desired that ECIL should gainfully utilise their experience in indigenous research in this process in meeting the future requirements of the country in this regard.

15. In their action taken reply, the Ministry of Railways initially stated that ECIL was being closely associated in matters connected with the approval of prototype, installation and commissioning work for Phase-I.

However, the Department of Atomic Energy maintained in their note that ECIL had not been adequately involved in the evaluation of prototype equipment and that the Ministry of Railways have now backed out from the Phase II contract with ECIL. They also stated that they had already paid the first instalment of Rs. 82 lakhs to GEC—ALSTHOM towards absorption of transfer of technology. When enquired by the Committee in this regard, the Ministry of Railways in their latest reply stated that the contract for CATC Phase II with ECIL has since been rescinded in April, 1993. Explaining the reasons for the same, the Ministry stated that the volume of traffic on Calcutta Metro now anticipated would be much lower than what had been originally envisaged thereby warranting a reduction in the number of coaches and the CATC equipment for those coaches. According to them, the requirement for Phase II would, therefore, be more or less met by utilising the surplus equipment in Phase I and by procuring direct from GEC—ALSTHOM, if necessary. In the opinion of the Ministry of Railways the transfer of technology would now not be viable in view of the steep decrease in the requirements. They also added that ECIL had not made any further progress in acquisition of technology due to the disputes regarding prices. According to Ministry of Railways with the changed scenario, the scope of the contract was reduce to Rs. 2.50 crores limiting to supply of indigenous materials, installation and commissioning etc. which eventually, ECIL did not agree to perform. Thus ECIL's further association in the CATC work for Calcutta Metro now stand discontinued. This, according to the Committee is a serious matter. Also the argument that frequency needed would not be as much as anticipated is not acceptable. The present volume of utilisation is affected by the fact that the system at present is truncated and thus cannot be the basis for correct projection of volume of traffic in future.

16. The Committee regret to note that despite the assurances given to them, ECIL was not involved in the project in a manner as was originally envisaged. They are deeply distressed to note that even after having spent a considerable amount of resources, the indigenous efforts to absorb the technology for CATC equipment had received a second setback in the same project and the expectation that the experience gained by ECIL in the process would help in upgrading the indigenous technology and thereby in meeting the future requirements of the country has been totally belied. The Committee desire that the reasons for not associating fully ECIL in Phase I work should be thoroughly enquired into and the Committee apprised of the same. They would also like to be informed of the precise quantum of investment made in the aborted attempt for the development of the equipment indigenously which had gone infructuous and the outcome of the dispute arising out of the discontinuance of association of ECIL with Phase II work.

**CHAPTER II**  
**RECOMMENDATIONS/OBSERVATIONS THAT HAVE BEEN**  
**ACCEPTED BY GOVERNMENT**

**Recommendation**

The work of development of a CATP system was entrusted by Metro Railways to ECIL in April 1977 who were selected because of their prior experience in development of AWS system stated to be similar to CATP. The draft specifications given in August 1977 and reiterated in September, 1982 included the provisions for catering to single as well as multi-component failures. The joint test procedure evolved by ECIL and Metro Railways in 1978 envisaged tests to be done in two phases; the first phase being experimental/bench model on the coded system to prove the possibility of practical realisation of design philosophy to be followed by extensive field testing the prototypes in Phase II trials.

(S. No. 2, Para 61)

**Action taken by the Ministry of Railways**

Noted for future guidance.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RAI/III/12-170/88 ATN dated 28.8.92.

[Ministry of Railways (Rly. Board's) case No. 88/MTP/C/25/6/Vol. II.]

**Action Taken by the Department of Atomic Energy**

Noted for future guidance.

**Recommendation**

A technical Report published by Metro Railways in April, 1980 had concluded that the tests and field trials conducted upto that time had found the equipment to be satisfactorily meeting the functional and fail safe requirements. According to Railways, this certificate was in respect of Phase I tests only which confined to single component failure.

(S. No. 3, Para No. 62)

**Action Taken by the Ministry of Railways**

Noted for future guidance.

This has been seen and vetted by Audit vide their U.O.I. NO. 1290—RAI/III/12-170/88 ATN dated 28.8.92.

[Ministry of Railways (Rly. Board's) case No. 88/MTP/C/25/6/VOL. II.]

**Action taken by the Deptt. of Atomic Energy**

Noted for future guidance.



### **Recommendation**

ECIL's equipment was on prototype trials from January, 1983 to August 1984 when it had to be temporarily stopped due to deluge and again started in March, 1985. The unsafe side features noticed during this phase of testing were discussed in Joint Review meetings on 11.3.85, 14.5.85 and 10.6.85. The Committee are informed by Railways that the tests had revealed multi-component failures which led them to conclude that CATP equipment developed by ECIL would not meet the specifications and, therefore, a letter was issued to them in April, 1985 withdrawing the Certificate given earlier in June, 1980. Further, according to Railways, ECIL in the meeting of 10.6.85 had asked for 3 to 5 years to rectify all the defects including that of multi-component failure, as that involved a complete re-design of the system for which they did not have technology at that moment. However, a Committee consisting of Dy. CSEs and CSEs came to the conclusion at that time that the equipment as developed by ECIL would not be strictly safe.

(S. No. 4, Para No. 63)

#### **Action Taken by the Ministry of Railways**

Noted for future guidance.

This has been seen and vetted by Audit vide their U.O.I. NO. 1290-RA/III/12-170/88 ATN dated 28.8.92.

[Ministry of Railways (Rly. Board's) case No. 88/MTP/C/25/6/VOL. II.]

#### **Action taken by the Deptt. of Atomic Energy**

Noted for future guidance.

### **Recommendation**

ECIL on the other hand have contended that they designed and fabricated bench model, based on specifications given to them in 1977 and reiterated in 1982. Metro Railway, ECIL and Deptt. of Electronics regularly reviewed the specifications and the performance. After 2 years of trial of bench model, Metro Railway accorded safety approval to ECIL equipment. Further trials on bench model continued and no serious deficiency of multi-component failure was noticed and Metro Railway released purchase order worth Rs. 4.07 crores during March, 1984.

(S. No. 5, Para 64)

#### **Action Taken by the Ministry of Railways**

Noted for future guidance. However, it may be mentioned that at the time of the release of the above order the multi-component failure test in field trials had not been done.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RA/III/12-170/88 ATN dated 28.8.92.

[Ministry of Railways (Rly. Board's) case No. 88/MTP/C/25/6/VOL. II.]

**Action taken by the Deptt. of Atomic Energy**  
Noted for future guidance.

### **Recommendation**

The Committee find that an Experts Committee comprising representatives from Department of Atomic Energy, Defence Department of Electronics and Indian Institute of Technology Delhi was constituted in October, 1985. This Experts Committee after considering various options before it unanimously recommended import of CATP system by Metro Railway for the Esplanade-Tollygunj sections with a provision for transfer of technical know-how to ECIL for developing the equipment to meet future needs. The Committee are informed that apart from urgent requirement of the equipment based on the latest technology, the main consideration which weighed with the Experts Committee in recommending import of CATP system was the fact that with the state of development of CATP equipment of ECIL, the test resulting in unsafe side failures, the system could not be adopted for Calcutta Metro. The Experts Committee also desired that while calling global tenders, Metro Railway's specifications should be suitably updated for catering for proven system using solid state technology, stipulate the failure rate and specify the type of modulation, frequency range etc., to suit the new range of electronic equipment. The Committee feel that if the Experts Committee had been appointed at the initial stages it would have given directions and guidelines regarding the technology to be adopted, specifications for the equipments, mode of testing etc. which would have helped the successful development of the CATP system by ECIL much earlier and the resultant boost to indigenous development activities besides obviating the need for eventual import thereof.

(S. No. 9, Para 68)

### **Action Taken by the Ministry of Railways**

Committee's observations have been noted for future guidance.

The initial specifications formulated by Metro Railway in 1977 as well as ECIL's proposal to develop the system according to these specifications were submitted to DOE for their approval. DOE appointed a Steering Committee to monitor the progress of implementation. Again when Metro Railway pointed out unsafe side failures on ECIL's equipment, Railway Board appointed two separate Committee of Dy. CSTE's and CSTEs. On the basis of the reports of these two Committees only, DOE decided to appoint an Experts Committee. It may, therefore, be appreciated that the need for appointing an Experts Committee arose only after the two Committees at the level of Dy. CSTEs & CSTE's had concluded that ECIL's equipment had unsafe side features.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RA/II/12-170/88 ATN dated 28.8.1992.

[Ministry of Railways (Railway Board's) case No. 88/MTP/C/25/6/  
Vol. II]

### **Action Taken by the Deptt. of Atomic Energy**

Noted for future guidance.

### **Recommendation**

The Committee find that the global tenders for import of CATP system were floated in June, 1986 for design, manufacture, supply, installation, testing and commissioning of CATP system for Phase I (Esplanade-Tollygunj sections) with transfer of technology and know-how to ECIL to cover the system for Phase II. The recommendation of the tender Committee for accepting the offer of M/s. ALSTHOM, France was approved by the Railway Board in March 1988 and a letter of intent was issued to the Firm in April, 1988 at an approximate cost of Rs. 13.33 crores for Phase I. The Committee are surprised at the contention of the Railways that the delay of about 2 years in issue of letter of intent was not abnormal considering the novel nature of the work involved with partial import, transfer of technology, indigenisation, elaborate specification, formulation, coordination with various agencies etc. There was also considerable delay in finalisation of contract with the firm which is evident from the fact that the contract for Phase I was finalised on 30.10.89 and for Phase II in February, 1990. The railways have attempted to explain this delay by stating that constant efforts were made at each stage to finalise the issue but it took more time as number of parties were involved. Moreover, the inordinate time delay also occurred as the matter required consideration not only at various ministerial levels but also with the French embassy in India and the French Government. Though import of CATP system was justified on the consideration of tight time schedule with the projected date of completion of Phase I by 1988, Metro Railway took more than two years to finalise the tender. Even after issue of Letter of acceptance to the French Firm in January 1989, a large number of post tender stipulations imposed by the Firm were accepted by the Metro Railway. Delay in finalisation of tender had not only resulted in delay of Phase I & II work but also had substantial financial implications to the tune of Rs. 79 lakh for Phase I and Rs. 1.79 crores for Phase II work. The Committee feel that time spent in procedural formalities and approval by the Ministries of Finance and Industry could have very well been anticipated while negotiating with the French Firm and a suitable approach adopted so as to avoid additional financial liabilities. The very fact that it would take six years, if not more, to import CATC system that too on an urgent basis points towards the inherent deficiencies existing in the system and calls for an immediate evaluation of laid down systems and

procedures so that similar instances do not recur and projects are planned and completed on schedule.

(S. No. 10, Para No. 69)

### **Action Taken by the Ministry of Railways**

Observations of the Committee have been noted. In this connection, it may be mentioned that Government of India have since then, revised the procedures for import of electronic goods. The number of agencies involved in getting permission for such imports has been reduced. It is, therefore, expected that time required for finalising similar cases in future would be considerably less. However, instructions have been issued to all concerned to carefully anticipate the time required for finalising complicated cases involving partial import, transfer of technology indigenisation, laying of elaborate specifications, formulation-coordination with other agencies.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RA/III/12-170/88 ATN dated 28.8.1992.

[Ministry of Railways (Rl. Board's) case No. 88/MTP/C/25/6/Vol. II.]

**GOVERNMENT OF INDIA (BHARAT SARKAR)  
MINISTRY OF RAILWAYS (RAIL MANTRALAYA)  
RAILWAY BOARD.**

88/MTP/C/25/6/Vol. II

New Delhi, dated: 14.9.92

The General Manager,  
Metro Railway,  
Calcutta.

*SUB : 9th Report of the Public Accounts Committee (1991-92) on Metro Railway/Calcutta-Procurement of Signalling Equipment.*

Public Accounts Committee (PAC) in Para 69 of their 9th Report on 'Metro Railway, Calcutta-procurement of Sophisticated Signalling Equipment' have observed that the time spent in the procedural formalities and approval for procurement of CATC Phase I & Phase II equipment should have been anticipated at the initial stage itself and suitable approach adopted so as to avoid the additional financial liabilities which accrued due to the delay in the procurement of this equipment. The PAC have further observed that the fact that it took about six years to import the CATC System points towards the inherent deficiencies in the procurement of such equipment and calls for an immediate evaluation of laid down system/procedures so that similar instances do not recur in future projects.

2. Board have accepted the above recommendations of the PAC and desire that following guidelines should be followed while dealing with tenders of such nature:—

- (i) The tenderers should be asked to prepare and submit for Railway's approval a detailed test plan. This test plan should ensure that the tenderers have taken into consideration all aspects of testing to fulfil the relevant specifications. The tenderers should also include tests for proving the safety of the equipment in the event of failure of individual/multiple components.
- (ii) Safety checking milestones should be clearly laid down for the bench model/prototype/series production. The tenderers should be responsible for the safety of the installation.

3. With regard to the time-schedule for procurment of sophisticated equipments which involve formulation of elaborate specifications, partial import, transfer of technology, indigenisation, co-ordination with various other agencies, etc., Board desire that time required for each aspect should be realistically estimated and provided for at the initial stage of tendering itself so as to avoid any additional financial liabilities which may accrue due to delay in the finalisation of such cases.

4. Board have already issued guidelines vide their letter No. 92/F(FEX)1/1 dated 1.6.92 wherein it has been advised that all the units will meet their requirements of foreign exchange from the market. It may also be noted that henceforth there is no need for Board's approval for floating global tenders for the procurements to be financed out of free resources. Board desire that the guidelines issued vide the above quoted letter should be strictly followed.

D.A. Nil

S/d-  
(S. Kumar)  
Director, Metro. Trans. (E),  
Railway Board.

No. 88/MTP/C/25/6/Vol. II

New Delhi: dated 14-9-92.

Copy forwarded, for information and necessary action to the General Managers, All Indian Railways, Production Units and Construction Organisations.

S/d-  
(S. Kumar)  
Director, Metro. Trans. (E),  
Railway Board.

**Action taken by the Deptt. of Atomic Energy**

Noted for future guidance.

## CHAPTER III

### RECOMMENDATIONS/OBSERVATIONS WHICH THE COMMITTEE DO NOT DESIRE TO PURSUE IN THE LIGHT OF THE REPLIES RECEIVED FROM GOVERNMENT

#### Recommendations

The Metropolitan Transport Project, Calcutta sanctioned in 1972 and targetted to be completed by 1978 had provision for continuous Automatic Train Protection type of signalling system (CATP). The Committee find that Metro Railway Administration has not yet been able to acquire this system for the underground Railway although a part thereof has been functioning for more than six years. The delay in procurement of CATP system was sought to be explained by Railways for having to resort to its import after failure of initial efforts to develop the indigenous production. The work of developing the system was entrusted to ECIL in April 1977 only although by end of 1973 the earlier decision to import the system from Soviet Union had been changed in favour of developing the system indigenously when it was known that the project would not be completed by 1978 for want of adequate funds. Even after entrusting the work late to ECIL, the development work progressed at a very slow speed and after 8 years of indigenous efforts, the Railways chose to foreclose the contract with ECIL in April, 1985. Even the imported CAT system for which global tenders were floated in June 1986 is likely to be available and installed by June 1992 for Phase I and by June 1994 for Phase II. Incidentally, urgent requirement of the system was one of the considerations for resorting to import thereof. It would not be out of place to mention here that less than anticipated traffic due to delay in completion of entire Metro Project has come to the rescue of Metro Railway Administration otherwise enormous problems would have been encountered if the anticipated traffic of 1.3 millions passengers per day as projected in the Project Report in the year of the opening had actually developed requiring trains running with a headway of 90 seconds possible only with CATP system as against the present arrangement allowing minimum headway of 8 minutes. The Committee consider the undue long delay in procurement of this important equipment for the underground Railway as unjustified which could have been avoided by careful and systematic planning.

(S.No. 1, Para No. 60)

### Action Taken by the Ministry of Railways

The observations of the Committee have been noted. It may be mentioned here that orders for both phase I and Phase II of CATC equipments have since been placed on M/s. GEC ALSTOM and M/s. ECIL respectively. Prototype. Equipment has already been received and field trials are in progress. All efforts are being made to commission both Phase I and Phase II of CATC so as to match with the opening of the balance section of Calcutta Metro Railway when the traffic is expected to rise to the full extent. Instructions have also been issued to all concerned to ensure that careful and systematic planning is done with a view to avoiding delays in the procurement of such equipment for future projects.

ECIL will be associated in the Phase I work to enable them to absorb the technology against Phase II order.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RA/III/12-170/88ATN dated 28.8.92.

[Ministry of Railways (Rly. Board's) case No. 88/MTP/C/25/6/VOL. II.]

**GOVERNMENT OF INDIA (BHARAT SARKAR)  
MINISTRY OF RAILWAYS (RAIL MANTRALAYA)  
(RAILWAY BOARD)**

No. 88MTP/C/25/6/Vol. II

New Delhi, dated 14.9.92.

The General Manager,  
Metro Railway,  
CALCUTTA

*SUB: 9th Rept of the Public Accounts Committee (1991-92) on Metro Railway Calcutta—Procurement of Signalling Equipment.*

Public Accounts Committee (PAC) in Para 60 of their 9th Report on 'Metro Railway, Calcutta—Procurement of Sophisticated Signaling Equipment' have observed that there was unduly long delay in the procurement of this important equipment. The PAC have further observed that this delay could have been avoided by careful and systematic planning in the procurement of this equipment.

2. Board have accepted the above recommendation of the PAC and reiterate that the concerned authorities must exercise utmost care in planning and procurement of such equipment. Board further desire that the procurement of equipment of this nature is reviewed at regular intervals

at sufficiently senior level so that the corrective action wherever necessary is taken and the delay in the procurement of the equipment does not occur.

Sd/-  
(S. Kumar)  
Director, Metropolitan Transport (Elect.)  
Railway Board.  
New Delhi, dated, 14.9.92.

DA: Nil.

No. 88/MTP/C/25/6/Vol. II

Copy forwarded for information and necessary action, to the General Managers, All Indian Railways, Production Units and construction Organisations.

Sd/-  
(S. Kumar)  
Director, Metropolitan Transport (Elect.)  
Railway Board.

DA: Nil

#### **Action taken by the Government (Dept. of Atomic Energy)**

Although Metro Railway has placed orders on ECIL for Phase-II; ECIL could not start the work due to increase of price twice by M/s. ALSTHOM (now GEC-ALSTHOM) which is not settled till date. Regarding prototype equipment supplied by GEC-ALSTHOM to Metro Railway against Phase-I order, ECIL has not yet got the chance to associate their engineers in the evaluation of prototype equipment. This association will enable ECIL to scrutinise the design of GEC-ALSTHOM and help in faster absorption of technology against Phase-II order which is linked up with approval of prototype of Phase-I and settlement of SKD/CKD prices for placement of orders by ECIL on M/s. SEC-ALSTHOM.

#### **Recommendation**

Further, according to ECIL, Metro Railway changed its stand on fail-safe requirement of the equipment from early 1985. Earlier this test was carried out as per Railway's own specifications by simulated failures of one component at a time. Equipment has passed this test even if more than one components failed at a time. Railways wanted major changes in design before bulk production. There were major differences on the interpretation of the multi-component failure modes. As per ECIL, the philosophy adopted by Railways in 1985 was not the same as one followed during 1984. The interpretation of multi-component failure specifications was entirely different and unreasonable.

(S. No. 6, Para 65)



### **Action taken by the Ministry of Railways**

Noted, for future guidance.

It may, however, be pointed out that earlier the tests were carried out as per specifications for simulated failures of one component at a time only. The equipment developed by ECIL has passed this test. Railways had pointed out that to fully comply with the specifications, the equipment should pass the test even if more than one component fails at a time.

Specifications for the CATP provided for the multi-component failure testing from the very beginning. There was no change in the final specifications issued by Railways in 1982 as compared to the draft specifications issued in 1977. As such it was not considered necessary to apprise M/s. ECIL separately with regard to the multi-component failure testing of the equipment. It was for M/s. ECIL to submit a test procedure to comply with the specifications.

The multi-component failures tests will now be carried out as per the internationally accepted specifications/test procedures both for phase I & II uniformly, i.e. in case of M/s. GEC Alsthom and M/s. ECIL respectively. This will avoid any controversy over the interpretation of the multi-component failure tests.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RA/III/12 170/88 ATN dated 28.8.92.

[Ministry of Railways (Rly. Board's) Case No. 88/MTP/C/25/6/Vol. II.]

#### **Action Taken by the Government (Dept. of Atomic Energy)**

The ECIL equipment had passed the simulated failure test with more than one component failing at a time. However, the interpretation of multi-component failure was so orchestrated that in our opinion no equipment in the world could pass this test.

#### **Recommendation**

ECIL, has further stated that they could not meet the specification in the way the Railways described the multi-component failure. Final acceptance is based on acceptance test procedure which did not exist to begin with. The Railways had subsequently communicated the test procedure for multi-component failure. However, ECIL, did not get time for complying with this procedure. Contesting this claim of ECIL, Railways have asserted that test procedure is a method which outlines the mode of testing to fulfil the requirements of specifications normally elaborated by contractor during contract period and approved by suppliers. As such, it is never the convention to outline the test procedure alongwith specifications.

(S. No. 7, Para No. 66)

### **Action Taken by the Ministry of Railways**

Noted for future guidance.

The acceptance test procedure for multi-component failures will be uniformly followed for phase I and phase II contracts.

This has been seen and vetted by Audit vide their U.O.I. No. 1290-RA/III/12-170/88 ATN dated 28.8.92.

[Ministry of Railways (Railway Board's) case No. 88/MTP/C/25/6/Vol. II.]

**Action Taken by the Government (Dept. of Atomic Energy)**

Railways may confirm as to whether the acceptance test procedure for multi-component failure as formulated and adopted for ECIL's CATP equipment has also been followed to evaluate Phase-I prototype equipment supplied by GEC-ALSTHOM.

## CHAPTER IV

### RECOMMENDATIONS/OBSERVATIONS REPLIES TO WHICH HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

#### Recommendation

The Committee feel that in order to encourage indigenous production it is absolutely necessary to ensure that such developmental works are well conceived and planned so that efforts and time expended are fruitfully utilized and investment made does not become infructuous or sub-optimal in terms of objectives achieved. The Committee regret to observe that in this case the indigenous efforts had a setback on account of the controversy regarding the interpretation of the multi-component failure tests. The ECIL's plea that they could not meet the specification in the way the Railways described the multi-component failure and the final acceptance being based on acceptance test procedure which did not initially exist proves that all issues connected with the development of the system including the exact specification etc. had not been clearly identified and laid down thus resulting in delay and defeating the very objective of promoting indigenous development. The Committee recommend that the matter should be investigated fully and responsibility fixed in this regard. They also desire that proper and adequate planning taking due note of the specifications to be fulfilled are clearly laid down before embarking on projects of this kind so as to avoid time and cost over-run and unnecessary imports.

(S. No. 8, para 67)

#### Action Taken by the Ministry of Railways

As desired by the committee, the matter has been investigated.

As already brought out in the committee's Report, Railways were keen on the indigenous development of CATP/CATC. All out support was accordingly given by the Railways to ECIL to develop the CATP indigenously. The indigenous development however, could not succeed due to the fact that no prior experience or expertise in the development of a complex system like CATP/CATC was available in the country. Calcutta Metro Railway is the first project of its kind. As a result it took sometime to evolve specifications, test procedures and also plan for the different activities. Sometime was also lost due to the suspension of trials on account of the flooding of Calcutta Metro Railway. Meanwhile CATP/CATC technology in the developed countries of the world had got upgraded involving use of digital electronics and micro processors. As ECIL were unable to develop the equipment to the state-of-the-art

technology within the time frame then envisaged, import had to be resorted to. However, the indigenous efforts made by ECIL in this regard will enable them to quickly absorb the state-of-art technology which is now being acquired by them in pursuance to the transfer of technology agreement between them and GEC-ALSTHOM. The efforts will, thus, not be wasted.

It may, therefore, be appreciated that the delay in the procurement of the CATP/CATC was as a result of the above factors which were beyond the control of the Railways.

However, instructions have been issued to all concerned to avoid time and cost over-run and also unnecessary imports in future projects of this nature.

This has been seen and vetted by Audit *vide* their U.O.I. No. 1290-RAI/III/12-170/88 ATN dated 28.8.92

[Ministry of Railways (Railway Board's) case No. 88/MTP/C/25/6/  
VOL.II]

GOVERNMENT OF INDIA (BHARAT SARKAR)  
MINISTRY OF RAILWAYS (RAIL MANTRALAYA)  
RAILWAY BOARD

.....

No. 88/MTP/C/25/6/Vol.II  
The General Manager,  
Metro Railway,  
Calcutta.

New Delhi, 14.9.92.

SUB: *9th Report of the Public Accounts Committee (1991-92) on Metro Railway Calcutta—Procurement of Signalling Equipment.*

.....

Public Accounts Committee (PAC) in para 67 of their 9th Report on 'Metro Railway Calcutta—Procurement of Sophisticated Signalling Equipment', have observed that in order to encourage indigenous production of such equipment, it is necessary to ensure that such development works are well conceived and planned so that efforts and time spent thereon are fruitfully utilised and investment made does not become infructions or sub-optimal in terms of the laid down objectives. The PAC have further observed that in this particular case the indigenous efforts had a setback on account of the controversy regarding the interpretation of the multi-component failure tests and that the issues connected with the development of the system including the exact specifications had not been clearly identified and laid down at the initial stage itself resulting in delay and defeating the very objective of promoting indigenous development.

Board have accepted the above recommendations of the PAC and desire that proper and adequate planning taking due note of the specifications to be fulfilled are clearly laid down before embarking on projects of this kind so as to avoid time and cost over-run in the procurement of such equipment and unnecessary import are avoided.

Sd/-

(S. Kumar)

Director, Metropolitan Transport (Elec.)  
Railway Board.

No.88/MTP/C/25/6/Vol.II

New Delhi, dated: 14.9.92

Copy forwarded for information and necessary action, to the General Managers, All India Railways, Production Units and Construction Organisations.

Sd/-

(S. Kumar)

Director, Metro. Trans.(E)  
Railway Board.

DA: Nil

#### **Action Taken by the Government (Dept. of Atomic Energy)**

GEC-ALSTHOM had initially offered Analog technology to Indian Railways. Subsequently, we were informed that GEC-ALSTHOM were giving digital technology for phase-I and hence ECIL was asked to negotiate with GEC-ALSTHOM for amending the contract accordingly. Consequently, GEC-ALSTHOM increased their prices which could not be settled between ECIL, Railways and GEC-ALSTHOM. This resulted in enormous delay of more than two years and now Railways wants to delete the entire supply portion of the Contract which amounts to cancellation of CATC Phase-II contract on ECIL, and thereby it defeats the sole purpose of promoting indigenous technology.

Regarding multi-components failure tests, ECIL is not aware of whether or not the technology offered by GEC-ALSTHOM to Railways for Phase-I meets these requirements in the manner in which ECIL's indigenous CATP equipment was subjected to. ECIL was also not involved by Metro Railways in the evaluation of GEC-ALSTHOM's prototype for Phase-I.

#### **Recommendation**

According to the Railways the trials on the prototype received from M/s ALSTHOM are likely to start from March, 1992 and the approval to the prototype is to be given in two months time. CATC system for Phase-I would be available and fully installed by June, 1992 as per the time schedule given by the Contractor. ECIL after absorbing the technology from M/s. ALSTHOM is expected to supply the equipment for the Phase-II requirement by June, 1994. Commenting on the point made by ECIL that they should be given a chance to participate in the scrutiny of design with M/s ALSTHOM, the Railways have clarified that the Phase-I design was finalised in consultation with ECIL. As stipulated by Department of Electronics, ECIL were associated while approving the CATC system in the specifications, formulations as well as technical evaluation of the offers

received against CATC tender. In fact, ECIL had confirmed in June, 1987 that the offer of M/s. ALSTHOM fully complied with the specification and was of the state of art technology. According to the agreement with M/s. ALSTHOM, ECIL will get all technical documents and drawings required to enable them to produce CATC equipment for Phase-II which will be similar to that of Phase-I and hence all the information will be available to ECIL. While taking note of the assurance given by Railways in this regard, the Committee desire that ECIL should be closely associated so that they are able to imbibe the technology, design, formulations, specifications etc. and are able to manufacture equipment for Phase-II requirement without any difficulty. The Committee expect ECIL to gainfully utilise their experience in indigenous research and that likely to be gained by transfer of technology from M/s. ALSTHOM in meeting the future requirements of the country in this regard.

(S.No. 11, Para No.70)

#### **Action Taken by the Ministry of Railways**

It may be stated that ECIL are being closely associated in matters connected with the approval of prototype, installation and commissioning work for Phase-I so that they are able to absorb the technology. This will enable them to successfully commission the equipment for Phase-II without any difficulty. The expertise acquired by ECIL for Phase-II work will be utilised for meeting the future requirements of such equipment in this country.

This has been seen and vetted by Audit *vide* their U.O.I. No. 1290/RAI/III/12/170/88 ATN dated 28.8.1992.

[Ministry of Railways (Railway Board's) case No. 88/MTP/C/25/6/Vol. II.]

#### **Action Taken by the Government (Dept. of Atomic Energy)**

Although ECIL was associated alongwith RITES in the framing of specification, and with Metro Railways in the evaluation of the offers received against the CATC tender, ECIL has not been involved when GEC-ALSTHOM has changed the technology from Analog to Digital. Further, ECIL was not involved either in the design of Phase-I CATC in the evaluation of the prototype.

Now Railways have backed out on the Phase-II contract on ECIL *i.e.* from TOT absorption manufacture and supply of equipment. This proves that railways are not serious about indigenous research and development.

Therefore the 'Action Taken by the Government' recorded and audited as of 28.8.92 is unlikely to be put into practice in view of the latest communication received from Metro Railway (Copy enclosed).

ECIL has paid the first instalment to GEC-ALSTHOM on July, 1991 Rs. 82 lakhs for TOT and requested them to give the schedule of TOT.

METRO RAILWAY  
33/1, Chowringhee Road,  
Calcutta-700 071

MOST URGENT

No. MRTG/SG-515/0/1 (CATU/GT) Ph. II Po. II (29341)  
dated: 30.12.97

M/s. Electronics Corpn. of India Ltd.,  
(Control Systems Group),  
Cherlapalli,  
Hyderabad-500 762

Dear Sirs,

*SUB: CATC Phase-II Contract—Notice of rescission.*

Vide our letter of 1.10.92 we have brought to your notice that in view of the various delays there has been no progress and this has necessitated review in the scope of work. A modified scope with schedule of prices based on the present day ground conditions was sent to you for acceptance to be jointly signed by us. Vide your letter of 28.11.92 after a considerable delay you have regretted your inability to reduce the scope of the work. Vide our letter of 9.12.92 you were once again requested to attend a detailed discussion in this regard within ten days to understand your reason of disagreement. You have again failed to respond.

From the above it appears that you are not willing to be associated further with this contract with the reduced scope that becomes inevitable at the present stage.

You are therefore requested to convey your acceptance for rescinding of the contract without financial implication on either side and arrange to return the advanced Rs. 3.23 Crores paid to you as brought out in our letter dt.1.10.92.

This acceptance may kindly be conveyed within a fortnight for us to ensure alternative procurement action being taken.

Thanking you,

Yours faithfully,  
Sq/-  
(M.R. BHASKARAN)  
Chief Signal and Telecom Engineer.

## CHAPTER V

### RECOMMENDATION/OBSERVATIONS IN RESPECT OF WHICH GOVERNMENT HAVE FURNISHED INTERIM REPLIES

-NIL-

NEW DELHI;  
21 February, 1994  
2 Phalgun, 1915 (Saka)

BHAGWAN SHANKAR RAWAT,  
*Chairman,*  
*Public Accounts Committee.*



## APPENDIX

### *Statement of Conclusions and Recommendations.*

S.No.	Para No.	Ministry/ Deptt.	Recommendation and Conclusion
1	2	3	4
1.	9.	M/o Railways	In their earlier Report, the Committee had found that there was an inordinate delay in the procurement of a sophisticated signalling equipment for the Metro Railway Calcutta. They had observed that the contract for the same which was entered into in April, 1977 between Railways and Electronic Corporation of India Ltd. (ECIL) had to be foreclosed by Railways after a period of eight years. Subsequently, the Railways had chosen to import the equipment. The Committee had found that the foreclosure of the contract with ECIL, apart from allowing an investment of Rs. 1.93 crores going idle had also caused a setback to the indigenous efforts made in the development of the technology. This had happened mainly on account of a controversy between the Railways and ECIL regarding the interpretation of an acceptability test termed as "multi-component failures test". ECIL had pleaded that they could not meet the specifications in the way the Railways described the multi-component failure and that the final acceptance was being based on a test procedure which was not prescribed initially. The Committee had arrived at the conclusion that all issues connected with the development of the system including the exact specifications etc. had not been clearly identified and laid down thus regulating in avoidable delay and defeating the very objective of promoting indigenous developments as was envisaged by Railways while entering into a contract with ECIL in

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1977. The Committee had, therefore, recommended that the matter should be investigated fully and responsibility fixed in this regard. They had also desired that proper and adequate planning taking due note of the specifications to be fulfilled are clearly laid down before embarking on projects of this kind so as to avoid time and cost overrun and unnecessary imports. The Ministry of Railways have in their action taken note while stating that the matter has been investigated have sought to explain the circumstances leading to the delay in the procurement of the equipment and have added that the delay was beyond their control and that instructions have now been issued to all concerned to avoid time and cost overrun and also unnecessary imports in future projects of this nature. The Committee are constrained to point out that the arguments now advanced by the Ministry are in no way different from what was adduced earlier and that the action taken note is completely silent about the nature of the investigation conducted by the Railways, their actual findings and the level at which they have been accepted. The Committee regret to conclude from the above that the Railways had not conducted any meaningful investigation so as to find out as to how and why the planning process had failed and as to who were responsible for the same. The Committee, therefore, reiterate their earlier recommendations and would like to be informed of the concrete action taken in the matter.

2. 14-16 M/o  
Railways

In their earlier report the Committee had observed that after the foreclosure of the agreement with Electronic Corporation of India Ltd. (ECIL) in April, 1985 Metro Railway, Calcutta

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had entered into a fresh agreement with a foreign firm M/s. ALSTHOM France for the import of the CATC equipment. The contract with the foreign firm was for design, manufacture, supply, installation, testing and commissioning of CATP system for Phase I with transfer of technology and know-how to ECIL to cover the system for Phase-II. The contract for supply of equipment for Phase-II was awarded to ECIL on 31.12.1990 at a cost of Rs. 21.47 crores. The Committee were assured by the Ministry of Railways earlier that the Phase I design was finalised in consultation with ECIL so that they were able to absorb the technology and enable them to successfully commission equipment for Phase II without any difficulty. While taking note of this assurance the Committee had in their earlier report desired that ECIL should be closely associated in the process so that they were able to imbibe technology, design, formulations, specifications; etc. and were able to manufacture equipment for Phase II requirements without difficulty. They had also desired that ECIL should gainfully utilise their experience in indigenous research in this process in meeting the future requirements of the country in this regard.

In their action taken reply, the Ministry of Railways initially stated that ECIL was being closely associated in matters connected with the approval of prototype, installation and commissioning work for Phase-I. However, the Department of Atomic Energy maintained in their note that ECIL had not been adequately involved in the evaluation of prototype equipment and that the Ministry of Railways have now backed out from the Phase II contract with ECIL. They also stated that they had already paid the first instalment of Rs. 82 lakhs to GEC-ALSTHOM towards absorption of transfer of technology. When enquired by the

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Committee in this regard, the Ministry of Railways in their latest reply stated that the contract for CATC Phase II with ECIL has since been rescinded in April, 1993. Explaining the reasons for the same, the Ministry stated that the volume of traffic on Calcutta Metro now anticipated would be much lower than what had been originally envisaged thereby warranting a reduction in the number of coaches and the CATC equipment for those coaches. According to them, the requirement for Phase II would, therefore, be more or less met by utilising the surplus equipment in Phase-I and by procuring direct from GEC-ALSTHOM, if necessary. In the opinion of the Ministry of Railways the transfer of technology would now not be viable in view of the steep decrease in the requirements. They also added that ECIL had not made any further progress in acquisition of technology due to the disputes regarding prices. According to Ministry of Railways with the changed scenario, the scope of the contract was reduced to Rs. 2.50 crores limiting to supply of indigenous materials, installation and commissioning etc. which eventually, ECIL did not agree to perform. Thus ECIL's further association in the CATC work for Calcutta Metro now stand discontinued. This according to the Committee is a serious matter. Also the argument that frequency needed would not be as much as anticipated is not acceptable. The present volume of utilisation is affected by the fact that the system at present is truncated and thus cannot be the basis for correct projection of volume of traffic in future.

The Committee regret to note that despite the assurances given to them, ECIL was not involved in the project in a manner as was originally envisaged. They are deeply distressed to note that even after having spent a

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considerable amount of resources, the indigenous efforts to absorb the technology for CATC equipment had received a second setback in the same project and the expectation that the experience gained by ECIL in the process would help in upgrading the indigenous technology and thereby in meeting the future requirements of the country has been totally belied. The Committee desire that the reasons for not associating fully ECIL in Phase I work should be thoroughly enquired into and the Committee apprised of the same. They would also like to be informed of the precise quantum of investment made in the aborted attempt for the development of the equipment indigenously which had gone infructuous and the outcome of the dispute arising out of the discontinuance of association of ECIL with Phase II work.

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## PART II

### \* MINUTES OF THE 19TH SITTING OF THE PUBLIC ACCOUNTS COMMITTEE HELD ON 16 FEBRUARY, 1994

The Committee sat from 1500 hrs. to 1600 hrs. on 16 February, 1994 in Committee Room 'B', Parliament House Annexe.

#### PRESENT

##### CHAIRMAN

Shri Bhagwan Shankar Rawat

##### MEMBERS

2. Shri Nirmal Kanti Chatterjee
3. Dr. K.V.R. Chowdary
4. Shri Sharad Dighe
5. Shri Srikanta Jena
6. Shri Rama Krishna Konathala
7. Shri D.K. Naikar
8. Shri Mrutyunjaya Nayak
9. Shri Somappa R. Bommai
10. Shri Anant Ram Jaiswal
11. Miss Saroj Khaparde
12. Shri Murasoli Maran

##### SECRETARIAT

1. Shri S.C. Gupta — *Joint Secretary*
2. Shri R.K. Chatterjee — *Deputy Secretary*
3. Shri P. Sreedharan — *Under Secretary*

##### REPRESENTATIVES OF AUDIT

1. Shri S.H. Manghani — *Addl. Dy. C&AG.*
2. Shri P.K. Bandopadhyay — *Dir. General of Audit (P&T)*
3. Shri Vikram Chandra — *Pr. Director, Reports (Central)*
4. Shri B.C. Mahe — *Pr. Director, E&SM*
5. Shri P.K. Brahma — *Pr. Director of Receipts Audit (INDT)*
6. Smt. Ruchira Pant — *Director (Custom)*

7. Shri P.S. Dewan — Dy. Director of Audit (Defence Services)
8. Shri T.S. Pathania — Dy. Director of Audit, Central Revenue
9. Shri K.C. Gupta — Dy. Director, P&T Audit

2. The Committee considered the following Draft Reports and adopted the same subject to certain modifications and amendments as shown in Annexures I\*, II\*, III & IV\* respectively:

- (i)     \*\*           \*\*           \*\*
- (ii)    \*\*           \*\*           \*\*
- (iii) Metro Railway, Calcutta—Procurement of sophisticated signalling equipment [Action taken on 9th Report (10th LS)]
- (iv)     \*\*           \*\*           \*\*
- \*\*           \*\*           \*\*

3. The Committee authorised the Chairman to finalise these draft reports in the light of other verbal and consequential changes suggested by some Members and also those arising out of factual verification by Audit and present the same to Parliament.

**The Committee then adjourned.**

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\* Not appended.