RCC No. 77

RAILWAY CONVENTION COMMITTEE (1991)

(TENTH LOK SABHA)

SIXTH REPORT

ON

Action taken by Government on the Recommendations contained in the Second Report of Railway Convention Committee (1991) on 'Purchase of Electric Locomotives from M/s. ABB, Switzerland by the Indian Railways'

Presented in Lok Sabha on 23.2.1994
Laid in Rajya Sabha on 23.2.1994

LOK SABHA SECRETARIAT
NEW DELHI

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RAILWAY CONVENTION COMMITTEE
(1991)

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$Shri Pramod Mahajan, MP re-nominated on 21 July, 1992.

INTRODUCTION

I, the Chairman of the Railway Convention Committee (1991) having been authorised by the Committee to submit the Report on their behalf, present this Sixth Report on Action Taken by Government on the recommendations contained in the Second Report of the Railway Convention Committee (1991) on 'Purchase of Electric Locomotives from M/s. ABB, Switzerland by the Indian Railways'.

2. The Second Report of the Railway Convention Committee (1991) was presented to Lok Sabha on 24th November, 1992 and laid on the table of Rajya Sabha on 25th November, 1992. It contained 35 observations and recommendations. Action Taken notes on all these recommendations and observations were received from the Ministry of Railways on 24th August, 1993. However, final replies to 5 recommendations and observations are still awaited.

3. The Committee considered the replies of the Government at their sittings held on 27.9.1993, 19.10.1993, 16.11.1993 and 31.1.1994. The report was considered and adopted at their sitting held on 10th February, 1994.

4. An analysis of action taken by Government on the recommendations contained in the Second Report of the Railway Convention Committee (1991) is given in Appendix..... It would be seen therefrom that out of 35 recommendations made in the Report, 8 recommendations *i.e.* about 23% have been accepted by the Government. The Committee do not desire to pursue 7 recommendations *i.e.* 20% in view of the replies furnished by the Ministry. The replies have not been accepted in respect of 15 recommendations *i.e.* about 43%. In respect of remaining 5 recommendations *i.e.* 14%, the final reply of the Government is still awaited and the Ministry have been requested to furnish the same expeditiously.

NEW DELHI;
February 21, 1994
Phalguna 2, 1915 *(S)*.

M. BAGA REDDY,
Chairman,
Railway Convention Committee.

CHAPTER I

REPORT

This Report of the Committee deals with the action taken by Government on the observations and recommendations contained in their Second Report (Tenth Lok Sabha) on Purchase of Electric Locomotives from M/s. ABB, Switzerland, by the Indian Railways. The Committee's Second Report was presented to Parliament on 24.11.1992. It contained 35 observations and recommendations. Action taken notes on all these recommendations and observations were received from the Ministry of Railways on 24.8.1993.

2. Replies to the recommendations and observations contained in the Report have broadly been categorised as under:—

(i) Recommendations and observations which have been accepted by the Government
5.1, 5.2, 5.4, 5.7, 5.11, 5.12, 5.13, & 1.

(ii) Recommendations and observations which the Committee do not desire to pursue in the light of the replies received from the Government
5.21, 5.22, 5.23, 5.27, 5.28, 5.29 and 5.30.

(iii) Recommendations and observations in respect of which replies of the Government have not been accepted by the Committee and which require reiteration
5.3, 5.6, 5.8, 5.9, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.25, 5.26, 2, 4 and 5.

(iv) Recommendations and observations in respect of which final reply of the Government is still awaited
5.5, 5.10, 5.20, 5.24 and 3.

3. The Committee expect that the final replies to the recommendations and observations in respect of which only interim replies have been furnished by the Government, will be submitted to them expeditiously.

4. The Committee will now deal with the action taken by Government on some of the recommendations.

Volume of Freight and Passenger Traffic (Para No. 5.1)

5. The Committee in paragraph 5.1 of the Report had observed:—

"The Indian Railways have registered impressive growth during the last 40 years. The Committee note that passenger kilometers, which in 1950-51 were 66,517 had by 1990-91 grown by a factor of 4.4 to 2,95,644. Similarly, tonne kilometers (revenue) had grown from the level of 37,565 by a factor of 6.2 during the same period. Notwithstanding this, growth has not kept pace with the growing demands of the national economy. Consequently, growth of economy has frequently been impaired by the shortage of rail transport. The Railways have, therefore, set a target of almost doubling their lift of passenger and freight traffic as it existed in 1985-86 by the year 2000 AD."

6. The Ministry of Railways in their reply dated 24.8.1993 have stated as under:—

"The Railways have by and large been achieving the volume of freight and passenger traffic as per the targets laid down from time to time, and its performance has generally been keeping pace with the demands of the National economy".

7. Keeping in view the fact that growth of economy has frequently been impaired by the shortage of rail transport, the Committee hope that the Railways would be able to achieve the target of almost doubling their lift of passenger and freight traffic, as it existed in 1985-86, by the year 2000 A.D. The Committee further hope that in order to achieve the above target, the Ministry of Railways would take urgent steps to augment their rolling stock and improve their operations.

Increase in Lift Capacity by raising Booked Speed (Para No. 5.3)

8. The Steering Committee of the Planning Commission on Transport have cautioned Indian Railways against the temptation to increase line capacity by raising the booked speed of freight trains from 75 Kmph to 90 Kmph with corresponding reduction in the differential between the freight trains and passenger trains which have the booked speed of 100-130 Kmph.

9. In this connection, the Ministry of Railways, in their reply dated 24.8.93, have stated:—

"Operating strategies contained in Corporate Plan envisage reduction of speed differential by raising maximum speed of freight trains upto 100 Kmph. However, on account of resource crunch, it is not likely for Indian Railways to raise the maximum permissible speed of freight trains for the present".

10. By their own admission the Ministry of Railways have stated that the Railways are not in a position to spend and take on renewal and strengthening of track to maximise the speed of freight trains. The

Committee fail to understand as to how the Railways are going to be benefited by induction of 'state-of-art' 3-Phase ABB Locomitives without first ensuring the requisite track renewal and fencing as well as providing other infrastructural facilities.

Transfer of Technology and Supervision Charges (Para 5.4 & 5.24)

11. Commenting on Purchase of 3-Phase electric locomotive, the Committee had, in paragraph 5.4, *inter-alia* observed:—

> ".....The third round was concluded in March, 1992 and an advance letter of acceptance was issued to M/s.ABB, Switzerland for procuring 30 Nos. of 3-Phase AC 6000 HP electric locomotives at a total cost of Rs. 621 crores exclusive of the element of custom duty, which at present rate of 87% works out to Rs. 540 crores, besides this the cost of spares and charges for transfer of technology are also excluded from this amount.
>
> The Committee are apprised that unit cost of 3-Phase AC locomotive, when fully assembled was Rs. 13.2 crores CIF during the first round of bidding (1989). However, as per latest calculation the unit cost of the same locomotive, after the third bid, will be around Rs. 45 crores which compares too unfavourably with the cost of indigenously built 5000 HP locomotives that is expected to cost less than Rs. 3 crores a piece. In fact between the first bid and second bid many important developments like general escalation of prices during the Gulf war, devaluation of rupee and partial convertibility of rupee took place which have, together, adversely, affected the comparability of 3-Phase AC locomotive *vis-a-vis* other available locomotives. The Committee are also concerned to note that the deal for purchase of these locomotives, if put through, would ultimately involve expenditure exceeding Rs. 1200 crores, not taking into account other long term financial liabilities, which will arise during the period of transfer of technology and purchase of spare parts. This would put together bring in serious distortions in the allocation of resources during the Eighth Five Year Plan. The Committee note with concern the candid admission of Financial Commissioner that Railways had no funds to accept such a huge liability without raising revenues through public issue of bonds (which in any case are not very attractive in the market) or by raising the Railway tariff. On the other hand, the entire investment planning of Railways during the Eighth Plan would also be seriously jeopardised. From the internal notings of the Railway Board on the subject, as furnished to the Committee, there is no evidence to suggest that these vital issues have been adequately addressed to before going ahead in the matter".

12. The Ministry of Railways in their reply dated 24.8.93 have stated as under:—

> "The advance letter of acceptance was issued to M/s. ABB, Switzerland on 18.3.92 for import of 30 Nos. of 3-Phase AC 6000 HP Electric Locomotives (20 freight and 10 passenger) alongwith 3 locomotives as spares (2 freight and 1 passenger) with maintenance spares etc. at a total CIF cost of about Rs. 583 crores at the market exchange rate of 17.3.92. This excludes Transfer of Technology and Supervision charges. The current rate of customs duty on import of locomotives is 84%".

The CIF cost as obtained during the first round of bid (1989) were as under:—

	Freight	*Passenger*
CIF cost per locomotive in Swiss Francs (CHF) and Swedish Kroner (SEK)	CHF 28,72,107.85 SEK 90,29,782.44	CHF 51,87,710.70
Price in Indian Currency with exchange rate of Rs. 100=CHF 9.865=SEK 40.40 as on 23.12.88	Rs. 5.15 crores	Rs. 5.26 crores
Price in Indian Currency with exchange rate of Rs. 100=CHF 4.7650=SEK 24.18 as on 2.7.93	Rs. 9.76 crores	Rs. 10.89 crores

The CIF price as per order on ABB, now placed is as under:—

	Freight	*Passenger*
CIF cost per locomotive in Swiss Francs (CHF) and Deutsche Mark (DEM)	CHF 48,01,875 DEM 34,75,875	CHF 52,78,650 DEM 38,22,000
Price in Indian Currency at the exchange rate of Rs. 100=CHF 4.765=DEM 5.3475 as on 2.7.93	Rs. 16.58 crores	Rs. 18.22 crores

The above prices are exclusive of custom duty.

As regards the comparison of the cost of a limited number of high horse power loco with 3 phase drive and microprocessor based control primarily for Transfer of Technology with that of the indigenous 5000 HP locos produced by CLW by optimising the existing tap changer technology, the same would not be realistic as the products as well as the context are entirely dissimilar and hence not comparable. Moreover, the price for the locos contracted fro import are fixed and without any price

variation clause. Hence, factors like general escalation of price, devaluation of rupee, partial convertibility of rupee etc. have also had their influence.

While this purchase will no doubt strain the railway resources to some extent, this is inescapable in the context of acquiring state-of-art technology which has a vital bearing on the future operational capabilities of Indian Railways. In this context, it is pertinent to mention that the purchase of these locomotives is tied up to the loans from ADB an EXIM bank and as such it would not have any immediate repercussion on the national finances as a whole. As a matter of fact if this purchase had not materialised, ADB/EXIM loans would have to be surrendered.

It may be mentioned that provision of Rs. 760 crores has been made during 8th Plan for 30 high horse power locomotives, which is adequate to meet the CIF cost of these locomotives including margin for some further devaluation of rupee. The provision of funds however does not cater adequately for import duty at the present rates.

The present policy is to reduce import duties gradually and it is expected that by 1995-96, when the actual import of locomotives will start, the import duty might come down substantially.

In addition to above, Ministry of Finance has been requested to exempt the Railways from payment of custom duty* of purchase of these locomotives as this purchase is related to technology upgradation.

This various issues including the financial implications have been deliberated at length and the Government has taken a conscious decision to acquire the new technology."

13. The Committee require clarification from the Ministry of Railways whether the market exchange rate of 17th March, 1992 is acceptable to M/s ABB Switzerland as the formal contract was signed by the Ministry in July, 1993. The total amount to be paid to the firm for transfer of technology and supervision charges and the source from which the railways are going to pay for it also needs to be explained to the Committee.

Cost Effectiveness of Different Technologies

14. Observing that perceptions differ in regard to cost effectiveness of different technologies, the Committee had, in paragrphs 5.5 and 5.6 of the Report, stated:—

> "The Committee note that the quest for high horse power electric locomotives has become a contentious issue within the Railways where opinions about the desirability of one or the other route are sharply divided. While there is a school of thought which favours going for

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* At the time of factual verification, the Ministry of Railways have intimated as follows: "Ministry of Finance has now communicated exemption from payment of custom duty vide letter No. F.No. 343/15/92-TRU dated 4th February, 1994".

'state of art' technology there is also another line of thinking which has argued for a more cautious approach in the matter. The former have emphasised the advantages which could accrue by going for the 'state of art' technology *i.e.* 3-Phase AC 6000 HP electric locomotives and these are, inter alia increased line capacity through attainment of higher speed of both passenger and goods traffic and greater power consumption, estimates of which range between 0 to 30 percent, lesser maintenance and, therefore, greater lift of passenger and freight. On the other hand, the later have been drawing attention to high differential in the cost between 3-phase technology and other technologies available/developed in the country and its adverse consequences on investment planning in regard to other vital areas in the Railways, non-compatibility with the available infrastructure in the Railways, particulary the track conditions, and adverse impact on technologies already developed/under trial and the resultant wastage of resources, the setback to indigenous technological developments, and on the R&D capability in regard to electric locomotives. It has also been pointed out that Railways are woefully short of locomotives as a result of which they are unable to meet the growing demand of traffic, which today stands at a shortage of 2000 wagons a day, implying an addition of 25,000 to 40,000 wagons to the existing fleet. The Committee, moreover, note that rakes are held up for sometime more than 72 hours waiting for availability of locomotives. They also note that under these circumstances, a strong case has been made for augmenting the supply of electric locomotives on the basis of technologies which are within an immediately attainable range, instead of waiting for the latest technology to be absorbed, indigenised and brought to production stage which may take anything from 5 to 10 years. In this context, the Committee also take note of the concern expressed by the World Bank regarding adoption of a still largely untested technology as an alternative to successfully tested standard thyristor control electric locomotives. They find that the Indian Railways have told the World Bank that with a view to limiting the risk, the 3-phase electric locomotives would first be tested before a decision is made to proceed with the transfer of technology for manufacture of these locomotives in India. The Committee further understand that the ultimate decision of the Indian Railways would impinge on the negotiations for the next World Bank loan that the Railways may seek.

The Committee further note that perception differs also in regard to the cost effectiveness of different technologies. While there is a view that acquiring 3-Phase technology today may be cheaper, another view contrary to this is that the modern 3-Phase AC technology, though desirable, can be opted for at a later stage when it has established

itself in Europe and elsewhere and by which time the whole technology package is expected to become much cheaper and affordable for the country.

In this context, the Committee fully agree the views of previous Chairman, Railway Board, that in due course, of time if and when 3-Phase technology established itself, not only in the continent but also elsewhere, the technology package would fall into our lap at much cheaper and affordable price and at that stage Indian Railways could be in a better position to absorb it. In the meanwhile, the Railways should go alongwith the thyristor technology. CLW's effort to produce 5000 HP locos with the existing technology within the infrastructure available and with perhaps a minimum additional input of money and technology should also be encouraged. The Committee considers it unfortunate that a balanced view taken by the previous Chairman, Railway Board, in the matter was ignored."

15. The Ministry of Railways, in their Action Taken notes dated 24.8.1993, stated:—

"The cost of imported technology for 3-Phase AC drive locomotives will rise and not fall in future and any assessment to the contrary would be unrealistic.

.....the technology package for 3-Phase locomotives would only become costlier in future. Adoption of thyristor technology for 6000 HP locomotives is not the best solution at the present juncture when 3-Phase technology has fully matured."

All concerned authorities in the Railways have accepted that induction of latest 3-Phase AC technology is considered the most appropriate choice for the future. These locomotives are comparatively maintenance free, capable of achieving 30% saving in energy consumption and nearly unity power factor and are more friendly with track and signalling system. Moreover these locomotives are necessary for meeting the throughput of congested high density routes as also for longer and faster passenger trains. No difference of option exists regarding the superiority of the 3-Phase technology.

(ii) The rate of return on investment has been evaluated and worked out to 14.7% as financial rate of return and 13.7% as economic rate of return. This rate of return has been worked out on the basis of lowest evaluated offer and without considering custom duty. Finance Ministry's approval has been sought for exempting this one time import of locos and spares for upgradation of technology from custom duty to avoid undue burden on the Railways' finance.

(iii) The cost of locomotives proposed for import with 3-Phase technology would no doubt be considered high when compared with the cost of locomotives presently being manufactured as CLW. But, it

has to be viewed in the light of ultimate objective of Indian Railways to organise series manufacture of these locomotives for the next two decade or more. The cost of technology which would form bulk of the cost would be distributed over nearly 3,000 or more locomotives during this period and it is expected that the indigenously manufactured locomotives with 3-Phase technology may be only marginally higher in cost than the 6000 HP locomotives if manufactured using thyristor technology and work out cheaper on life cycle cost basis.

(iv) No adverse impact on technology already developed/under trial as the 5000 HP locomotives developed by CLW would be a sub-optimal solution and not a substitute for 6000 HP locomotive. Regarding adoption of high horse power thyrister locomotives, this technology had already became obsolete and it would be a retrograde step to go in for the same. Moreover, the cost of manufacture of such locomotives would be more or less the same as High Horse Power Locomotives with 3-Phase drive.

(v) Electric locomotives manufactured with 3-Phase technology have been in service in European countries and this technology was considered proven and best suited for series production in our country for the next 2-3 decades.

(vi) No confirmation has been made by Indian Railways to the World Bank regarding testing of 3-Phase electric locomotives before making a decision to proceed with the transfer of technology for manufacture of these locomotives in India. In fact this project has no link with World Bank, being financed by ADB who have evaluated the project and approved it."

16. It is incomprehensible to the Committee as to how the Ministry of Railways have come to the conclusion that the cost of imported technology for 3-Phase AC drive locomotives will rise and not fall in future. As transport technology is fast changing the world over, the availability of more advanced, yet cheaper, alternatives cannot be ruled out.

The committee feel that the above plea taken by the Ministry of Railways has no basis whatsoever.

Utilisation and Evaluation of 5000 HP locos
(Para 5.8 and 5.9)

17. Taking note of the Statement made before them by GM, CLW that with the present wagons, rails etc. optimum utilisation of even 5000 HP Locomotives is not possible and deprecating the fact that Railways had not evaluated the total economic of 5000 HP Locomotives *vis-a-vis* the locomotives already imported or proposed to be imported, the Committee had, in paragraphs 5.8 and 5.9 of Report recommended:—

"The Committee note that at present all the manufacturers of

electric locomotives in the country, including Chittaranjan Locomotive Works (CLW), are manufacturing WAG-5 and WAP-3 type electric locomotives of horse power up to 3900 which is based on tap changer technology obtained from SNCF in sixties. The Committee note that efforts of the CLW, in association with Research, Design and Standard Organisation (RDSO), to upgrade these locomotives up to 5000 HP mark reached a critical stage as one prototype christened by Mother Teresaa's 'Shanti Dan' has already been developed and is undergoing field trial. Further, it is expected to be available for bulk manufacture within a couple of years. The Committee, however note that while the user services in the Railways would welcome a locomotive of 5000 HP which, in any case, is being acknowledged by all concerned to be a better locomotive than the existing 3000 HP and 3900 HP locomotives, the Member (Electrical), RDSO and GM, CLW, more or less, share the view that from a long term point of view, tap changer technology, even after upgradation of 5000 HP mark, would not answer the problem of doubling the lift capacity of the Railways. They have further expressed scepticism about the possibility of upgrading these locomotives to 6000 HP level. The Committee also take note of the statement **made before the Committee by GM, CLW that with the present wagons, rails etc. optimum utilisation** of even 5000 HP locomotives is not possible.

The Committee welcome the parallel efforts undertaken by BHEL to develop 5000 HP electric locomotives with thyristor technology which they hope to deliver to Railways by December, 1992. The Committee, however, regret to note that the Railway Board have not bothered to know the details of these efforts on the part of BHEL. They also deprecate the lack of enthusiasm on the part of the higher echelons in the Railways in regard to efforts within and outside the Railways to develop high horse power locomotives on the basis of indigenous knowhow which, according to DG, RDSO, though within the realm of possibility is likely to take some more time. The Committee also note that it is possible to retrofit the existing locomotives with the thyristor technology in order to upgrade and incorporate power regenerative features, which the Rlys desire to have from a long term point of view. The Committee are informed that cost of 5000 HP locomotives developed by CLW is likely to be less than Rs. 3 crores. An improved version being developed by BHEL is likely to cost about Rs. 4 crores. During the evidence, the Railway Board Representatives and the GM, South-Eastern Railway, have conceded that two indigenous produced 5000 HP locomotives of SNCF technology or based on thyristor technology, would adequately meet the requirements of Indian Railways, keeping

in view, the track condition on most of the sections and impediments of achieving higher speeds or hauling heavier trains. A classic example is hauling of 4700 tonne trains on Kirandul-Waltair Section by two 6000 HP thyristor locos, replacing three 3900 HP CLW locomotives. Two or three CLW or BHEL made 5000 HP locos would cost the Railways 8 to 15 crores, as against Rs. 90 crores in case of two 3-Phase electric locomotives. In this context, the Committee deprecate the fact that Railway have not evaluated the total economics of 5000 HP locomotives *vis-a-vis* the locomotives already imported or proposed to be imported. In this context, the Committee are not surprised by the fact that CLW are to take longer than expected to deliver a prototype of 5000 HP electric locomotive."

18. In their action taken note dated 24.8.1993, the Ministry of Railways have stated:—

"It is submitted that the observations made by the Committee are factually correct except for the statement about the optimum utilisation of 5000 HP loco not being possible with the present wagons, rails etc. Regarding same, it may be clarified that the present fleet of wagons & track on trunk routes is quite fit for utilisation of 6000 HP locos and no difficulty has been experienced in case of 18 HHP thyristor locomotives on this account.

The parallel effort of BHEL to develop 5000 HP electric locomotive with hyristor technology has been noted but same is yet to be offered to ailways. The upgradation of ratings of present day locomotives to 5000 HP and retro-fitment of thyristors, if successful, will still be sub-optimal lution and not a substitute for 6000 HP locos.

The cost comparison of 2 or 3 CLW or BHEL made 5000 HP locos with the cost of 3-Phase electric locomotives would not give realistic picture as the cost of series manufacture of 3-Phase locomotive is expected to be much lower than the cost of import of these locos in the present tender as a major portion of this investment would be primarily for the technology that will be acquired alongwith the locos. In view of the above and the substantial saving in recurring costs on account of maintenance and operation, the two alternatives are not directly comparable."

19. Keeping in view the cost of 5000 HP locomotives produced by BHEL or CLW, as against the cost of 3-Phase Electric Locomotives, as well as the views expressed by the Railway Board Representatives and the GM, South Eastern Railway, the Committee are still of the view that Railways should have evaluated the total economic of 5000 HP locomotives *vis-a-vis* the locomotives proposed to be imported before placing the final order. The Committee do not agree with the views expressed by the Ministry of Railways that the cost of series manufacture of 3-Phase

locomotives is expected to be much lower than the cost of import of these locos in the present tender. Because of the resource crunch and the time gap between the receipt of first batch of locomotives and the transfer of technology, the Ministry of Railways would not be able to start series manufacture of these locomotives in the near future, atleast for seven to eight years. Moreover, keeping in view the track conditions on most of the sections and impediments to achieving higher speed of about 100 KMPH, overhauling heavier trains etc., the benefits supposed to be obtained by induction of these high speed locomotives are not likely to accrue. During their study tour of Waltair-Kirandul section of South Eastern Railway in February, 1993, the Committee have found that two 6000 HP Thyristor locos were successfully hauling 4700 tonne trains by replacing three indigenously built 3000 HP, CLW Locomotives. The Committee, therefore, suggest that the Government should continue to encourage parallel efforts of BHEL to develop 5000 HP Electric Locomotives with Thyristor technology and the CLW's, 5000 HP locomotive based on the existing technology.

Role and State of RDSO

(Para 5.10 to 5.13)

20. Recommending greater involvement of Universities, National Research Institutions and Industry, both in Public and Private Sector, as the Railways alone could not make the required investment on R&D, the Committee had, in Para 5.10 to 5.13 stated:—

> "The Committee were informed that R&D base at RDSO and CLW is not up to the mark. This has been attributed not so much to the absence of scientific and technical manpower or even to efforts on the part of RDSO/CLW as to poor back-up which is there largely in the system. It has been argued by the Railways that the required research efforts call for greater involvement of Universities, National Research Institutions and Industry, both in public and private sector. They have, however, stated that Railways alone could not make the required investment on R&D.
>
> The Committee find that RDSO has essentially become an organisation devoted to absorption of technology and not to its development. In this context, the Committee find the statement of DG, RDSO that Railways had found it cheaper to go for imported technology, significant. In such a situation, the Committee cannot fully accept the statement that RDSO plays the role of a brain for the Railways. They are also convinced that much greater attention is required to be paid to RDSO in terms of resources and importance to be given, if this organisation is to serve any real purpose.
>
> The Committee also wish to underline the importance of greater coordination between the efforts of RDSO and CLW. As a

corollary to this, the R&D component of the CLW also requires to be strengthened further.

In this context, the Committee are constrained to infer from the statements made during evidence that presently no integrated effort has been undertaken by the Railways to involve Universities, Research Institutions and the Industry for a coordinated effort to develop a strong R&D base in the country for manufacture of electric locomotives and other improved type of rolling stock. Thus, the Committee feel, is highly desirable in view of the fact that ours is one of the largest railway networks in the world and that the economy of no other country depends on the efficiency, of the Railways as much as ours."

21. In their reply dated 24.8.1993 the Ministry of Railways have stated:—

"Over the years RDSO has done considerable research and developmental work which has benefited the Railways. However, in the area of latest state-of-art technology, there have been great advancements in some of the developed countries due to massive financial and other inputs.

In order to further improve the research back-up in RDSO, apart from in-house technological inputs, Technology Development Groups have been set up in RDSO in which Universities, IITs, Research Institutes etc. are being actively involved so as to benefit from the latest advancements being made by them.

In order to enable RDSO to function as a pioneering R&D organisation, and with a view to improving its efficiency and productivity, a revised scheme of working has been recently introduced which gives additional powers and further delegations to the Governing Council of RDSO. This is expected to give further fillip to research and developmental activities in RDSO.

In the context of loco design, RDSO conceives a design, prepares key drawings, specifications, test protocol and also undertakes development of critical major equipment with industries. CLW prepares detailed drawings required for manufacture at their works and development of less critical items and undertakes manufacture. RDSO carries out final evaluation by instrumented test and field trials. Not only with CLW, but with all field units, RDSO now has more closer interaction. A Design and Development Centre is being set up at CLW to further increase their developmental potential.

RDSO has made significant contribution in development of technology on Railways despite its limited resources. However, admittedly there is a scope for improvement.

It is also accepted that in our country, where efficiency of the

Railways has a major role in the National economy, there should be greater co-ordination between Railways and Universities/Research Institutions in order to develop a stronger R&D base.

With this in view RDSO was directed to adopt a mission-oriented approach and to set up Technology Development Groups in association with Universities/IITs/Research Institutions/Industry etc. These Missions/Technology Development Groups have made some innovative contribution in the areas of Railways operations and modernisation of rolling stock etc. which have contributed significantly in capacity augmentation.

In order to further develop its research activities a revised scheme of working has been introduced in RDSO in which additional powers have been delegated to its Governing Council."

22. The Committee find that in the area of latest 'state-of-art' technology there have been greater achievements in some of the developed countries due to massive financial and other inputs. As the Railways alone could not make the required investment on R&D the Committee desired that the required research efforts call for greater involvement of Universities, National Research Institutions and Industry, both in Public and Private sector. In this connection, the Ministry of Railways have informed the Committee that technology development groups have been set up in RDSO in which Universities, IITs, Research Institutes etc. are being actively involved so as to benefit from the latest advancements being made by them. The Committee would like to know the full details in this regard.

The Ministry of Railways have informed the Committee that with a view to improving its efficiency and productivity a revised scheme of working has been recently introduced which gives additional powers and further delegations to the Governing Council of RDSO. The Committee would like to know in detail about the recently introduced revised scheme and the manner in which this scheme is expected to give further fillip to research and development activities in RDSO.

As regards better coordination between the efforts of RDSO and CLW, the Committee have been informed that RDSO now has more closer interaction not only with CLW but also with all field units and for this purpose a Design and Development Centre is proposed to be set up at CLW to further increase their developmental potential. The Committee would like to know the latest position in this regard.

Thyristor Locos

(Para 5.14)

23. In paragraph 5.14, the Committee had observed as under:—

"The Committee note that already a period of 9 years (1983-1992) has elapsed since the global tenders for thyristor locos were floated. The trial runs have more or less been completed and Bo-Bo type locomotives from both suppliers *i.e.* Hitachi, Japan and ABB, Sweden, have been identified as equally appropriate for indigenous manufacture, except for minor modifications which have since been completed. The Committee find that there is no difference of opinion between, the users and technical experts in regard to operational performance, as well as technical aspects of these locomotives, which on both these counts, are satisfactory."

24. The Ministry of Railways in their reply dated 24.8.93 have stated as under:—

"While there is no difference of opinion between the users and technical experts in regard to operational performance as well as technical aspects of Bo-Bo type locomotives from both suppliers *i.e.* M/s Hitachi Japan and ABB, Sweden and on both these accounts they can be considered satisfactory. There are a number of modifications, both minor and major, which are yet to be incorporated."

25. The Committee are surprised at the reply of the Ministry of Railways that a number of modifications, both major and minor, are yet to be incorporated in Thyristor locos, whereas during the evidence on 8.9.92, GM, South Eastern Railway (vide para 3.26 of the Committee's Report), had confirmed that the modifications necessary for three types of locomotives had been completed. The Committee seek an explanation from the Ministry of Railways on this.

Adoption of Thyristor Technology VIS-A-VIS Procurement of 3-Phase Locomotives

(Paras 5.15 & 5.16)

26. Recommending to explore the possibility of further improving Thyristor Technology, such as incorporating in it some of the distinct features of 3-Phase Technology, the Committee had, in paragraphs 5.15 and 5.16 recommended:—

"During their examination of this subject the Committee went at length into the suitability of thyristor technology vis-a-vis 3-Phase technology. However, taking into account all arguments for and against AC 3-Phase type locomotives the Committee are convinced that at the present juncture and keeping in view comparative costs of thyristor type locomotives which have passed a crucial stage of trial and test is the appropriate answer to the needs of the Railways in the years to come. In this context, the Committee are also mindful of the fact that, in absence of any experience of running 3-Phase AC locomotives in Indian conditions, the entire economics of 3-Phase

technology as projected by the Railways is based on large number of assumptions. The Committee are, however, also of the view that the possibilities of further improving upon this technology to incorporate in it some of the distinct features of 3-Phase technology such as regeneration of power should be earnestly explored.

In this context the Committee also note that although 3-Phase AC locomotives can attain a speed of 200 kmph for passenger trains and 100 kmph for goods trains, the actual attainable speed under the existing conditions may not exceed the speed of Rajdhani and Shatabdi Express trains which are running with the help of WAG-5 3900 HP locomotives. The Committee also note that the advantages which may accrue from larger number of coaches/wagons with help of 3-Phase AC 6000 HP locomotives at existing speeds have not been fully evaluated against higher financial burden including cost of loan and cost of spares that may be entailed."

27. In their reply dated 24.8.1993, the Ministry of Railways had submitted to the Committee as under:—

"Adoption of thyristor technology which has already become obsolete for series manufacture of HHP locomotives would be a retrograde step. Besides, the comparative cost of series manufacture of 3-Phase locomotives is considered to be only marginally more than the locomotives built with thyristor technology and these costs, in fact, will be cheaper on life cycle-cost basis. The incorporation of regeneration of feature in thyristor technology, though technically feasible is costly and unremunerative.

The advantages have been evaluated with the present day number of wagons (4700 tonne load) at existing max. speed only. While the cost of locomotives have been taken as quoted in the tender, cost of M&P and tools required for series manufacture and proportionate cost of transfer of technology has also been taken into account only custom duty has not been added. As regards the cost of loan, same is automatically covered with the financial rate of return. Apart from the financial rate of return worked out to 14.76% and economic rate of return worked out to 13.7%, there would be substantial benefit on account of increase in line capacity besides avoidance of investments in infrastructure for status quo. However, these benefits are not prone to easy quantification."

28. The Committee had expressed their concern over the fact that the views and the detailed assessment made by the former Chairman, Railway Board, who was in position till March, 1992, were totally ignored by the Ministry of Railways. What is more disturbing to the Committee is the fact that no answer has been given to the Committee's recommendation regarding evaluation of the advantages which may accrue from haulage of a larger number of coaches and wagons with the help of 3-Phase AC 6000 HP

locomotives at existing speeds vis-a-vis higher financial burden, including cost of loan and cost of spares that may be entailed. The Committee, therefore, reiterate their earlier recommendation that the possibilities of further improving the Thyristor technology should be earnestly explored.

Unproven Utility of State of Art Locomotives
(paras 5.18, 5.19 and Recommendation No. 2)

29. Deploring the tendency on the part of Railways to shop for technologies without due seriousness or consideration of its impact on the already precarious railway finances, the Committee had, in paragraphs 5.18 & 5.19, recommended:—

"The Committee, therefore, strongly feel the Railways should resist the temptation of going for the 'state of art' locomotives of unproven utility, in preference to thyristor technology which not only is a great improvement over the existing locomotives in use but is well proven and affordable.

In this context, it has surprised the Committee that contrary to the usual practices and norms, the decision of the Railways to acquire 3-Phase AC locomotives was taken in 1987 without consultations with RDSO and CLW and without a demand from the user department *i.e.* Traffic Department. In fact the Chairman and Members of the Railway board were not aware whether or not the decision had the backing of the full Board. During evidence a peculiar fact which emerged was that although Railways have been making repeated assertions that 3-Phase AC technology was still in its 'infancy' in 1983 the global tenders which were floated in that year for purchase of 18 prototype thyristor locomotives, had also invited offers for supplying 3-Phase AC locomotives, which was not insisted upon. The Committee are, indeed intrigued by the fact that tenders had been floated for an 'unproven technology' based on reports in journals, as the Member, Electrical, has seated before the Committee. They are further intrigued by the fact that GM, CLW had in a letter to Chairman, Railway Board in 1986 bemoaned the fact that AC 3-Phase technology had been over-looked while going for 18 prototype thyristor locomotives. He had also pointed out that hundreds of 3-Phase locomotives were under commercial use at that time in foreign Railways. From this the Committee further find that 3-Phase technology for which the Railways had floated tenders even in 1983 was neither offered by the foreign suppliers nor seriously considered by the Railways. From this, the Committee gained the conviction that 3-Phase technology was at that stage considered to be unsuitable for Indian conditions and therefore not taken seriously. Although the Railways have tried to explain away most of these contradictions, to the eagerness on their part to obtain the 'state of art' technology for reasons unsubstantiated, the Committee remain unconvinced about the maturity of judgement on the part of higher

Railway authorities. In this context, the Committee deplore the tendency on the part of Railways to shop for technologies without due seriousness or consideration of its impact on the already precarious railway finances due to which Railways are continuously throwing heavier and heavier burdens on the rail-users in the form of abnormal increases in fares and freight rates. It is deplorable that such decision are being taken ignoring the demands in other sectors like improved coaches, more wagons, track renewals railway electrification and passenger amenities and giving scant attention to the plan allocation."

30. In their Action Taken Notes, dated 24.8.1993, the Ministry of Railways have stated:—

"Locomotives built with 3-Phase technology have been in service for many years in different railway system in Europe and their superiority in performance has now been well established. More and more countries are now going in for 3-Phase technology for the new locomotives being acquired by them. High horse power locomotive built with thyristor technology are no doubt a great improvement over the existing locomotives in use but going in for the same would not be desirable as thyristor technology has already become obsolete. Moreover series manufacture of locomotives built with 3-Phase technology would be only slightly more in cost when compared with series manufacture of high horse power locomotive built with thyristor technology and would in fact, be cheaper on life cycle cost basis.

The decision to import 3-Phase locomotives was taken by full Board, including Member Traffic during the meeting held on 30th Jan., 87. Specifications for 3-Phase locomotives were drawn by RDSO. Technical experts of RDSO, CLW and Board have scrutinised technical bids received against 3-Phase tender."

31. The Committee are not convinced with the reply of the Government that the locomotives built with 3-Phase Technology have been in service for many years in different railway systems in Europe. The superiority of 3-Phase technology system might have been established in European countries where track conditions and other necessary infrastructure are far better than what exists in Indian Railways. As stated by the Member (Traffic), Railway Board, during evidence held on 18.9.92, taking into account the track conditions and absence of any fencing on both sides of tracks, attaining a speed of 160-180 kmph is not feasible. A similar statement was also made before the Committee by GM, CLW that with the present wagons, rails etc. optimum utilisation of even 5000 HP locomotives (WAG) is not possible in Indian Railways. The Committee seek an explanation from the Ministry of Railways in this regard and would like to know as to how they can guarantee that 3-Phase technology, which is being

imported at present, will not become obsolete by the time they start series manufacture, say after seven or eight years.

Commitment Charges (Para 5.20)

32. Commenting on the loss incurred by the Railways on account of commitment charges etc., the Committee had, in para 5.20, stated:

> "The Committee note that as a result of delay in placing orders for purchase of 3-Phase electric locomotives caused by protracted tendering process, the Railways have incurred a loss of $ 4.619 million upto 15th December, 1991 on account of commitment charges and interest payable to ADB. In fact, the Railways are incurring a liability of $ 4000 per day on account of commitment charges alone. This has not only diminished the over all size of the funds available for actual purchase of 3-Phase locomotives but also acted as the pressure point on the decision making authorities."

33. The Ministry of Railways, in their Action Taken Notes dated 24.8.93, informed the Committee as under:—

> "The Commitment charges/interest incurred by the Ministry of Railways as mentioned in the RCC's observations was unavoidable in view of the circumstances that led to the repeated tendering. Some commitment charges/interest would have been leviable, even if the tender had been finalised as per original schedule as payment of certain amount of commitment charges is unavoidable in all loan schemes since some minimum gestation period is always involved towards execution of projects and claiming disbursement. Hence the entire commitment charges should not be looked upon as a "loss". Even though we issued an advance acceptance letter on 18.3.92 against the 3rd round of tendering, further action in this case was pended in view of RCC's specific advice to pend the same till they submit their report to the Parliament. As a matter of fact the recommendation No. 5 of the report of the RCC also emphasised the point that the importance of taking the commitment charges incurred. After consideration of the RCC's recommendations, Government have given approval for procurement of 6000 HP AC 3-Phase Electric Locomotives in June, 1993. Detailed contracts have been awarded to M/s. ABB, Switzerland in July, 1993 for supply of stores and transfer of technology. The commitment charges continue to be incurred even after placement of the contracts till the utilisation of the loan amount."

34. The Committee note that the Railways had been incurring a liability of $ 4000 per day on account of commitment charges alone and loss on this account upto 15.12.91 amounted to $ 4.619M. The Ministry of Railways have further stated that "commitment charges continue to be incurred even after placement of the contracts till the utilisation of the loan amount." The Committee would like to know the total amount of commitment charges till

date and the amount available with the Ministry of Railways out of the ADB loan, after payment of these commitment charges, by the time the first consignment of 3-Phase locos would reach India. They would also like to know the source from where the Ministry of Railways would meet the extra foreign exchange needed to meet the obligation for payment of the contracted amount. In this connection, the Committee have noted the candid admission of financial Commissioner (Railway Board) that they had no funds to accept such a huge liability of Rs. 1200 crores, including custom duty, without raising revenues through public issue of bonds, or by raising the railway tariff. The Committee would like to know specifically whether such vital issues were seriously examined by the Ministry of Railways before entering into a formal contract with M/s. ABB, Switzerland and finalising loan from ADB. The Committee are of the considered view that had the Ministry of Railways shown due prudence the circumstances leading to the repeated tenders resulting in huge liability of commitment and interest charges could have been avoided.

Evaluation of the offer of M/s. ABB, Switzerland
(Paras 5.25, 5.26 and Recommendation No. 4&5)

35. Expressing their concern over a number of issues remaining unresolved, even months after the issue of 'Advance letter of Acceptance', the Committee had, in their Report, recommended:—

> "The Committee further note that while evaluating M/s. ABB as the lowest bidder in the third round some crucial aspects relating to transfer of technology; cost of spares that will have to be imported till the technology is fully indigenised and the additional costs arising as a result of changes in the customs duty and attributable to delay in the delivery of locomotives etc. have remained unresolved even months after the issue of 'Advance Letter of Acceptance'. Infact, the Committee have taken a serious note of the sharp difference of opinion within the Railway Board itself on these issues. They also regret to note that these issues were not fully thrashed out before issuing the advance letter of acceptance. They are of the firm opinion that had the Ministry of Railway persisted the foreign bidder could have been pressurised to accept the conditions as were set in the tender documents issued to various parties and as also insisted upon by the Tender Committee. In their opinion, an Advance Letter of Acceptance which, according to Chairman, Railway Board, is nothing but a 'letter of intent' would not tentamount to a contract in view of substantive issues still remaining wide open and in absence of full and final acceptance by one party or the offer made by the other party.
>
> In this context, the Committee perceive para-15 of the Advance Letter of Acceptance, which states that "the contract stands concluded with the issue of this Letter of Acceptance" to be of pre-

emptive nature. The Committee further regret the fact that, while finalising the contract, valid and serious objections made by the present financial Commissioner of Railways as well as two successive Chairman of the Railway Board were over-ruled.

Notwithstanding the Advance letter of Acceptance issues to M/s. ABB, Switzerland on 18.3.1992, which itself is under further discussion the Government may give serious consideration to the views expressed by the committee as enunciated in para 5.25 and 5.26 before taking a final decision.

The payment of commitment charges totalling to $ 4 million should not be an inhibitive factor in taking a correct decision in the matter."

36. On the issues raised by the Committee, the Ministry of Railways have, in their Action Taken Notes dated 24.8.93, stated as under:—

"A decision was taken to negotiate with M/s. ABB which was considered as the lowest evaluated offer. Though some of the deviations could be resolved during the negotiations held with M/s. ABB in November, 1991, it was decided that the issues remaining unresolved could be discussed in detail with the firm subsequently and settled before the issue of the detailed contract. On receipt of the file from Ministry of Finance on 14.3.92 and subsequent release of foreign exchange on 18.3.92 there was hardly any time left as the firm's offer was expiring on 20th March, 1992. It was, therefore, decided to issue an advance acceptance letter incorporating the deviations to be withdrawn by M/s. ABB, with the intention of binding the firm to their quoted prices and to prevent them from increasing the price. In addition to the deviations in their offer vis-a-vis the tender, IR had also stipulated certain conditions for further safeguarding IR's financial interests. It took some time for the firm to respond to our acceptance letter. While the firm withdrew completely or partially many of the deviations, their response in respect of ones they did not agree were considered carefully and held to be acceptable. However, further action after July' 92 was pended in view of RCC's advice to do so till the submission of their (RCC) Report to the Parliament. After receipt of the RCC's report, conclusions in paras 5.25 & 5.26 alongwith the recommendations No. 4 of the RCC had been considered by the Government. Government have finally given the approval to go ahead with the procurement of 6000 HP AC 3-Phase Electric locomotives from M/s. ABB, Switzerland. Contracts for supply of stores and transfer of technology were awarded to M/s. ABB in July, 1993.

As mentioned in reply to ealier para 5.25, the letter of acceptance was issued on 18.3.92 since the validity of the firm's offer was expiring on 20th March, 1992 and 19th March, 1992 was a holiday.

As mentioned earlier this was done so as to prevent the firm from revising their quoted prices.

While as stated in remarks against conclusion at para 5.25, the recommendation No. 4 and para 5.26 were considered by the Government, superior authority's right to overrule the objections at the lower level, per se, cannot be critcized sicne this is one of the tenets of the hierarchical decision-making, albeit sparingly used.

After considering the Committee's report and all relevant aspects of the case, Government have given the approval to go ahead with the procurement of 6000 HP AC 3-Phase Electric locomotives from M/s. ABB, Switzerland. Contracts for 30 Nos. of 6000 HP 25 KV AC 3-Phase electric locomotives alongwith associated spares in the form of three loco sets and transfer of technology have been awarded in July, 1993 to M/s. ABB, Switzerland."

37. The Committee take a serious view of the lackadaisical manner in which the deal relating to purchase of 3-Phase locomotives has been dealt with in the Ministry of Railways. They feel that the Government have failed to resolve the vital issues before placing the order with M/s. ABB, Switzerland. The Committee would like to know the details of the deviations which have been agreed to by the firm, completely or partially, and also those on which they did not agree.

As regards superior authority's right to overrule the obejctions at the lower level the Committee agree that this is one of the tenets of the hierarchical decision-making, albeit sparingly used. But there must be some valid reasons for overruling such objections by officials, who had acquired vast experience over the decades in running the railways and were better equipped to make evaluations of both technological factors and financial implicatitons. However, the Committee, in this case, find that the superior authority had overruled in an arbitrary manner the objections raised by the Financial Commissioner, two successive Chairman of the Railway Board, GM, South Eastern Railway, the then GM, CLW etc., without giving any convincing reasons. Even the valid objections raised by the Railway Convention Committee, appointed by the Parliament, were not given due consideration by the Government. The Committee consider this as highly objectionable and repugnant to the tenets of Parliamentary democracy.

38. After having examined various documents and information placed before the Committee and the evidence adduced before them, the Committee have no hesitation in reiterating their earlier observation that the contract entered into by the Ministry of Railways with M/s. ABB, Switzerland for import of thirty 6000 HP 3-Phase AC Locomotive is not only unwarranted but uneconomical too. It has relegated to the background and ignored completely the indigenous advancements made in the loco-technology, besides throwing Railway finances out of gear. In the Committee's view, the heavy cost of acquiring this state of art technology.

especially when Railways are highly ill-equipped to absorb the same with the present infrastructure, will have to be borne by rail users. They, therefore, express their deep anguish over the fact that the recommendations made by the Committee have been totally ignored by the Government.

Implementation of Recommendations

39. The Committee would like to emphasise that greatest importance has to be attached to the implementation of recommendations accepted by the Government. They expect the Government to take expeditious steps in implementing such recommendations. In cases where it is not possible to implement the recommendations in letter and spirit for any reason, the matter should be reported to the Committee in time with reasons for non-implementation.

CHAPTER II

RECOMMENDATIONS AND OBSERVATIONS WHICH HAVE BEEN ACCEPTED BY THE GOVERNMENT

Recommendations (Para 5.1)

The Indian Railways have registered impressive growth during the last 40 years. The Committee note that passenger kilometers, which in 1950-51 were 66,517 had by 1990-91 grown by a factor of 4.4 to 2,95,644. Similarly, tonne kilometers (revenue) had grown from the level of 37,565 by a factor of 5.2 during the same period. Notwithstanding this, growth has not kept pace with the growing demands of the national economy. Consequently, growth of economy has frequently been impaired by the shortage of rail transport. The Railways have, therefore, set a target of almost doubling their lift of passenger and freight traffic as it existed in 1985-86 by the year 2000 AD.

Reply of the Government

The Railways have by and large been achieving the volume of freight and passenger traffic as per the targets laid down from time to time, and its performance has generally been keeping pace with the demands of the National economy.

(The factor 5.2 in the third sentence should read as 6.2).

[Ministry of Railways (Railway Board) OM No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.2)

The Committee, however, note that even as Sixth and Seventh Plan documents recognised the importance of three thrust areas *viz.* track renewals, procurement of rolling stock and electrification of Railway routes involving *inter alia* replacement of overaged assets and modernisation thereof and technological upgradation, the actual performance, particularly during the Sixth Plan period, has been unimpressive. In this context, the Committee, however, also note that the electrification programme, which upto the Sixth Five Year Plan had progressed at an uneven pace picked up tempo thereafter. Although the electrification programme during Eighth Five Year Plan is still under finalisation, the Committee are informed that currently electrification works are in progress on 4204 route kilometers.

Reply of the Government

It is submitted that the observations made by the Committee are factually correct.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.4)

The Railways have, however, been making endeavours to upgrade the haulage capacity to electric locomotives. Since the Railways are committed to phasing out steam locomotives and in view of rising costs of fossil fuels, the Railways have been making efforts to augment the supply and modernise the manufacture of electric locomotives in the country. In this context, the Railway convention Committee (1985) in their Fifth Report had taken note of the project to upgrade existing WAG-5 electric locomotives of 3900 HP to 5000 HP by CIW and other manufacturers of electric locos. A parallel action had been initiated in 1983 to float tenders to acquire 18 prototypes of thyristor 6000 HP locomotives from M/s. Hitachi, Japan and M/s. Asea (now ABB), Sweden. An order to this effect was placed in 1985. These locomotives, received in 1988, have been undergoing trial runs since then on the Waltair-Kirandul Section of the South Eastern Railway. However, in 1987 itself, the Railways floated another global tender for acquisition of 50 Nos. of 3-phase AC 6000 HP electric locomotives even before the 18 thyristor convertor locomotives were received and given a fair trial. The Committee note that for this project the tenders were invited in three rounds by the Railways. The third round was concluded in March, 1992 and an Advance Letter of Acceptance was issued in favour of M/s. ABB, Switzerland for procuring 30 nos. of 3-phase AC 6000 HP electric locomotives at a total cost of Rs. 621 crores exclusive of the element of customs duty, which at present rate of 87% works out to Rs. 540 crores, besides this the cost of spares and charges for transfer of technology are also excluded from this amount.

Reply of the Government

The advance letter of acceptance was issued to M/s. ABB/Switzerland on 18.3.92 for import of 30 Nos. of 3-phase AC 6000 HP electric Locomotives (20 freight and 10 passenger) alongwith 3 locomotives as spares (2 freight and 1 passenger) with maintenance spares etc. at a total CIF cost of about Rs. 583 crores at the market exchange rate of 17.3.92. This excludes Transfer of Technology and Supervision charges. The current rate of customs duty on import of locomotives is 84%.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.7)

While the Committee appreciated the importance of high horse power technology for the overall economic development of the country as also the health of the Railways, at the same time, they cannot but be guided by a sturdy sense of realism which must underpin all decision of public import. In order to take a balanced view of the matter, the Committee have examined various issues thrown up by the decision of Railway Ministry to purchase 3-phase AC 6000 HP locos from M/s. ABB Ltd. while doing so, they have considered not only the views of Ministries of Railways, Finance, Heavy Industry and Planning Commission and various individuals associated therewith, but have also studied various reports, papers correspondence and internal file notings, as furnished by the concerned Ministries.

Reply of the Government

It is submitted that the observations made by the Committee relate to the methodology adopted by them to arrive at observations/conclusions.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.11)

The Committee find that RDSO has essentially become an organisation devoted to absorption of technology and not to its development. In this context, the Committee find the statement of DG, RDSO that railways had found it cheaper to go for imported technology, significant. In such a situation, the Committee cannot fully accept the statement that RDSO plays the role of a brain for the Railways. They are also convinced that much greater attention is required to be paid to RDSO in terms of resources and importance to be given, if this organisation is to serve any real purpose.

Reply of the Government

5.11 In order to enable RDSO to function as a pioneering R&D organisation, and with a view to improving its efficiency and productivity, a revised scheme of working has been recently introduced which gives additional powers and further delegations to the Governing Council of RDSO. This is expected to give further fillip to research and developmental activities in RDSO.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.12)

The Committee also wish to underline the importance of greater coordination between the efforts of RDSO and CLW. As a corollary to this, the R&D Component of the CLW also requires to be strengthened further.

Reply of the Government

In the context of loco design, RDSO conceives a design, prepares key drawings, specifications, test protocol and also undertakes development of critical major equipment with industries. CLW prepares detailed drawings required for manufacture at their works and development of less critical items and undertakes manufacture. RDSO carries out final evaluation by instrumented tests and field trials. Not only with CLW, but with all field units, RDSO now has more closer interaction. A Design and Development Centre is being set up at CLW to further increase their developmental potential.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.13)

In this context the committee are constrained to infer from the statements made during evidence that presently no integrated effort has been undertaken by the Railways to involve Universities, Research Institutions and the Industry for a co-ordinated effort to develop a strong R&D base in the country for manufacture of electric locomotives and other improved type of rolling stock. This, the Committee feel, is highly desirable in view of the fact that ours is one of the largest railway networks in the world and that the economy of no other country depends on the efficiency of the railways as much as ours.

Reply of the Government

RDSO has made significant contribution in development of technology on Railways despite its limited resources. However, admittedly there is a scope for improvement.

It is also accepted that in our country, where efficiency of the Railways has a major role in the National economy, there should be greater co-ordination between Railways and Universitites/Research Institutions in order to develop a stronger R&D base.

With this in view RDSO was directed to adopt a mission-oriented approach and to set up Technology Development Groups in association with Universities/IITS/Research Institutions/Industry etc. These missions/ Technology Development Groups have made some innovative contribution in the areas of Railways operations and modernisation of rolling stock etc. which have contributed significantly in capacity augmentation.

In order to further develop its research activities a revised scheme of working has been introduced in RDSO in which additional powers have been delegated to its Governing Council.

[Ministry of Railways (Railway Board) O.M. No.91/RCC/206/2 Dt. 24.8.1993]

Recommendation S. No. 1

1. The existing WAG-5 and WAP-5 locomotives based on SNCF technology as upgraded to 5000 HP mark by CLW and the locomotives of similar horse power based on thyristor technology being developed by BHEL may be expeditiously productionised to meet the short term and medium term requirements of the Railways.

Reply of the Government

Efforts to upgrade the existing WAG-5 and WAP-3 locomotives to 5000 HP by CLW and development of thyristor technology are being continued. These upgraded locomotives are, however, a sub-optimal solution and not capable of meeting the requirements of congested high density routes of Indian Railways apart from being inefficient as compared to 3-phase locomotives which are comparatively maintenance free, capable of achieving 30% savings in energy consumption and nearly unity power factor and are more friendly with track and signalling system.

[Ministry of Railway (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

CHAPTER III

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

Recommendation (Para 5.21)

The Committee has gone into entire tendering process extensively. They find it disconserting that tenders should have been invited on three consecutive occasions, thus postponing a decision which could have been taken long time back. The Committee regret to note that not only the Railways have incurred a definite and significant financial loss, even the question of deciding the appropriate technology for future manufacture of electric locomotives has been hanging in the balance for too long thus affecting the lift capability as well as profitability of Railways. Moreover, this has also the potential of causing embarrassment and loss of credibility for the country in the eyes of multilateral financial institutions.

Reply of the Government

The brief note on procurement of 6000 HP three phase electric locomotives alongwith technology transfer as well as the chronological sequence of events about this case are enclosed as Annexures A & B. As brought out in this note, the circumstances beyond the control of Ministry of Railways led to a situation where tenders had to be invited 3 times. The consequent repercussions, including those observed by the Committee, could not have been avoided under these circumstances. However delay in procurement of locomotives has not been allowed to reduce the transport capability of Indian Railways during this period

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.93]

ANNEXURE 'A'

Brief Note on Procurement of 6000 Horse Power Three Phase Electric Locomotives Alongwith Technology Transfer

A loan of 190 m US $ was negotiated with ADB in December, 1987 for financing Railways Project, which included procurement of 30 freight locos. EXIM Bank Japan agreed to co-finance 10 passenger locos and a loan of 110 m US $ with 42.5 US $ in foreign exchange for locos was concluded with them also.

2. Global tenders were floated in October, 1987 after getting clearance from ADB as well as other Ministries/Departments involved (DGTD, DOE). Technical offers for 40 locos (30 freight and 10 passengers), with technology transfer were opened on 29th Feb. 1988. 4 bidders viz. ABB, Switzerland, GEC-Alsthom, France, Sumitomo Corporation, Japan (for Hitachi locos) & BHEL, New Delhi (for Hitachi Locos) participated in the tender. After technical evaluation of these offers (Feb. 89), recommendations of the Tender Committee on technical offers (March, 1989), approval of ADB (August, 89-several back references were received, based on report of consultants appointed by ADB), the Commercial offers of these bidders (excepting that of GEC-Alsthom whose technical offer was considered unresponsive) were opened on 28th August, 1989.

3. The Tender Committee after considering the commercial offers in October, 1989 recommended acceptance of the lowest evaluated offer alongwith simultaneous technology transfer, subject to certain technical and commercial aspects being tied up before placement of the contract. These recommendations were thereafter examined by the Board Members concerned who, while agreeing with tender Committee recommendations for acceptance of the lowest evaluated offer of M/s ABB, made some further observations regarding some commercial aspects, TOT etc. (Nov. Dec. 1989).

4. In the meantime, arising out of discussions on the draft '8th Plan' documents, Planning Commission desired to have some clarifications regarding the proposed acquisition of high horse power electric & diesel locomotives during the 8th Plan. These were furnished by this Ministry in November, 1989. Thereafter, an advice was received by CRB from the Principal Adviser, Planning Commission that the final decision on ordering of high HP locos, both diesel and electric, should pend till the matter has been discussed with Planning Commission on 24.11.1989 and it was mentioned by Member Planning Commission that in view of heavy outlay and foreign exchange involved it was necessary to have a second look and

a second opinion before agreeing to the procurement of these locomotives during 8th Plan. The Planning Commission constituted an Expert Group on 9.1.1990 to go into the need for high horse power electric locomotives with 3-phase drive in the context of IR's total requirement of additional locomotives during the next 10 years. The Group submitted its report on 14.3.1990, wherein the Expert Group, *inter alia*, concluded that "the need for induction of high horse power electric locomotives with three phase technology is established beyond doubt on technological, operational and economic considerations", but suggested a reduction in the scope. However, before the recommendations could be considered by MR and processed for clearance of ADB, the validity of commercial offers expired by the end of March, 1990 and bidders did not extend the validity of their offers further.

5. After prolonged discussions with ADB regarding reducing the quantity to 30 (20 freight and 10 passenger) on the lines, recommended by the Expert Group of the Planning Commission technical rebids were invited on 28.8.1990, due for opening on 1.10.1990. In the two part tender system, the technical bids were finalised in consultation with ADB on 8.11.1990 and the commercial bids were opened on 11.12.1990. It was seen that there was considerable price increase as compared to the earlier bids which lapsed in March, 1990. In view of the price hike, approval was obtained from ADB for negotiations with the lowest evaluated tenderer M/s BHEL (Sumitomo/Hitachi) to examine the feasibility of reduction in the price. BHEL however, regretted and expressed their inability to reduce the price. Besides BHEL did not furnish data to substantiate their claim of 20% indigenous value addition.

6. Factors like uncertainties arising out of Gulf crisis, large scale design efforts involved in making a few of these locos adaptable for use in DC areas of Bombay system, etc. were apprehended to have contributed to the unusually high prices quoted and hence a review was made in consultation with ADB to reduce the number of designs i.e. deletion of AC/DC freight and passenger locos as well as reduce the import of fully assembled locos (from 10 to 6 and corresponding increase of CKD/SKD locos from 5 to 7 each), with a view to bring down the costs. ADB conveyed their approval on 3.5.1991 to invite fresh commercial bids from all the four tenderers as per the revised scope. Accordingly, third round of commercial bids were called for opening on 24th June, 1991. Tender Committee submitted their recommendations in August, 1991 and recommended that the tender be discharged in view of the very high rates received in the tender.

7. However, after considering all aspects of the case a decision was taken by Board, with the approval of MR, that it was very necessary to bring this latest "State of Art" technology to India to get the maximum benefits at the earliest and if the same was done later, the costs may also go up further. It was also decided to hold negotiations with M/s ABB, whose offer was considered as the lowest evaluated, so as to explore the

possibilities of getting reduction in prices, speedier indigenisation and to get their acceptance of terms and conditions as per the bid documents.

8. On receipt of the approval from ADB, negotiations were held with M/s ABB from 14th to 16th November, 1991. After the negotiations, Tender Committee recommendations were submitted to the Board on 26.11.1991, wherein the Tender Committee mentioned that they were unable to recommend acceptance of the negotiated offer basically owing to high price. Ministry of Railways, however, weighing the overall implications took a decision to go ahead with this procurement involving technology transfer and also took a view that the deviations be accepted as there appeared to be no option, but with a proviso that deviations will have to be pursued with the firm before placement of the contract. The recommendations of the board were approved by MR on 2.12.1991 and a memorandum accordingly sent to ADB for obtaining their approval for awarding the contract to M/s ABB. The approval of the ADB was received on 12.12.1991.

9. In the meantime, as desired by the Ministry of Finance, the file was sent to them (MOF). On receipt of certain queries from the Ministry of Finance on 24.12.1991, the Tender Committee was asked to examine the issues raised. Tender Committee submitted their recommendations on those issues on 31.12.1991 and after obtaining the approval of MR the case was again sent to Ministry of Finance on 1.1.1992. The final clearance from Ministry of Finance was received by Ministry of Railways on 14.3.1992. After obtaining foreign exchange release, the letter of acceptance was issued on 18.3.1992. In this letter, the firm was asked to accept/withdraw certain conditions as per Board's earlier decision to persue the deviations with the firm. ABB's final response has been received on 16.7.1992 which was accepted by Ministry of Railways. However, before the detailed contracts could be finalised, an advice was received from the Railway Convention Committee (RCC) that the Ministry of Railways should keep in abeyance all further actions in relation to this purchase till the Committee gives its considered opinion. The report from Railway Convention Committee was received in November, 1992. After receipt of the RCC's report, the same was considered and the Government have given the approval to go ahead with the proposal for procurement of 6000 HP 3-Phase locomotives from M/s ABB, Switzerland in June, 1993. Detailed contracts for supply of stores and transfer of technology have been awarded in July, 1993.

10. Annexure 'B' indicating chronological sequence of events is enclosed.

ANNEXURE 'B'

ADB & EXIM BANK

SUB: *Acquisition of 30 Nos. of 6000 HP 3-phase drive Electric Locomotives with Technology transfer—Chronological—order of events*

1.	Preliminary discussions on shortage of Electric Locomotives and on benefits and potentials of 3-phase drive traction system—State of Art Technology.	May-October, '86
2.	Decision by Board (Ministry of Railways) to go in for 6000 h.p. 3-phase drive Electric Locomotives with option for Technology Transfer. (20 Nos. freight consisting of 6 complete, 7 SKD & 7 CKD Locomotives and 10 Nos. Passenger Locomotives)	30.1.1987
3.	Discussions with Ministry of Finance for foreign exchange requirements.	February, 1987
4.	Provision in Rolling Stock Programme 1987-88 for approval by Parliament	February, 1987
5.	Recommendations regarding procurement of 6000 h.p. 3-phase drive Electric Locos with Technology transfer by Planning Group on Technology Progression on Railways (PGTR) appointed by Planning Commission.	June, 1987
6.	Appraisal by Asian Development Bank for grant of loan for upgradation of Gaya-Ghaziabad route with 30 Nos. freight locomotives of 6000 h.p. with 3-phase drive and other items.	May-Sept., '87
7.	Clearance of proposal of procurement of 40 Nos. 6000 h.p. Electric Locomotives by DGTD, Ministry of Heavy Industry.	July, 1987
8.	Clearance of above proposal by Deptt. of Electronics.	September, '87
9.	Issue of Tenders for 6000 h.p. 3-phase drive locomotives.	September, '87
10.	Finalisation of Loan with Asian Development Bank for 30 Freight locomotives and with Exim Bank for 10 passenger locomotives by Ministry of Finance and Ministry of Railways.	August-October, 1987
11.	Opening of Technical Offers	—29.2.1983

11A.	Preliminary recommendations by RDSO	—September, 1988
11B.	Consideration of the report by Tender Committee & reference to RDSO for final recommendations	—December, 1988
12.	Finalisation of recommendations by RDSO	—February, 1989
13.	Finalisation of recommendations on Technical offers by Ministry of Railways	—March, 1989
14.	Approval of recommendations by ADB after back references and replies thereto	—August, 1989
15.	Opening of commercial offers	—28.8.1989
16.	Finalisation of recommendations by TC	—28.10.1989
17A.	Discussions on 7th Plan Documents by Steering Committee of Planning Commission on efficiency of 6000 hp 3-phase drive Electric Locomotives & 4000 hp diesel locos	—September, 1989
17B.	Reply by Ministry of Railways	—7.11.1989
18.	Planning Commission notification to set up expert group to review Indian Railway's total power requirements and the need for import of electric/diesel locomotives	—9.1.1990
19.	Submission of Expert Group Report	—14.3.1990
20.	Expiry of validity period of commercial offers	—31.3.1990
21.	Reference to Asian Development Bank for Rebid	—13.8.1990
22.	Revised bids were called for on	—28.8.1990
23.	Opening of Technical Bids	—1.10.1990
24.	Submission of recommendations (technical offers) to ADB by Ministry of Railways	—23.10.1990
25.	Opening of Commercial Bids	—11.12.1990
26.	Submission of Recommendations Rebid-I (Commercial Offers) to ADB by Ministry of Railways	—8.1.1991
27.	ADB's clearance to hold negotiations with BHEL	—4.2.1991
28.	Negotiations held with BHEL	—20.2.1991
29.	Reference to ADB for Rebids II	—15.4.1991
30.	Clearance by ADB for Rebid II	—3.5.1991
31.	Invitation to Rebid II	—9.5.1991
32.	Opening of Technical Bids	—24.5.1991
33.	Opening of Commercial Bids	—24.6.1991
34.	Submission of recommendations to ADB by Ministry of Railways	—30.10.1991
35.	ADB's clearance for negotiations	—7.11.1991
36.	Negotiations held with ABB	—14 to 16.11.1991
37.	Submission of negotiated offers	—22.11.1991

37A.	Recommendations of TC	—26.11.1991
37B.	Orders of the competent authority	—2.12.1991
37C.	Reference to ADB	—2.12.1991
37D.	ADB's approval to Ministry of Railway's decision	—12.12.1991
38.	Submission of recommendations to Ministry of Finance	—5.12.1991
39.	Reply by Ministry of Finance to review	—24.12.1991
40.	Reference to Ministry of Finance after reviewing	1.1.1992
41.	Approval from Ministry of Finance	—14.3.1992
42.	Request to Ministry of Finance for release of foreign exchange.	—16.3.1992
43.	Issue of Advance Acceptance letter to ABB	—18.3.1992
44.	Final response from ABB regarding deviations received on	—16.7.1992
45.	Decision to accept response of ABB by Ministry of Railways	—5.8.1992
46.	Advice received from RCC to keep in abeyance all further actions till the Committee gives its considered opinion	—27.8.1992
47.	RCC's Report presented in Parliament on	—24.11.1992
48.	Reference to the Cabinet	—April & May, 1993
49.	Government approval received in	—June, 1993
50.	Supply & Transfer to Technology—Contracts signed on	—23.7.1993

Recommendation (Para 5.22)

In this context, the Committee note that the Planning Commission intervened in the matter just before the first bid was to be finalised. However, since the Planning Commission ultimately neither differed with its earlier assessment nor went specifically into the question of identifying as to which of the technologies under consideration was appropriate, the Committee find that this last minute intervention was unnecessary and devoid of any rationale. Moreover, unlike the earlier Expert Group constituted in 1985-86 for the purpose, the Expert Group appointed this time was constituted entirely by former and serving Railwaymen. Since the Planning Commission did not associate any of its own experts or experts drawn from other relevant disciplines, in the opinion of the Committee, the views of the latest Expert Group had little additional value in deciding the specific matter under consideration of the Railways. Had the Railways gone ahead with the finalisation of the bid, the contract would have been awarded at a time when financial viability of the new type of locomotives was not being seriously doubted.

Reply of the Government

Planning Commission had appointed two Committees one in 1986 and other in 1990. Earlier one had wider terms of reference relating to technology in all areas of Railways' functioning; the later one related exclusively to locomotives.

The Railways could not go ahead with the finalisation of the bid as they were restrained from doing so by the Planning Commission.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.23)

Similarly, tenders, considered during the second bid, were discharged with the implied assumption that in a subsequent bid the price that might be quoted would be lower than this. The Committee however note that actually the prices quoted in the third bid by different parties are marginally higher. This obviously puts a question mark against the wisdom of discharging tenders in the second bid when the BHEL had been more or less accepted as the lowest bidder and could have bagged the contract.

Reply of the Government

Though during the second bidding Tender Committee had considered BHEL as the lowest evaluated bidder on the basis of price preference (up to maximum 15%) applicable to category—I bidder, it was noted that BHEL had increased their price for freight and passenger locomotives by 146% and 163% respectively *vis-a-vis* their prices during the first round of bidding. Indian Railways had asked for approval of ADB to hold negotiations with the lowest evaluated bidder, *i.e.*, M/s BHEL with a view to

(i) strive for reduced cost with the scope of supply as per the tender.

(ii) to consider obtaining reduction in price by

(a) deleting the requirement of one AC/DC locomotive both for passenger and freight along with their associated spares, tools & fixtures and Transfer of Technology clause.

(b) by reducing the fully assembled locos from 10 to 6 and increasing SKD/CKD locos from 5 to 7 as the price of SKD/CKD locos was lower than fully assembled locos.

(c) to explore the possibility of getting reduced rates by reducing the number of passenger locomotives from 10 to 5 (2 fully assembled and 3 SKD locomotives).

(d) by reducing the training provision by 50%

ADB, however, while agreeing with Indian Railway's proposal of holding negotiations with the lowest evaluated bidder, M/s BHEL, made the following observations:

(i) Negotiations should be only on the basis of scope of procurement as tendered without any change.

(ii) Since BHEL had been determined to be the lowest evaluated bidder on the basis of price preference in terms of the bid documents, Ministry of Railways must satisfy themselves that information provided by BHEL demonstrates that 20% value addition takes place domestically as required in the bid documents. The result of the Indian Railway's scrutiny in this regard was required to be advised to the Asian Development Bank in the evaluation report to be submitted to the Bank after the negotiations.

In fact Asian Development Bank very clearly stated in their repay that IR's proposal to hold negotiations for revised scope of supply was not acceptable since the same was not in accordance with the Bank's guidelines for procurement. ADB mentioned that in case any satisfactory contract can not be concluded after negotiations, modifications of scope of procurement my be considered before call of re-bidding to all the 4 origional bidders.

A copy of the IR's letter No. 87/F(FEX)/115/1/ADB dated 8.1.91 to ADB and the telex reply dated 4.2.91 are enclosed as Annexures A & B.

Since BHEL, during the negotiations, neither reduced the rates nor gave the desired information to enable IR to substantiate their claim for 20% indigenous value addition so as to qualify as category-I bidder for claiming 15% price-preference, action to modify the scope of procurement and a call for rebidding to all the 4 original bidders as suggested by the ADB had to follow as a matter of course.

[Ministry of Railways (Railways Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

ANNEXURE-A

GOVERNMENT OF INDIA
MINISTRY OF RAILWAYS
(RAILWAY BOARD)

Aarti Khosla
Exec. Director, Finance(LF)

DO No. 87/F(FEX)/115/1ADB
New Delhi, Dt. 8.1.91

Dear Shri Ganesan,

Kindly refer to your telex dt. 8.11.90 in reply to our letter of even number dt. 23.10.90, communicating approval of ADB to calling of commercial bids for technically responsive locomotives from the four bidders through rebidding under ADB Loan 857-IND.

2. Commercial bids were called from all the four bidders and opened on 11.12.90 giving a time period of clear 30 days. The observations of ADB that exchange rates to be used for evaluation and amendments to the bid documents should also be advised to the bidders, were incorporated in the letter of 9.11.90 (sent separately to ADB).

2.1 All the four bidders have quoted prices for all the combinations/type of freight and passenger locomotives which had been advised to them as technically responsive. There were 11 combinations of freight and passenger locos for which bids were called and have also been submitted by the bidders as given below:—

Firm	Number of combinations of freight & passenger locos.
GEC-Als thom-Siemens/France	1
ABB/Switzerland	2
Sumitomo Corporation/Japan	4
BHEL	4
Total	11

2.2 Of the four bidders, GEC-Alsthom-Siemens, ABB and Sumitomo Corporation fall under Category III in terms of clause 9 of Section I Bid

Documents Pt. I. The fourth bidder BHEL, New Delhi, comes under Category I. BHEL has maintained that they will ensure indigenous value addition of not less that 20% of the total contract price of the equipment. However, there are a few points which need to be clarified/ confirmed by BHEL for compliance of conditions laid down for Category I as brought out in paras 8 & 9 of Tender Committee recommendations. The lowest evaluated bids from Category I technically acceptable bidder *viz.* BHEL/NDLS corresponding to three of the four technically acceptable combinations offered by them works out to Rs. 456.98 crores. The lowest evaluated bidder under category III is from Sumitomo for one of the four combinations of freight/passenger locomotives and works out to Rs. 439.7 crores. If an amount equal to 15% of the CIF prices (*viz.* Rs. 413.99 crores) quoted by Sumitomo Corporation corresponding to the lowest evaluated bid is added to their evaluated bid price for the purpose of comparison of BHEL's evaluated price of Rs. 456-98 crores, BHEL's (offer would work out to be the most advantageous one as per the ADB guidelines.

2.3 However, prices of lowest evaluated bid are extremely high as compared to the lowest unit prices of freight and passenger locomotives quoted in their corresponding original bids 15 months ago. The prices as quoted by Sumitomo/Japan are higher by 107/115% for freight and passenger locomotives respectively than the original bid price and the corresponding price increases reflected in BHEL's bid are 146% and 163% respectively. This also substantially exceeds components of loans available under Asian Development Bank & EXIM Bank of Japan. There is very high escalation in the cost. Though the firms have advanced various reasons, *e.g.* additional design work involved for dual voltage AC/DC freight and passenger locomotives, reduction in the quantum of order to 30 from 40, inflationary factors, Gulf crisis etc., the reasons given by firms cannot fully justify the phenomenal increase in prices and it would appear that there is a significant scope for reduction in prices.

3. IR have reviewed the issue. Notwithstanding the need for modernisation and induction of HHP locos, IR have to examine different options in the face of resource constraints. IR consider that negotiations should be held with the lowest evaluated bidder *i.e.*, BHEL to strive for much reduced cost for the existing package as also for the following options:—

(i) With regard to 20 freight locomotives, requirement of one AC/DC locomotive alongwith associated unit exchange spares, tools, jigs and fixtures be dispensed with and procurement be for all the 20 locomotives as AC locos as our main thrust is on 25 KV AC system. In order to obtain favourable price, it is proposed to negotiate for alternative package by reducing fully assembled locos from 10 to 6 increasing SKD/CKD locos from 5 to 7 each

retaining the total number as 20. The prices of CKD/SKD locos are lower than fully assembled locos.

(ii) Regarding passenger locomotives, reduction in prices for 10 AC locos is proposed to be pursued and AC/DC version of one loco is proposed to be dispensed with. Further, considering the gaps in foreign exchange in EXIM Bank Loan and rupee finance, an alternative offer is proposed to be explored by reducing the number of passenger locos from 10 to 5. Its composition is proposed to be changed to 2 fully assembled and 3 SKD locomotives. Even the reduced number of 5 locos will enable superior technology absorption for passenger locos and their series manufacture.

(iii) The training provision is proposed to be reduced by 50% as part of the technology absorption will be taking place in an Indian Unit.

4. ADB's clearance for negotiations with the lowest evaluated bidder M/s BHEL for the existing package as also for the alternatives mentioned above is solicited. Unless satisfactory response and substantial reduction is received from the lowest bidder, IR may find it difficult to progress the procurement. Depending upon the final outcome of the negotiations, IR can decide whether to progress the case or attempt alternative approaches to meet IR's long term needs. I would also suggest if ADB have further observations, we may be informed on phone with a view to settle them by personal discussions. This is being suggested in view of Government of India's desire for expeditious finalisation of the tender which has already been considerably delayed due to one factor or the other.

5. One set of the original commercial bids from the four bidders, copies of Tender Committee recommendations are being sent alongwith this letter for ADB's consideration.

6. A copy of this letter along with a copy of recommendations will be sent through Shri R.S. Soin who happens to be in India and is expected to visit us on 9.1.91.

with regards and wishing you a very happy New Year.

Your's sincerely,

Sd./-
(Aarti Khosla)

DA: (1) Original bids.
(2) Two copies of TC proceedings.

Shri Mahesh Ganesan
Manager
Transport & Communications Division(West)
Asian Development Bank
2330 Roxas Boulevard
Manila
Philippines.

ANNEXURE-B

ZCZC AT×2487 MAN 8711
QU NK TLX
MN LHQAD IFD
HKTLX 0813172203 3172203 IRFC IN

P/EVA-195 S.GOYAL, MANAGING DIRECTOR IRFC, NEW DELHI

4 FEB 91 DUE TO COMMUNICATION PROBLEM WOULD APPRECIATE FOLLOWING MESSAGE BE DELIVERED TO:

AARTI KHOSLA, EXECUTIVE DIRECTOR (LNO.F), RAILWAY BOARD, NEW DELHI, INDIA

RE: LOAN 857-IND: RAILWAY PROJECT—PROCUREMENT OF LOCOMOTIVES (AA) (1) THANKS YOUR LETTER DATED 8 JAN. 91 AND FOLLOW UP TLX OF 24 JAN. 91. BANK HAS NO OBJECTION TO YOUR HOLDING NEGOTIATIONS WITH THE LOWEST EVALUATED BIDDER M/S BHEL FOR A REDUCTION OF THE BID PRICE ON THE BASIS OF SCOPE OF PROCUREMENT AS TENDERED IN THE REBIDDING, WITHOUT ANY CHANGE. SINCE BHEL HAS BEEN DETERMINED TO BE THE LOWEST EVALUATED BIDDER ON THE BASIS OF PRICE PREFERENCE IN TERMS OF THE BID DOCUMENTS, MOR MUST SATISFY THEMSELVES THAT INFORMATION PROVIDED BY BHEL DEMONSTRATES THAT 20 PER CENT VALUE ADDED TAKES PLACE DOMESTICALLY AS REQUIRED IN THE BID DOCUMENTS. THE RESULT OF YOUR SCRUTINY IN THIS REGARD MAY BE ADVISED IN THE EVALUATION REPORT TO BE SUBMITTED TO THE BANK AFTER THE NEGOTIATIONS.

(2) AS A CONDITION OF ENTERING INTO NEGOTIATIONS MOR WOULD REQUIRED BHEL TO AGREE TO:

(I) WITHDRAW THE ASSUMPTION MADE IN BHEL'S BID AS TO THE CONTINUED EXEMPTION FROM PAYMENT OF CUSTOM DUTIES ON IMPORTED COMPONENTS? AND

(II) TO AGREE THAT THEIR BID PRICE IS NOT SUBJECT TO VARIATION FOR EXCHANGE RATE MOVEMENTS AND STATUTORY VARIATIONS.

(BB) MOR'S PROPOSAL TO ALSO HOLD NEGOTIATIONS WITH THE LOWEST EVALUATED BIDDER BHEL ON THE BASIS OF OPTIONS DETAILED IN PARA 3 OF YOUR LETTER QUOTED ABOVE IS NOT ACCEPTABLE SINCE IT IS NOT IN ACCORDANCE WITH THE BANK'S GUIDELINES FOR PROCUREMENT. IN CASE NO SATISFACTORY CONTRACT CAN BE CONCLUDED AT NEGOTIATIONS. MODIFICATIONS OF THE SCOPE OF PROCUREMENT MAY BE CONSIDERED BEFORE CALL OF REBIDDING OPEN TO ALL THE FOUR ORIGINAL BIDDERS.

(CC) WE REQUEST THAT YOUR EVALUATION REPORT AND RECOMMENDATIONS MAY BE SENT TO US EARLY AFTER THE NEGOTIATIONS.
REGARDS
GANESAN/ASIAN BANK
PLEASE REPLY TO 63587 ADB PN 40571 ADB PM 23103 ADB PH=02040857
3172203 IRFC IN
04/FEB/91 14:21:19

Recommendation (Para 5.27)

BHEL, after having come close to winning the contract in the second bid, finally lost it in the third round. The Committee find that throughout the process of evaluating different tenders in all the three rounds of bidding, the only issue which has gone against BHEL is the veracity of their claim of being able to achieve 20 per cent domestic value addition on the basis of which they could qualify for 15% price preference and win the contract. On perusal of the reports of the Tender Evaluation Committees and other related papers, the Committee find that the Railways have consistently doubted this claim of BHEL. The Railways have, in their submissions before the Committee, expressed helplessness keeping in view of the conditions incorporated by Asian Development Bank (ADB) in the loan agreement which obliged the Railways to fully convince themselves about the genuineness of BHEL's claim of achieving 20% domestic value addition. However, the Committee find that ADB had, for all practical purposes, placed the entire onus in this regard on the Indian Railways. On their part, ADB have, in the matter, fully relied upon the opinion of the Indian Railways. One of the specific issues, which became a point of deadlock between the Railways and the BHEL, was the former's insistence that the prices quoted in the tender documents should disclose the break-up

4into the labour costs etc. so that the actual level of domestic value addition could be verified.

The Committee also note that during the third round the Tender Committee of the Railways itself, having been convinced about the genuineness of BHEL's claim of 20% domestic value addition, had recommended treatment of BHEL offer as category-I. This recommendation was overruled by the Railway Board. It is, however, pertinent to note here that negotiations between BHEL and the Railways during the second bid had essentially broke down due to the reluctance of BHEL to give break-up of their costs as per ADB stipulation and as per the conditions of tender document. During the third bid also BHEL lost the contract on the same issue. Further efforts to reconcile this knotty issue to the inter-ministerial level also resulted in a dead-lock. The Committee feel that in this entire exercise BHEL also have not acquitted themselves well. It would seen that they were prepared to risk the contract rather than share information which Railways were procedurally entitled to receive. In fact the indifference of BHEL in this entire process baffles the Committee.

Reply of the Government

Asian Development Bank while agreeing with the Indian Railways' proposal of holding negotiations with the lowest evaluated bidder M/s BHEL during the second bidding made the following observation:

> Since BHEL had been determined to be the lowest evaluated bidder on the basis of price preference in terms of the bid documents, Ministry of Railways must satisfy themselves that information provided by BHEL demonstrates that 20% value addition takes place domestically as required in the bid documents.
>
> The result of the IR's scrutiny in this regard was required to be advised to the Asian Development Bank in the evaluation report to be submitted to the Bank after the negotiations.

BHEL, during the negotiations, did not furnish the desired information to enable IR to substantiate their claim for 20% indigenous value addition so as to qualify for 15% price preference. Even during the 3rd bid, they failed to furnish the details of 20% value addition. BHEL took the plea for non-furnishing of price break-up of indigenous value addition that sharing of detailed price break up of items/components before technology transfer means sharing of commercial data of their collaborators/BHEL with their competitors. Photostate copy of the comments of BHEL in this regard is enclosed. The stand taken by BHEL for not furnishing the price break up of 20% value addition to qualify them as category-I bidder and claim 15% price preference was not acceptable as they were required to furnish the data in terms of the Bid Documents and also as required by Asian Development Bank, the agency financing the purchase of these locomotives.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Comments furnished by BHEL/Ministry of Industry (Deptt. of Heavy Industry) in respect of Para 5.27

SUB: IRB tender no. GP-140/R for the procurement of 3-Phase locomotives alongwith technology transfer.

1. Value addition for the purpose of classification of offers had been defined in Clause No. 9.1 of the Railway's bid document as:—

"Tenderers of goods manufactured in India shall establish in their offers to the satisfaction of the Purchaser and ADB, that manufacturing cost of such goods includes a domestic value added in India, equal to atleast twenty percent (20%) of the ex-factory tender price of such goods and such offers shall be classified as Category-I offers."

Further the tender was to be decided as one total package as per Appendix II of Railway's letter No. 89/RSF/P-459/1 (GP-140/R) dated 28.8.90.

2. Accordingly total price and total CIF content had been clearly indicated in the required Format by BHEL in their offer/s. It established the requisite indigenous value addition as was required for evaluation purposes as stipulated above. In support of such value addition, a physical list of material contribution to be made indigenously had also been furnished alongwith offer which clearly justified the value addition. With this BHEL had fully complied with the tender requirements of level of indigenisation and became eligible for classifying the bid as category I.

3. However Railways seems to be taking the view that BHEL has not furnished further break up prices against indigenously manufactured items/equipments and therefore conclude that BHEL has not complied the tender requirements. Before arriving at such conclusion, it is necessary to analyse the issue involved. The total tender package comprised of 20 Nos. freight locomotives, 10 Nos. passenger locomotives, spares, services, special tools & technology transfer etc. The tender required manufacture of these locomotives under the technology transfer. Accordingly BHEL proposed in their offer progressive indigenisation of these locomotives ensuring required total value addition mentioned in the bid document. As per this it is to be noted that the initial locos would have the lower indigenous content and the last loco the highest indigenous content.

As already mentioned earlier, full list of items/equipment indigenously proposed to be manufactured for these thirty locos is already furnished to substantiate the value addition. In order to give break up of prices against each of these items precisely, it would be

necessary to have total documentation, process technology and investment details. At the tendering stage and before technology transfer, these details are obtained from collaborators as average near approximate values.

Therefore, BHEL had furnished physical items to be manufactured indigenously against all the thirty locos and their average value which entirely meets the spirit of the tender requirements.

4. Various ICB tenders were quoted in the past based on similar lines at the tender stage against which contracts were awarded to BHEL e.g. the Farakka Super Thermal Power Project of NTPC and Indian Railways' Chittaranjan Locomotive Works Contract No. CRJ/ME/727/Part III for traction motors (copy enclosed).

Railways did not ask for such a data in any of the three rounds of bidding and at no time it was mentioned that this type of data was a mandatory requirement. In fact, BHEL's Dec.' 1990 bid was accepted and BHEL was called for negotiations. As such Railways insistence on the break up in terms of stores, labour, over-heads & others etc. appears to be an after thought. Sharing of detailed price break up of items/equipments before technology transfer means sharing of commercial data of collaborators/BHEL with their competitors even though these details would be very approximate and have no significance for tender evaluation.

5. Here it is relevant to mention para 3.3 of the 'Handbook on problems in ADB financed procurements':

QUOTE

The Executing Agency can and indeed should ask a bidder for clarification of his bid if there is any doubt about the intent of the bidder. Modifications of the substance of a bid by a bidder are, however, not permissible. Any change in price, delivery terms, conditions of contract or changes in specifications proposed by the bidder in his bid is considered a substantive modification.

UNQUOTE

Furnishing or otherwise of this break-up information by BHEL in any way does not change the price or delivery terms or specification etc. and BHEL could have been given an opportunity to explain its stand before BHEL is denied such a major Contract.

Recommendation (Para 5.28)

Under the present conditions, the Ministry of Railways enjoy a certain degree of autonomy in sanctioning projects, subject to their inclusion in the Railway Plan and the Railway Budget. From the notes submitted by the Railways to the Committee the correspondence relating to the project between Ministry of Finance and the Railways, as also from the newspaper

reports, the Committee had gained an impression that the project, as also the issue of Advance Letter of Acceptance in favour of ABB, Switzerland had been cleared by the Ministry of Finance. During evidence, however, it became evident that the expression 'clearance' had been misconstrued. The Secretary, Economic Affairs, stoutly disclaimed any responsibility for techno-economic as well as financial viability of the project. In fact, in his evidence before the Committee he almost laboured on the point that the matter was referred to the Ministry of Finance for resolving a limited issue viz. whether or not Railways in classifying BHEL's offer as category-I bid, had acted within the guidelines issued by the ADB. He also admitted the Ministry of Finance were not competent to judge the viability of the Railways' project of the present kind and that if such a responsibility were to be cast upon that Ministry, it will approach the matter in a different manner. The Committee also note that, notwithstanding, the limited role of Finance Ministry inregard to Railway projects, that Ministry in the meeting convened by the Secretary, Economic Affairs himself on 10 Feburary, 92 did raise some very serious question about the financial viability as well as future implementability of the contract. Moreover, the correspondence between the Ministry of Finance and Railways on the subject shows that the former were not aware of the developments in regard to this project.

Although, procedurally, the Secretary, Economic Affairs, has been well within his brief, the Committee find it hard to accept that a project, which affects the entire Railway's Eighth Five Plan and therefore, affects, vitally, the entire national economy, and was within the knowledge of the Ministry should have been viewed by the custodian of nation's economy and financial health with such nonchalance. As it is obvious to the Committee this highlights lack of holistic functioning of the economy in the Ministry of Finance.

Reply of the Government

This para was referred to the Ministry of Finance for furnishing the reply. The reply as furnished by them is reproduced below:—

"The Indian Railway Committee, popularly known as the Acworth Committee, was appointed by the Secretary of State for India on the 1st of November, 1920. Based on the recommendations of the Acworth Committee, the Financial Commissioner Railways was appointed on 1st April, 1923 with a special status, whereby, he became a full Member of the Railway Board, and, at the same time, acted in the Board as a representative of the Finance Member (now Finance Minister) of the Government of India. It was envisaged since the inception of this office that in all matters of sufficient importance or difficulty, the Financial Commissioner would fully and formally keep the Finance Member (now Finance Minister) informed, as he would have done if the ordinary departmental practice of reference through the Finance Secretary had been

followed. Thus, for the purpose of according sanctions of the Finance Department (Ministry), since inception itself, the Financial Commissioner Railways has taken the place and role which the Finance Secretary would otherwise have played. It has all through been accepted in principle since 1923 that the Financial Commissioner Railways would be the agency through which the Finance Department (now Ministry) would exercise its powers of control and oversight over Railways.

2. The dual status of the FC Railways has remained unchanged to this date. He is a member of the Railway Board, and also, as an Ex-Officio Secretary to the Ministry of Railways for all financial matters, he acts as an agency through which the Finance Minister is expected to exercise his control and oversight.

3. Because of this arrangement, all Railway proposals are kept outside the scope of Public Investment Board (PIB), which is chaired by the Secretary (Expenditure), under direct control of the Finance Minister.

4. In 1974, the Ministry of Finance took up with the Railways the question of bringing within the ambit of PIB certain types of Railway investments, but did not succeed. In June, 1978 the Railway Convention Committee also considered the matter and advised against the routing of Railway Investment proposals through the PIB in the Ministry of Finance. Again in July, 1981, the Railway Reform Committee declined to agree to this proposal, except continuing the practice of major investment proposals being submitted for clearance by the Planning Commission. This matter was taken up by the Secretary (Expenditure) upto the Prime Minister level through the Cabinet Secretary once again in January, 1988, but no decision for Finance Ministry/PIB reviewing Railway Investment proposals in any manner was agreed to.

5. In the present case, since the then Financial Commissioner (Railways) was totally supportive of the proposal, and had, in his capacity equivalent to the Finance Secretary, marked papers directly to the Finance Minister in November and December, 1991, in the scheme of things as approved by the Parliament under the Indian Railways Act, 1989; by the Railway Convention Committee in its 1978 Report, and by the Transaction of Business Rules of GOI, it was not possible for the Ministry of Finance (in the Departments of either expenditure, or Economic Affairs) to go into the aspects of financial viability etc. of this proposal, after the then Financial Commissioner (Railways) had fully satisfied himself, supported the proposal and had submitted the papers directly to the Financial Minister.

6. The Department of Economic Affairs carried out, on the instructions of Cabinet Secretariat, and PMO, only a limited examination of the whole proposal from the point of view of ADB's Procurement Guidelines having been complied with by Railway Ministry".

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.29)

In this context, the Committee strongly deprecate the view expressed by Financial Commissioner, Railway that, his own serious doubt about the overall viability of the project notwithstanding, he did not think it to a matter important enough to be brought to the notice of Finance Minister which, he admitted, he could have done as per power conferred on him had he recognised the importance of the project.

Reply of the Government

1. The Railway Minister, after going through the reservations of the Financial Commissioner, has minuted as under on 5.8.1992.

> "In this case conscious decision was taken by the Government taking into account all the relevant aspects and in full and final consultation with the Finance Minister....."

2. It also needs to be noted that the case had already been examined by the Finance Ministry. The Finance Ministry, while returning the case stated that:

> "In accordance with the well accepted procedure, the Ministry of Railways are the competent authority to undertake a comparative technical evaluation of various bids including the commercial and financial terms as well as guarantee conditions, consistent with the prescribed specifications and requirements and that the Ministry of Finance are satisfied that the procedure prescribed by the ADB has been followed."

Though the Ministry of Finance limited their comments to being satisfied with the procedure prescribed by ADB has been followed, it was felt that had the Ministry of Finance noticed any serious flaw with the disposal of the case, they would have commented on it.

3. It was in the context of the background as brought out in the preceding two paragraphs that, in the course of his evidence the Financial Commissioner, Railways had observed as under:

> "I did not consider this matter to be important enough to be referred to the Finance Ministry, more so because a decision had already been taken and my predecessor had agreed to this purchase."
>
> [Ministry of Railways (Railway Board) O.M. No.91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.30)

In the same context, the Committee are also unhappy at the manner in which the Planning Commission, after having stalled the tendering process during the first bid, should at the later stage, take the stand that they had neither the competence nor any role to take a

view as to the choice of technology being made by the Railways or its financial implications. The Committee are deeply disturbed by the helplessness sigments of the Government in watching the interests of the tax-payer. The Committee are of the firm view that his calls for serious thinking on the part of the Government as to the reasonability and effectiveness of existing allocation as well as transaction of business within the Government and grant of autonomy for Railways such matters outside and purview of PIB.

Reply of the Government

Ministry of Railways have adequate autonomy for purchase of Locos/Rolling Stock/Technology transfer etc.

The above case of locomotive import was a stray one.

[Ministry of Railways (Railway Board) O.M. No.91/RCC/206/2 Dt. 24.8.1993]

CHAPTER IV

RECOMMENDATIONS AND OBSERVATIONS IN RESPECT OF WHICH REPLIES OF THE GOVERNMENT HAVE NOT BEEN ACCEPTED BY THE COMMITTEE AND WHICH REQUIRE REITERATION

Recommendation (Para 5.3)

The Committee note that alongside electrification of more route kilometers the question of augmenting the present lift of passenger and freight from the existing network at the lowest capital and operative costs has been engaging the attention of Planning Commission as well as the Railways for the last several years. In this context, the latest view of the Planning Commission is that in their search for new technologies to accomplish this task, the Indian Railways do not have to adopt technologies which have been accepted in the developed countries to win back traffic from faster modes of transport and, therefore aim at achieving higher speeds. The Steering Committee of Planning Commission on Transport have underlined the need for the Railways to endeavour to remain the 'beast of burden' of the national economy, as hitherto, and to eschew all attempts to become its showpiece. They have therefore, cautioned Indian Railways against the temptation to increase line capacity by raising the booked speed of freight trains from 75 Kmph to 90 Kmph, with corresponding reduction in the differential between the freight trains and passenger trains which have the booked speed of 100—130 Kmph.

Reply of the Government

Operating strategies contained in Corporate Plan envisage reduction of speed differential by raising maximum speed of freight trains upto 100 Kmph. However, on account of resource crunch, it is not likely for Indian Railways to raise the maximum permissible speed for freight trains for the present.

Recommendation (Para 5.6)

The Committee futher note that perception differs also in regard to the cost effectiveness of different technologies. While there is a view that acquiring 3-phase technology today may be cheaper, another view contrary to this is that the modern 3-phase AC technology, though desirable can be opted for at a later stage when it has established itself in Europe and elsewhere and by

which time the whole technology package is expected to become much cheaper and affordable for the country.

Reply of the Government

The cost of imported technology for 3-phase AC drive locomotives will rise and not fall in future and any assessment to the contrary would be unrealistic.
[Ministry of Railways (Railway Board) O.M. No.91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.8)

The Committee note that at present all the manufacturers of electric locomotives in the country, including Chittaranjan Locomotive Works (CLW), are manufacturing WAG-5 and WAP-3 type electric locomotives of horse power up to 3900 which is based on tap changer technology obtained from SNCF in sixties. The Committee note that efforts of the CLW, in association with Research, Design and Standard Organisation (RDSO), to upgrade these locomotives up to 5000 HP mark reached a critical stage as one prototype christened by Mother Teresaas 'Shanti Dan' has already been developed and is undergoing field trial. Further, it is expected to be available for bulk manufacture within a couple of years. The Committee however, note that while the user services in the Railways would welcome a locomotive of 5000 HP which, in any case, is being acknowledged by all concerned to be a better locomotive than the existing 3000 HP and 3900 HP locomotives, the Member (Electrical), RDSO and GM, CLW, more or less, share the view that from a long term point of view, tap changer technology, even after upgradation of 5000 HP mark, would not answer the problem of doubling the lift capacity of the Railways. They have further expressed scepticism about the possibility of upgrading these locomotives to 6000 HP level. The Committee also take note of the statement *made before the Committee by GM CLW that with the present wagons rails etc. optimum utilisation of even 5000 HP locomotives is not possible.*

Reply of the Government

It is submitted that the observations made by the Committee are factually correct except for the statement about the optimum utilisation of 5000 HP loco not being possible with the present wagons, rails etc. Regarding same, it may be clarified that the present fleet of wagons & track on trunk routes is quite fit for utilisation of 6000 HP locos and no difficulty has been experienced in case of 18 HHP Thyristor locomotives on this account.
[Ministry of Railways (Railway Board) O.M. No.91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.9)

The Committee welcome the parallel efforts undertaken by BHEL to develop 5000 HP electric locomotives with thyristor technology which they hope to deliver to Railways by December, 1992. The Committee, however, regret to note that the Railway Board have not bothered to know the details of these efforts on the part of BHEL. They also depreciate the lack of enthusiasm on the part of the higher echelons in the Railways in regard to efforts within and outside the Railways to develop high horse power locomotives on the basis indigenous know-how which, according to DG, RDSO, though within the realm of possibility is likely to take some more time. The Committee also note that it is possible to retrofit the existing locomotive with the thyristor technology in order to upgrade and incorporate power regenerative features, which the Rlys desire to have from a long term point of view. The Committee are informed that cost of 5000 HP locomotives developed by CLW is likely to be less than Rs. 3 crores. An improved version being developed by BHEL is likely to cost about Rs. 4 crores. During the evidence, the Railway Board representatives and the GM, South Eastern Railways, have conceded that two indigenously produced 5000 HP locomotives of SNCF technology or based on thyristor technology, would adequately meet the requirements of Indian Railways keeping in view the track condition on most of the sections and impediments of achieving higher speeds or hauling heavier trains. A classic example is hauling of 4700 tonne trains on Kirandul-Waltair Section by two 6000 HP thyristor locos, replacing three 3900 HP CLW locomotives. Two or three CLW or BHEL made 5000 HP locos would cost the Railways 8 to 15 crores, as against Rs. 90 crores in case of two 3 phase electric locomotives. In this context, the Committee deprecate the fact that Railways have not evaluated the total economic of 5000 HP locomotives *vis-a-vis* the locomotives already imported or porposed to be imported. In this context the Committee are not surprised by the fact that CLW are to take longer than expected to deliver a prototype of 5000 HP electric locomotive.

Reply of the Government

The parallel effort of BHEL to develop 5000 HP electric locomotive with thyristor technology has been noted but same is yet to be offered to Railways. The upgradation of ratings of present day locomotives to 5000 HP and retro-fitment of thyristors, if successful, will still be sub-optimal solution and not a substitute for 6000 HP locos.

The cost comparison of 2 or 3 CLW or BHEL made 5000 HP locos with the cost of 3-phase electric locomotives would not give realistic

picture as the cost of series manufacture of 3-phase locomotives is expected to be much lower than the cost of import of these locos in the present tender as a major portion of this investment would be premarily for the technology that will be acquired alongwith the locos. In view of the above and the substantial saving in recurring costs on account of maintenance and operation, the two alternatives are not directly comparable.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.14)

The Committee note that already a period of 9 years (1983-1992) has elapsed since the global tenders for thyristor locos were floated. The trial runs have more or less been completed and Bo-Bo type locomotives from both suppliers i.e. Hitachi, Japan and ABB, Sweden, have been identified as equally appropriate for indigenous manufacture, except for minor modifications which have since been completed. The Committee find that there is no difference of opinion between, the users and technical experts in regard to operational performance, as well as technical aspects of these locomotives, which, on both these counts, are satisfactory.

Reply of the Government

While there is no difference of opinion between the users and technical experts in regard to operational performance as well as technical aspects of Bo-Bo-Bo type locomotives from both suppliers, i.e. M/s Hitachi, Japan and ABB, Sewden and on both these accounts they can be considered satisfactory. There are a number of modifications, both minor and major, which are yet to be incorporated.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.15)

During their examination of this subject the Committee went at length into the suitability of thyristor technology *vis-a-vis* 3 phase technology. However, taking into account all arguments for and against AC 3-phase type locomotives the Committee are convinced that at the present juncture and keeping in view comparative costs of thyristor type locomotives which have passed a crucial stage of trial and test is the appropriate answer to the needs of the Railways in the years to come. In this context, the Committee are also mindful of the fact that, in absence of any experience of running 3-phase AC locomotives in Indian conditions, the entire economics of 3-phase technology as projected by the Railways is based on large number of assumptions. The Committee are, however, also of the view that the possibilities of further improving upon this technology to incorporate in it some of the distinct features of 3-phase technology such as regeneration of power should be earnestly explored.

Reply of the Government

Adoption of thyristor technology which has already become obsolete for series manufacture of HHP locomotives would be a retrograde step. Besides, the comparative cost of series manufacture of 3-phase locomotives is considered to be only marginally more than locomotives built with thyristor technology and these costs, in fact, will be cheaper on life cycle-cost basis. The incorporation of regeneration of feature in thyristor technology though technically feasible is costly and unremunerative.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.16)

In this context, the Committee also note that although 3-phase AC locomotives can attain a speed of 200 kmph for passenger trains and 100 kmph for goods trains, the actual attainable speed under the existing conditions may not exceed the speed of Rajdhani and Shatabdi Express trains which are running with the help of WAG-5 3900 HP locomotives. The Committee also note that the advantages which may accrue from larger number of coaches/wagons with help of 3-phase AC 6000 HP locomotives at existing speeds have not been fully evaluated against higher financial burden including cost of loan and cost of spares that may be entailed.

Reply of the Government

The advantages have been evaluated with the present day number of wagons (4700 tonne load) at existing max. speed only. While the cost of locomotives have been taken as quoted in the tender, cost of M&P and tools required for series manufacture and proportionate cost of transfer of technology has also been taken into account, only custom duty has not been added. As regards the cost of loan, same is automatically covered with the financial rate of return. Apart from the financial rate of return worked out to 14.76% and economic rate of return worked out to 13.7% there would be substantial benefit on account of increase in line capacity besides avoidance of investments in infrastructure for *status quo*. However, these benefits are not prone to easy quantification.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.17)

In this context, the Committee fully agree the views of previous Chairman, Railway Board, that in due course of time if and when 3-phase technology established itself, not only in the continent but also elsewhere, the technology package would fall into our lap at much cheaper and affordable price and that at that stage Indian Railways could be in a better position to absorb it. In the meanwhile, the Railways should go alongwith

the thyristor technology, CLW's effort to produce 5000 HP locos with the existing technology within the infrastructure available and with perhaps a minimum additional input of money and technology should also be encourged. The Committee considers it unfortunate that a balanced view taken by the previous Chairman, Railway Board, in the matter was ignored.

Reply of the Government

As explained against para 5.6, the technology package for 3-phase locomotives would only become costlier in future. Adoption of thyristor technology for 6000 HP locomotives is not the best solution at the present juncture when 3-phase technology has fully matured.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.18)

The Committee, therefore, strongly feel the Rlys should resist the temptation of going for the 'State of art' locomotives of unproven utility, in preference to thyristor technology, which not only is a great improvement over the existing locomotives in use but is well proven and affordable.

Reply of the Government

Locomotives built with 3-phase technology have been in service for many years in different railway system in Europe and their superiority in performance has now been well established. More and more countries are not going in for 3-phase technology for the new locomotives being acquired by them. High horse power locomotives built with thyristor technology are not doubt a great improvement over the existing locomotives in use but going in for the same would not be desirable as thyristor technology has already become obsolete. Moreover, series manufacture of locomotives built with 3-phase technology would be only slightly more in cost when compared with series manufacture of high horse power locomotives built with thyristor technology and would, in fact, be cheaper on life cycle cost basis.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.19)

In this context, it has suprised the Committee that contrary to the usual practices and norms, the decision of the Railways to acquire 3-phase AC locomotives was taken in 1987 without consultations with RDSO and CLW and without a demand form the user department *i.e.* Traffic Department. In fact, the Chairman and Members of the Railway Board were not aware whether or not the decision had the backing of the full Board. During evidence a peculir fact with emerged was that although Railways have been

making repeated assertions that 3—phase AC technology was still in its 'infancy' in 1983 the global tenders which were floated in that year for purchase of 18 prototype thyristor locomotives, had also invited offers for supplying 3—phase AC locomotives, which was not insisted upon. The Committee are, indeed, intrigued by the fact that tenders had been floated for an 'unproven technology' based on reports in journals, as the Member, Electrical, has stated before the Committee. They are futher intrigued by the fact that GM, CLW had in a letter to Chairman, Railway Board in 1986 bemoaned the fact that AC 3—phase technology had been overlooked while going for 18 prototype thyristor locomotives. He had also pointed out that hundreds of 3—phase locomotives. Were under commercial use at that time in foreign Railway. From this the Committee further find that 3—phase technology for which the Railways had floated tenders even in 1983 was neither offered by the foreign suppliers nor seriously considered by the Railways. Form this, the Committee gained the conviction that 3—phase technology was at that stage considered to be unsuitable for Indian conditions and therefore not taken sriously. Although the Railways have tried to explain away most of these contradictions, to the eagerness on their part to obtain the 'stated of art' technology for reasons unsubstatiated, the Committee remain unconvinced about the maturity of judgement on the part of higher Railway authorities. In this context, the Committee deplore the tendency on the part of Railways to shop for technologies without due seriousness or consideration of its impact on the already precarious railway finances due to which Railways are continuously thowing heavier and heavier burdens on the rail-users in the form of abnormal increases in fares and freight rates. It is deplorable that such decision are being taken ignoring the demands in other sectors like improved coaches, more wagons, track renewals, railway electrification and passenger amenities and giving scant attention to the Plan allocation.

Reply of Government

The decision to import 3-phase locomotives was taken by full Board, including Member Traffic during the meeting held on 30th Jan. 87. Specifications for 3—phase locomotives were drawn by RDSO. Technical experts of RDSO, CLW and Board have scrutinised technical bids received against 3—phase tender.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.25)

The Committee further note that while evaluating M/s. ABB as the lowest bidder in the third round some crucial aspects relating to transfer of technology; cost of spares that will have to be imported till the technology is fully indigenised and the additional costs arising as a result of changes in the customs duty and attributable to delay in the delivery of locomotives etc. have remained unresolved even months after the issue of 'Adavnce

Letter of Acceptanc'. In fact, the Committee have taken a serious note of the sharp difference of opinon within the Railway Board itself on these issues. They also regret to note that these issues were not fully thrashed out before issuing the advance letter of acceptance. They are of the firm opinion that had the Ministry of Railways persisted, the foreign bidder could have been pressurised to accept the conditions as were set in the tender documents issued to various parties and as also insisted upon by the Tender Committee. In their opinion, an Advance Letter of Acceptance which, According to Chairman, Railway Board, is nothing but a 'letter of intent' would not tentamount to a contract in view of substantive issues still remaining wide open and in absence of full and final acceptance by one party or the offer made by the other party.

Reply of the Government

A decision was taken to negotiate with M/s. ABB which was considered as the lowest evaluated offer. Though some of the deviations could be resolved during the negotiations held with M/s ABB in Nov. '91, it was decided that the issues remaining un-resolved could be discussed in detail with the firm subsequently and settled before the issue of the detailed contract. On receipt of the file form Ministry of Finance on 14.3.92 and subsequent release of foreign exchange on 18.3.92 there was hardly any time left as the firm's offer was expiring on 20th March, 92. It was, therfore, decided to issue an advance acceptance letter incorportaing the deviations to be withdrawn by M/s. ABB with the intention of binding the firm to their quoted prices and to prevent them form increasing the price. In addition to the deviations in their offer *vis-a-vis* the tender, IR had also stipulated certain conditions for futher safequarding IR's financial interests. It took some time for the firm to respond to our acceptance letter. While the firm withdrew completely or partially many of the deviations, their response in respect of ones they did not agree were considered carefully and held to be acceptable. However, further action after July '92 was pended in view of RCC' advice to do so till the submission of their (RCC) report to the Parliament. After receipt of the RCC's report, conclusions in paras 5.25 & 5.26 a longwith the recommendations No. 4 of the RCC had been considered by the Government. Government have finally given the approval to go ahead with the procurement of 6000 HP AC 3—phase Electric locomotives form M/s. ABB/Switzerland. Contracts for supply of stores and transfer of technology were awarded to M/s ABB in July, 1993.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.26)

In this context, the Committee perceive para-15 of the Advance Letter of, Acceptance, which states that "the contract stands concluded with the issue of this Letter of Acceptance" to be of pre-emptive nature. The Committee further regret the fact that, while finalishing the contract, valid and serious objections made by the present Financial Commissioner of Railways as well as two successsive Chairmen of the Railway Board were over-ruled.

Reply of the Government

As mentioned in reply to earlier para 5.25 the letter of acceptance was issued on 18.3.92 since the validity of the firm's offer was expiring on 20th March '92 and 19th March' 92 was a holiday. As mentioned earlier this was done so as to prevent the firm form revising their quoted prices.

While as stated in remarks against conclusion at para 5.25, the recommendation No. 4 and para 5.26 were considered by the Government, superior authority' right to overrule the objections at the lower level, per se, cannot be criticized since this is one of the tenets of the hierarchical decision-making, albeit sparingly used.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation S.N. 2

2. In order to achieve the objective of doubling lift of passenger and freight traffic, the thyristor technology already tried and tested under Indian conditions may be indigenised for series manufactured at CLW as well as by other manufacturers including BHEL.

Reply of the Government

Recommendation No. 2

Series manufacture of 6000 HP locos using thyristor technology would not be the best step as this technology has already become obsolete. Moreover, in view of the cost of series manufacture of these locomotives being only marginally lower than the series manufacture of 3-phase locomotives and being higher in cost on life cycle basis, the adoption of thyristor technology is not considered beneficial for the Indian Railways.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendations S.N. 4 & 5

4. Notwithstanding the Advance Letter of Acceptance issued to M/s. ABB, Switzerland on 18.3.1992, which itself is under further discussion, the Government may give serious consideration to the views expressed by the Committee as enunciated in para 5.26 before taking a final decision.

5. The payment of commitment charges totalling to $4 million should not be an inhibitive factor in taking a correct decision in the matter.

Reply of the Government

After considering the Committee's report and all relevant aspects of the case, Government have given the approval to go ahead with the procurement of 6000 HP AC 3-Phase electric locomotives from M/s ABB/ Switzerland. Contracts for 30 Nos. of 6000 HP 25 KV AC 3-Phase electric locomotives alongwith associated spares in the form of three loco sets and transfer of technology have been awarded in July, 1993 to M/s ABB/ Switzerland.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

CHAPTER V

RECOMMENDATIONS AND OBSERVATIONS IN RESPECT OF WHICH FINAL REPLY OF THE GOVERNMENT IS STILL AWAITED

Recommendation (Para 5.5)

The Committee note that the quest for high horse power Electric Locomotives has become a contentious issue within the Railways where opinions about the desirability of one or the other route are sharply divided. While there is a school of thought which favours going for 'state of art' technology there is also another line of thinking which has argued for a more cautious approach in the matter. The former have emphasised the advantages which could accrue by going for the 'state of art' technology *i.e.* 3-phase AC 6000 HP electric locomotives and these are, *inter-alia* increased line capacity through attainment of higher speed of both passenger and goods traffic and greater power consumption, estimates of which range between 10 to 30 percent, lesser maintenance and, therefore, greater lift of passenger and freight. On the other hand, the letter have been drawing attention to high differential in the cost between 3-phase technology and other technologies available/developed in the country and its adverse consequences on investment planning in regard to other vital areas in the Railways, non-compatibility with the available infrastructure in the Railways, particularly the track conditions, and adverse impact on technologies already developed/under trial and the resultant wastage of resources, the setback to indigenous technological developments, and on the R&D capability in regard to electric locomotives. It has also been pointed out that Railways are woefully short of locomotives as result of which they are unable to meet the growing demand of traffic, which today stands at a shortage of 2000 wagons a day, implying an addition of 25,000 to 40,000 wagons to the existing fleet. The Committee, moreover, note that rakes are help up for sometime more than 72 hours waiting for availability of locomotives. They also note that under these circumstances, a strong case has been made for augmenting the supply of electric locomotives on the basis of technologies which are within an immediately attainable range, instead of waiting for the latest technology to be absorbed, indigensied and brought to production stage which may take anything from 5 to 10 years. In this context, the Committee also take note of the concern expressed by the World Bank regarding adoption of a still largely untested technology as an alternative to successfully tested standard thyristor control electric locomotives. They find that the Indian Railways have told the World Bank that with a view to limiting the risk, the 3-phase electric locomotives would first be tested

before a decision is made to proceed with the transfer of technology for manufacture of these locomotives in India. The Committee further understand that the ultimate decision of the Indian Railways would impinge on the negotiations for the next World Bank loan that the Railway may seek.

Reply of the Government

All concerned authorities in the Railways have accepted that induction of latest 3-phase AC technology is considered the most appropriate choice for the future. These locomotives are comparatively maintenance free, capable of achieving 30% saving in energy consumption and nearly unity power factor and are more friendly with track and signalling system. Moreover these locomotives are necessary for meeting the throughput of congested high density routes as also for longer and faster passenger trains. No difference of option exists regarding the superiority of the 3-phase technology.

ii) The rate of return on investment has been evaluated and worked out to 14.7% as financial rate of return and 13.7% as economic rate of return. This rate of return has been worked out on the basis of lowest evaluated offer and without considering custom duty. Finance Ministry's approval has been sought for exempting this one time import of locos and spares for upgradation of technology from custom duty to avoid undue burden on the Railways' finance.

iii) The cost of locomotives proposed for import with 3-phase technology would no doubt be considered high when compared with the cost of locomotives presently being manufactured at CLW. But, it has to be viewed in the light of ultimate objective of Indian Railways to organise series manufacture of these locomotives for the next to decades or more. The cost of technology which would form bulk of the cost would be distributed over nearly 3,000 or more locomotives during this period and it is expected that the indigenously manufactured locomotives with 3-phase technology may be only marginally higher in cost than the 6000 HP locomotives if manufactured using thyristor technology and work out cheaper on life cycle cost basis.

iv) No adverse impact on technology already developed/under trial as the 5000 HP locomotive developed by CLW would be a sub-optimal solution and not a substitute for 6000 HP locomotive. Regarding adoption of high horse power thyristor locomotives, this technology had already become obsolete and it would be a retrograde step to go in for the same, Moreover, the cost of manufacture of such locomotives would be more or less the same as High Horse Locomotives with 3-phase drive.

v) Electric locomotives manufactured with 3-phase technology have been in service in European countries and this technology was considered proven and best suited for series production in our country for the next 2-3 decades.

vi) No confirmation has been made by Indian Railways to the World Bank regarding testing of 3-phase electric locomotives before making a decision to proceed with the transfer of technology for manufactured of these locomotives in India. In fact this project has no link with World Bank, being financed by ADB who have evaluated the project and approved it.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.10)

The Committee were informed that R&D base at RDSO and CLW is not up to the mark. This has been attributed not so much to the absence of scientific and technical manpower or even to efforts on the part of RDSO/CLW as to poor back-up which is there largely in the system. It has been argued by the Railways that the required research efforts call for greater involvement of Universities, National Research Institutions and Industry, both in public and private sector. They have, however, stated that Railways alone could not make the required investment on R&D.

Reply of the Government

5.10 Over the years RDSO has done considerable research and developmental work which has benefited the Railways. However, in the area of latest state-of-art technology, there have been great advancements in some of the developed countries due to massive financial and other inputs.

In order to further improve the research back up in RDSO, apart from in-house technological inputs, Technology Development Groups have been set up in RDSO in which Universities, IITS, Research Institutes etc. are being actively involved so as to benefit from the latest advancements being made by them.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.20)

The Committee note that as a result of delay in placing orders for purchase of 3-phase electric locomotives caused by protracted tendering process, the Railways have incurred a loss of $ 4.619 million upto 15th December, 1991 on account of commitment charges and interest payable to ADB. In fact, the Railways are incurring a liability of $4000 per day on account of commitment charges alone. This has not only diminished the overall size of the funds available for actual purchase of 3-phase locomotives but also acted as the pressure point on the decision making authorities.

Reply of the Government

The commitment charges/interest incurred by the Ministry of Railways as mentioned in the RCC's observations was unavoidable in view of the circumstances that lead to the repeated tendering. Some commitment charges/interest would have been leviable, even if the tender had been finalised as per original schedule as payment of certain amount of commitment charges is unavoidable in all loan schemes since some minimum gestation period is always involved towards execution of projects and claiming disbursement. Hence the entire commitment charges should not be looked upon as a "loss". Even though we issued an advance acceptance letter on 18.3.92 against the 3rd round of tendering, further action in this case was pended in view of RCC's specific advice to pend the same till they submit their report to the Parliament. As a matter of fact the recommendation No. 5 of the report of the RCC also emphasised the point that the importance of taking the correct decision by far outweights the extent of commitment charges incurred. After consideration of the RCC's recommendations, Government have given approval for procurement of 6000 HP AC 3-phase Electric Locomotives in June, 1993. Detailed contracts have been awarded to M/s. ABB/Switzerland in July, 1993 for supply of stores and transfer of technology. The commitment charges continue to be incurred even after placement of the contracts till the utilisation of the loan amount.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation (Para 5.24)

5.24. The Committee are apprised that unit cost of 3 phase AC locomotive, when fully assembled was Rs. 13.2 crores CIF during the first round of bidding (1989). However, as per latest calculation the unit cost of the same locomotive, after the third bid, will be around Rs. 45 crores which compares too unfavourably with the cost of indigenously built 5000 HP locomotives that is expected to cost less than Rs. 3 crores a piece. In fact between the first bid and second bid many important developments, like general escalaction of prices during the Gulf War, devaluation of rupee and partial convertibility of rupee took place which have, together, adversely, affected the comparbility of 3 phase AC locomotive *vis-a-vis* other available locomotives. The Committee are also concerned to note that the deal for purchase of these locomotives, if put through, would ultimately involve expenditure exceeding Rs. 1200 crores, not taking into account other long term financial liabilities, which will arise during the period of transfer of technology and purchase of spare parts. This would put together bring in serious distortions in the allocation of resources during the Eighth Five Year Plan. The Committee note with concern the candid admission of Financial Commissioner that Railways had no funds to accept such a huge liability without raising raising revenues through public

issue of bonds (which in any case are not very attractive in the market) or by raising the Railway tarrif. On the other hand, the entire investment planning of Railways during the Eighth Plan would also be seriously jeopardised. From the internal nothings of the Railway Board on the subject, as furnished to the Committee, there is no evidence to suggest that these vital issues have been adequately addressed to before going ahead in the matter.

Reply of the Government

The CIF cost as obtained during the first round of bid (1989) were as under:—

	Freight	*Passenger*
CIF cost per locomotive in Swiss Francs (CHF) and Swedish Kroner (SEK)	CHF 28,72,107.85 SEK 90, 29,782.44	CHF 51,87,710.70 crores
Price in Indian Currency with exchange rate of Rs. 100=CHF9. 865=SEK 40.40 as on 23.12.88	Rs. 5.15 crores	Rs. 5.26 crores
Price in Indian Currency with exchange rate of Rs. 100=CHF 4.7650=SEK 24.18 as on 2.7.93	Rs. 9.76 crores	Rs. 10.89 crorrs

The CIF price as per order on ABB, now place is as under:—

	Freight	*Passenger*
CIF cost per locomotive in Swiss Francs (CHF) and Deutcho Mark (DEM)	CHF 48,01,875 DEM 34,75,875	CHF 52,78,650 crores DEM 38,22,000 crores
Price in Indian currency at the exchange rate of Rs. 100=CHF 4.765=DEMS.3475 as on 2.7.93	Rs. 16.58 crores	Rs. 18.22 crores

The above prices are exclusive of custom duty.

As regards the comparison of the cost of a limited number of high horse power loco with 3 phase drive and microprocessor based control primarily for Transfer of Technology with that of the indigenous 5000 HP locos produced by CLW by optimising the exisiting tap changer technology, the same would not be realistic as the products as well as the context are entirely dissimilar and hence not comparable. Moreover, the price for the locos contracted for import are fixed and without any price variation clause. Hence, factors like general escalation of price, devaluation of rupee, partial convertibility of rupee etc. have also had their influence.

While this purchase will no doubt strain the railway resources to some extent, this is inescapable in the context of acquiring state-of-art technology which has a vital bearing on the future operational capabilities of Indian Railways. In this context, it is pertinent to mention that the purchase of these locomotives is tied up to the loans form ADB and EXIM banks and as such it would not have any immediate repercussion on the national finances as a whole. As a matter of fact if this purchase had not materialised, ADB/EXIM loans would have to be surrendered.

It may be mentioned that provision of Rs. 760 crores has been made during 8th Plan for 30 high horse power locomotives, which is adequate to meet the CIF cost of these locomitives including margin for some further devaluation of rupee. The provision of funds however does not cater adequately for import duty at the present rates.

The present policy is to reduce import duties gradually and it is expected that by 1995-96, when the actual import of locomotives will start, the import duty might come down substanstially.

In addition to above, Ministry of Finance has been requested to exempt the Railways from payment of custom duty of purchase of these locomotives as this purchase is related to technology upgradation.

The various issues including the financial implications have been deliberated at length and the Govenrment has taken a conscious decision to acquire the new technology.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

Recommendation S.N. 3

Efforts should be stepped up to provide a credible R&D back-up to Indian Railways which is one of the largest in the world and for this purpose the role and wherewithal, including organisational structure, power and investments, in regard to RDSO may be reviewed and redefined to enable it to become a dynamic core of R&D effort which should spill outside RDSO into universities, research institutions and the industry at large. Towards the same end the level of interaction between the Railways, RDSO and CLW at the one end and between all these together and industry, both in public and private sector at the other end may be stepped up. Immediate action be taken by the Railways to provide and improve the infrastructure necessary for the use of high horse power locomotives like strengthening the track, fencing, modernisation of signalling and repair facilities in workshops and locosheds.

Reply of the Government

At the level of RDSO, system design capability exists to a substantial extent. The recently introduced revised scheme of Working of RDSO includes a decision to induct young postgraduate engineers from probationers and groom them for long term posts in RDSO.

Further infrastructure, as may be required, will be created as and when considered necessary.

[Ministry of Railways (Railway Board) O.M. No. 91/RCC/206/2 Dt. 24.8.1993]

APPENDIX

(*Vide* Para 4 of Introduction)

Analysis of the Action Taken by Government on the Recommendations/ observations contained in the Second Report of Railway Convention Committee (1991)

I.	Total number of recommendations	35
II.	Recommendations/observations which have been accepted by the Government (Vide recommendations at S.No. 5.1, 5.2, 5.4, 5.7, 5.11, 5.12, 5.13 & 1)	
	Number	8
	Percentage to total	23%
III.	Recommendations/observations which the Committee do not desire to pursue in view of the replies of the Government (Vide recommendations at S.No. 5.21, 5.22, 5.23, 5.27, 5.28, 5.29, & 5.30)	
	Number	7
	Percentage to total	20%
IV.	Recommendations/observations in respect of which the replies of the Government have not been accepted by the Government (Vide recommendations at S.No. 5.3, 5.6, 5.8, 5.9, 5.14, 5.15, 5.16, 5.17, 5.18, 5.19, 5.25, 5.26, 2, 4 & 5)	
	Number	15
	Percentage to total	43%
V.	Recommendations/observations in respect of which final replies of the Government are still awaited (Vide recommendations at S.No. 5.5, 5.10, 5.20, 5.24 and 3)	
	Number	5
	Percentage to total	14%

PART-II

MINUTES OF THE 40TH SITTING OF THE RAILWAY CONVENTION COMMITTEE HELD ON 19TH OCTOBER, 1993

Fortieth sitting of the Railway Convention Committee were held on the 19th October, 1993 in Committee Room 'C' in Parliament House Annexe from 1100 to 12.30 hours.

The following Members were present in the sitting:—

Shri M. Baga Reddy — *Chairman*
Lok Sabha

2. Shri R. Anbarasu

3. Shri Lal Jan S.M. Basha

4. Shri Saifuddin Choudhury

5. Shri Gurudas Vasant Kamat

6. Shri Ram Naik

7. Shri Rajvir Singh

8. Shri Lokanath Choudhury

SECRETARIAT

Shri Murari Lal — *Joint Secretary*

The Committee took up for consideration the draft Report on action taken by the Government on the observations and recommendations contained in the Second Report of Railway Convention Committee (1991) on 'Purchase of Electric Locomotives from M/s. ABB, Switzerland by the Indian Railways' and suggested modifications in paras 10, 16, 28, 31, 34 & 3' as indicated in Annexure.

** ** ** **

The Committee then adjourned.

ANNEXURE

Paragraphs Revised Under The Directions Of The Committee

10. By their own admission the Ministry of Railway have stated that the Railways are not in a position to spend the requisite amount on renewal of track and fencing to maximise the speed. The Committee fail to understand as to how we are going to be benefited by induction of 'State-of-art' 3-Phase ABB locomotives without first ensuring the requisite track renewal and fencing.

16. It is incomprehensible to the Committee as to how the Ministry of Railways have come to the conclusion that the cost of imported technology for 3-Phase AC drive locomotives will rise and not fall in future. As transport technology is fast changing the world over, the availability of more advanced, yet cheaper, alternatives cannot be ruled out.

The Committee feel that the above plea taken by the Ministry of Railways has no basis whatsoever.

28. The Committee had expressed their concern over the fact that the views and the detailed assessment made by the former Chairman, Railway Board, who was in position till March, 1992, were totally ignored by the Ministry of Railways. What is more disturbing to the Committee is the fact that no answer has been given to the Committee's recommendation regarding evaluation of the advantages which may accrue from haulage of a larger number of coaches and wagons with the help of 3-Phase AC 6000 HP locomotives at existing speeds vis-a-vis higher financial burden, including cost of loan and cost of spares that may be entailed. The Committee, therefore, reiterate their earlier recommendation that the possibilities of further improving the Thyristor technology should be earnestly explored.

31. The Committee are not convinced with the reply of the Government that the locomotives built with 3-Phase Technology have been in service for many years in different railway systems in Europe and their superiority in performance has now been well established. superiority of 3-Phase technology system might have been established in European countries where track conditions and other necessary infrastructure are far better that what exists in Indian Railways. As stated by the Member (Traffic), Railway Board, during evidence held on 18.9.1992, taking into account the track conditions and absence of any fencing on both sides of tracks, attaining a speed of 160-180 KMPH is not feasible. A similar statement was also made before the Committee by GM, CLW that with the present wagons, rails etc. optimum utilisation of even 5000 HP Locomotives (WAG) is not possible in Indian Railways. The Committee seek an explanation from the Ministry of Railways in this regard and would like to know as to how they can

guarantee that 3-Phase technology, which is being imported at present, will not become obsolete by the time they start series manufacture, say after seven or eight years.

34. The Committee note that the Railways had been incurring a liability of $ 4000 per day on account of commitment charges alone and loss on this account upto 15.12.91 amounted to $ 4.619 M. The Ministry of Railways have further stated that "commitment charges continue to be incurred even after placement of the contracts till the utilisation of the loan amount." The Committee would like to know the total amount of commitment charges till date and the amount available with the Ministry of Railways out of the ADB loan, after payment of these commitment charges, by the time the first consignment of 3-Phase locos would reach India. They would also like to know the source from where the Ministry of Railways would meet the extra foreign exchange needed to meet the obligation for payment of the contracted amount. In this connection, the Committee have noted the candid admission of Financial Commissioner (Railway Board) that they had no funds to accept such a huge liability of Rs. 1200 crores, including custom duty, without raising revenues through public issue of bonds, which in any case are not very attractive in the market, or by raising the railway tariff. The Committee would like to know specifically whether such vital issues were seriously examined by the Ministry of Railways before entering into a formal contract with M/s. ABB, Switzerland and ADB. The Committee are of the considered view that had the Ministry of Railways shown due prudence the circumstances those leading to the repeated tenders resulting in huge liability of commitment and interest charges could have been avoided.

37. The Committee take a serious view of the lackadaisical manner in which the deal relating to purchase of 3-Phase locomotives has been dealt with in the Ministry of Railways. They feel that the Government have been remiss in protecting the country's interest by not resolving vital issues before placing the order with M/s. ABB, Switzerland. The Committee would like to know the details of the deviations which have been agreed to by the firm, completely or partially; and also those on which they did not agree.

As regards superior authority's right to overrule the objections at the lower level, the Committee agree that this is one of the tenets of the hierarchical decision-making, albeit sparingly used. But there must be some valid reasons for overruling such objections by officials, who had acquired vast experience over the decades in running the railways and were better equipped to make evaluations of both technological factors and financial implications. However, the Committee, in this case, find that the superior authority had overruled the objections raised by the Financial Commissioner, two successive Chairman of the Railway Board, GM, South Eastern Railway, the then GM, CLW etc., without giving any convincing reasons, in an arbitrary manner. Even the valid objections raised by the

Railway Convention Committee, appointed by the Parliament, were not given due consideration by the Government. The Committee consider this as highly objectionable and repugnant to the tenets of parliamentary democracy. The Committee also regret that the request of some Members of the RCC to arrange a meeting with the Cabinet Sub-Committee, appointed to deal with the matter, to hear their views, was not honoured by the Government.

MINUTES OF THE 43rd SITTING OF THE RAILWAY CONVENTION COMMITTEE HELD ON 10TH FEBRUARY, 1994

Forty-third sitting of the Railway Convention Committee was held on Thursday, the 10th February, 1994 in committee Room 'C' in Parliament House Annexe from 1500 to 1600 hours.

The following Members were present:—

Shri M. Baga Reddy—*Chairman*

Lok Sabha

2. Shri Saifuddin Choudhury
3. Shri Gurudas Vasant Kamat
4. Shri Ram Naik
5. Shri Rajvir Singh
6. Shri Lokanath Choudhury

Rajya Sabha

7. Shri Pramod Mahajan
8. Shri Ramsinh Rathwa
9. Chowdhry Hari Singh
10. Shri P. Upendra

SECRETARIAT

1. Shri Murari Lal—*Joint Secretary*
2. Smt. P. K. Sandhu—*Deputy Secretary*
3. Shri S. B. Arora—*Committee Officer*

The Committee took up for consideration the following draft Reports:—

(i) Draft Report on Action Taken by Government on the recommendations contained in the Second Report of RCC (1991) on 'Purchase of Electric Locomotives from M/s. ABB, Switzerland by the Indian Railways'.

(ii) *** *** ****

3. The Report was adopted subject to the amendments/modifications given in Annexure.

4. The Committee also authorised the Chairman to make other consequential changes arising out of factual verification by the Ministry of Railways.

The Committee then adjourned.

ANNEXURE

Amendments/Modifications made by the Railway Convention Committee in the Draft Report on Action Taken by Government on the Recommendations contained in the Second Report of Railway Convention Committee (1991) on 'Purchase of Electric Locomotives from M/s. ABB, Switzerland by The Indian Railways'.

Page No.	*Para No.*	*Line*	*For*	*Read*
1	2	3	4	5
3	7		For the existing paragraph *substitute*	The Committee are concerned to note that there has been a heavy shortfall in the volume of freight and passenger traffic during the current year which has resulted in shortfall of earnings to the Railways. The Committee apprehend that if this trend continues unchecked, it shall effect adversely the growth of economy. They, therefore, hope that Railways will make all earnest efforts to achieve the target fixed for doubling the lift of passengers and freight traffic as it existed in 1985-86, by the year 2000 A.D. The Committee also desire that in order to achieve this target, the Ministry of Railways must take urgent steps to augment their rolling stock and improve their operations.
5	10		For the existing paragraph *substitute*	By their own admission the Ministry of Railways have stated that the Railways are not in a position to spend and take on renewal and strengthening of track to maximise the speed of freight trains. The Committee fail to understand as to how the Railways are going to be benefited by induction of 'State-of-art' 3-Phase ABB Locomotives without first ensuring the requisite track renewal and fencing as well as providing other infrastructural facilities.
18	19	1	*Add*	the work 'locomotives' after H.P.
18	19	11	Present tender particularly because of the resource	Present tender. Because of the resource crunch

1	2	3	4	5
24	25	1	to know	at
24	25	3	Thyristor locos. Whereas	Thyristor locos, whereas
30	31	4	in Europe and their superiority	in Europe. The superiority.
32	34	18 & 19	*Delete* the words 'which in any case are not very attractive in the market'.	
32	34	22	*Add* the words 'finalising loan from' after ABB, Switzerland.	
32	34	24	*Delete* the word 'those'	
35	37	4 & 5	been remiss in protecting the Country's interest by not resolving vital issues	failed to resolve the vital issues.
35	37	18	*Add* the words 'in an arbitrary manner', after 'overruled'.	
35	37	22	*Delete* the word 'in an arbitrary manner'.	
		22	*Delete* the word 'valid'	
36	38	6&7	unwarranted, uneconomical but also against the larger interest of our country	unwarranted but uneconomical too
37	39		*Add* the following paragraph (Para 39) at the end:-	

Implementation of Recommendations

39. The Committee would like to emphasise that greatest importance has to be attached to the implementation of recommendations accepted by the Government. They expect the Government to take expeditious steps in implementing such recommendations. In cases where it is not possible to implement the recommendations in letter and spirit for any reason, the matter should be reported to the Committee in time with reasons for non-implementation.