

Country	United Mexican States	
Project	Locomotive Reconstruction Project	
Borrower	Government of United Mexican States	
Executing Agency	Ferrocarriles Nacionales de Mexico (FNM)	
Exchange of Notes	October 1990	
Loan Agreement	November 1990	
Loan Amount	¥6,186 million	
Loan Disbursed Amount	¥5,959 million	
Project Summary and OECF Portion		
<p>Of the 1,747 diesel electric locomotives owned by the Ferrocarriles Nacionales de Mexico (FNM) as of June 1989, a repair program for 231 locomotives that were incapacitated due to accidents, etc., but could be repaired by mounting the proper materials and equipment during the three-year period from 1991 to 1993 (replacement of parts on the part of the locomotive above the platform), and therefore this project to deal with demand for railway transport in Mexico, was prepared by the FNM itself. This repair plan was divided into three phases. This project, which corresponded to Phase I, was to repair 60 locomotives during fiscal 1991.</p> <p>The ODA loan covered the entirety of the foreign-currency costs related to the procurement of kits (materials required for repairing locomotives) required for this phase and the hiring of consultants (but excluding interest payments during the construction period).</p>		
Comparison of Original Plan and Actual	Plan	Actual
(1) Project Scope	1) Procurement of kits for repairing 20 locomotives with 2,250 h.p. 2) Procurement of kits for repairing 40 locomotives with 3,000 h.p.	1) Procurement of 60 kits for repairing locomotives with 3,000 h.p.
(2) Implementation Schedule Start of consulting service ~ completion	Oct., 1990 ~ Mar. 1992 : 18 months	Mar. 1991 ~ Apr. 1993 : 26 months
(3) Project Cost Figures in the parentheses are for ODA loans.		
• Foreign currency portion	¥6,365 million (¥6,186 million)	¥6,365 million (¥5,959 million)
• Local currency portion	\$18,036 thousand	\$23,030 thousand
Total Project Cost	¥9,125 million (¥6,186 million)	¥9,244 million (¥5,959 million)
Exchange rate	\$1 = ¥153	\$1 = ¥125

Analysis and Evaluation**(1) Project Scope**

The initial repair program planned to repair 231 locomotives of different horsepower, but after the project was launched, this was changed to 195 locomotives with a horsepower of 3,000 h.p. As a result of this change, the repair assignment for Phase I, which was originally twenty 2,250 h.p. locomotives and forty 3,000 h.p. locomotives, changed to sixty 3,000 h.p. locomotives. This change was due to the fact that the FNM shifted to the policy of recovering primarily locomotives of 3,000 h.p. in order to handle more long-distance railway freight transport, based on the fact that freight transportation was predicted to increase as the result of Mexico joining NAFTA. Thus 60 locomotives were repaired as part of Phase I, but due to cost overruns (described later), the cost of repairing all these units could not be covered with the ODA loan alone, and in the end the ODA loan covered the repair of 53 locomotives (the remaining 7 were repaired using a loan from the bank in Mexico).

(2) Implementation Schedule

The repairs were completed 14 months behind the original schedule. The main reason for this delay was that procurements ran into delays, and the delay in arrangement of finance when cost overruns did occur. Furthermore, the number of locomotives repaired each month at each plant performing repairs for this project shows that this figure did not exceed half the figure of original plan at the time of the OECF appraisal, and thus the low efficiency of the plants did contribute to the delay in the implementation schedule.

(3) Project Cost

The fact that the horsepower of the locomotives repaired rose due to the plan revision, and also due to the bidding results, the price of the repair kits turned out to be considerably higher than estimation at the time of the OECF appraisal, leading to a cost overrun. For this reason, it became impossible to repair all 60 locomotives using only the ODA loan, and thus, in the end, 53 locomotives were repaired using the ODA loan. The remaining seven locomotives were repaired using financing provided by the bank (NAFINSA) in Mexico.

(4) Implementation Scheme

At the beginning of this project, Locomotive Repair Office was established inside the FNM for this project, and it became the organization in charge of this project. However, subsequent organizational changes were made, so that in the end the FNM's Motive Power Office was put in charge of the project's implementation.

(5) Operations and Maintenance

It was pointed out during the F/S for this project that the FNM's operations and maintenance scheme was not sufficiently developed, and this point had still not been improved after the completion of the project. Behind this problem lies the fact that the Mexican government's policy is to keep long-distance train fares low, and as a result of this policy, the FNM has been unable to ameliorate its financial status and thus cannot allocate sufficient funds for operations and maintenance. The FNM's operations and maintenance scheme not having been improved, no progress has been made for the repair of locomotives other than those repaired as part of this project, and as a result, the overall utilization rate of all locomotives owned by the FNM has actually declined. Therefore, the sustainability of the overall repair program could not be maintained.

Project Effects and Impacts

Contributed to long-distance transportation in railway sector of Mexico in 1993, average FNM locomotive transportation distance: 699 kg/ton, versus average locomotive transportation distance of the 60 locomotives of the project: 702 kg/ton

Notes

Report Date : March 1998