

RRP:SRI 29680

ASIAN DEVELOPMENT BANK

**REPORT AND RECOMMENDATION
OF THE
PRESIDENT
TO THE
BOARD OF DIRECTORS
ON A
PROPOSED LOAN
TO THE
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
FOR THE
EMERGENCY REHABILITATION OF PETROLEUM
FACILITIES PROJECT**

April 1996

CURRENCY EQUIVALENTS
(as of April 1996)

Currency Unit	=	Sri Lanka Rupee (SLRs)
SLRs 1.00	=	\$0.0187
\$1.00	=	SLRs53.45

The Sri Lanka rupee is allowed to float against the currencies of the country's major trading partners.

ABBREVIATION

CPC	-	Ceylon Petroleum Corporation
EIRR	-	Economic Internal Rate of Return
FIRR	-	Financial Internal Rate of Return
GDP	-	Gross Domestic Product
ICB	-	International Competitive Bidding
PG	-	Persian Gulf
t	-	Metric Ton

NOTES

- (i) The fiscal year (FY) of the Government and CPC ends on 31 December.
- (ii) In this Report, "\$" refers to US dollars.

CONTENTS

	<u>Page</u>
LOAN AND PROJECT SUMMARY	(ii)
MAP	(v)
I. THE PROPOSAL	1
II. INTRODUCTION	1
III. BACKGROUND	1
A. Recent Economic Developments	1
B. The Bank's Operational Strategy	2
C. The Energy Sector	3
D. The Petroleum Subsector	4
E. Lessons Learned	4
IV. DETAILS OF THE DISASTER	6
A. Description Of The Damage	6
B. Impact Of The Damage	7
V. THE PROJECT	8
A. Objective	8
B. Scope And Description	9
C. Cost Estimates	10
D. Financing Plan	11
E. Implementation	11
F. Environmental And Social Measures	14
G. Benefits And Justification	15
H. Risks	15
VI. ASSURANCES	16
VII. RECOMMENDATION	17
APPENDIXES	18

LOANS AND PROJECT SUMMARY

Borrower	:	Democratic Socialist Republic of Sri Lanka
Project Description	:	Emergency assistance is needed to rebuild petroleum storage facilities damaged or destroyed by explosion and fire on 20 October 1995.
Classification	:	Economic Growth
Environmental Assessment	:	Category B
Executing Agency	:	Ceylon Petroleum Corporation (CPC)
Rationale and Objective	:	<p>The Project is consistent with the Bank's policy on rehabilitation assistance after disasters, as it is the least-cost solution for the restoration of infrastructure to minimize long-term economic and social disruption, particularly in the energy, industrial, and transport sectors.</p> <p>The damage to the facilities has reduced the storage capacity for critical oil products to 9 days from the historical minimum target of 30 days. The main objective of the proposed Project is to help rebuild the crude oil and refined product storage, essential for the security of petroleum supplies. At present, any problem at the refinery or a delay in arrival of imported crude or refined products could create an energy crisis in the country. Another objective is to clean up debris and the contaminated soil.</p> <p>CPC is not in a position to commercially raise the necessary long-term finance.</p>
Scope	:	<p>The Project covers (i) the reconstruction and repair of the storage capacity for crude oil and refined petroleum products destroyed or damaged at Orugodawatte and Kolonnawa; (ii) improvements in the security and access at the two sites, and (iii) two new tanks for unleaded gasoline to enable early introduction of this environmentally beneficial fuel.</p> <p>To meet the current engineering and safety standards, some of the tanks to be rebuilt are to be located at a new site. This will reduce congestion at the Kolonnawa depot</p>

and significantly reduce the number of petroleum product road tankers that have to travel daily across Colombo.

Cost Estimates : The Project is estimated to cost \$41.14 million equivalent, of which \$24.00 million (58 percent) is in foreign exchange and \$17.14 million equivalent (42 percent) is in local currency.

Financing Plan :

Source of Financing	Foreign Currency	Local Currency	Total	%
(\$ million equivalent)				
Bank loan	24.00	00.00	24.00	58
CPC	00.00	17.14	17.14	42
Total	24.00	17.14	41.14	100

Loan Amount : The equivalent in various currencies of \$24 million (SDR 16.425 million).

Terms : Bank's Special Fund resources for 40 years, including a grace period of 10 years and a service charge of 1 percent per annum.

Relending Terms : The proceeds of the loan to be relent to CPC for 15 years inclusive of a grace period of 5 years at a fixed interest rate of 14 percent per annum. The exchange risk will be borne by the Government.

Period of Utilization : Until 31 December 1999.







Implementation Arrangements : A Project Task Force headed by a full-time Project Manager is in place to oversee Project implementation. The main reconstruction work will be carried out under a single turnkey contract to be awarded by international competitive bidding.

Executing Agency : Ceylon Petroleum Company

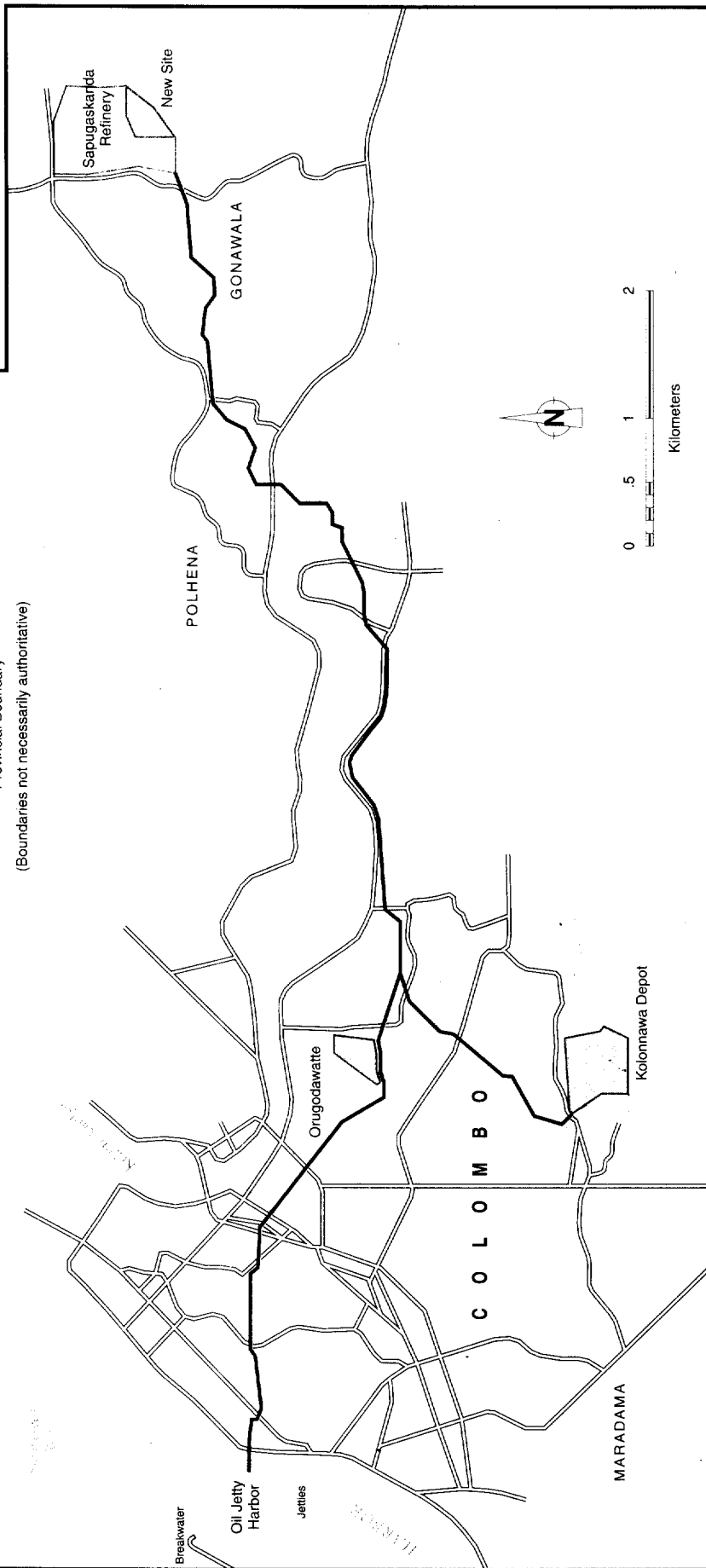
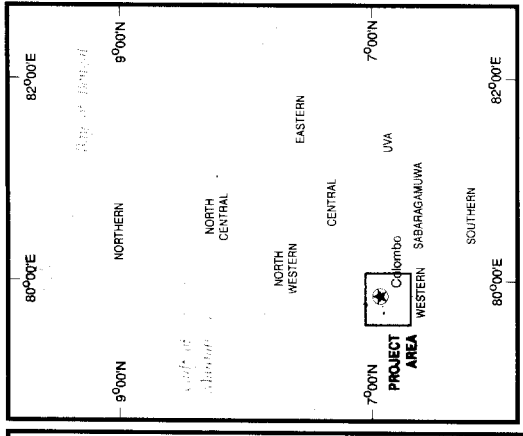
Procurement : Advance procurement action for the single turnkey contract and retroactive financing for the consultant services have been approved, subject to the approval of the loan. Procurement will be in accordance with the Bank's *Guidelines for Procurement*.

- Consulting Services :** About 52 person-months of international consulting services will be required for preparation of bid documents, bid evaluation and assistance with Project implementation.
- Project Benefits :** The Project will restore the storage capacity for petroleum supplies essential for the smooth operation of the Sri Lankan economy. It will also eliminate the extra cost being borne by the economy as a result of additional freight and demurrage charges and the below optimal production pattern of the refinery.
- Project Completion Date :** 30 June 1999

SRI LANKA CEYLON PETROLEUM CORPORATION FACILITIES

-  Project Area
 -  National Capital
 -  Road
 -  Pipelines
 -  River
 -  Provincial Boundary
- (Boundaries not necessarily authoritative)

WATTALA



I. THE PROPOSAL

1. I submit for your approval the following Report and Recommendation on a proposed loan to the Democratic Socialist Republic of Sri Lanka for the Emergency Rehabilitation of Petroleum Facilities Project.

II. INTRODUCTION

2. On the night of 20 October 1995, crude oil and refined petroleum storage facilities at two sites in Colombo, Sri Lanka, were hit by a terrorist rocket and grenade attack. As a result of the attack and the ensuing fire, the facilities suffered serious damage. As much as 33 percent of the country's crude and 55 percent of the country's diesel and kerosene storage capacity was destroyed or rendered inoperable because of damage to ancillary facilities. Sri Lanka is entirely dependent on the import of crude oil and, to a significant extent, refined petroleum products for its primary energy needs; therefore, adequate operational and buffer storage is essential. The Government is concerned that any problem at the country's sole refinery or delays in the arrival of tankers with imported petroleum products could lead to a serious energy crisis. The incident has also resulted in a higher import bill for petroleum products. The Government has therefore requested assistance from the Bank, under its facility for assistance after disasters, for rebuilding the lost storage capacity.

3. A Fact-finding Mission¹ visited Sri Lanka from 15 to 30 November 1995 to assess the extent of the damage and the scope of the assistance needed. The Mission visited the damaged facilities, held detailed discussions with the representatives of the Government and the Ceylon Petroleum Corporation (CPC) on alternatives for addressing the crisis, and identified areas where additional information was required. A Follow-up Mission² visited Sri Lanka from 26 February to 6 March 1996. The Mission concluded that the Bank's emergency assistance was justified and that the Government and CPC have taken the necessary initial steps for proper implementation of the proposed Project.

III. BACKGROUND

A. Recent Economic Developments and Prospects

4. Sri Lanka's economy experienced satisfactory growth, averaging 5.5 percent during the 1990s despite persistent macroeconomic imbalances, high inflation, and the armed conflict in the north and east. However, in 1995 economic growth leveled off while budgetary and external current account deficits and inflation rates rose. The budgetary deficit has resulted in the crowding out of private investment, and an increasing reliance on foreign capital that is sensitive to economic and political conditions in the country.

¹ The Mission comprised of K.I. Rahman, Sr. Project Engineer /Mission Leader; J. Fyfe, Financial Analyst; P. King, Sr. Environmental Specialist; N.K. Laursen, Project Engineer; and C. Wee, Counsel.

² The Mission comprised J. Fyfe, Financial Analyst and N. K. Laursen, Project Engineer.

5. The economy grew by 5.6 percent in 1995, the same rate of growth as in 1994. However, this was substantially lower than in 1993 because of (i) the resumption of hostilities; (ii) the rising Government budget deficit, which is attributable to higher defence expenditure and subsidies for basic commodities; and (iii) labor unrest. Nevertheless, the 1995 growth performance was impressive given these adverse factors and indicates the potential of the economy under more amenable conditions.

6. Acceleration in the investment rate is the main factor that contributed to Sri Lanka's strong growth performance during the 1990s. Gross domestic investment rose from 21.9 percent of gross domestic product (GDP) in 1990 to 25.8 percent in 1995. The rise in the investment rate was attributable primarily to favorable Government policies for private sector development and foreign investment. However, uncertainty about the political situation in Sri Lanka, particularly among foreign investors, had a negative impact on investors' perceptions recently. The Government's measures to liberalize and deregulate the financial sector contributed to sharp increases in the private savings rate, which rose from 14.7 percent of GDP in 1991 to over 19 percent in 1995. However, the domestic savings ratio was at a rather low 13.4 percent of GDP in 1995, primarily because of the rise of Government dissavings. The domestic savings-investment gap has been rising steadily, from 7.6 percent of GDP in 1990 to 12.4 percent of GDP in 1995, which reflects the country's increasing inability to generate sufficient savings to meet the investment needs of the economy. The outflow from the capital account in 1995 was a result of uncertainties created by labor unrest in the country and the escalation of the civil war. With Sri Lanka's heavy reliance on foreign savings to finance domestic investment, the recent slow down in capital inflows has potentially serious consequences for economic growth.

7. Per capita GDP of Sri Lanka is \$680, and the number of poor is estimated at 22 percent of the population. Unemployment continues to be a major concern and was estimated to be 13 percent of the labor force in 1995. However, if underemployment is taken into account, the rate rises to 35-40 percent. Growth in employment in Sri Lanka is still insufficient to absorb new entrants to the labor force or to significantly reduce the numbers of unemployed or underemployed.

B. The Bank's Operational Strategy

8. The prime developmental concerns in Sri Lanka are the need to reduce unemployment and poverty. Finding solutions to these two problems is central to the Government's development agenda and forms the core of the Bank's medium-term operational strategy for the country. The cornerstone of the Government's strategy to reduce poverty and unemployment is to move the economy to a higher growth plane. However, there are a number of serious obstacles to achieving sustained high growth rates over the medium term: (i) a large and rising domestic savings-investment gap and heavy reliance on foreign borrowing; (ii) an inefficient public sector; (iii) an education system whose output does not match market requirements; (iv) an infrastructure eroded by years of neglect and war-induced damage, and (v) growing environmental degradation.

9. The principal objective of the Bank's medium-term operational strategy is therefore to contribute towards a reduction in unemployment and poverty by:

- (i) accelerating the rate of economic growth;
- (ii) improving access of the poor and underprivileged to productive assets; and,
- (iii) protecting or improving the environment.

10. Accelerating the rate of economic growth is the only way in which opportunities for the productive employment of an expanding population can be generated and incomes raised. However, to ensure that the gains from an acceleration in the rate of growth are sustained, the growth must be consistent with economic efficiency, and gains from economic growth must be equitably distributed. The Bank's operational program focuses on (i) promoting sound macroeconomic policies in order to improve domestic resource mobilization and provide an attractive climate for domestic and foreign investment; (ii) deregulating the economy, liberalizing trade, reforming the financial sector, promoting export-oriented industries, and encouraging a more productive agriculture sector; (iii) rationalizing public sector enterprises to free resources for private sector growth and to reduce public sector waste; (iv) upgrading the skills of the labor force and addressing the current mismatch between availability and requirements; (v) improving the physical infrastructure; and (vi) ensuring sound environmentally-sensitive development and contributing to environmental improvement.

11. Although the main development concern in Sri Lanka is unemployment and poverty, the concern of paramount importance in the short term is the resolution of the civil war, which has been costly in human terms and has led to high budget and external account deficits, inflation, and the erosion of investor confidence. These factors indicate that the underlying macroeconomic situation in the country needs to be placed on a firmer foundation. A severe drought, coupled with political uncertainty, could exacerbate the already depressed investment climate, causing economic growth in 1996 and the next few years to fall below the 5 percent mark, with the industrial sector and tourism performing significantly below the previous years. The rate of investment is also expected to continue to fall because of the current economic slow down and general loss of business confidence.

C. The Energy Sector

12. The rapid growth in commercial energy consumption was the salient feature of the energy sector during 1994. The demand for electricity expanded rapidly during the year, despite a significant increase in electricity tariffs in February 1994. An increase in thermal power generation was required during the third quarter of the year because of the persistent growth in electricity demand and low hydroelectric generation resulting from poor monsoons.

13. Noncommercial energy sources consisting of wood, agricultural residues, animal waste, and other organic matter continued to be the major source of solid fuel, representing 5 million tons of oil equivalent and providing 65 percent of the total energy supply in the country. Among the commercial energy sources, petroleum products accounted for 24 percent of the demand and electricity 11 percent.

D. The Petroleum Subsector

14. The total demand for petroleum products grew 10.6 percent in 1994, compared with a decrease of 4.6 percent in 1993. The change reflected economic growth in general and, specifically, higher generation of thermal power. Between 1993 and 1994, the demand for heavy diesel rose three fold, from 18,000 metric tons (t) to almost 54,000 t, while the demand for furnace oil rose by 4 percent to 228,345 t. The sales of gasoline rose by 6 percent and of diesel by 10 percent between the two years. The consumption of kerosene increased by 8 percent in 1994 compared with a marginal increase in 1993, reflecting the impact of a price decrease in 1994. The sales of Liquefied Petroleum Gas (LPG) grew by 22 percent, to 64,257 t in 1994.

15. A basic flow scheme of petroleum products import, refining and distribution operations is shown in Appendix 1. Crude is imported mostly from the Persian Gulf (PG) and Malaysia by tanker through the port of Colombo and is transferred to intermediate storage at Orugodawatte in Colombo (see the Map for relative locations). A single-point buoy mooring has been built 5 kilometers (km) at sea, outside Colombo, to provide enough draft for tankers of up to 180,000 t carrying capacity. From Orugodawatte, the crude is pumped through to the country's sole refinery at Sapugaskanda, about 3 km out of Colombo. The refinery has a gross capacity of processing 2.1 million t of crude per year into various refined products, which are piped to the country's main refined products storage depot at Kolonnawa, in the city and about 8 km from the refinery. Imported refined products, about 290,000 t a year, are received through the port of Colombo and are also stored at Kolonnawa. Refined products are distributed countrywide by (i) coastal tankers, (ii) train wagon, and (iii) road tank trucks.

16. The country's petroleum business is almost entirely in the hands of CPC, a Government-owned company under the Ministry of Irrigation, Power and Energy. All the facilities described above are owned and controlled by CPC. The Government, which is moving to a gradual divestment and privatization of CPC, has recently privatized two CPC subsidiaries by selling 51 percent of its shareholdings in them, through public bidding. Lanka Lubricants, which is a lubricating oil blending and marketing company is now owned 51 percent by Caltex; similarly Colombo Gas Company, the LPG business of CPC, now called Shell Gas Lanka is owned 51 percent by Shell. The Government will retain 39 percent shareholding in both the companies, and as per law, 10 percent of the shares are to be distributed among company employees within two years of the sale to the private sector. On the retail side, CPC has started to increase private sector participation by selling off its retail outlets. The World Bank has recently started a study aimed at assisting the Public Enterprise Reform Commission with further privatization and restructuring of the petroleum sector.

E. Lessons Learned

17. The Bank has provided two previous emergency assistance loans to Sri Lanka¹ to rehabilitate infrastructure damaged during civil conflict in the north and

¹ Loan No. 865: *Emergency Road Restoration*, for \$20 million, approved on 24 November 1987, and Loan No. 888: *Emergency Schools Restoration*, for \$15 million, approved on 30 June 1988.

east of the country. Both projects have been completed and have achieved satisfactory results. However, the resumption of hostilities in the north and east prevented implementation from being in full accordance with the project designs and each project required a loan extension of about three years.

18. The principal lesson learned from the Bank emergency projects is that the project design needs to include adequate institutional and consultant assistance to enable the executing agency to manage the implementation. For example, considerable delays arose because of complex and lengthy Government procurement procedures. The delays could be reduced if the project design provides for consultants to have an active role in the procurement process. The establishment of a high caliber project steering committee was found effective in streamlining project implementation.

19. Experience with other emergency assistance projects indicates that the project design must be flexible enough to enable adjustments in the project, if required. Frequent monitoring and review,¹ including more field missions, are particularly important for such projects.

20. Therefore, the following specific actions have been taken in structuring the Project:

- (i) CPC's establishment of a Project implementation team was a condition for loan negotiations. The team is now in place.
- (ii) Advance procurement action has been initiated for recruitment of consultants who will supervise and assist with the engineering, bid preparation, and evaluation, and will assist during Project implementation.
- (iii) The main work will be contracted out under a turnkey contract awarded under the Bank's international competitive bidding (ICB) procedures. This will reduce the amount of procurement approvals necessary and contracting procedures that the Project team will have to handle directly.
- (iv) Specific procurement approval procedures are being worked out and agreed with by the Government and CPC to expedite the approval procedure.
- (v) A midterm review has been incorporated in the Project design.

¹

Including midterm reviews.

IV. DETAILS OF THE DISASTER

A. Description of the Damage

1. Crude Storage at Orugodawatte

21. CPC's refinery has a capacity to process, on an average, 2.1 million t of crude oil per annum of which about 1.4 million t is imported from the PG while the remaining 700,000 t is imported from other sources, predominantly Malaysia. This blend is critical to optimize the yield of middle distillates¹ and improve refinery economics. The total crude storage in the country consists of nine tanks of 40,000 t (65 meters [m] diameter by 16 m high) nominal capacity. Of these, four tanks are at Orugodawatte and five are at the refinery. Two of the nine tanks are normally under long-term maintenance and inspection to meet the requirements specified for such tanks by the American Petroleum Institute, the internationally recognized authority in this field. The remaining seven tanks are the minimum number required to operate with two different crude oils and to import crude in volumes that offer economy of scale on freight.

22. Orugodowatte was one of the two sites attacked. Two of its four tanks were completely destroyed. A third tank was saved but requires extensive repairs. Most of the interconnecting pipelines, fire fighting and safety systems, pumping equipment, controls, and other ancillary equipment suffered damage and need to be replaced or repaired. The total base cost of repairing this facility is estimated at \$6.4 million equivalent. In addition to the physical damage to the facilities, crude oil valued at about \$4.5 million was lost.

2. Refined Products Storage at Kolonnawa

23. The main product storage installation of CPC at Kolonnawa was also attacked. The installation, which is 50 years old, has expanded over the years and its layout and construction does not meet current engineering and safety standards. Before the incident, Kolonnawa had 46 product storage tanks. As a consequence of the attack, seven tanks, normally used for the storage of diesel, were totally destroyed. Another five tanks, normally used for storing kerosene or diesel, were extensively damaged and will most likely have to be discarded after detailed inspection. A total of 78,500 t of storage capacity was lost. The interconnecting pipe work, concrete and masonry bund walls, firefighting system, drainage system, and railway wagon loading and bowser filling facilities were partially destroyed. The base cost of replacing and rehabilitating the damaged and destroyed facilities is estimated at \$15.8 million equivalent. In addition to the physical damage, the fire resulted in a loss of refined product valued at about \$7.0 million.

¹ Middle distillates refers to the middle range of products (kerosene and diesel) produced by distilling crude oil.

B. Impact of the Damage

1. Refinery Economics

24. In Sri Lanka the demand for middle distillate fuels is out of proportion to the demand for residues, bunker and fuel oil when compared to the refinery yields. Consequently, the refinery has to export surplus naphtha and residues,¹ which sell at less than the price of crude oil. To improve its yield of middle distillates and reduce production of residues, CPC has been processing a blend of PG crudes, which are lower in middle distillates but high in residue, with Malaysian crude, which gives a higher yield of middle distillates and produces less residue. The two types of crude need to be stored separately. Because of the damage to the crude storage tanks at Orugodawatte, it is no longer possible to handle efficiently two types of crude. A refining operation predominantly based on PG crude reduces the net refining margin by \$4.4 million a year and results in higher imports of the middle distillates.² Long-term crude supply arrangements for PG crude limit Sri Lanka's ability to reduce the purchase of crude from these sources. Also, the refinery design precludes running on Malaysian crude only.

2. Cost of Transportation

25. The unit cost for transporting petroleum products is very sensitive to the size of the cargo. Transportation charges per ton of crude from the PG to Colombo drop from \$6.5 per ton for a 60,000-t tanker to \$4.0 per ton for a 120,000 tanker load. CPC developed the Orugodawatte facility and the single-point buoy mooring facility in 1987 to handle bigger, deeper draft tankers and to enable fast unloading. The intermediate storage at Orugodawatte, on the outskirts of Colombo and near to the port and the refinery, enables the tankers to unload at 2,000 tons per hour compared with a rate of 1,200 tons per hour if they were to discharge directly to the refinery, which is further away. The slower discharge rate would result in demurrage charges, which can be as high as \$18,000 per day for a 60,000-t tanker to \$20,000 per day for a 100,000 t tanker. CPC practice has been to receive crude from the PG in 140,000 to 180,000-t parcels and from Malaysia in 60,000-t parcels. However, because CPC now has only one operational crude tank instead of the normal four at Orugodawatte, it will have to import crude in smaller shipments or pay demurrage because of slower discharge directly to the refinery. CPC estimates that the resulting higher unit freight charges will cost it about \$3.5 million a year until the storage capacity at Orugodawatte is restored.

3. Import of Petroleum Products

26. The storage capacities available at Kolonnawa for diesel has been reduced from 65,000 t to 14,000 t, and for kerosene/aviation turbine fuel, from 43,000 t to 16,000 t. Storage capacity for diesel is therefore down to nine days demand

1 In refinery design and operations, the aim is always to process crude oils that give the maximum yield of the products demanded by the refinery's particular market. However, a balance has to be struck between the market demands and the cost of crude oils which depends on the value of products that result from it.

2 Based on the 1994 refinery operations. Compares actual operations based on a blend of the two crudes in the ratio of 1: 2 and operations based on PG crudes only.

equivalent, while that for kerosene/aviation turbine fuel has been reduced to 21 days demand equivalent. CPC's policy has been to maintain a storage capacity equal to at least 30 days requirement. This comfort level is based on years of experience and takes into consideration the lead time needed for importing a parcel of refined products, refinery shutdowns, routine maintenance, and a reasonable safety margin. The refinery's inability to blend crudes has reduced the domestic production of kerosene and diesels, thus increasing the amount of these products that must be imported. CPC has to resort either to more frequent imports in smaller parcels at higher unit freight charges or to paying higher demurrage charges for import of larger parcels.

27. CPC has been trying to balance the payment of demurrage against stock of product in hand. A tanker delay (and this is not unusual), could lead to shortages in the country. A shortage of diesel fuel, used widely for transport would slow the economy while a shortage of kerosene, used primarily by the lower income group for cooking and lighting, could lead to serious social discontent.

3. The Environment

28. One advantage of blending the PG crude and the Malaysian crude is that the sulfur content is lowered, by weight, in diesel, from an average of 1.00 percent to 0.60 percent, and in furnace oil from 3.00 percent to 1.86 percent. With a change to a refinery operation based on the PG crude, the sulfur content of these oil products will revert to the higher values.

29. While a large portion of the crude oil, diesel, and gasoline that spilled from the damaged tanks was burned and the highly volatile fractions were vaporized, a sizable amount of hydrocarbon liquids was left within the bunds enclosing the storage tanks and in the surrounding areas. Crude oil and petroleum products are a mixture of hydrocarbon compounds, some of which are known carcinogenic substances, specifically the aromatic fractions such as benzene and toluene. The diesel and kerosene could contaminate the ground and surface water, making those resources unfit for human uses, and disrupt the ecology of the area. Thus, CPC must collect and dispose of the contaminated soil and determine the extent of subsoil contamination.

30. During the fire, the inhabitants of dwellings adjacent to the perimeter of the Orugodawatte installation were evacuated to escape the heat, smoke, and vapors generated.

V. THE PROJECT

A. Objective

31. The main objective of the Bank's assistance to Sri Lanka is to reestablish security of essential petroleum supplies by restoring the petroleum storage infrastructure at least to the level existing before the attack of 20 October 1995. Another objective of the Project is to clean-up the debris and contaminated soil resulting from the attack.

32. The options available are to (i) find crude oil that does not require blending and will result in a reduction of the number of crude tanks necessary; (ii) hire

crude and product tankers to serve as floating storage; and (iii) operate the facilities with the reduced storage capacity, paying higher freight and demurrage charges for the crude and refined products, pending the rebuilding of the storage capacity lost.

33. Option (i) requires a redesign of refinery facilities, capital investment in refining facilities, finding new sources of crude oil, and negotiating new long-term supply contracts. CPC went through this exercise before their last refinery expansion in 1992. Two to three years could elapse before work could start on the refinery modifications. In the meantime, CPC would have to undertake either option (ii) or (iii). Option (ii) is possible but offers only a temporary solution pending building of onshore storage. The cost of hiring the tankers appears to be higher than the transient costs to be borne under option (iii) pending building of the replacement storage tanks. Also, it is more difficult to assure security of tankers anchored offshore than of land-based installations. Option (iii), which is CPC's position pending implementation of the Project, offers the most economical solution to the problem.

B. Scope and Description

34. The Project will consist of two main components.

1. Rehabilitation and Reconstruction of Crude Storage

35. This component will cover the work at the existing crude oil storage depot at Orugodawatte and will primarily consist of (i) dismantling two 40,000-t capacity floating roof steel tanks; (ii) removing and disposing of the debris; (iii) removing and safely disposing of the contaminated soil; (iv) constructing two new 40,000-t capacity, all welded floating roof steel tanks; (v) repairing one damaged 40,000-t capacity floating roof tank; (vi) reconstructing oil, water, and other services pipe work and facilities; (vii) repairing and refurbishing pumps and ancillaries; (viii) rehabilitating and replacing of instrumentation and control systems; and (v) enhancing security at the site.

36. The Orugodawatte installation is relatively current (commissioned in 1988) in terms of engineering standards and safety requirements, and major layout changes are not expected at this stage. Tanks will likely be rebuilt on existing foundations. This, however, is subject to confirmation by detail inspection and check for conformity with engineering codes once the debris has been removed.

37. CPC proposes to upgrade the security of the facility by creating a 50-m wide buffer zone around it and enclosing it in a security fence. This will also facilitate access for emergency vehicles and security personnel to all parts of the facility. The buffer zone will require acquisition of some additional land and relocation of up to ten families.

2. Rehabilitation and Reconstruction of Refined Products Storage

38. The Kolonnawa installation is over 50 years old and, because of expansion over a number of years, has become congested; its layout does not meet current engineering and safety standards. Thus, the facilities need restructuring and revamping. This major task can only be done in a phased manner given (i) that the total

facility cannot be taken out of operation at any one time, and (ii) the large investment required. Though the focus of the Project is on emergency assistance, the replacements under the Project should be in line with current standards and contribute to the overall improvement and optimization of the petroleum storage and distribution facilities in the country. The land that will be available at Kolonnawa after the removal of the debris may not permit the reconstruction of the entire lost capacity, as current design codes require increased distances between adjacent tanks. Additional land not being available at Kolonnawa, some of the replacement tanks will have to be located at a new site.

39. To reduce tanker traffic through Colombo, CPC has had plans for building, near the refinery, additional storage facilities for loading road tankers taking products to other parts of the country. Daily, as many as 400 road tankers from Kolonnawa travel across Colombo to deliver oil products to different parts of the country. This is already causing major traffic congestion around Kolonnawa and to a lesser extent in other parts of the city. The congestion is expected to increase as the economy expands and the number of tanker deliveries grow. Thus, part of the replacement facilities under the Project are to be located at this new site. Such relocation will also require rationalizing the allocation of existing and new storage tanks between various petroleum products.

40. This Project component covers the rehabilitation of the petroleum product storage facility at Kolonnawa involving the dismantling, construction and repair of about 80,000 t of product storage tanks and ancillary facilities affected by the incident and the construction of about 15,000 t of new storage capacity and ancillary facilities for unleaded gasoline. This marginal expansion (6 percent) of CPC's predisaster refined products storage capacity will enable the early introduction of more environmentally friendly unleaded gasoline and the start of a phased reduction in the use of leaded gasoline in Sri Lanka.

41. The dispersion of tanks will enable the new construction to meet current design codes and will make land available in the existing installation for start of its redevelopment. The development of the proposed new depot will contribute to environmental improvement, as it will reduce by about 150 per day the number of petroleum road tankers traveling across Colombo to other parts of the country. CPC is vigorously pursuing the acquisition of land for the new site. The Project cost estimates are based generally on replacement costs at Kolonnawa and do not include land cost for the new site or basic infrastructure needed there. These are considered as CPC's normal capital costs for its new depot.

C. Cost Estimates

42. The total Project cost, inclusive of interest during construction, insurance, taxes, and duties, is estimated at \$41.14 million equivalent, of which \$24.00 million is in foreign exchange and \$17.14 million equivalent is in local currency.

43. The cost of the physical facilities and works is based on estimates prepared by CPC and a consulting engineering organization. A summary of the cost estimates is provided in Table 1. A detailed cost estimate is given in Appendix 2.

Table 1: Cost Summary
(\$ million)

Item	Foreign Exchange	Local Currency	Total
Base Cost	19.20	4.81	24.01
Contingencies	4.80	1.19	5.99
Interest, Insurance, Taxes, and Duties	-	11.14	11.14
	-	-	-
Total	24.00	17.14	41.14

Source: CPC

D. Financing Plan

44. The financing plan for the Project is summarized in Table 2. All the foreign exchange cost of \$24 million, equal to 58 percent of the Project cost, will be financed by the Bank from its Special Funds resources under standard Asian Development Fund terms. CPC will meet the local currency costs of \$17.14 million equivalent, which is about 42 percent of the Project costs, from its internally generated funds. The cost of land acquisition, local taxes, and duties is excluded from funding under the loan.

Table 2: Financing Plan
(\$ million)

Source	Foreign Exchange	Local Currency	Total Costs	Percent
Bank	24.00	-	24.00	58
CPC	-	17.14	17.14	42
Total	24.00	17.14	41.14	100

Source: Staff and CPC.

45. The Borrower of the loan will be the Democratic Socialist Republic of Sri Lanka, which will relend the proceeds of the loan to CPC under a subsidiary loan agreement for a period of 15 years inclusive of a grace period of 5 years at a fixed annual interest rate of 14 percent. The Borrower will bear the foreign exchange risk during drawdown and repayment of the loan.

E. Implementation

1. Implementation Arrangements

46. CPC will be the Executing Agency for the Project. A separate Project task force, headed by a full-time Project Manager and comprising technical and other necessary specialists, has been set up. This will be further strengthened by staff of the

consultant to be recruited under the Project. The Bank considers the Project implementation arrangements to be generally satisfactory.

2. The Executing Agency

47. CPC, an integrated oil company, was incorporated under the Ceylon Petroleum Corporation Act No. 28 in 1961 with the objectives of (i) carrying on the business of import, export, sales, supply, and distribution of petroleum products; and (ii) exploring and exploiting of indigenous hydrocarbon resources. It commenced operations in 1962 in competition with other oil companies who were operating in the country at that time, but in 1964 CPC became the sole provider of petroleum products. CPC has expanded its facilities to meet the demand for petroleum products in Sri Lanka. Details of CPC operations are given in Appendix 3.

48. CPC has operated profitably since 1985, except for 1989 when a small loss was made. Details of CPC financial performance are given in Appendix 4 and summarized in Table 3.

Table 3: CPC Financial Performance
SLRs millions

ITEM	1990	1991	1992	1993	Unaudited 1994	Forecast 1995
Net Operating Revenue	19,331	21,553	23,446	24,336	26,639	27,573
Operating Expenses	18,530	20,327	21,619	21,765	22,370	26,202
Operating Profit	801	1,226	1,827	2,572	4,269	1,371
Other Income/(Expense) a	(727)	(1,132)	(994)	(1,048)	(685)	(1,398)
Net Profit Before Government Charges	116	94	833	1,508	3,578	(27)
Government Charges, Taxes and Dividend	0	0	701	1,380	3,420	500
Retained Earnings	74	94	132	143	164	(527)

a 1995 includes cost of assets lost in the attack.
Source: CPC.

49. In 1994, refinery throughput was 1,945,000 t, the highest on record since the refinery was commissioned in 1969, while 290,000 t of refined product was imported. The product was distributed through 969 retail outlets of which 516 were dealer-owned, 89 dealer-controlled, and 364 CPC-controlled.

50. In 1995, the total number of employees was 5,216 of which 951 or 18 percent were in manufacturing; 827 or 16 percent in depot operations; 336 or 6 percent in marketing; 820 or 16 percent in distribution; and the balance, 2,282 or 44 percent in services and procurement, including 661 in security. Responsibility for the statutory audit of the annual accounts is vested in the Auditor General of Sri Lanka, who is assisted by a firm of public accountants.

51. CPC has experience in constructing facilities such as those proposed under the Project, though it has no experience as an EA for a previous Bank project.

3. Consultant services

52. The Project will require international consultant services for engineering, preparation of bid documents, bid evaluation, and for assistance with Project implementation. An estimated 27 personmonths of consultant services will be required up to the award of the turnkey contract. Thereafter, an additional 25 personmonths of consultant services will be required during the implementation phase. The consultants will be engaged in accordance with the *Guidelines on the Use of Consultants*.

4. Procurement

53. Procurement of goods and services to be financed by the Bank will be carried out in accordance with the Bank's *Guidelines for Procurement*. The detailed engineering and construction of the new tanks and refurbishing of the damaged facilities, is proposed to be carried out under a turnkey contract to be awarded in accordance with the Bank's ICB procedures. The dismantling of the damaged facilities, removal of debris, and general site clearance will be contracted out separately and carried out before the turnkey contract is awarded. This will reduce the risk of nonproductive time for the turnkey contractor.

5. Advance Procurement Action and Retroactive Financing

54. The Bank has agreed, subject to Board approval of the loan, to advance procurement action on the recruitment of consultants and the turnkey contractor and retroactive financing for the consulting services. The retroactive financing is limited to expenditure incurred after 1 December 1995 and subject to a maximum of \$0.15 million. These actions were required to minimize delays in areas critical for Project implementation.

6. Disbursement Procedures

55. CPC will, immediately after the loan agreement becomes effective, open and maintain a Project imprest account. The imprest account will be established, managed, and liquidated in accordance with the Bank's *Guidelines on Imprest Fund and Statement of Expenditures Procedures*.

7. Reporting, Accounts, and Audit

56. CPC will furnish the Bank with brief monthly and detailed quarterly reports on the progress of Project implementation. CPC will submit to the Bank, within three months of completion of the Project, a comprehensive report covering details of implementation and other information that the Bank may reasonably request.

57. CPC will provide copies of unaudited accounts and financial statements to the Bank annually within five months of the close of the fiscal year to which such accounts relate. In addition, such accounts and financial statements will be audited regularly by auditors acceptable to the Bank, and certified copies of audited accounts and financial statements will be submitted to the Bank within ten months of the close of each fiscal year.

8. Implementation Schedule

58. The Project will require a three-year period to complete. An outline implementation schedule is attached as Appendix 5. The actual implementation period will depend on the bids for the turnkey contract.

9. Mid-Term Review

59. The Borrower, CPC and the Bank shall jointly undertake a mid-term review to assess (i) Project implementation, (ii) design and construction standards, (iii) physical progress and disbursements in relation to the implementation schedule for the Project, (iv) the performance of Project consultants and contractors, and (v) compliance by the Borrower and CPC with the covenants in the Loan and Project Agreements.

F. Environmental and Social Measures

60. Bank staff inspected the Project site and identified the need to clean up the environment and to prevent spread of contamination. The immediate tasks required are to remove oil-contaminated soil and debris and dispose of it in a proper manner at a suitable site. That this clean-up task represents a major environmental improvement to be brought about by the Project was confirmed by an initial environmental examination conducted using the Bank's *Environmental Guideline for Selected Industrial and Power Development Projects*. Considering the urgency of the clean-up, CPC has invited several environmental consultants to submit proposals for the work. The scope of work includes (i) assessing the extent and severity of the contamination of soil and groundwater; (ii) designing methods and facilities for the removal and disposal of the contaminated soil; and (iii) designing a monitoring program to ascertain the effectiveness of the clean-up task. CPC has consulted closely with the Bank regarding the evaluation of the proposals. Implementation of the recommended environmental clean-up task will ensure complete mitigation of the environmental damage.

61. Up to a hundred families living along the perimeter of the installations or at the proposed new site may need to be relocated. They have indicated a desire to move, as their safety and properties were threatened by the fires. CPC is identifying relocation sites. Buffer zones, to isolate the installations and enhance security, will be created around the installations. This will also provide improved access for the rapid deployment of security personnel and fire fighting equipment. In the long-term redevelopment of Kolonnawa, to the extent possible, the tanks will be located closer to the center of the site, with less vulnerable facilities including offices on the outside.

62. CPC will provide the Bank, for its approval, with an action plan for the resettlement of the affected persons. The plan will cover (i) details of the people to be relocated, (ii) a summary of the consultation process with them; and (iii) the compensation package. In addition, CPC will monitor the implementation of the approved resettlement plan and report on its progress to the Bank on a six monthly basis.

63. CPC has agreed that no physical works (including any restoration, rehabilitation, or construction) would commence without the Bank's concurrence that the environmental clean-up plan and the resettlement action plan are satisfactory to the Bank.

G. Benefits and Justification

64. Based on quantifiable benefits (lower freight and demurrage charges and higher value added by the refinery), the Project is estimated to have an Financial Internal Rate of Return of 14.0 percent and an Economic Internal Rate of Return of 20.0 percent. Details of the calculations are given in Appendix 6.

65. In addition to the quantifiable benefits there are two significant unquantifiable benefits. First, the Project will enable Sri Lanka to reestablish its historical buffer stock of petroleum products, providing the security of petroleum supplies essential for avoiding disruption to economic and social activity. Secure petroleum supplies, a major source of primary energy, are important to maintain the transportation and power infrastructure essential for economic growth and for continued confidence among investors. The loss to the economy in the event of a shortage of petroleum products is difficult to quantify. Second, the blending of PG and Malaysian crudes will reduce the sulfur content of diesel and furnace oil.

66. CPC is not in a position to quickly raise commercially the long-term financing it needs to fund the reconstruction of its lost storage capacity and thus needs assistance from an institution such as the Bank.

67. The proposed Project is consistent with the Bank's operational strategy for Sri Lanka and the Bank's policy on rehabilitation assistance after disasters in that (i) it supports economic growth through restoration of essential infrastructure to minimize long-term economic and social dislocation, particularly in the energy, industry, and transport sectors; (ii) the scope relates to refurbishing damaged equipment and its restoration to at least the level of service prior to the disaster, with due regard to technological improvement, changed requirements, and disaster prevention; and (iii) it offers the least-cost solution.

H. Risks

68. Delay in Project implementation poses the biggest risk to the success of the Project. To minimize this risk, CPC has taken early steps to set up the Project implementation organization and recruit consultants. The implementation of the major part of the Project under a properly structured turnkey contract, bid out under ICB, would further reduce the chances of delays. CPC, is an experienced operator and manager of petroleum products and has the capability to implement the Project.

69. Although terrorists could attack the facilities again, the buffer zone around the perimeter proposed under the Project will mitigate this risk to a certain extent. In addition, CPC and the security agencies have stepped up security at the key installations.

VI. ASSURANCES

A. Specific Assurances

70. The Borrower has given the following assurances in addition to the standard assurances which have been incorporated in the legal documents:

- (i) The Project will receive the highest priority from the Borrower and its agencies and streamlined procedures satisfactory to the Bank will be evolved to deal with award of contracts.
- (ii) The Borrower will make the necessary arrangements to ensure that CPC will achieve in FY1996 and each fiscal year thereafter a profit that will provide CPC a rate of return, after taxes, levies, and dividends, of at least 10 percent on its total capital employed.
- (iii) If CPC is successful in recovering any monies under its proposed insurance claim for the losses CPC has suffered, then CPC will retain the proceeds for meeting its costs for replacing product lost and for rehabilitating its facilities.
- (iv) The Borrower and CPC will ensure that CPC will not dispose of any assets by privatization or sale without first obtaining the Bank's approval of the proposed disposal. The Borrower and CPC will take into account the Bank's views on such disposal, and the Bank reserves the right to adjust the terms of the loan, as remains outstanding at the time of the disposition.

B. Condition of Loan Effectiveness

71. As an additional condition to the effectiveness of the Loan, the Subsidiary Loan Agreement between the Borrower and CPC shall have become fully effective and binding on the parties.

VII. RECOMMENDATION

72. I am satisfied that the proposed loan would comply with the Articles of Agreement of the Bank and recommend that the Board approve the loan in various currencies equivalent to Special Drawing Rights 16,425,000 to the Democratic Socialist Republic of Sri Lanka for the Emergency Rehabilitation of Petroleum Facilities Project, with a service charge at the rate of 1 percent per annum and with an amortization period of 40 years, including a grace period of 10 years, and such other terms and conditions as are substantially in accordance with those set forth in the draft Loan and Project Agreements presented to the Board.

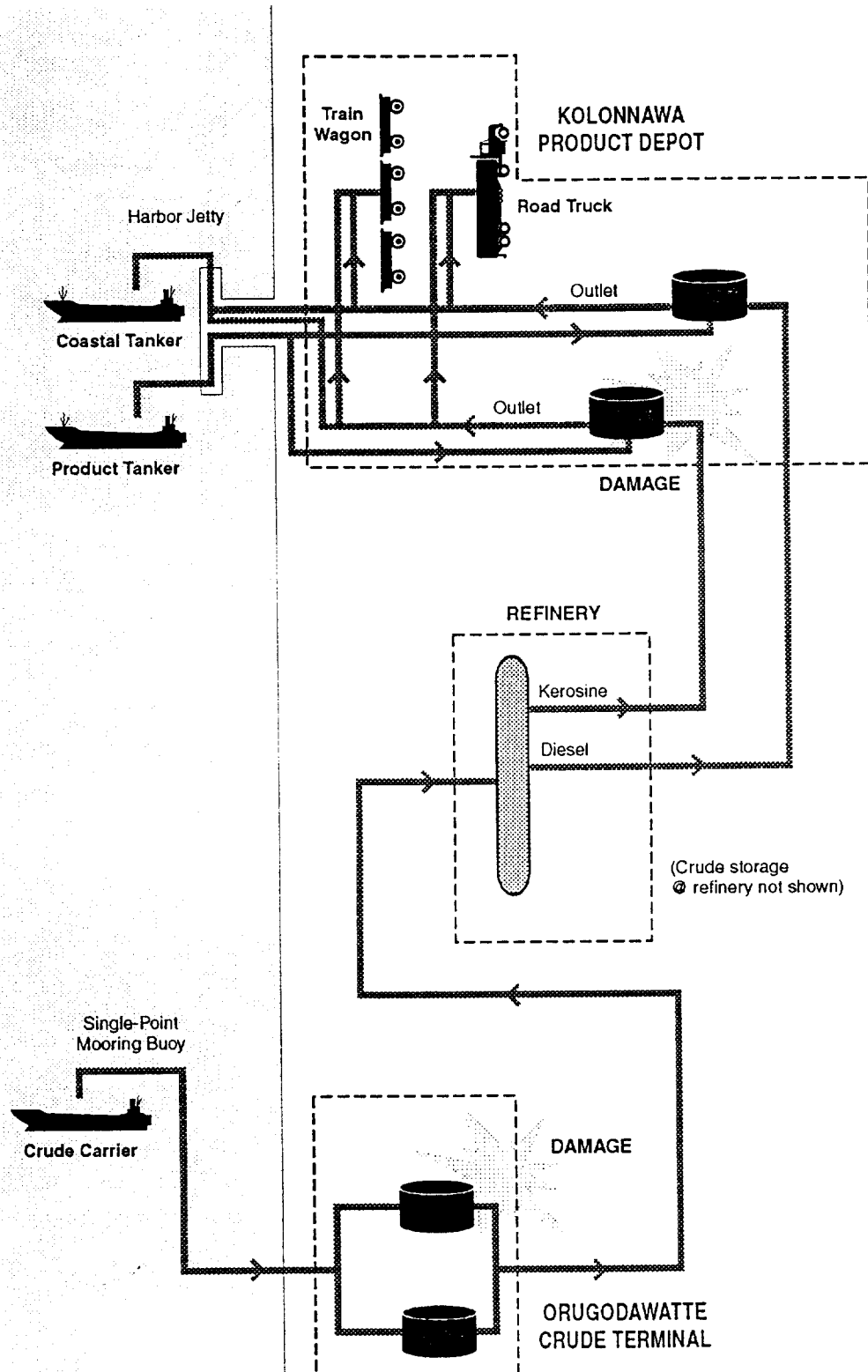
MITSUO SATO
President

19 April 1996

APPENDIXES

Number	Title	Page	Cited On (page,para.)
1	Basic Flow Scheme of Petroleum Products in CPC's Operations	19	4,15
2	Cost Estimate	20	10,43
3	Ceylon Petroleum Corporation	21	12,47
4	Financial Projection for Ceylon Petroleum Corporation	24	12,48
5	Implementation Schedule	29	14,58
6	Calculations of Financial and Economic Benefits	30	15,64

BASIC FLOW SCHEME OF PETROLEUM PRODUCTS IN CPC's OPERATIONS



COST ESTIMATE

ITEM	TOTAL (\$ MILLION)	FOREIGN (\$ MILLION)	LOCAL (\$ MILLION)
A. Base Costs	24.01	19.20	4.81
Reconstruction crude oil storage	6.42	5.14	1.28
Reconstruction refined products storage	15.83	12.66	3.17
Engineering and Project Management	1.76	1.40	0.36
B. Contingencies	5.99	4.80	1.19
Physical contingency @ 20 percent	4.80	3.84	0.96
Escalation @ 2.7 percent p.a. (of base costs)	1.19	0.96	0.23
C. Other Costs	11.14	-	11.14
Import duties and taxes levied	7.54	-	7.54
Interest during construction (of base costs)	3.60	-	3.60
D. Total Project Cost (A+B+C)	41.14	24.00	17.14

**CEYLON PETROLEUM CORPORATION:
THE EXECUTING AGENCY**

A. History

1. Ceylon Petroleum Corporation (CPC) is an integrated oil company wholly owned by the Government of Sri Lanka. CPC was incorporated under the Ceylon Petroleum corporation Act No. 28 (CPC Act) in 1961 with the objectives of (i) carrying on the business of importer, exporter, seller, supplier and distributor of petroleum products; and (ii) exploring for and exploiting indigenous hydrocarbon resources. It commenced operations in 1962 in competition with other oil companies operating in the country at the time, but in 1964 the Government determined that CPC would be the sole importer, refiner, and distributor of petroleum products in the country.

2. CPC has expanded its operations over the years to meet the demand for petroleum products. In 1969, a refinery and lubricating oil plant were commissioned. Over the period, various additions have been made to refinery operations to expand the range of products. These include removing bottlenecks from the crude distiller (1979), adding Nylon "6" Plant (1981) and a blown asphalt plant (1984), and revamping the distillation unit to enable use of middle distillate rich Far East crude (1992). In addition, the single point buoy mooring facility was commissioned in 1987 and the crude storage tank farm at Oregadawatte was completed in 1988.

B. Financial Performance

1. Profitability

3. CPC has operated profitability since 1985, except for 1989 when a small loss was made primarily because of Government taxes, levies, and other charges. Selling prices are generally set by the Government based on CPC's recommendations, which take into account estimated purchase costs for crude and refined products, refinery and distribution costs, and financial and administrative expenses. The selling price of super petrol is set at a level which generates sufficient profits to allow auto diesel and kerosene to be sold at little more than cost. Out of its operating profits CPC is required to pay to the Government (i) a kerosene subsidy,¹ (ii) any special levies the Government may impose, and (iii) deemed dividends. The level of special levies and dividends is generally set to permit CPC to retain earnings equal to 10 percent of capital employed.

1 The Government operates a voucher system that allows poor families to purchase kerosene at a substantial discount. CPC reimburses the Government for the costs of this scheme.

2. Balance Sheet

4. Working capital, including crude and refined products inventory, is provided by creditors through their purchase terms, or short-term bank loans. Noncurrent assets (fixed assets and investments) which were SLRs2,551 million (\$48 million) as of 31 December 1994, were funded 65 percent by subscribed capital, retained earnings, and reserves and 35 percent by long-term loans (repayable fully by 1998), largely yen-denominated, which were incurred in 1986 to fund the construction of the single point buoy mooring system and the crude storage facility at Orugodawatte.

C. Operational Performance

5. In 1994, the refinery throughput was 1,945,000 metric tons (t), the highest on record since the refinery was commissioned in 1969 while 290,000 t of refined product was imported. Refinery losses and product for own-use was 4.27 percent of intake. Product was distributed through 969 retail outlets, of which 516 were dealer-owned, 89 dealer controlled, and 364 CPC-controlled.

6. Staff strength in 1995 was 5,216, of which 951 or 18.5 percent were in manufacturing, 827 or 16 percent in depot operations, 336 or 6 percent in marketing, 820 or 16 percent in distribution, and the remaining 2,282 or 44 percent in services and procurement, including 661 in security.

D. Accounting and Audit

1. Accounting

7. The activities of the finance function are specified in the CPC Act and the Finance Act No. 38 of 1971 and include:

- (i) maintenance of accounting records;
- (ii) establishment of a system of internal control;
- (iii) selection and application of appropriate accounting policies;
- (iv) safeguarding the Cooperatives assets;
- (v) submission of financial statements;
- (vi) corporate planning, budgetary control, and provision of management information;
- (vii) treasury management and preparation of tax return; and
- (viii) costing and pricing of products.

8. To carry out these functions, the Finance Department has a staff of 284 at the head office and subunits at the refinery, Kolonnawa refined storage facility, and China Bay (Trincomalee). These staff report to the Finance Manager at the head office.

2. Management (Internal) Audit

9. The function of the Internal Audit Department are also specified in the Finance Act and include:

- (i) review of the system of internal control,
- (ii) safeguarding transactions,
- (iii) ensuring business efficiency and effective management, and
- (iv) ensuring the overall efficient performance of the corporation.

10. The Internal Audit department has a staff of 56 who carry out an annual audit plan using written programs. Specialists have been recruited to carry out audits of electronic data processing activities.

3. Statutory (External) Audit

11. Responsibility for the Statutory audit of the annual accounts required under the Finance Act is vested in the Auditor General of Sri Lanka who is assisted in carrying out this function by a firm of accountants in public practice. The scope and extent of the audit is set by the Auditor General but is stated to be as wide as possible within the limitations of staff, other resources, and time available. A detailed audit report setting out major audit findings together with the Chairman of CPC's response thereto is published in the corporation's annual report.

ASSUMPTIONS FOR FINANCIAL PROJECTIONS:

Ceylon Petroleum Corporation

1. Income Statement

Energy Sales	-	Annual growth rates have been assumed as follows:												
		<table><tr><td>Petrol</td><td>4.8%</td></tr><tr><td>Auto Diesel</td><td>7.0%</td></tr><tr><td>Kerosene</td><td>3.5%</td></tr><tr><td>Fuel Oil</td><td>5.1%</td></tr></table>	Petrol	4.8%	Auto Diesel	7.0%	Kerosene	3.5%	Fuel Oil	5.1%				
Petrol	4.8%													
Auto Diesel	7.0%													
Kerosene	3.5%													
Fuel Oil	5.1%													
Average Revenue	-	Price increases necessary to satisfy the covenanted 10 percent rate of return have been assumed.												
Other Operating Income	-	Includes dividends received from subsidiaries and is assumed to increase at 10 percent per annum from 1996/97 and 5 percent per annum thereafter.												
Interest Earnings	-	12 percent of average positive cash balances.												
Interest Payments	-	18 percent of average negative cash balances other than foreign loans, which are at the Government's lending rate (14 percent) for the proposed Bank loan and 6.3 percent for direct borrowings.												
Fuel Cost	-	Based on crude oil prices. <table><tr><td>1996</td><td>(\$18.28)</td><td>1999</td><td>(\$20.00)</td></tr><tr><td>1997</td><td>(\$18.50)</td><td>2000</td><td>(\$21.00)</td></tr><tr><td>1998</td><td>(\$19.00)</td><td></td><td></td></tr></table>	1996	(\$18.28)	1999	(\$20.00)	1997	(\$18.50)	2000	(\$21.00)	1998	(\$19.00)		
1996	(\$18.28)	1999	(\$20.00)											
1997	(\$18.50)	2000	(\$21.00)											
1998	(\$19.00)													
Selling and Distribution Expenses	-	An average increase of 8 percent per annum over the period 1996-2000 has been assumed.												

Administration Expenses	-	Increase of 15 percent per annum over the period 1996-2000 has been assumed.
Turnover Tax/ Defence Levy	-	Assumed at 12 percent of total revenue
Depreciation	-	Provided on a straight-line basis at statutory rates e.g. Buildings, Refinery Tanks and Pipelines 2.5% p.a. Plants and Machinery 10.0% p.a. Bowsers and Tanker Lorries 20.0% p.a.
Inflation	-	Local inflation assumed to average 8 percent over the period 1996-2000.

2. Balance Sheet

Investments	-	No changes in investments is assumed over the period 1996-2000.
Insurance Reserve	-	An amount equivalent to the estimated actual cost of insuring imports other than crude oil and refined products is credited to an insurance reserve.
Inventories	-	Forecast to remain at prefire volumes for the period 1996-2000.
Accounts Receivable - due after one year -	-	Represent loans and advances to employees-increase over the period in line with overall salary increases.
Current Liabilities	-	Purchase of crude and imported refined products are financed largely by short-term supplier credits and short-term bank borrowings.
Capital Expenditure	-	Based on Ceylon Petroleum Corporation's approved corporate plan for 1996 adjusted for changes as a result of the damage to facilities.

**Weighted Average
Cost of Capital**

- Average ratio of long-term debt to equity has been assumed at 60:40. Average cost of long-term debt is 14 percent and the cost of equity is assumed at 18 percent including a 4 percent risk premium. Inflation rate is 8 percent per annum. Weighted average of cost of capital is therefore:

Long-term debt (60% at 14%)	8.4%
Equity (40% at 18%)	<u>7.2%</u>
nominal	15.6%
Less: inflation	<u>8.0%</u>
Weighted average cost of capital in real terms	<u>7.6%</u>

**FINANCIAL STATEMENTS OF
CEYLON PETROLEUM CORPORATION**
Table 1: Income Statement
(years ending December 31, SLRs million)

Item	Audited					Unaudited					Projected			
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000			
Operating Revenue														
Domestic Sales	17 027	20 161	22 994	23 610	26 531	27 461	30 307	33 431	36 012	37 872	39 827			
Export Sales - Direct	992	1 071	599	1 030	1 072	1 110	1 225	1 351	1 455	1 530	1 609			
Export Sales - Indirect	2 990	2 267	2 178	2 557	2 679	2 773	3 060	3 376	3 636	3 824	4 021			
Less : Turnover Tax and Defence Levy	(1 678)	(1 947)	(2 324)	(2 860)	(3 643)	(3 771)	(4 161)	(4 590)	(4 945)	(5 200)	(5 469)			
Total	19 331	21 553	23 446	24 336	26 639	27 573	30 430	33 567	36 159	38 026	39 989			
Operating Expenses														
Cost of Sales	17 531	18 927	19 977	20 205	20 937	24 715	27 632	30 035	32 224	33 492	34 810			
Selling and Distribution Expenses	607	695	758	798	901	932	1 029	1 135	1 223	1 286	1 352			
Administration Expenses	382	767	990	855	647	674	727	820	929	1 178	1 453			
Less : Other Operating Income	(115)	(147)	(125)	(92)	(115)	(119)	(131)	(145)	(156)	(164)	(173)			
Exceptional Charges	124	85	19	0	0	0	0	0	0	0	0			
Total	18 530	20 327	21 619	21 765	22 370	26 202	29 256	31 845	34 219	35 792	37 442			
Operating Profit	801	1 226	1 827	2 572	4 269	1 371	1 174	1 722	1 940	2 234	2 547			
Other Income/Expense														
Income from Investments	1	1	1	1	1	2	2	2	2	2	2			
Interest Expense (Net)	(636)	(972)	(902)	(869)	(570)	(410)	(782)	(990)	(1 097)	(1 189)	(1 289)			
Exchange Loss on Long-term Foreign Loan	(50)	(160)	(93)	(196)	(122)	(150)	(100)	(75)	(30)	0	0			
Total	(685)	(1 132)	(994)	(1 064)	(691)	(558)	(880)	(1 063)	(1 125)	(1 187)	(1 287)			
Net Profit from Ordinary Operations Before Taxes	116	94	833	1 508	3 578	813	294	659	815	1 047	1 261			
Extraordinary Item (Net of Tax)	(42)	(0)	0	16	6	(839)	0	0	0	0	0			
Prior Years' Adjustment	0	0	0	0	0	0	0	0	0	0	0			
Net Profit Before Taxes and Government Charges	74	94	833	1 523	3 584	(26)	294	659	815	1 047	1 261			
Government Charges, Taxes and Dividend														
Kerosine Subsidy	0	0	0	135	203	0	0	0	0	0	0			
Special Levy	0	0	700	700	2 638	500	0	0	0	0	0			
Income Tax	0	0	1	422	497	0	118	230	288	371	447			
Deemed Dividend	0	0	0	123	82	0	44	86	107	139	167			
Net Profit after Appropriations	74	94	132	143	164	(526)	132	343	420	537	647			
Ratio														
Net Return on Average Capital Employed (%) a/	3%	4%	5%	6%	7%	-21%	5%	10%	10%	10%	10%			

a/ Net Profit after Appropriations/Average Total Equity and Non-current Liabilities

Table 2 : Balance Sheet

Item	[----- Audited -----]					Unaudited	[----- Projected -----]				
	1990	1991	1992	1993	1994		1995	1996	1997	1998	1999
ASSETS											
Gross Fixed Assets in Use	3,591	3,163	3,563	3,590	3,674	2,941	3,316	3,455	3,660	5,389	5,661
Less: Accumulated Depreciation	1,568	1,243	1,398	1,521	1,692	1,129	1,434	1,521	1,655	1,724	1,796
Net Fixed Assets in Use	2,023	1,920	2,165	2,068	1,982	1,812	1,882	1,934	2,005	3,665	3,865
Construction In Progress	177	131	110	158	210	250	770	1,290	2,211	800	700
Total	2,200	2,050	2,275	2,226	2,192	2,062	2,652	3,224	4,216	4,465	4,565
Non-current Assets											
Investment in Associated Companies	36	36	30	30	300	300	300	300	300	300	300
Other Investments	53	53	59	59	59	59	59	59	59	59	59
Accounts Receivable Due after One Year	1,404	2,222	2,966	2,568	464	384	350	410	480	454	454
Total	1,493	2,311	3,055	2,657	824	743	709	769	839	813	813
Current Assets											
Cash on Hand and at Bank	372	225	262	244	419	239	250	275	300	400	450
Inventories	5,909	4,341	3,932	3,976	4,444	4,264	4,292	4,381	4,546	4,865	5,206
Accounts Receivable	966	1,109	1,155	1,205	1,306	1,482	1,432	1,581	1,680	2,074	2,181
Other Receivables	1,198	1,822	357	566	136	0	0	0	0	0	0
Total	8,465	7,497	5,706	5,991	6,304	5,985	5,974	6,237	6,526	7,339	7,837
Total Assets	12,157	11,858	11,036	10,874	9,319	8,790	9,335	10,236	11,585	12,621	13,216
EQUITY AND LIABILITIES											
Equity											
Government Equity	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
Revaluation Reserve	26	25	27	28	28	28	29	27	28	28	28
Insurance Reserve	342	344	354	357	361	470	475	490	525	575	625
Retained Earnings	(259)	(165)	(33)	110	274	(252)	(120)	223	643	1,180	1,826
Total	1,109	1,204	1,348	1,495	1,662	1,246	1,384	1,740	2,196	2,783	3,479
Liabilities											
Non-current Liabilities											
Long-term Debt	1,001	1,066	971	834	607	925	1,356	1,756	2,354	3,010	2,985
Provision for Retiring Gratuity	104	137	165	167	201	271	280	325	350	375	400
Total	1,105	1,203	1,136	1,000	808	1,196	1,636	2,081	2,704	3,385	3,385
Current Liabilities											
Bank Overdraft (secured)	1,005	2,669	864	1,721	1,152	855	843	870	911	868	853
Foreign Bills Payable	6,492	4,415	4,840	3,023	2,063	2,369	2,047	2,227	2,391	1,928	2,158
Current Maturities Long-term Debt	520	1,446	2,145	1,949	822	322	223	60	0	0	0
Other Current Liabilities	1,927	922	705	1,686	2,912	2,803	3,204	3,258	3,383	3,657	3,340
Total	9,943	9,451	8,553	8,379	6,849	6,349	6,317	6,415	6,685	6,453	6,351
Total Equity and Liabilities	12,157	11,858	11,036	10,874	9,319	8,790	9,335	10,236	11,585	12,621	13,216
Ratios											
Current Ratio	0.9	0.8	0.7	0.7	0.9	0.9	0.9	1.0	1.0	1.1	1.2
Long-term Debt : Equity (%)	90%	89%	72%	56%	37%	74%	98%	101%	107%	108%	86%
Accounts Receivable (months)	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7

EMERGENCY REHABILITATION FOR PETROLEUM FACILITIES

Implementation Schedule

TASK	1996												1997												1998												1999											
	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M						
Project Team in Place																																																
Engineering																																																
Prequalification Package, CATB & Bank approvals																																																
Prequalification Round of Turnkey Contractors																																																
Prequalification, Evaluation, CATB & Bank approval shortlist																																																
Preparation of Tender Documents, CATB & Bank approval																																																
Tendering of Turnkey Contract																																																
Tender Price Evaluation, CATB & Bank approval, award																																																
Debris/Site Clearance at Orugodawatta Crude Storage																																																
Design and Construction of tanks at Oruodawatta																																																
Debris/Site clearance at Kolonnawa Depot Storage																																																
Design and Construction at Kolonnawa Depot Storage																																																
Design and Construction of tanks at Kolonnawa																																																
Site Acquisition/Preparation at Sapugaskanda																																																
Design and Construction of tanks at Sapugaskanda																																																

CALCULATIONS OF FINANCIAL AND ECONOMIC BENEFITS

1. Reduction of Freight Costs on Persian Gulf Crude Shipments

Freight Rate	-	120,000 t tanker	\$ 4.00/t
		60,000 t tanker	<u>\$ 6.50/t</u>
Cost Saving			\$ 2.50/t
Annual Imports (PG Crude)			1,4000,000 t
Annual savings using Larger Tanker			<u>\$3.5 million</u>

2. Reduction of Demurrage Charges

Daily Demurrage Charges	\$12,500
No. of Days Demurrage (estimated 2 per month)	24
Annual Cost	<u>\$0.3 million</u>

3. Improved Product Mix (based on actual 1994 operations)

	1994 <u>Actual</u>	PG Crude <u>Only¹</u>	<u>Inc/(Dec)</u>
Value of product	\$282.8	\$267.9	\$14.9
Cost of crude	<u>232.2</u>	<u>221.7</u>	<u>(10.5)</u>
Net Margin	<u>\$ 50.6</u>	<u>\$ 46.2</u>	<u>\$ 4.4 million</u>

Summary of Benefits

	<u>\$ Million</u>
1. Reduction of Foreign Costs	3.5
2. Reduction of Demurrage Charges	0.3
3. Improved Product Mix	<u>4.4</u>
Total Benefits	8.2
Less: 10% for mitigating actions ²	<u>(0.8)</u>
Net Benefits	<u>\$7.4</u>

¹ Estimated production/cost values if only PG Crude had been refined at the same volume of throughput

² Reduction to reflect estimated reduction in costs (and consequent reduction in benefits) of mitigating actions such as occasional blending.

RATES OF RETURN CALCULATIONS

YEAR	FIRR			EIRR		
	COST	PROJECT BENEFITS	NET CASH FLOW	COST	PROJECT BENEFITS	NET CASH FLOW
1996	(2.00)		(2.00)	(2.00)		(2.00)
1997	(22.00)		(22.00)	(20.00)		(20.00)
1998	(23.87)		(23.87)	(17.18)		(17.18)
1999		7.40	7.40		8.90	8.90
2000		7.40	7.40		8.90	8.90
2001		7.40	7.40		8.90	8.90
2002		7.40	7.40		8.90	8.90
2003		7.40	7.40		8.90	8.90
2004		7.40	7.40		8.90	8.90
2005		7.40	7.40		8.90	8.90
2006		7.40	7.40		8.90	8.90
2007		7.40	7.40		8.90	8.90
2008		7.40	7.40		8.90	8.90
2009		7.40	7.40		8.90	8.90
2010		7.40	7.40		8.90	8.90
2011		7.40	7.40		8.90	8.90
2012		7.40	7.40		8.90	8.90
2013		7.40	7.40		8.90	8.90
2014		7.40	7.40		8.90	8.90
2015		7.40	7.40		8.90	8.90
2016		7.40	7.40		8.90	8.90
2017		7.40	7.40		8.90	8.90
2018		7.40	7.40		8.90	8.90
2019		7.40	7.40		8.90	8.90
2020		7.40	7.40		8.90	8.90
2021		7.40	7.40		8.90	8.90
2022		7.40	7.40		8.90	8.90
2023		7.40	7.40		8.90	23.19
			152.3			197.6
		FIRR	14.0%		EIRR	20.1%
WEIGHTED AVERAGE OF CAPITAL COST			7.6%			7.6%

Notes:

- (1) For the purpose of calculating the FIRR, all costs and benefits are at border prices except refinery operating costs - \$7.3 million per annum. When converted to border prices at the standard conversion factor for Sri Lanka - 0.8 economic benefits increase by \$1.5 million per annum.
- (2) To calculate the EIRR, project costs have been reduced by duties and taxes included therein.
- (3) Project costs include initial working capital, which represents the cost of replacing crude and refined product destroyed in the attack. These have been recovered in 2023 together with the estimated salvage value (10%) of other Project items.

Source: Staff