

## LARGEST YEN LOAN COMMITMENT TO INDIA

### Continued Emphasis on Environment Projects and Economic Infrastructure Projects

OECF (The Overseas Economic Cooperation Fund, Japan: President, Chairman of the Board, Akira Nishigaki) and India today signed loan agreements totaling 132,746 million yen for 11 development projects. The agreements were signed by Mr. Akira Nishigaki, President, Chairman of the Board and H. E. Mr. Kuldip Sahdev, Ambassador Extraordinary and Plenipotentiary of India to Japan. This brings to 132 the cumulative number of loans committed by OECF to India, making the total for OECF loan commitments to India approximately 1.5 trillion yen.

The loan package comprises three environmental projects (water supply & sewerage and afforestation), two urban transport projects, five electric power projects, and one irrigation project. An outline of the loan package is given below.

#### 1. OUTLINE OF THE PACKAGE

##### (1) Continued Emphasis on Environmental Aspects

Environmental protection is essential for sustainable development. Development that merely gives higher incomes but causes the quality of life to deteriorate, now or in the future, is essentially meaningless. In addition to development of economic infrastructure, the FY 96 loan package to India emphasizes environmental protection.

###### 1) Afforestation

Population growth in rural areas has led to the inhabitants' increased need for firewood for fuel and for forest resources for keeping cattle, causing forest coverage to shrink rapidly. Residents' participation in afforestation projects is essential for effective implementation of projects and operation and maintenance of related facilities. Training for state government staff and residents, and feedback from experience to date to give improved project implementation methods are also increasingly required.

Since 1991, OECF has implemented three afforestation projects (Afforestation and Pasture Development Project along the Indira Gandhi Canal Area, Afforestation Project in Aravali Hills, Rajasthan Forestry Development Project) in the State of Rajasthan, the largest dry area in India. In 1995, OECF extended a loan for the Gujarat Afforestation and Development Project. The FY96 package includes two afforestation projects: the Tamil Nadu Afforestation Project and the Eastern Karnataka Afforestation Project.

In selecting the FY96 afforestation projects, OECF did its utmost to ensure that systems enhancing incentives for local residents' participation were incorporated in the projects. They will be encouraged in every way possible to involve themselves in the planning of project implementation, as well as in the maintenance of related facilities, making it possible to reflect their needs in project designing. For example, they will be allowed to utilize forest resources, cutting down trees, after an agreed period of afforestation, to the extent that adequate reproduction of resources is not impaired. NGOs are actively relied on as bridges linking policy makers (state governments) and residents (beneficiaries), and for identifying the needs of the latter.

Afforestation projects also make for increased employment opportunities for women and the poor, giving more equitable distribution of the economic gains of development.

###### 2) Water Supply and Sewerage

In many provincial towns and cities in India, the wave of urbanization accompanying economic development has resulted not only in water supply inadequacy, but also in seriously insufficient access to safe drinking water. People must obtain water from wells and ponds for drinking, where there are no proper water supply and sewerage facilities. Water supply and sewerage projects are directly linked to basic human needs. The FY96 Kerala Water Supply Project is intended to enhance residents' welfare by increasing the supply of safe water in five cities and towns in Kerala, including the capital of the State.

##### (2) Building Economic Infrastructure

Economic activities must be invigorated and foreign capital must be introduced, if sustained economic growth is to be attained. OECF loans to India focus on the development of economic infrastructure with major spill-over effect helping to create an enabling environment for domestic and foreign businesses operating in the country.

###### 1) Electric Power

Chronic shortages of power have been a major bottleneck to economic growth for India. In addition to assisting construction of new power stations to increase generation capacity, OECF also assists projects designed to reduce transmission loss, stabilize power supply, and make it easier to adjust supply-and-demand as between states by the constructing of transmission lines. Renovation and rehabilitation of older power plants is also being implemented.

In the FY96 package, projects for the construction of new power stations are the Simhadri Thermal Power Station Project and the Turrial Hydro-Electric Power Station Project. Transmission projects are: the Northern India Transmission System Project and the West Bengal Transmission System Project. The Umiam Hydro Power Station Renovation Project is a renovation project. The total loan amount for the power sector projects is 52.8 billion yen.

###### 2) Urban Transport

Due to the urbanization resulting from economic growth, traffic congestion in urban areas has increased, causing the fear of rapidly worsening air pollution by exhaust emissions from vehicles. The FY96 projects are aimed at improving traffic flow and conservation of the urban environment in India's two largest cities, Delhi and Calcutta.

The Calcutta Transport Infrastructure Development Project is designed to alleviate traffic jams and to give smoother traffic flow in the center of Calcutta by improving intersections and constructing flyovers.

The Delhi Mass Rapid Transport System Project, one of the priority projects in the 8th Five Year plan, aims to build a mass transit system to cope with traffic congestion and air pollution caused by the increased use of buses and private cars in recent years by constructing subways and surface and elevated railways.

###### 3) Irrigation

Although India became self-sustaining in food grains in the '70s, its agricultural productivity is still lower than that of other Asian countries. In order to feed a growing population in the future and raise the nutrition levels of the country's people, it is necessary to enhance agricultural productivity. Since agriculture is a primary source of income for the poor in rural areas, irrigation projects are expected to play an important role in reducing poverty.

The Rajghat Canal Irrigation Project is intended to effectively utilize rainfall in the monsoon season and to increase and stabilize agricultural output by providing irrigation facilities in Madhya Pradesh. 25% of the expected beneficiaries are from scheduled castes and tribes.

##### (3) Commitment Amount

The fiscal 1996 package amounting to 132,746 million yen (up 3.1% from the previous year) is the OECF's largest commitment to India. Environment-related projects account for 31% of the 1996 package, electric power for 40%, urban transport infrastructure for 19%, and irrigation for 10%.

Economic liberalization policies initiated by the Rao Administration on its inauguration in 1991 are being continued under the Gowda Administration, which took office in June, 1996. India, with its vast domestic market, is becoming increasingly attractive to international investors. It is, however, increasingly necessary not only to establish an appropriate legal framework for businesses, both domestic and from abroad, but also to create a favorable climate for investment in infrastructure development. In view of the growing need for economic infrastructure to fully actualize India's growth potential, continued assistance in the form of official loans, such as Yen Loans is essential both today and in the future.

**Sectorial Distribution of Commitments to India (Million Yen)**

Sector	FY	1992	1993	1994	1995	1996
Electric Power and Gas		36,568(3)	68,243(3)	82,205(6)	17,685(2)	52,796(5)
Transportation			21,397(2)	10,663(2)		25,439(2)
Water Supply and Sewerage		17,773(1)		17,098(1)	37,122(2)	11,997(1)
Environmental Protection				11,580(2)	5,112(1)	
Afforestation				4,219(1)	15,760(1)	29,292(2)
Mining and Manufacturing		24,482(1)				
Agriculture					16,049(1)	13,222(1)
Financia-Intermediary Loans			30,000(1)		30,000(1)	
Commodity Loans		33,085(1)				
Others					7,046(1)	
<b>Total</b>		<b>111,908(6)</b>	<b>119,640(6)</b>	<b>125,765(12)</b>	<b>128,774(9)</b>	<b>132,746(11)</b>
Environmental Project Amount %		17,773(1) 16%	- -	32,897(4) 26%	57,994(4) 45%	41,289(3) 31%

( ):Number of Projects

**2. Amount and Conditions of the Loan**

Project	Amount (Mil. Yen)	Interest Rate (%)	Repayment Period/ Grace Period (Years)	Tying Status
Northern India Transmission System Project	8,497	2.3	30(10)	General-Untied
West Bengal Transmission System Project	11,087	2.3	30 (10)	General-Untied
Umiam Hydro Power Station Renovation Project	1,700	2.3	30 (10)	General-Untied
Tuirial Hydro-Electric Power Station Project	11,695	2.3	30 (10)	General-Untied
Simhadri Thermal Power Station Project	19,817	2.3	30 (10)	General-Untied
Delhi Mass Rapid Transport System Project	14,760	2.3	30 (10)	General-Untied
Calcutta Transport Infrastructure Development Project	10,679	2.3	30(10)	General-Untied
Kerala Water Supply Project	11,997	2.1*	30 (10)	General-Untied
Eastern Karnataka Afforestation Project	15,968	2.1*	30 (10)	General-Untied
Tamil Nadu Afforestation Project	13,324	2.1*	30 (10)	General-Untied
Rajghat Canal Irrigation Project	13,222	2.3	30 (10)	General-Untied
<b>Total</b>	<b>132,746</b>	<b>-</b>		

\*Preferential Interest Rate on Environmental Projects.

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#### 3. Project Description

##### (1) Northern India Transmission System Project

In the northern part of India, where this project is located, power supply can satisfy only about 84% of peak demand ( supply:14,290 MW, demand:16,950MW) and 93% of energy demand (supply: 97,068GWh, demand: 104,749GWh in Fiscal Year 1994). The demand for power is projected to increase rapidly in the years ahead. In order to deal with this power shortfall, the Dhauliganga Hydroelectric Power Plant and the Chamera Power Plant are under construction. Expansion of the transmission system and new expansion and construction of source of energy are also urgently needed.

The purpose of this project is to increase power supply and enhance the reliability of power supply by i) Construction of a transmission line between Dhauliganga Hydroelectric Power Plant and Bareilly Substation, and expansion of Bareilly Substation in the northern part of the State of Uttar Pradesh, ii) Construction of a transmission line between Jalandhar Substation (in the State of Punjab) and Hamirpur Substation (in the State of Himachal Pradesh), and expansion of both the Jalandhar and Hamirpur Substations. The cost of construction of the Dhauliganga Hydroelectric Power Plant is covered by a previous OECF loan (signed in Fiscal Year 1995; loan amount: 5,665 million yen). The transmission line between Dhauliganga and Bareilly is to supply power from this power station.

The loan is for construction, equipment, and civil work.

The executing agency is Power Grid Corporation of India Limited.(Address: Hemkunt Chambers, 89, Nehru Place, New Delhi-110 019, India, TEL:91-11-6434049, FAX:91-11-6428065)

##### (2) West Bengal Transmission System Project

Projections indicate that electric power demand in the State of West Bengal, in which Calcutta (one of India's 4 biggest cities) is located, will grow rapidly in the period 1996 - 2000. (Annual average growth: 6.9% for peak demand, 7.1% for energy demand). In order to solve the problem of a serious power shortage, development of additional source of energy is in progress.

But transmission system construction is delayed in this state, and, in addition, transmission loss is as high as 20.02%. So, it is essential to reduce transmission loss and stabilize voltage by constructing substations, transmission lines and expanding existing substations and transmission lines in order to enhance the reliability of the power system. The purpose of this project is to improve the above energy situation by i) construction and improvement of transmission lines (total length: 970km), ii) construction and expansion of related substations (32 sites). In addition, this project has the objective of enhancing the reliability of the power supply by strengthening the linkage with other states by means of development of the transmission system.

The loan is for construction, equipment, civil works and related consulting services.

The executing agency is West Bengal State Electricity Board.(Address: Vidyut Bhavan, Block DJ, Sector II, Bidhannagar, Calcutta- 700 091, India, 91-033-3591915, FAX:91-033-3591954)

##### (3) Umiam Hydro Power Station Renovation Project

Existing power supply capacity in the north-east of India, in which this project is located, can satisfy only about 74% of peak demand (supply :620MW, demand :840MW), and 90% of normal demand (supply : 3491GWh, demand : 3862GWh). The region suffers from a chronic power shortage. It is estimated that this power shortfall will continue in the future, and construction of power stations is urgently needed. The purpose of this project is to improve the energy situation in the north-eastern part of India by renovation of the Umiam Power Station (Stage I), which was built 30 years ago. As part of this renovation, turbines and generators will be replaced. The loan is for equipment and related consulting services. The executing agency is Meghalaya State Electricity Board.(Address: Lum Jingshai, Short Round Road, Shillong -793003, India, TEL:91-364-226367, FAX:91-364-226445)

##### (4) Tuirial Hydro-Electric Power Station Project

Existing power supply capacity in Mizoram State is 25.1MW (21.7MW from 22 diesel generators, 3.4MW from 9 Small Hydro-Electric Power Stations), and there is a serious shortage of power (shortfalls of 42% for peak demand:69MW, 26% for normal demand) . Power demand in this state cannot be fully satisfied even with the purchase of energy from other states in the north-eastern part of India.

The purpose of this project is to improve the energy situation in this state by constructing an earth-fill dam and a hydroelectric power plant with a capacity of 60MW(2X30MW) on the Tuirial River, near the village of Saipun in the Kolasib sub-division of Aizawl District, Mizoram.

The loan is for equipment, civil works, and related consulting services.

The Executing Agency is North Eastern Electric Power Corporation Ltd.(Address: Brookland Compound, Lower New Colony, Shillong - 793003, India, TEL:91-364-224487, FAX:91-364-226417)

##### (5) Simhadri Thermal Power Station Project

Power demand for agriculture in Andhra Pradesh State (one of the largest agricultural states in the southern part of India) has been expanding rapidly in recent years, resulting in a shortage of energy for industry, which may prove to be a bottleneck for industrial development in this state. Generation capacity at peak times is 4301MW, and there is a shortfall of 1646MW (-27.7%) for a peak demand of 5947MW. It is, therefore, essential to develop sources of energy in order to deal with the serious power shortage.

The purpose of this project is to construct 1000MW coal-fired thermal power station near Devada Village, Vishakhapatnam District, adjacent to the main Industrial Development Zone. This coal-fired thermal power station will use the abundant domestic coal produced in neighbouring Orissa State and help to assure a stable power supply in the State of Andhra Pradesh.

The loan is for construction, equipment and civil works.

Executing Agency is National Thermal Power Corporation Ltd.(Address: NTPC Bhawan, Scope Complex 7, Institutional Area, Rodhi Road, New Delhi- 110 003, India.,TEL:91-11-4360100, FAX:91-11-4361018)

##### (6) Delhi Mass Rapid Transport System Project

Delhi, the capital of India, benefits from the extensive nationwide road and national railway networks, constructed at the beginning of this century in accordance with a well-conceived plan intended to provide long-distance transportation for both passengers and freight. On the other hand, the transportation system inside the city, such as the commuter trains connecting the suburbs and the center, is inadequately developed. As a result, transportation in Delhi depends mainly on the bus network, with buses always overcrowded because the number of buses is inadequate and there are frequent delays. The inadequacy of the mass transportation system causes many serious problems, such as heavy traffic jams and air pollution due to the rapid increase in the number of cars and other vehicles. Given the projections for the increase in the number of cars, construction of a mass transportation is required both for preservation of the environment and in order to alleviate traffic jams.

The purpose of this project is i) to alleviate traffic jams and air pollution, and ii) to establish an efficient and punctual mass rapid transport system, by constructing a subway (Delhi University - ISBT(Inter State Bus Terminus) - Connaught place - Central Secretariat) (11.0km), and a surface and elevated rail corridor (44.3km).

The loan is for the first phase of the whole project.

The loan is for construction, materials and equipment, and the related consulting services.

The executing agency is Delhi Metro Rail Corporation Limited.(Address: c/o Ministry of Urban Affairs & Employment, Government of India, TEL:91-11-3011787, FAX:91-11-3014459 )

#### (7) Calcutta Transport Infrastructure Development Project

India's road and rail networks are unusually extensive and well-developed for a developing country. The total length of nation's roads was 2,041 thousand km (as of March 1992), 49.1% of this was paved, and road density was 0.62km per km<sup>2</sup> (as of March 1991). While the number of cars registered increased by 415% between 1980 and 1990, total road length increased by only 37%. Construction and improvement of roads is not keeping pace with the increase in traffic volume.

Calcutta, with a population of more than 12 million, is one of India's biggest cities. The city suffers from serious traffic jams due to the rapid increases in population and the number of private cars, and from environmental problems such as automobile exhaust pollution. The extremely low ratio of roads to total area, traffic lights' not working, excessive concentration of traffic in a few main corridors and large numbers of pedestrians are other reasons for the serious traffic jams.

The purpose of this project is to alleviate traffic jams in the center of Calcutta, to ensure smooth traffic flow, and to develop the economy and urban environment by improvement of intersections (3) and the construction of flyovers (6).

The loan is for intersections improvement, equipment, civil works, and related consulting services.

The executing agency is Transport Department, Government of West Bengal. (Address: 18 Rabindra Sarani, Calcutta 700 001, India, TEL:91-033-225-4798, FAX:91-033-245-1483)

#### (8) Kerala Water Supply Project

The State of Kerala, in the south-western part of India, with a land area of 38,863km<sup>2</sup> and a population 29.1 million, has the highest population density (749 people per 1 km<sup>2</sup>) of any Indian state. Its annual income, Rs. 5,065, is much lower than the national average of Rs. 6,234. The diffusion of water supply in Kerala is delayed and water supply system coverage is as low as 54% (74% in urban areas and 46% in rural areas), compared with the national average water supply coverage of 80%. There are many people who cannot access safe drinking water, and water supply level is not adequate even in the areas served. Especially, the average daily water supply in Trivandrum (state capital) is only 90 liters per person, the second-lowest, after Chennai (Madras), which is 70 liters, of all state capitals, and much lower than the appropriate volume for a city of its size (150-200 liters).

The purpose of this project is to increase the supply of safe drinking water and to improve the quality of people's lives in the following five areas: Trivandrum, Calicut, Pattuvum, Cherthala, and Meenad, by construction, expansion, and renovation of water supply facilities.

The loan is for equipment and materials for intakes, raw water mains, treatment plants, clear water transmission mains, and distribution systems, civil works, and related consulting services.

The executing agency is Kerala Water Authority. (Address: Jalabhavan, Trivandrum- 695 033, India, TEL:91-471-62797, FAX:91-471-64903)

#### (9) Eastern Karnataka Afforestation Project

India used to be covered by abundant forests. At the beginning of this century, total forest cover in India was 40%. But because of population growth, diversion of forest land to other uses such as cultivation, cutting and felling for fuel wood, wood pulp, and pasturage, caused severe degradation of the country's forests, with forest cover dropping to 22% by 1950. In order to solve this problem, the Government of India established the National Forest Policy, which has the target of covering one-third of total land area with forest.

In the State of Karnataka, located in the south-eastern part of India, total forest area is 3.83 million ha, and forest cover 20%. This forest cover is slightly lower than the average cover for India (23%).

The state suffers from shrinking of its forests because of indiscriminate cutting and felling for use as fuel and fodder. Especially, in the eastern parts of the state, deforestation is so serious that forest cover has fallen to 9%.

Degradation of forests causes reduced water conservation, erosion, decrease of cultivable land, flooding, desertification, ecological destruction, shrinking of habitable area, increased CO<sub>2</sub>, and global warming. Prevention of deforestation and increase of forest area in India are therefore, pressing needs from the global environment point of view, also.

The purpose of this project is to improve the ecological situation by afforestation with the participation of local people and development of wildlife conservation areas.

The loan is for afforestation activities.

The executing agency is Forests Department, State Government of Karnataka. (Address: MS Building, Dr Ambedkar Veedi, Bangalore, India, TEL:91-80-3341484, FAX:91-80-3362935)

#### (10) Tamil Nadu Afforestation Project

The State of Tamil Nadu, in the south-eastern part of India, suffers from shrinking of its forests as a result of indiscriminate deforestation because of the need for wood in urban areas, increased need for fuel and fodder due to population increase in rural areas. While overall forest cover in India is about 23%, forest cover in this state is as low as 14%, although the state government is promoting afforestation activity, with a target of covering one-third of the state's total land area.

The purpose of this project is to improve the ecological situation by afforestation, such as afforestation in villages near reserved forests, afforestation by scheduled castes, afforestation on public lands and afforestation to increase water conservation with the participation of local people.

The loan is for afforestation activities.

The executing agency is Environment and Forests Department, the State Government of Tamil Nadu. (Address: 259, Anna Salai, Madras - 600 006, India, TEL:91-44-561511, FAX:91-44-450233)

#### (11) Rajghat Canal Irrigation Project

The State of Madhya Pradesh, in the center of India, is an agricultural state where 80% of those in employment are engaged in agriculture. This state is one of the poorest states in India, with an average per capita income ( 4,725 Rupees), much lower than nation's average (6,249 Rupees). Though 80% of total rainfall in the year is concentrated in the monsoon season (June to September), irrigated area is only 19% of total cropping area. Therefore, it is essential to utilize water resources more effectively constructing irrigation facilities.

The purpose of this project is to increase the productivity of agriculture and improve the living standards of farmers in the northern part of the state, where a large percent of the population is poor, by assisting construction of the Rajghat Canal. The Canal will take water from the Rajghat Dam on the Betwa River. Total project irrigated area will be 121,450ha. The loan is for equipment and materials for canal lining and construction, civil works and related consulting services.

The executing agency is Water Resources Department, Government of Madhya Pradesh (Address: Mantralaya, Bhopal - 462 004, India, TEL:91-755-551153, FAX:91-755-551521)