#### Signing of Japanese ODA Loan Agreements with Bangladesh

Provision of yen loans on a large scale for accommodating an increase in demand for electric power and public transportation and for pursuing disaster risk reduction

On June 29, the Japan International Cooperation Agency (JICA) signed Japanese ODA loan agreements with the Government of the People's Republic of Bangladesh to provide loans of up to a total of 173.538 billion yen for assistance for six projects.

Bangladesh is one of the most populous countries in the world (eighth in the world ranking) with a population of 160 million people. It has continued to grow at an average pace of six percent per annum due to the development of sewing and other readymade garment related industries. In recent years, Bangladesh has attracted increasing attention from overseas enterprises including Japanese firms due to competitive labor costs, an abundant work force and a potential market size as an upcoming manufacture base and an investment destination. However, compared with its rapid economic growth and urbanization, the infrastructure in Bangladesh, including the transportation network and the power supply, is still at an early stage. As such, the formulation of a business environment has emerged as an urgent issue. Also, Bangladesh is vulnerable to natural disasters such as cyclones and floods and there is a critical need to take measures against them. JICA will continue to support Bangladesh's effort for further economic growth and overcoming its social vulnerability though six projects agreed to in the foresaid loan agreements.



signing ceremony

The features of the yen loan projects are summarized below.

(1) Building infrastructure for enhancing international competitiveness: Response to the demand for electric power and public transportation

In the transportation sector, JICA will support measures to meet the rapidly increasing traffic demand in South Asia in general and in Dhaka in particular by developing infrastructure for urban transportation and a transportation network for connecting South Asian countries. The Dhaka Mass Rapid Transit Development Project (II) will construct the first urban railroad system in Bangladesh to provide an additional means of urban transportation for the people of Dhaka. This will reduce the demand of automobile and bus transportation and, in consequence, mitigate the chronic traffic congestion and air pollution in Dhaka. The Cross-Border Road Network Improvement Project (Bangladesh) will develop economic corridors (including Asian Highway Route 1) to interconnect major cities in the Asian region by: a) replacing severely damaged existing bridges, b) providing national border facilities and c) constructing a Kalna Bridge which currently is the only point where overland traffic between Dhaka and Kolkata is barred. The Jamuna Railway Bridge Construction Project (E/S) will build a railway bridge as part of the Trans-Asian Railway which connects India to respond to the expected increase in demand for container transportation.

In the electricity sector, JICA will counter the increasing power demand due to economic growth in Bangladesh by both increasing the power supply and mitigating the excess electricity demand. The Matarbari Ultra Super Critical Coal-Fired Power Project (II) will develop a highly efficient electric power source with low coal consumption to meet the rapidly increasing power demand while controlling the emission of greenhouse gases. The Energy Efficiency and Conservation Promotion Financing Project will promote efficient power usage by providing two-step low-interest financing services to expedite the introduction of more energy efficient machines and equipment to local companies and households.

(2) Overcoming vulnerability to natural disasters: The Japanese ODA loan project under the Sendai Framework for Disaster Risk Reduction

Since Bangladesh is ranked as one of the most vulnerable countries to natural disasters, the establishment of disaster risk governance for disaster risk reduction is a critical issue. With the Disaster Risk Management Enhancement Project, based upon the Sendai Framework for Disaster Risk Reduction which was adopted at the March 2015 UN World Conference on Disaster Risk Reduction, Bangladesh's comprehensive disaster risk management capacity will be enhanced by the implementation of a disaster management cycle which consists of three stages: a) the prevention/mitigation of disaster risk through full-scale recovery of infrastructure that has a potential for insufficiency in post-disaster recovery; b) enhancing preparedness for emergency response through the provision of equipment for information communication and rescue operations; and c) recovery/reconstruction through the establishment of a scheme for quick recovery and rapid implementation of the scheme after a disaster occurrence.

#### Reference

#### Terms and Amounts of Loans

Project title	Amount (million yen)	Annual interest rate (%)		Repayment	Grace	
		Project	Consulting services	period (years)	period (years)	Procurement
Dhaka Mass Rapid Transit Development Project (II)	75,571	0.01	0.01	40	10	General untied
Cross-Border Road Network Improvement Project (Bangladesh)	28,698	0.01	0.01	40	10	General untied
Jamuna Railway Bridge Construction Project (E/S)	2,464	-	0.01	40	10	General untied
Matarbari Ultra Super Critical Coal-Fired Power Project (II)	37,821	0.01	0.01	40	10	General untied
Energy Efficiency and Conservation Promotion Financing Project	11,988	0.01	0.01	40	10	General untied
Disaster Risk Management Enhancement Project	16,996	0.01	0.01	40	10	General untied
Total	173,538	-	-	-	-	-

## (1) Dhaka Mass Rapid Transit Development Project (II)

#### (a) Background and Necessity

Dhaka City, the capital of Bangladesh, is one of the most populated cities in the world with its population rising from 6.62 million in 1990 to 14.61 million in 2010. The population is expected to continue to grow and is estimated to reach 20.9 million by 2025. This population growth has led to a skyrocketing of an unmet demand for urban transportation, resulting in chronic traffic congestion and air pollution in Dhaka. Currently, the urban transportation and logistics in the Dhaka Metropolitan Area is largely dependent on road transportation. However, the development of transportation infrastructure and enactment of traffic regulations to control various traffic means, including public buses and auto rickshaws (three-wheeler taxi), are largely insufficient. As such, the traffic conditions in Dhaka have largely deteriorated, inhibiting economic and social activities in Dhaka. As a result, Dhaka is suffering an annual economic loss of 2,600 million US dollars (Source: Dhaka Chamber of Commerce and Industry). In addition, the worsening of traffic pollution, including exhaust gas and traffic noise, is becoming a major issue, resulting in an urgent demand for the introduction of mass rapid transit (MRT) to alleviate the situation.

#### (b) Objective and Summary

The project will alleviate traffic congestion and improve air pollution in Dhaka City by constructing 20.1 kilometers of MRT, thereby contributing to regional economic development and improvement to the urban environment. The anticipated improvement in the flow of goods and transportation of people by the construction of MRT is expected to enhance economic activities in the Dhaka Metropolitan Area, thereby not only improving economic development and poverty reduction in the Dhaka Metropolitan Area but also contributing to the economic development of Bangladesh as a whole. Also, the project will contribute to the reduction of the air pollution and the mitigation of climate change by promoting public transportation.

The loan funds will be allocated to the construction of railway structures and rolling stock depot, to the procurement of equipment, such as rolling stocks and electric and telecommunication systems, and to consulting services.

(c) Executing Agency
Dhaka Mass Transit Company Limited
Address: 71-72 Old Elephant Road, Eskaton Garden, Dhaka 1000
Phone: +880-2-9359828, fax: +880-2-9359828

(d) Planned Implementation Schedule

- (i) Completion of project: July 2021 (when the facilities are put into service)
- (ii) Issuing of letters of invitation for consulting services: Contract concluded

(iii) Tender announcement of next procurement package for international competitive bidding on project construction:

Procurement package title: Construction of Viaducts and Stations for MRT Line-6 Release date: July 2016

## (2) Cross-Border Road Network Improvement Project (Bangladesh)

## (a) Background and Necessity

With a population of 1.7 billion people, South Asia is entering a demographic bonus period, and further economic growth is expected due to the resulting growth in domestic demand. Given these circumstances, each country of the region is proactively promoting structural reforms to liberalize its economy. In contrast, the intra-regional trading volume in this region compared to the total volume including trading with other regions was limited to a mere three percent in 2012. As such, the enhancement of intra-regional connectivity, especially by developing the transportation infrastructure, is considered to be the next challenge. In Bangladesh, the transportation of goods and people is obstructed by several factors, such as the inefficiency of the customs and border control processes for intra-regional trading. Furthermore, the roads and bridges that connect to neighboring countries do not function adequately as an international corridor due to degradation and inadequate development. For example, the arterial road connecting Dhaka and Kolkata is divided by a river, hampering interregional logistics.

# (b) Objective and Summary

The purpose of this project is to improve the intercity transportation and logistics network by developing major international road networks in Bangladesh, thereby contributing to the facilitation of international trade with neighboring countries.

The project funds will be allocated to the construction of the Kalna Bridge, replacement of 16 existing bridges needing rehabilitation and installation of an axle load control station at the border.

(c) Executing Agency
Roads and Highways Department, Ministry of Road Transport and Bridges
Address: Sarak Bhaban, Tejgaon, Dhaka, Bangladesh
Phone: +880-2-8879299, fax: +880-2-8879199

(d) Planned Implementation Schedule

- (i) Completion of project: July 2021 (when the facilities are put into service)
- (ii) Issuing of letters of invitation for consulting services: Already sent
- (iii) Tender announcement of initial procurement package for international competitive bidding on project construction:

Procurement package title: Construction of Kalna Bridge and approach road, and installation of axle load control station

Release date: Second quarter, 2017

## (3) Jamuna Railway Bridge Construction Project (E/S)

## (a) Background and Necessity

Bangladesh Railway has not been able to fully utilize the merits of railroad transportation (fixed-load transportation at fix times in large mass while being safe and energy-efficient) due to several factors. Among them is railway deterioration and the resulting load and speed limitation. Operational delays and accidents are also factors. As the demand for transportation is expected to increase with anticipated economic growth, the development of a proper railway network that can meet the future demand is a challenge. The degradation of the Bangabandhu Bridge (Jamuna Multipurpose Bridge) is particularly an issue. That bridge, which spans the Jamuna River that flows through central Bangladesh, constitutes a key segment of the Trans-Asian Railway connecting Bangladesh to neighboring India. As such, speed limitations and other restrictions set due to the degradation of the bridge have become major hindrances to the Bangladesh railway network.

#### (b) Objective and Summary

The purpose of the project is to improve the capacity and safety of railway transportation by constructing a dedicated railway bridge over the Jamuna River in parallel to the existing Jamuna Multipurpose Bridge, thereby contributing to a more efficient logistics network within the country and with the neighboring countries.

The project funds from the agreed loan agreement will be allocated to consulting services which include detailed design, tender assistance, and environmental and social considerations.

(c) Executing Agency
Bangladesh Railways
Address: Railbhaban, 16 Abdul Gani Road Dhaka-1000, Bangladesh
Phone: +880-2-9561200, +880-2-9565734, fax: +880-2-9563413

## (d) Planned Implementation Schedule

(i) Completion of project: December 2018 (with completion of the loan disbursement)

(ii) Issuing of letters of invitation for consulting services: Already sent

### (4) Matabari Ultra Super Critical Coal-Fired Power Project (II)

#### (a) Background and Necessity

The electricity demand is rising in Bangladesh due to the electrification and industrialization as a result of recent rapid economic growth and is estimated to continue to grow by 10 percent per annum over the next decade. While the current latent demand is estimated to be 9,000 megawatts, the power supply is limited to 8,177 megawatts (as of 2015), or approximately 90 percent of the latent demand. About 60 percent of the power supply in Bangladesh is provided by thermal power plants powered by natural gas but domestic natural gas supplies are nearly depleted and the industrial and household demand for natural gas is rising. As such, a transformation to mixed sources of power is an upcoming challenge. The Government of Bangladesh is targeting the development of thermal power based on imported coal as the next source of power to counter the rising demand for power and to thereby contribute to further economic growth.

#### (b) Objective and Summary

The purpose of the project is to counter the rising demand for power while mitigating greenhouse gas emissions in Bangladesh by constructing an ultra-supercritical coalfired power plant (capable of producing 1,200 megawatts of power in total) in the Matarbari area of Maheshkhali Upazila, which is located in Cox's Bazar District in Chittagong Division, thereby contributing to nationwide economic development and climate change alleviation.

The project funds will be allocated to: a) the construction of power plant, a port for importing coal, transmission lines, and roads to power plants, b) the electrification of neighboring regions, c) the procurement of vehicles, instruments, disaster prevention equipment and other necessary equipment, and d) consulting services.

#### (c) Executing Agencies

Coal Power Generation Company Bangladesh Limited Address: Biddut Bhaban, 8th Floor, 1 Abdul Gani Road, Dhaka-1000 Phone: +880-1755652779, fax: N/A

Power Grid Company of Bangladesh Limited Address: IEB Bhaban 3rd Floor, Ramna, Dhaka-1000 Phone: +880-2-95608839, fax: +880-2-9582382

Roads and Highways Department Address: Sarak Bhaban, Tejgaon Industrial Area, Dhaka Phone: +880-2-8879299, fax: +880-2-8879199

#### (d) Planned Implementation Schedule

- (i) Completion of project: March 2024 (when the facilities are put into service)
- (ii) Contract for consulting services (detailed design work): Contracted
- (iii) Tender announcement of next procurement package for international competitive bidding on project construction:

Procurement package title: Construction of Access Road Release date: October 2016

## (5) Energy Efficiency and Conservation Promotion Financing Project

#### (a) Background and Necessity

The economy of Bangladesh is growing at the average pace of six percent per annum and as a result, the demand for energy is rising sharply, resulting in a large gap between demand and supply. The power supply is limited to approximately 90 percent of the latent demand, and domestic natural gas, which supplies approximately 60 percent of the power supply, is nearing depletion. In addition, the production of domestic natural gas is expected to peak in 2016. While the Government of Bangladesh has been making efforts to develop more diversified energy sources and to enhance power generation, this gap cannot be filled by expanding the supply capacity alone. As such, an approach focused on energy conservation is the next challenge that must be met to restrain the power demand.

## (b) Objective and Summary

The purpose of the project is to promote energy efficiency and conservation measures through facilitating the installation of energy-efficient and energyconserving equipment in Bangladesh by extending two-step concessional loans, thereby stabilizing the balance between supply and demand for electricity and contributing to the mitigation of climate change.

The project funds will be allocated to: a) financing energy conservation-promoting loans by financial institutions affiliated with Bangladesh's Sustainable and Renewable Energy Development Authority (SREDA) to private businesses in the industrial and commercial sectors to introduce energy conservation electronics, and b) consulting services to promote project implementation and for technical support for the foresaid energy conservation-promoting loans.

(c) Executing Agencies
Sustainable and Renewable Energy Development Authority
Address: Bidyut Bhaban,10th Floor, 1, Abdul Gani Road, Dhaka-1000, Bangladesh
Phone: +880-2-9574413, fax: +880-2-9574413

Infrastructure Development Company Limited Address: Bangladesh Secretariat, Dhaka-1000 Phone: +880-2-9574413, fax: +880-2-9102171

Bangladesh Infrastructure Finance Fund Limited Address: UTC Building, Level-16, 8 Panthapath, Kawranbazar, Dhaka-1215, Bangladesh Phone: +880-2-8333238, fax: +880-2-8333238

## (d) Planned Implementation Schedule

(i) Project completion: November 2022 (with completion of the loan disbursement)

(ii) Issuance of letters of invitation for consulting services: July 2016

(iii) Date of initial financing for energy conservation electronics: December 2016

#### (6) Disaster Risk Management Enhancement Project

#### (a) Background and Necessity

Bangladesh is located in the largest delta area in the world, with 90 percent of the land located in low-lying areas where the height is less than 10 meters above sea level, and around 20 percent of the land is inundated in the rainy season. Cyclones occur almost every year, and the total number of deaths due to natural disasters in the past three decades (1985 to 2014) exceeded 170,000 (with a cumulative total of 262 million affected people) and the average annual economic loss in the same period reached 570 million US dollars. This accounts for about 0.9 percent of the GDP, indicating that Bangladesh is one of the world's most vulnerable countries to natural disasters. However, disaster risk management systems are inadequate. For example, so far no inter-ministerial disaster risk reduction plans and guidelines have been created, and inter-ministerial mechanisms for disaster risk management have not been established. During efforts for recovery and reconstruction of infrastructure that has been damaged in a disaster, disaster risk reduction actions are taken independently by government ministries and agencies based on their internal standards without mutual coordination. As a consequence, there are a number of cases where no disaster risk reduction investment is made due to insufficient coordination between ministries (e.g., a budget is allocated for repairing embankment roads, but not for the foundation of the same embankment that needs to be repaired first), and in cases where the communities around the infrastructure are exposed to disaster risks, because rehabilitation works are not made in an appropriate time. As such, there is yet a great deal of room for improving the efficiency and effectiveness of budget appropriation for disaster risk reduction. Regarding information communication at the time of disaster, although the government system of disaster information delivery has been improved and contributed to the increase of the evacuation rate in the recent disasters, the information collection network is still vulnerable especially during a disaster and this has been an obstacle to an appropriate emergency response and earlier recovery. Also, appropriate procedures and rules for early recovery and reconstruction after a disaster need to be formulated.

## (b) Objective and Summery

This project will enhance the comprehensive disaster risk management of the Government of Bangladesh by recovering and rehabilitating infrastructure at high risk for natural disasters, providing equipment for emergency communication and relief, and establishing and implementing a scheme for the quick and effective recovery and rehabilitation, thereby contributing to the sustainable development of Bangladesh with the development of a disaster-resilient society.

The project funds will be allocated to: a) the recovery and reconstruction of embankments, bridges and roads which were insufficiently recovered after past disasters and pose a heightened disaster risk to neighboring communities, b) the provision of wireless communication equipment and field communication vehicles, which strengthen rescue and relief operation during a disaster through the collection of disaster information, c) the recovery and reconstruction of damaged embankments,

bridges, roads and cyclone/flood shelters which might be affected by future disasters, and d) consulting services.

For the infrastructure recovery works, the manual for the design and construction of embankments will be prepared by the technical cooperation project titled the Project for Capacity Development of Management for Sustainable Water Related Infrastructure, started in 2013, and the research results of the science and technology cooperation project titled the Research Project on Disaster Prevention/Mitigation Measures against Floods and Storm Surges, started in 2014 are utilized.

(c) Executing Agencies

The Ministry of Disaster Management and Relief will coordinate the relevant ministries and agencies for disaster risk management.

Bangladesh Water Development Board Address: Wapda Building (2nd Floor), Motijheel C/A, Dhaka-1000 Phone: +880-2-9552194, fax: +880-2-9552194

Local Government Engineering Department Address: LGED Bhaban, Agargaon, Sher-e-Bangla Nagar, Dhaka-1207 Phone: +880-2-9124027, fax: +880-2-9124027

Department of Disaster Management Address: 92-93, Mohakhali Commercial Area, Dhaka-1212 Phone: +880-2-9841581, fax: +880-2-9841581

Fire Service and Civil Defence Address: 38-46 Kazi Alauddin Road, Dhaka-1000 Phone: +880-2-9558880, fax: +880-2-9558880

(d) Planned Implementation Schedule

- (i) Completion of project: June 2021 (when the facilities are put into service)
- (ii) Issuing of letters of invitation for consulting services: September 2016

(iii) Tender announcement of next procurement package for international competitive bidding on project construction:

Procurement package title: Procuring Equipment for Information Communication and Emergency Rescue and Relief

Release date: October 2017