Japanese ODA Loan

Ex-ante Evaluation

1. Name of the Program

Country: The Islamic Republic of Pakistan

Project: Energy Sector Reform Program (II)

Loan Agreement Signed: February 2, 2016

Loan Amount: 5,000 million yen

Borrower: The President of the Government of the Islamic Republic of Pakistan

2. Background to and Necessity of the Program

(1) Current State and Issues of the Energy Sector in Pakistan

The Islamic Republic of Pakistan (Pakistan) is facing power shortages; its supply at the peak hours falls short of the demand by over 20% and companies are not supplied with enough power to operate their factories and businesses. It is estimated that these power shortages reduce Pakistan's GDP by approximately 2% to 3%. The most important factor leading to these serious power shortages in Pakistan is a structural problem in the energy sector. Due to a number of reasons, including inappropriate power tariffs, the low payment collection rate and a high level of power transmission and distribution losses, electric power companies cannot earn sufficient income. As a result, power distribution companies owe debts to power transmission companies; power transmission companies owe debts to power generation companies; and power generation companies owe debts to fuel supply companies. With such a structural problem, power generation companies are unable to obtain sufficient amount of fuel, including petroleum, leading to a low operating rate for power plant, which in turn results in the above power shortages.

In order to hold down the electricity tariffs at low levels, the Pakistani government has provided subsidies, amounting to a total of approximately 1.7 trillion rupees (approximately 17 billion dollars) over the past 11 years until fiscal 2013/14. This has caused considerable financial stress to the government. In addition, there are delays and failures to pay subsidies due to budget shortages, which lead to decreases in power generation companies' income. This in turn results in further decreases in power generated, thereby magnifying the negative effects of power outages on the economy.

(2) Development Policies for the Energy Sector in Pakistan and the Priority of the Program

The Pakistani government has positioned energy sector reform as one of its top priorities. This program, which is in accordance with the National Power Policy 2013 issued by the Pakistani government in July 2013, supports comprehensively the Pakistani government's implementation of a series of reform programs.

(3) Japan and JICA's Policy and Operations in Pakistan's Energy Sector

In Japan's Country Assistance Policies for Pakistan (April 2012), the Japanese government adopted a basic policy of developing a stable, sustainable social system in Pakistan through economic growth and defined improving and developing the economic infrastructure (transportation and energy) as one development goal with respect to improving economic growth, which is an area of high-priority. In the JICA Country Analysis Paper for Pakistan, the energy sector is positioned as one of the top priorities. This program is consistent with such policy and analysis. 19 ODA loan projects have been implemented in the energy sector in Pakistan (total loan amount:

approximately 211.2 billion yen), including Energy Sector Reform Program (I) which is Phase one of this program. With respect to technical support, multiple projects including the followings have been carried out in recent years; the Project for Least Cost Generation and Transmission Expansion Plan (a project for achieving the management of power generation costs at an appropriate level); the dispatch of Expert for Energy Conservation and Efficiency Promotion (an expert for supporting establishment of a system for promoting energy conservation and efficiency); and the Project for Improvement of Training Capacity on Grid System Operation and Maintenance (a project for improving maintenance training skills of power transmission company: Completed in December 2014).

(4) Other Donors' Activity

The World Bank and the Asian Development Bank (ADB) have defined the implementation of reforms as a key priority in the energy sector of Pakistan, and have provided financial support for this program (For Phase one: World Bank $600 million, ADB $400 million/For Phase two: World Bank $500 million, ADB $400 million). These two organizations have also been carrying out projects for improving electricity transmission and distribution network. In addition, the World Bank supports the development of a large-scale hydroelectric power plant while the ADB supports the construction of a coal-fueled power plant in Pakistan.

(5) Necessity of the Program

This program aims to assist Pakistan in its effort to reform the energy sector for improving its financial status and its international balance of payments and is in line with Japan's assistance policy for Pakistan as well as Pakistan's development policy. In light of these points, it is highly necessary and relevant for JICA to support the implementation of this program.

3. Outline of the Program

(1) Objective

The aim of this program is to support the reform of the energy sector, with co-financing by the World Bank and the ADB, as well as to address the sector's structural problem that has led to the deterioration of Pakistan's financial status and international balance of payments for the following purposes: (1) establishing appropriate electricity tariffs and reducing the amount of subsidies; (2) reducing power generation costs; and (3) improving accountability and transparency in the energy sector. The final goals of the program are to ensure a sustainable, reliable power supply as well as to contribute to improving Pakistan's financial status and its international balance of payments.

(2) Project Site/Target Area: All regions of Pakistan

(3) Program Components

This program is implemented based on a five-phase policy matrix composed of the following three pillars and 10 reform goals. General budget support shall be provided based on the progress of the program in Phase two.

Policy area	Reform goals
Policy area A: Establishing Appropriate Electricity Tariffs and Reducing the Amount of Subsidies	(1) Adoption of clear policies on tariffs and subsidies to target low income consumers; ensuring policy implementation through National Electric Power Regulatory Authority rules and regulations; and reduction of discretionary policy decisions and lag in tariff approval and implementation.

Policy area B: Improving Sector Performance and Opening the Market to Private Participation	(2) Loss reduction and improving collection in distribution companies (3) Improving demand side efficiency and strengthening energy conservation (4) Managing generation costs through Least Cost Planning (LCP), and ensuring new-generation entrants following the LCP (5) Increasing gas supply and opening the gas market to direct contracting sales to large gas consumers (6) Commercialization and improving performance of public companies in the power sector (7) Commercial Operation of Central Power Purchasing Agency as an independent agency to buy power on behalf of distribution companies, and implementation of a multiple buyers' market by allowing generators to contract sales directly with large consumers
Policy area C: Improving Accountability and Transparency	(8) Increasing access to information in the energy sector (9) Strengthening National Electric Power Regulatory Authority (10) Monitoring and Surveillance

(4) Total Project Cost: 5,000 million yen

(5) Schedule

Financial support through this program shall cover the payments made in and after July 2014. It was confirmed in October 2015 that all the policy actions in Phase two of this program had been achieved. This program will be completed on the day the disbursement of the loan is completed (scheduled for February 2016).

(6) Program Implementation Structure

1) Borrower: The President of the Government of the Islamic Republic of Pakistan

2) Executing agency: Ministry of Finance, Revenue, Economic Affairs, Statistics and Privatization

3) Implementation Structure: The executing agency, the Ministry of Finance, Revenue, Economic Affairs, Statistics and Privatization, supervises the overall progress of this program. The progress of individual policy actions are monitored using Program Monitoring Units (PMU) installed at the Ministry of Water and Power and the Ministry of Petroleum and Natural Resources.

(7) Environmental and Social Considerations, Poverty Reduction and Social Development

1) Environmental and social considerations

(i) Category: B

(ii) Reason for the categorization: Based on JICA's Guidelines for Environmental and Social Considerations (issued in April 2010), this program is not expected to have serious adverse effects on the environment in light of sector, project and region characteristics.

(iii) Environmental permits: Submission of environmental impact assessment (EIA) reports is not required for this program under Pakistan's legal system.

(iv) Anti-pollution measures: For policy actions related to the Least Cost Generation Development Plan, Strategic Environment Assessment (SEA) is carried out through the Project for Least Cost Generation and

Transmission Expansion Plan. For policy actions that are related to increasing gas production, the SEA will be carried out when the domestic gas development plan is carried out.

(v) Natural environment: For policy actions related to the Least Cost Generation Development Plan, the SEA is carried out through the Project for Least Cost Generation and Transmission Expansion Plan. For policy actions that are related to increasing gas production, the SEA will be carried out when the domestic gas development plan is carried out.

(vi) Social environment: For policy actions related to the Least Cost Generation Development Plan, the SEA is carried out through the Project for Least Cost Generation and Transmission Expansion Plan. For policy actions that are related to increasing gas production, the SEA will be carried out when the domestic gas development plan is carried out.

(vii) Other/Monitoring: Implementation of mitigation measures for individual policy actions is monitored on a quarterly basis.

2) Promotion of poverty reduction: This program includes implementation of a subsidy policy for electricity tariffs that favors low-income families. Therefore, the program will contribute to reducing poverty.

3) Promotion of social development: None in particular

(8) Other Schemes and Collaboration with Other Donors

This program is being co-financed by JICA, the World Bank and the ADB. In order to check the progress of policy actions, joint monitoring is carried out basically on a quarterly basis by the three parties. The combination of this program with technical support projects such as assistance for the formulation of the Least Cost Generation Development Plan and dispatch of experts for promoting energy conservation support the achievement of policy goals.

(9) Other Important Issues: This program will help conserve energy and reduce power transmission and distribution losses and is likely to contribute to mitigating climate change.

4. Targeted Outcomes

(1) Quantitative Effects: Outcomes (operation and effect indicators)

Indicator	Baseline (2013 results)	2017 Target
Energy sector subsidies (ratio to the GDP) (%)	1.8	0.3–0.4
Power transmission and distribution loss rate (%)	21.9	17.9
Power distribution companies' electricity tariffs collection rate (%)	86	94
No. of preparations and notifications of energy consumption efficiency standards (*)	0	5

(*) Standards that define the minimal requirements which targeted appliances shall satisfy in terms of energy efficiency.

(2) Qualitative effects: This program supports implementing a variety of energy sector reforms promoted by the Pakistani government as well as enhancing the government's financial status and stimulating economic activity.

5. External Factors and Risk Control

Smooth implementation of initiatives related to energy sector reforms in the IMF program in Pakistan

6. Lessons Learned from Past Projects and Applying Those Lessons to This Project

(1) Lessons Learned from Similar Projects

The results of the ex post evaluation of the Power Sector Restructuring Program in Sri Lanka revealed that the Electricity Reform Act, which was to break up the Electric Power Agency as a major policy action, could not be enacted due to strong opposition from labor unions, which prevented the implementation of the reform program. Therefore, it is essential to confirm that there is a well-defined reform plan for the energy sector. In the ex post evaluation of the Energy Sector Restructuring Program for Pakistan, which was implemented by the ADB in 2000, it was pointed out that in order to successfully implement the program without any problems, it was important to work in close collaboration with co-financing bodies, the IMF and the World Bank, and to provide technical support for achieving policy actions.

(2) Practice of Lessons Learned for This Program

In this program, the donor policy matrix has been created based on the aforementioned lessons as well as the Pakistani government's National Power Policy 2013 and the policy matrix. In addition, to minimize the risk of stakeholder opposition, the World Bank has dispatched a consultant for communication and public relations fields to Pakistan to advise the government on how to communicate with stakeholders appropriately. JICA works in close collaboration with the World Bank and the ADB, including joint monitoring by the three parties on a quarterly basis. The monitoring is conducted alongside IMF's program reviews, which enables to collect information on matters related to reforms in the energy sector included in the IMF program. In addition, with the aim of promoting the achievement of policy actions, technical support is being provided in collaboration with the World Bank and the ADB.

7. Plans for Future Evaluation

(1) Indicators for Future Evaluation

1) Energy sector subsidies (ratio to the GDP) (%)

2) Power transmission and distribution loss rate (%)

3) Power distribution companies' electricity tariffs collection rate (%)

4) Number of notification of energy efficiency standards

(2) Timing of Next Evaluation: At the completion of policy actions in Phase five (2017)