

Signing of Japanese ODA Loan with the Indonesia: Addressing the rapidly growing power demand

On December 18, the Japan International Cooperation Agency (JICA) signed loan agreements with the Government of the Republic of Indonesia to provide Japanese ODA loans of up to 63.571 billion yen for two projects.

The peak power demand in Indonesia overall was 36,787 megawatts in 2015, but it is growing at an average annual rate of 8.7 percent (3,800 megawatts per year). As the peak power demand is expected to reach 74,536 megawatts by 2024, alleviating the strain on the power supply is a priority.

In 2015, the country's power source structure was composed of 11.4% oil/diesel, 24.7% natural gas, 53.5% coal, 5.7% hydroelectric (including small hydroelectric generation) and 4.2% geothermal. As the domestic consumption of oil and natural gas will rise with economic growth, placing further stress on the power supply, expanding the use of coal—a resource that Indonesia has ample deposits of—and of renewable energies with great potential such as hydroelectric and geothermal power is an important strategy for developing new power sources.

The Java-Sumatra Interconnection Transmission Line Project (II) will construct power transmission lines between power-impooverished Java and Sumatra with its abundance of coal deposits, enabling a power interchange from coal-fired power stations (total output of 3,000 megawatts (MW)) planned for development by independent power producers. The loan will specifically provide assistance for the construction of a total of 558 kilometers in transmission lines, including the first domestic DC submarine transmission line in Indonesia, and a DC/AC converter station. JICA has provided ODA loans for the project twice, in Japanese fiscal year 2008 for engineering services and in 2010 for the Construction of Java-Sumatra Interconnection Transmission Line Project (I).

The Geothermal Development Acceleration Program (Hululais Geothermal Power Plant Project (E/S)) will construct a geothermal power plant, a type of power plant gaining attention for its production of reusable, renewable energy as a stable power source. This new geothermal power plant will contribute to the stability of the power supply with the efficient use of the geothermal resources of Indonesia, which has one of the greatest geothermal energy potentials in the world, and to alleviating climate change by curbing greenhouse gas emissions.

Reference

Terms and Amounts of Loans

Project title	Amount (million yen)	Annual interest rate (%)		Repayment period (years)	Grace period (years)	Procurement
		Project	Consulting services			
(1) Java-Sumatra Interconnection Transmission Line Project (II)	62,914	1.4	-	25	7	General untied
(2) Geothermal Development Acceleration Program (Hululais Geothermal Power Plant Project (E/S))	657	-	0.01	40	10	General untied

Notes: The conditions of the Climate Change ODA Loan apply to project (2).

(1) Java-Sumatra Interconnection Transmission Line Project (II)

(a) Background and Necessity

The Java-Bali power grid, which encompasses the Jakarta metropolitan area, is undergoing considerable growth in power demand (9.8 percent per year), and the peak power demand now exceeds the historical high of 20,000MW, making new power development a priority from the perspective of a stable power supply. Power development by a large-scale independent power producer is being planned for southern Sumatra, which has rich coal deposits. Because Java, which has the greatest power demand, is not yet connected to the power system on Sumatra, transmission lines to interconnect both power systems are needed to create a flexible power supply system.

JICA has provided ODA loans for the project, a total of 40,880 million yen in Japanese fiscal year 2008 for the engineering services and 2010 for the Construction of Java-Sumatra Interconnection Transmission Line Project (I)

(b) Objective and Summary

The project will construct new submarine and overhead transmission lines, as well as a DC/AC power converter station, creating a flexible power supply system that incorporates the Java-Bali and Sumatra power grids, thereby reducing the pressure on the power supply, and contributing to economic development on Java and Sumatra.

The loan funds are to be allocated to the laying of DC submarine and DC/AC overhead power transmission lines, as well as to a DC/AC converter station and transformer equipment.

(c) Executing Agency

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(d) Planned Implementation Schedule

(i) Completion of project: November 2017 (when the facilities are to be put into service)

(ii) Issuing of letters of invitation for consulting services (including basic design): Already contracted

(iii) Tender announcement of initial procurement package for international competitive bidding on project construction: 500 KV Overhead Transmission Line: Already contracted

(4) Geothermal Development Acceleration Program (Hululais Geothermal Power Plant Project (E/S))

(a) Background and Necessity

The Government of Indonesia is addressing the growing power demand and promoting renewable energy to fight climate change. By 2025, the government aims to increase the share of new renewable energy to 17 percent, including 5 percent (9,500MW) of geothermal energy. The power demand on the Sumatra power grid, where the present project will take place, is growing with a momentum greater than on Java, where the Jakarta metropolitan area is located, and because the peak demand is expected to rapidly increase from 5,590 megawatts in 2015 to 9,687 megawatts in 2021, constructing a new power plant that uses Indonesia's ample geothermal resources is a priority to meet the increasing power demand on Sumatra.

(b) Objective and Summary

The project will construct a Hululais geothermal power plant (110MW) in southern Sumatra, improving the stability of the power supply on the Sumatra power grid, and thereby improving the investment environment and contributing to economic development on Sumatra. The project will also promote renewable energy development, and is expected to lower the global environmental burden and alleviate climate change.

The loan funds will be allocated to engineering services such as detailed design and tender assistance.

This project is a part of the Geothermal Development Acceleration Program for which an exchange of notes was signed in August 2011 for the inclusive support of multiple geothermal projects.

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(d) Planned Implementation Schedule

(i) Completion of project: December 2021 (with completion of the loan disbursement)

(ii) Issuing of letter of invitation for consulting services (including detailed design, tender assistance, and supervision):

January 2016

(iii) Tender announcement of initial procurement package for international competitive bidding on project construction: No construction package will be procured under international competitive bidding