

July 3, 2014

## Signing of Japanese ODA Loan Agreement with the Plurinational State of Bolivia for the Laguna Colorada Geothermal Power Plant Construction Project (Phase 1 of First Stage)

The First Japanese ODA Loan in 22 Years for Construction of the First Geothermal Power Plant in South America

On July 2, the Japan International Cooperation Agency (JICA) signed a Japanese ODA loan agreement with the Government of the Plurinational State of Bolivia in La Paz to provide a loan of up to 2.495 billion yen for assistance for the Laguna Colorada Geothermal Power Plant Construction Project (Phase 1 of First Stage). This loan is the first Japanese ODA assistance to Bolivia in 22 years.

This project will alleviate the pressure on and stabilize Bolivia's domestic power through construction of a geothermal power plant in Sol de Mañana located in the southwest area of Potosí Department in southern Bolivia, with transmission lines and substations for connecting to the national grid network by promoting renewable energy development. It will also contribute to mitigating climate change by reducing greenhouse gas emissions. The loan funds are planned to be allocated to production well drilling and consulting services as phase 1 of the project to construct a geothermal power plant capable of producing 50 megawatts of power.



Signing ceremony

As of March 2014, the power generation capacity in Bolivia is 1,469 megawatts, and the demand for power is expected to increase by an average of 7 percent per year. There has been mineral resources development activity particularly in the southwest area of Potosí Department, one of the foremost areas in the world for zinc, lead and silver production, raising the demand for power. Also Salar de Uyuni (Uyuni Salt Lake) in Potosí Department is estimated to have the world's largest lithium reserves. Lithium is an essential material in the production of the lithium ion batteries for mobile electronics, electric cars and other such devices. It is believed that the demand for power will rise further as lithium development there moves into full production. However, electricity is transmitted by long-distance transmission lines to the area since there are no power generating facilities in the area large enough to meet the local demand.

The possibility of geothermal resource development in the southwest region of Potosí Department was recognized in the past, and several past surveys indicate sufficient geothermal resources. The Government of Bolivia planned the Laguna Colorada Geothermal Power Plant Construction Project which aims to utilize this resource and positioned it as a part of new power development planned to produce about 1,696 megawatts of power by 2020. The Government of Japan announced support for the first stage of the plant construction project to provide the initial 50 of the total 100 megawatts planned in a Japan-Bolivia joint statement signed by then-Japanese Prime Minister Naoto Kan and the Bolivian President in December 2010 during President Evo Morales's visit to Japan. This loan finances phase 1.

The geothermal power plant to be constructed in this project will be the first plant not only in Bolivia, but also in South America. Furthermore, this is the world's first geothermal development at an altitude in the 5000-meter range. Therefore, JICA has been providing technical assistance since 2010 for the purpose of testing existing wells, promoting understanding and capacity building for the geothermal power plant, and ensuring the smooth implementation of the project prior to the loan. JICA will continue technical cooperation, such as organizational capacity building, toward successful completion of the project.

### Reference

#### 1. Terms and Amount of Loan

Project title	Amount (million yen)	Annual interest rate (%)		Repayment period (years)	Grace period (years)	Procurement
		Project	Consulting services			
Laguna Colorada Geothermal Power Plant Construction Project (Phase 1 of First Stage)	2,495	0.65	0.01	40	10	General untied

#### 2. Executing Agency

Empresa Nacional de Electricidad

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#### 3. Planned Implementation Schedule

(i) Completion of project: August 2020 – when the facilities are put into service

(ii) Issuing of letters of invitation for consulting services: August 2014

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

Procurement package title: Well Drilling

Release date: July 2015