

# REQUEST OF PROPOSAL FOR EXPRESSION OF INTEREST - EPC

## Introduction

LaGEO S.A. de C.V. (LAGEO), a power generation company of El Salvador, is negotiating a loan with the World Bank (P170089), to increase the generation of electrical energy based on the geothermal resources available in the country. The scope of the project consists of the construction and commissioning of two condensing geothermal plants, one to be installed in the Chinameca geothermal field in eastern El Salvador with a generation capacity of 25 MW and the other to be placed in the San Vicente geothermal field in central El Salvador with a generation capacity of 10 MW.

LAGEO currently has two geothermal plants in operation with a total installed capacity of 204.2 MW, distributed as follows: 95 MW at the Ahuachapán geothermal power plant and 109.2 MW at the Berlin geothermal power plant.

The objective of the request of Expressions of Interest is to understand the market for the required services for construction and commissioning of geothermal power plants to be installed in the Chinameca and San Vicente geothermal fields under an EPC LSTK contract (Engineering, Procurement and Construction) and to establish communication with interested companies, who will subsequently be informed about the tender process and invited to participate in it.

## Project Description

### ***Chinameca Geothermal Field***

The Chinameca geothermal field is located 130 km east of San Salvador, the capital city of El Salvador, in the department of San Miguel, within the Pacayal-Limbo volcanic complex. The towns of Chinameca, Nueva Guadalupe, Jucuapa and Lolotique are located to the north of the geothermal field and to the south the towns of San Jorge and San Rafael Oriente.

The Chinameca geothermal field development project consists in the generation of electrical energy through the installation of a 25 MW simple flash condensation cycle generation unit. Currently, several production and injection wells exist with a potential steam production that exceeds 70% of the flow necessary to operate a plant of the aforementioned power.

### ***San Vicente Geothermal Field***

The San Vicente geothermal field is located 40 km east from San Salvador, in the Department of San Vicente, on the north flank of the Chichontepec volcanic complex at elevations between 800-1140 m.a.s.l. south of the town of Tepetitán.

The scope of the project consists of the construction and commissioning of a 10 MW simple flash condensation cycle geothermal plant. Currently, several production and injection wells exist with a potential steam production that exceeds 60% of the flow necessary to operate a plant of the aforementioned power.

## **General Scope of the Project**

Construction and assembly of both geothermal plants consists of the installation of the turbogenerators and their auxiliary systems, in addition to their respective power substations, for which the following is considered:

- Engineering and detailed design of the plant and the electrical substation (plans for construction, technical specifications of plant equipment and main bill of materials).
- Site preparation and construction of civil works (access road, power plant house, turbo-generator foundations and transformers, cooling tower, control room, electrical room, warehouse, workshop, administrative offices, mitigation works and slopes).
- Supply, assembly and control of plant equipment (turbine, generator, condenser, non-condensable gas extraction system, cooling tower, pumps, among others required for the continuous operation of the plant).
- Supply, assembly and control of substation equipment (current transformers, power transformers, switches, switchgear, surge suppressors, wave traps, among others required for the continuous operation of the plant).
- Commissioning and startup of commercial operation of the power plant and substation.
- Preparation of documentation "As Built", O&M training of the personnel in charge of the plant.

The chemical composition of the fluids from the Chinameca and San Vicente geothermal fields are very similar to the fluids from the Ahuachapán and Berlin geothermal fields. Based on this information, specifications of equipment and materials are required to mitigate the risk of corrosion, however, the interested party must verify said information.

Procurement process is expected to begin in 2021 and commissioning of power plants in 2023. Interested companies can choose to send an Expression of Interest for BOTH services or just ONE of them.

## **Reply Letter Content.**

When submitting your reply letter, you must also attach duly completed with the information requested in the forms attached to this request for expression of interest.

## **Interest Company Overview**

The profile of the company, enterprise or consortium that is sought is that of a company that has abundant experience in EPC-type contracts (including commissioning), with proven experience in the construction and assembly of condensing geothermal plants and electrical substations. Verifiable financial robustness, agile organizational structure and having specialized technical human resources in all the specialties associated with the construction of a condensing plant and electrical substations is also required.

**Additional reference information.**

The responses to this letter of expression by the interested parties can be presented in Spanish or in English. The envelope must be labeled designating "Letter of Expression of Interest for the construction projects of the Chinameca and San Vicente Plant and Substation - Eol" and they must be sent to the following postal address (or sent by email) at the latest for the February 21 of 2021.

**LAGEO, S.A. de C.V.**  
**Final 15 Avenida Sur y Blvd. Sur, Col. Utila, Santa Tecla**  
**La Libertad, El Salvador**  
**Telephones: + 503 2211-6700**  
**e-mail: [compras@lageo.com.sv](mailto:compras@lageo.com.sv)**

Company name :  
Address:  
Contact :

EXPERIENCE IN GEOTHERMAL DEVELOPMENT PROJECTS LAST 10 YEARS (EPC Main Contractor)										
Item	Name of the power plant	Company and country of development	EPC Name	Technology used (dry or flash)	Name of main supplier/s of equipment	Capacity of power plant (MW)	Start of project date	Commissioning date	Contract amount (USD)	Ref # and contact (Name, position, email, mobile)
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Company name:  
Address:  
Contact:

SUPPLIER OF GOODS OR SERVICES FOR LAST 10 YEARS (EPC-Subcontractor)

Item	EPC Name	Company and country of development	Main Contractor Name	Goods or Services Provided	Year	Contract Amount (USD)	Reference contact (Name, position,
1							
2							
3							
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