

Environmental and Social Data Sheet

Overview

Project Name:	<i>LAS PAILAS GEOTHERMAL PROJECT</i>
Project Number:	<i>2013-0037</i>
Country:	<i>Costa Rica</i>
Project Description:	<i>The project consists of the extension of a geothermal power plant in Costa Rica</i>
EIA required:	yes

Project included in Carbon Footprint Exercise¹: yes

(details for projects included are provided in section: “EIB Carbon Footprint Exercise”)

Summary of Environmental and Social Assessment, including key issues and overall conclusion and recommendation

The project consists of an extension of a geothermal power plant that has been operational since 2011. The project provides renewable energy with small environmental and social impacts. The main environmental concern is the vicinity of Rincon de la Vieja national park. The respective impacts have been identified in ESIA and can be minimised and managed. The ESIA study and the experience of the operation of the existing plant show that the park is not significantly negatively affected by the geothermal plant.

If located in the EU, the project would fall under Annex II of EU Directive 85/337 (as amended) and would require the competent authority to decide on the need for an EIA. Costa Rican law requires a full Environmental Impact Assessment. An environmental and social impact assessment (ESIA) has been carried out for Las Pailas power plant in 2005, and the EIA has been updated for this extension in 2012. The EIA and the update identify, describe and analyse the actual and future state of the environment and propose a series of environmental and social actions. The studies comprise public consultation and monitoring plans. The studies have been approved and respective licenses issued by competent authority SETENA.

The project is situated in sparsely populated area and social impacts of the project are limited. Two small hotels in the vicinity serve the ecotourism in the adjacent national park, and effects to their sustainability are mitigated. Nearest village is at 10 km distance from the site. In conclusion the ESIA for this project is compliant with the Bank’s environmental and social policies and the residual negative environmental impacts of the project are minor and therefore considered acceptable.

Environmental and Social Assessment

Environmental Assessment

The ESIA for the Las Pailas power plant (commissioned 2011), and ESIA update for the plant extension (this project) were established by the promoter according to Costa Rican national

¹ Only projects that meet the scope of the Pilot Exercise, as defined in the EIB draft Carbon Footprint Methodologies, are included, provided estimated emissions exceed the methodology thresholds: above 100,000 tons CO₂e/year absolute (gross) or 20,000 tons CO₂e/year relative (net) – both increases and savings.

legislation and international standards, and both stages have included public consultation. Both were approved by SETENA, the Costa Rican national competent authority. The licence for the extension was issued 26.9.2012.

The project area is adjacent to Rincon de la Vieja National Park. Interaction, understanding and communication with the Sistema Nacional de Áreas de Conservación (SINAC) which runs the park, are good and adverse impacts have been kept to a minimum in the past.

Environmental impacts would potentially include pollution from geothermal brine, solid wastes, sound and air emissions, and increase in soil erosion and dust levels, and localised disruption of flora and fauna during construction. The area of the plant and steam field consists of secondary forests and cleared fields and does not include areas of high conservation importance. The brines and the condensed steam will be re-injected into the geothermal underground reservoir, limiting the need for water abstraction. As experience with the Costa Rican geothermal power stations Miravalles and Pailas shows, wildlife and birds are hardly disturbed by the operations. Noise levels will be minimised and H₂S impacts (from geothermal gases) reduced by dispersion. Dispersion models and measurements show that residual impacts are within WHO threshold and acceptability limits. The main residual environmental impacts appear to be land use and visual.

The geothermal resources are mainly situated underneath (1500-2500 m depth) the natural park, and the project is expected to reach these resources by directional (horizontal) deep drilling. This drilling consists of a vertical section outside the park, and then (in the level of the resource) a deep horizontal section to the resource. This concept is not considered to have any negative impacts to the natural park above it. The power plant steamfields are as well acting as buffer zone to the national park, as the activities like wood harvesting, agriculture or livestock grazing are discontinued in steamfields. The environmental management plans of the promoter have included systematic reforestation of the steamfield areas that consist mainly of abandoned grazing pastures.

EIB Carbon Footprint Exercise

Estimated emissions savings are 55 000 tonnes of CO₂ equivalent per year. The project boundaries are the power plant and the steamfield. No emissions or savings outside this boundary have been taken into account.

For the annual accounting purposes of the EIB Carbon Footprint, the project emissions will be prorated according to the EIB lending amount signed in that year, as a proportion of project cost.

Social Assessment,

The project does not cause resettlements, and the social impacts are typical to any large construction site; noise, traffic and increased amount of temporary workers. Two small hotels, originally serving ecotourists, are situated within 2 km of the project areas. The ecotourism business of these hotels is negatively affected by the construction traffic and noise of the project. These operators are expected to benefit from the increased business during the plant construction, and of the improved road infrastructure.

Nearest village (Curubande, 2000 inhabitants) is situated at 10 km distance of the project. The earlier project did substantially increase the economic activity at the region, and this activity is now expected to continue with the present project. The construction of geothermal plant has according to surveys been widely accepted and considered positive.

The promoter ICE has a policy of recruiting a substantial amount of the workforce of the project from the nearby communities. It applies acceptable occupational health and safety standards to its own employees (which constitute 90% of the workforce). Enforcement of similar standards needs to be established as well with respect to other contractors operating

on the project; to this end, ICE will develop a compliance monitor mechanism for sub-contractors, drawing on its own OHS policies and procedures.

To facilitate better management of the environmental, social and health and safety elements of the project, ICE will amalgamate all existing teams under a single unit under an Environmental, Social and Health and Safety Management System – ESHS-MS based on internationally recognized standards, covering both construction and operation phases and being accompanied by respective Manuals. In addition, ICE will create an independent supervision team with a clear mandate, capacity to halt construction works and/or operations if and when needed, detailed procedures and field supervision protocols, and adequate personnel and budget

Public Consultation and Stakeholder Engagement, where required

The public consultation was carried out in the context of updating the ESIA in August 2012.

Other Environmental and Social Aspects

None

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