

ENVIRONMENTAL AND SOCIAL STRATEGY ¹

1. The Project consists on the construction of two substations (Churrúa and Nueva Temuco) and a 200-km long, 220-kV transmission line, which will be located approximately 600 kilometers south of Santiago, in the VIII and IX regions of Chile. (see Figure RE.1)
2. The Concessionaire is seeking financing of approximately US\$47 million for the construction of the Project. Total Project costs are estimated at US\$65 million, and construction is expected to take approximately 15 months. IDB would provide up to US\$16 million, or 25% of Project costs in the form of an A loan and US\$31 million in the form of a B loan.

A. Environmental and Social Compliance

3. The Sponsors have hired a local environmental consultant firm to develop the Environmental Impact Assessment (EIA). This assessment was finalized and introduced to the *Comisión Nacional de Medio Ambiente* (CONAMA) on March 14, 2006. The IEA is currently “under qualification” (www.e-seia.cl). According to Chilean regulations, to provide the official approval of an EIA and the corresponding environmental license for a given project, the CONAMA has an EIA review and consultation period of 180 days after a project is introduced in the *Sistema de Evaluación de Impacto Ambiental*. Thus, in an optimistic scenario, the environmental license should be expected by mid-September, 2006.

B. Environmental and Social Conditions

4. The project will be developed in highly intervened rural areas of central Chile, with cultivated lands occupying over on third of the direct influence area (35.42%), prairies (30.34%), forest plantations (23.88%), natural vegetation (8.82%), and other uses (1.53%). Most common crops include mostly cereals and leguminous corps, and forest plantations involve mostly Pine and Eucalyptus. Other uses include some areas with industrial activity such as an energy distribution company in Churrúa and a small urban area in the *Comuna de Cabrero*.

¹ This Environmental and Social Strategy (ESS) is being made available to the public in accordance with the Bank's Policy on Disclosure of Information. The ESS has been prepared based primarily upon information provided by the project sponsors and does not represent either the Bank's approval of the project or verification of the ESS's completeness or accuracy. The Bank, as part of its due-diligence on the feasibility of the project, will assess the environmental and social aspects. This assessment will be presented in the project Environmental and Social Management Report, prepared by the Bank, and will be made available to public prior to consideration of the project by the Bank's Board of Executive Directors.

5. In the direct influence area of the Project there were no endangered species identified. There were, however, one plant species (*Citronella mucronata*) and two toad species (*Eupsophus roseus* and *Batrachyla taeniata*) with conservation status found in the influenced area, mostly concentrated in the remaining natural vegetation.
6. The Project is located in an area where Mapuche indigenous communities have an important presence, specially in Region IX. The most important communities in the Project direct impact area are Juan Savaria, Mateo Niripil, Juan Manqueche, Colihuinca Tori, José Llancao, Domingo Trangol, and Anselmo Enef Pailahueque. It is important to note, however, that the Project does not impact any site of cultural importance.
7. In the Project direct influence area a total of 9 archeological sites were registered, and other additional 13 archeological sites have been detected on the indirect influence area. None of these sites are considered major archeological site, and finding include essentially superficial ceramic and stone fragments.

C. Environmental, Social and Health and Safety Impacts and Risks

8. The impacts from transmission lines and associated infrastructure are more relevant during the construction phase and more intense within the area of immediate influence of the transmission lines' ROW and substations. The most significant impacts are:
 - i. *ROW easement*: Preliminary information provided by the Sponsor indicates that the 200 kilometers ROW does not affect any sensitive or protected natural habitat as most of the route goes through already developed agricultural lands, characterized by cultivated fields and some forestry concessions. However, an estimated 20-30 kilometers of the line goes through Mapuche territory, one of Chile's most organized indigenous ethnic groups. It is important to note that, even though the actual construction environmental and social impacts on Mapuche territory are expected to be minimal, the agreement on the final compensation will probably be complicated, and will require a good consultation, valuation, and negotiation process. The Mapuche people, after years of experience negotiating a variety of compensation deals with both the Government of Chile and private companies, have developed skills to ensure respect for their territories and their right to self-determination. No resettlement is expected.
 - ii. Other significant construction impacts include (i) potential social impacts associated with construction noise and dust, and with workers' campsites, if any; (ii) impacts associated with new access

roads², (iii) landscape and visual impacts, and (iv) any impacts on archaeological sites encountered in the ROW. Through careful environmental and social planning of the route selection and incorporation of environmental standards into project engineering, the majority and most relevant impacts of these transmission lines can be either avoided or significantly reduced. Of particular relevance for this project will be (v) detailed line routing to avoid as much as possible any relevant environmental and social areas (e.g. archeological sites³), including reducing as much as possible (a) populated areas, (b) Mapuche areas (c) forestry concessions, (d) areas sensible to erosion (e.g. steep slopes) and (e) areas of tourist or landscape value; and (vi) the site selection and design (type and height) of the towers and the two substations, and the engineering design to mitigate noise, electromagnetic fields, and landscape impacts.

9. During operations, the principal impacts are related to limited and selective clearing of vegetation for ROW maintenance, disturbance due to people and equipment access for maintenance purposes, and small quantities of wastes generated in substations. Noise and electromagnetic fields are not expected to be an issue in this Project, which operates on 220kV (must scientific evidence indicates that electromagnetic fields are significant only over 500 kV).
10. Even though this would be their first project in Chile, both Alusa and Cemig seem to have a good track record constructing transmission lines in Brazil. Alusa is one of the largest companies in Brazil constructing transmission lines, with a very extensive and well accredited Environmental, Health and Safety training program for employees, sub-contractors, and collaborators, and monitors its operations following environmental plans based on international standards (ISO 14000). Similarly Cemig has an environmental policy that guides their operations and has corporate environmental and health and safety plans that have been widely applied in Brazil and have also been developed based on international standards.

D. Environmental and Social Strategy for the Due Diligence

11. The Bank, as part of the due diligence process, will analyze the environmental and social aspects of the project for review and approval by the Bank's Committee on Environment and Social Impacts (CESI). The environmental and social due diligence will specifically include the components listed below:
 - i. An assessment of project compliance status with the applicable country (national, provincial, municipal, local) environmental, social, and health and safety regulatory requirements (e.g., laws, regulations, standards, permits, authorizations, applicable

² The company expects to open only 1.53 kilometers of new access roads/trails, as most of the ROW runs parallel or near existing roads.

³ The Sponsors have stated that as of January 2006, they have modified the initial transmission line route to avoid five archeological sites.

international treaties/conventions, etc.), project-specific legal requirements (e.g., concession contract, etc.), and any applicable Bank environmental and social policy.

- ii. An assessment of the quality of CEMIG and Alusa's Environmental, Social and Health and Safety Systems and the adequacy of the resources allocated for their application on this Project.
- iii. An evaluation of the proposed Project to confirm that the Project's direct and indirect environmental and social impacts have been properly identified and evaluated.
- iv. An evaluation to ensure adequate environmental mitigation measures and monitoring, in terms of their completeness, sufficiency of detail, ability to implement, cost, definition of responsibility, schedule, and quality control. Special emphasis will be placed to ensure (a) the avoidance, to extend possible, of impacts on natural vegetation areas, and (b) the implementation of appropriate measures to deal with the plant and animal species identified in the direct influence area that are under conservation status.
- v. An evaluation to ensure adequate social mitigation measures and monitoring, in terms of their completeness, sufficiency of detail, ability to implement, cost, definition of responsibility, schedule, and quality control. Special emphasis will be placed to ensure best industry practices are used in the valuation methodology and compensation mechanisms-to both the Mapuche people and private owners-in the process associated with ROW acquisition.
- vi. An evaluation to ensure adequate health and safety plans and procedures, including their technical adequacy given the potential project-specific health and safety risks, adequate level of training to be performed, and sufficient resources to be made available to ensure adequate implementation.
- vii. An evaluation to confirm adequate contingency plans (i.e., emergency and spill plans), including confirmation that all relevant project-specific environmental risks have been identified, proper procedures have been developed, and sufficient resources will be made available to ensure adequate implementation.
- viii. An evaluation of project-related information disclosure and public consultation activities that have been performed and the proposed future actions to provide adequate ongoing information disclosure and public consultation with the local population, especially with affected Mapuche people.

- ix. An evaluation, and further development as necessary, of project monitoring/supervision procedures to ensure proper implementation of environmental, social, and health and safety actions and requirements.
- x. An evaluation of environmental, social and health and safety terms and conditions in relevant project legal documents (e.g., license contract, construction contract etc.), in terms of sufficiency, potential risks or liabilities, or issues.
- xi. An evaluation of potential existing and future environmental, social, or health and safety financial/credit risks and liabilities associated with the project, the project site, and the Sponsors.