

**BR-L1042 - CELPA INVESTMENT PROGRAM
BRAZIL**

ENVIRONMENTAL AND SOCIAL STRATEGY ⁽¹⁾

I. PROJECT AND COMPANY OVERVIEW

A. CELPA and Investment Program

- 1.1 CELPA was created in 1962 and privatized in July 1998, to distribute electricity in its service area, which comprises the entire State of *Pará* in Brazil's North Region (see **Figure 1**). This state, which is the second largest in the country, presents an area of around 1,247,689 km² and population of almost 6.5 million inhabitants. The Company's activities comprise electricity distribution and generation. Presently, with a workforce of about 2476 employees, the Company provides service to the 143 municipalities in the state, servicing approximately 1,292,149 consumer units, and distributing around 4440 GWh per year. Of the energy provided by CELPA, approximately 37 percent is used by residential consumers, 22 percent commercial, 22 percent industrial, and others (government, municipalities, street lighting, etc.) make up 19 percent.
- 1.2 CELPA has an installed generation capacity of approximately 115 MW and is comprised of: (i) a 30-MW hydroelectric power plant "*Curuá-Una*" located in the municipality of *Santarém*; and (ii) 85-MW thermoelectric power plants (40 in total) located all over the State of *Pará*.
- 1.3 It should be pointed out, however, that following ANEEL's deverticalization regulatory requirements CELPA will have to forgo some of its generating capacity.
- 1.4 The existing CELPA electric energy distribution network comprises: (i) high-voltage distribution lines: 1130 km of 69 kV, 1840 km of 138 kV, and 11 km of 230 kV; (ii) 28,000 km of distribution networks (urban and rural areas included) with tension classes ranging from 13.8-34.5 kV; (iii) 59 substations ranging from 34.5 to 230 kV, and (iv) 3000 km of low-voltage distribution lines (between 127-220 V).
- 1.5 To increase service coverage and quality under its Concession contract, CELPA has developed an Investment Program, part of which (the 2005-2007 component) is under analysis for support by IDB. CELPA's Investment Program will allow the Company to: (i) provide electricity to new customers mostly in rural areas, (ii) allow productivity gains and reduce costs, and (iii) improve quality and reliability of its distribution network system.

⁽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.

1.6 CELPA's Investment Program comprises essentially the following components:

- (a) Rural electrification expansion ("Luz para Todos" Light for All Project): (i) construction of 8,793 kilometers ("km") of distribution networks with voltages between 13.8 and 34.5 kilovolts ("kV"); and (ii) installation of 19,570 rural distribution transformers. The projected results include (i) 106,080 new connections in rural areas throughout the State of *Pará* and (ii) boosting the economy and infrastructure in such rural areas by providing reliable and efficient energy source.
- (b) Urban electrification expansion: investment in the expansion of urban networks including: (i) construction of 1,415 km of low-voltage distribution networks (127/220 V) and (ii) installing 1,400 urban distribution transformers. Projected results include (i) 110,843 new connections in urban areas; (ii) supply of approximately 110,000 electricity poles to low-income families, and (iii) expand the existing distribution network to service additional new industrial and commercial clients.
- (c) Quality improvement of the distribution network: investment in reduction of losses and improvement in the quality of distribution system to include: (i) installation of 160,000 low-voltage electromechanical and digital measurement equipment; (ii) construction of 1,280 km of more efficient low-voltage distribution network to reduce energy losses; and (iii) adjustment and improvement of in-home electric installations and appliances for 160,000 low-income families. Projected results include eliminating power strikes and surges, reduction of technical losses and revenue recovery, as well as improve distribution network quality for all of the State of *Pará's* consumers.

1.7 As indicated in **Section III of this document**, given the nature and characteristics of the main components of the Investment Program, the majority of the projects and actions involved in CELPA's proposed 2005-2007 Investment Program are not likely to generate environmental and social impacts of significant magnitude and importance. Furthermore, any relevant potential negative environmental and social impacts and risks will likely be associated with the first two components, i.e. with the rural and urban electrification expansion projects.

B. CELPA's Environmental, Social, Health and Safety Management

1.8 In terms of environmental, social, health and safety management tools, the Company has: (i) an Environmental Unit and a Health and Safety Unit in its organizational structure, both staffed with full-time specialists to coordinate all respective activities in relation to the Company as well as to the respective competent authorities; and (ii) specific procedures and standards to address environmental and social issues, or health and safety aspects. Furthermore, CELPA has initiated the development of an Environmental Management System within the Company that is compatible with the principles of ISO 14001.

- 1.9 In addition, when new energy distribution lines and substations are involved, CELPA takes into consideration environmental criteria to guide the selection of alignments and sites, and try to avoid, as much as possible, affecting sensitive areas, such as conservation and indigenous areas, as well as housing, commercial and industrial areas (; therefore, by adopting these criteria, the Company prevents many indigenous and resettlement issues. Furthermore, in projects involving sensitive areas, CELPA has a proactive attitude and carries preliminary discussions with environmental, indigenous, cultural heritage authorities, as applicable, to define the criteria and specifications to be adopted in developing the necessary studies.
- 1.10 The Company has as well environmental, social, health and safety procedures that apply to its contractors, including some to assess, monitor and follow-up their compliance status (*e.g.*, through periodic audits).
- 1.11 CELPA has also in its structure a Social Communication Unit that helps the Company promote disclosure of relevant information and organize public consultations and hearings. The Company adopts a proactive attitude in terms of providing prior information about upcoming projects to potentially affected communities, and had performed in the past public consultations and hearings independent of regulatory requirements.
- 1.12 Whenever necessary the Company hires consultants and specialists to perform specific studies in relation to environmental and social issues (*e.g.*, anthropologist to properly address indigenous communities concerns, archeologists, biologists, etc.), or establishes agreements with state universities and research institutes to carry out specialized studies, perform environmental and social monitoring activities, or help develop and implement environmental education actions internally or externally within the community.
- 1.13 It should also be pointed out that CELPA adopts an Ethics Code and specific hiring standards to prevent discriminatory labor practices and foster integration of women, young adults and handicapped workers.

II. ENVIRONMENTAL AND SOCIAL COMPLIANCE STATUS

- 2.1 According to Brazilian federal environmental laws, the presentation of an Environmental Impact Study (“EIS”) within a formal Environmental Impact Assessment (“EIA”) process is mandatory in licensing new transmission lines carrying electricity above 230 kV, which is not the case for the CELPA’s projects included in the Investment Program under consideration by IDB (voltages up to 34.5 kV only). Nevertheless, in some particular instances, for example when conservation or other sensitive areas may be at risk of being adversely affected, the environmental licensing authority may request submission of an EIS, even in cases where transmission lines carrying electricity at less than 230 kV are involved.
- 2.2 The principal environmental licensing authority in the State of *Pará* is the State Department of Science, Technology and Environment (*Secretaria de Ciência, Tecnologia e Meio Ambiente* – SECTAM). Projects that are not usually associated with significant

environmental impacts, such as electric distribution lines involving voltages lower than 230 kV do not require an environmental license and need only be registered at SECTAM, and obtain the necessary vegetation clearing permit, if this is the case. An EIS will be required when the line is supposed to involve voltage above 230 kV, or interfere with indigenous areas, conservation areas, or other areas of environmental interest. Three types of environmental licenses are foreseen at the state level: (i) Preliminary License (at site location analysis stage); (ii) Installation License (to initiate construction); (iii) Operating License (authorizing operation of the facility). The environmental licensing system in *Pará* establishes the need for public consultation and hearings in some instances.

- 2.3 According to the information available, CELPA is currently in compliance with the applicable environmental legislation. The works involved in the Investment Program are presently at different stages of their planning and implementation but it is very likely that most of the projects involved will only need to be registered at SECTAM and require a vegetation-clearing permit. If any of the projects require a formal and more extensive environmental license, the Company will adopt its established environmental licensing procedures and perform the necessary environmental impact assessment studies required by the authorities, as have been done in the past to obtain some of the required licenses.
- 2.4 Relative to licensing of existing facilities and operations, following the privatization CELPA established with the competent authorities an agreement involving requirements and specific conditions to be met by the Company. Presently, according to the available information, all requirements and conditions pertaining to this agreement have been met.

III. POTENTIAL IMPACTS, RISKS AND CONTROL MEASURES

- 3.1. The majority of the works included in CELPA's Investment Program will involve the installation of new aerial (no underground cables are foreseen) electric energy distribution cables and other associated equipment in areas of consolidated urban and suburban use, in great part, through established rights-of-way, existing corridors, or areas with substantially completed infrastructure, or the installation of low- and medium-voltage distribution lines in rural areas. Therefore, significant environmental and social impacts are not anticipated as the new and upgraded infrastructure does not involve large construction works and is not expected to require resettlement, or produce significant adverse impacts on indigenous communities or natural habitats. Furthermore, the Company adopts control measures during planning and design phases to prevent significant interference with any sensitive area. Nevertheless, if the studies to be carried out indicate the potential for significant impacts on sensitive communities and areas, CELPA will integrate the appropriate control measures proposed in the studies and/or recommended by competent authorities.
- 3.2 Potential health and safety risks will be associated with possible accidents involving worker contact with energized lines and fall from high places during aerial cable installation. These impacts and risks can be prevented and/or mitigated by adopting basic precautions and standard procedures, as established in Company's health and safety procedures and plans.

- 3.3 Relative to the new medium-voltage distribution lines, CELPA takes also into consideration environmental criteria to guide the selection of alignments and sites, and try to avoid, as much as possible, affecting sensitive areas, such as conservation and indigenous areas, as well as housing, commercial and industrial areas, even though this may implicate in longer line segments to circumvent sensitive areas. The State of *Pará* presents various indigenous and conservation areas; therefore, by adopting these criteria, the Company prevents many indigenous and resettlement issues. In projects that may interfere with sensitive areas, CELPA has a proactive attitude and carries preliminary discussions with environmental, indigenous, cultural heritage authorities, as applicable, to define the criteria and specifications to be adopted in developing the necessary studies. Furthermore, whenever necessary the Company hires consultants and specialists to perform specific studies in relation to environmental and social issues (e.g., anthropologist to properly address indigenous communities concerns, archeologists, biologists, etc.)
- 3.4 In some instances it may not be possible to avoid interferences and the medium-voltage distribution line may have to pass through rural areas of agricultural use; in these cases, considering the relatively narrow width of the right-of-way (between 5 and 15 m), typically an agreement is established with the property owner, and if cultured land is affected, an indemnity is provided to compensate for the restricted use of the affected narrow band of land corresponding to the right-of-way, or in other cases where agriculture patches presenting some types of permanent culture may be affected, the Company may opt for not suppressing the vegetation at that particular segment to preserve as much as possible the cultured land. IDB participation will ensure that, if required, the compensation measures will be in compliance with applicable Bank policies.
- 3.5 Other relevant potential negative impacts associated with the construction of new medium-voltage distribution lines (including construction of temporary and permanent access roads) are: (i) vegetation loss and soil erosion; (ii) disturbance to fauna habitats; (iii) dust and noise emissions; (iv) increased concentration of suspended solids in nearby body of waters; and (v) visual impacts, particularly on urban areas of historic importance. Some of these impacts usually occur on a limited scale, are temporary and can be mitigated with the standard construction environmental management procedures established by the Company and/or by environmental authorities. Others, like installing underground cables and equipment can mitigate visual impacts on historic sites, and can be adopted if applicable.
- 3.6 Concerning possible negative environmental and social impacts associated with work camps, sites and presence of workers, no significant impacts are expected as the works will individually be of limited magnitude, dispersed in time and space throughout the state, will not require concentration of workers, and crews will be usually composed of a limited number of workers.
- 3.7 No significant negative environmental, social, health and safety impacts and risks are expected in association with maintenance and operation of the facilities involved in the Investment Program. CELPA no longer acquires equipment that contains PCBs and

adopts specific procedures for adequate removal and disposal of solid wastes generated at their facilities and buildings (e.g., used batteries, fluorescent lights, etc.). To reduce risks of accidents with power lines, the Company conducts periodical trimming of trees and suppression of vegetation in the right-of-way, and these activities are performed adopting appropriate procedures established by the Company, applicable also to contractors, and taking into account the safeguards included in the authorizations granted by the environmental authorities. Another possibility, particular in urban areas, is the risk of electric shock to members of the community by inadvertent or accidental contacts with the energized network (by negligence or misinformation about the risk); to prevent these situations the Company carries out various educational and safety awareness programs throughout the served communities.

- 3.8 Another type of potential negative environmental impact associated with electric energy networks located in rural areas is the possibility of electrocution of animals, particularly birds that enter in contact with the energized lines. CELPA has experience in addressing this issue and develops and implements specific measures when the situation warrants.
- 3.9 Relative to possible health effects associated with electromagnetic fields generated at medium- and high-voltage distribution lines, the current body of evidence from the international scientific community suggests that distribution lines operating at voltages such as those in the case of CELPA (up to 34.5 kV) do not present a human health hazard. Nevertheless, CELPA adopts the technical standards and regulations established by the Regulatory Authority (National Electric Energy Agency, or *Agência Nacional de Energia Elétrica* – ANEEL), which are consistent with the international standards and based on precautionary principles.
- 3.10 In regard to possible environmental, social, health and safety liabilities associated with CELPA's existing facilities and operations, it should be pointed out that the Company concluded deactivation of all equipment containing PCBs, and sent them for proper incineration at a licensed facility run by specialized company. The Company performed also a diagnostic of existing facilities, particularly the thermoelectric generating units, to identify situations that could potentially represent significant environmental liability, and is presently addressing the main issues raised. Possible environmental and social liabilities need to be evaluated in association with the hydroelectric power plant and with possible illegal settlement (encroachment) within the right-of-way of existing distribution lines. In addition, evaluation of possible existing environmental, social, and health and safety liabilities at Company level may also be required to fully assess associated risks.

IV. POSITIVE IMPACTS AND OTHER ISSUES

- 4.1 Electric energy is fundamental for economic and social development, and human well-being. Distribution companies, such as CELPA, provide energy to residential areas, community services (e.g., hospitals, schools, sports facilities, community centers), as well as to commercial and industrial establishments. Therefore, the projects included in the Investment Program have the potential to benefit several areas and communities throughout the State of *Pará*, by providing electricity to areas that did not have it before, and increasing service quality and reliability throughout the system. These improvements

may induce significant beneficial impacts on economic and social conditions of the served communities.

- 4.2 The principal positive environmental and social impacts associated with CELPA's Investment Program include: (i) increased availability of reliable energy in urban and rural areas; (ii) stimulation of economic activities in the newly served areas; and (iii) enhanced environmental and health and safety practices; (iv) decreased safety risks related to inappropriate electricity connections.
- 4.3 It should also be pointed out that CELPA develops several initiatives and promotes various programs to improve relationship with customers and integration in the served communities. The Company established and implements the following most relevant programs and actions: (i) a Social Responsibility Program for the Company; (ii) Environmental Education Programs for communities; (iii) Environmental research and monitoring programs involving university and research institutes; (iv) Energy Efficiency Program to improve energy use and reduce waste; and (v) several social partnerships with local community and state institutions.

V. ENVIRONMENTAL AND SOCIAL STRATEGY

- 5.1 As the Investment Program involves various projects, presenting distinct magnitude and at different stages of development, IDB will require the Company to present an Environmental Analysis Report covering all projects included in the Investment Program as well as relevant existing facilities, to address potential impacts, risks and any significant pending liability. This report will be disclosed to the public in accordance with IDB's operational policy OP-102 – Disclosure of Information.
- 5.2 The Project Team, with the assistance of an independent environmental and social consultant, will perform an environmental and social due diligence in order to confirm that all Project impacts and risks have been, or will be properly and adequately evaluated and mitigated. The environmental and social due diligence will specifically address the following aspects:
 - (a) An assessment of Project and Company existing operations and facilities compliance status with national, state and municipal environmental, social, health, safety and labor regulatory requirements (*e.g.*, laws, regulations, standards, permits, authorizations, applicable international treaties/conventions, etc.), project specific legal requirements, and any applicable IDB environmental and social policy or guideline.
 - (b) An evaluation of the available environmental impact assessment reports related to the Investment Program projects, to assess the appropriateness of the identification and evaluation of relevant direct and indirect environmental and social impacts and risks, and the adequacy of the definition of mitigation and monitoring measures, in terms of their completeness, sufficiency of detail, implementation, cost, definition of responsibility, schedule, and quality control.

- (c) 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.
- (d) An evaluation to assess if the proposed Project direct and indirect environmental, social, health and safety potential impacts and risks have been properly identified and evaluated, including those referred to in **Section III of this document**, and if adequate control measures have been introduced.
- (e) An evaluation of the Company's Environmental, Health and Safety Management System, including plans (Environmental and Social Management Plan, Health and Safety Plan, Contingency Plan, etc.) and procedures, to assess their adequacy including in terms of responsibilities, training, auditing, reporting, and resources to be made available to ensure adequate implementation, and specifically all the system components necessary to ensure that projects and works which will be implemented will not generate significant negative impacts.
- (f) An evaluation of potential existing and future environmental, social, health, safety and labor risks and liabilities associated with Project sites and Company's existing facilities and operations.
- (g) An evaluation to confirm that an acceptable Action Plan is in place, as necessary, in order to correct or mitigate the existing environmental, social, health and safety non-compliances and/or liabilities associated with the Company's existing facilities and operations.

5.3 Furthermore, the Bank, as part of the due diligence process, will analyze the environmental and social aspects of the Project and establish the appropriate environmental, social, health, safety, and labor requirements in the Loan Proposal for review and approval by the Bank's Committee on Environment and Social Impacts (CESI).

FIGURE 1

PROJECT LOCATION MAP

State of Pará
BRAZIL

