

BR-L1070 - CELTINS INVESTMENT AND REFINANCING PROGRAM BRAZIL

ENVIRONMENTAL AND SOCIAL STRATEGY⁽¹⁾

I. PROJECT AND COMPANY OVERVIEW

A. *Celtins and Investment and Refinancing Program*

- 1.1 Celtins was created in March 1989 and was privatized in September of that same year through a public bidding process won by *Grupo Rede* (“Rede Group”). Celtins is the electricity distribution concessionaire for the State of *Tocantins* (the “Concession Area”) (see **Figure 1**), located in Brazil’s North Region. Celtins operates under a 30-year concession signed in June 1999 and which may be extended, upon termination, for another 20-years. As of 2005, with a workforce of about 700 employees, the Company provided service to 139 municipalities in the state, servicing approximately 316,664 consumer units, and distributing around 932 GWh per year. Of the energy provided by Celtins, approximately 37 percent is used by residential consumers, 21 percent commercial, 12 percent industrial, and others (government, municipalities, street lighting, etc.) make up 30 percent.
- 1.2 As of June 2005, Celtins had an installed generation capacity of approximately 48,74 megawatts (“MW”) comprised of 8 hydroelectric power plants. In addition, its distribution network comprised: (i) 32,902-km of distribution networks (urban and rural areas included); (ii) 2,220-km of 138 and 69 kV voltage lines; (iii) 83 electric substations, and (iv) 15,602 transformers. In November 2005, in compliance with the new energy sector regulatory framework requiring the unbundling (deverticalization) of other activities and/or assets, Celtins spun off all its generation assets and is now a Company devoted exclusively to electric energy distribution.
- 1.3 Celtins is seeking financing for its 2006-2010 Investment and Refinancing Program. The Investment and Refinancing Program (the “Project”) aims to expand and modernize Celtins’ electrical network allowing the company to: (i) provide electricity to new customers in urban and rural areas; and (ii) improve the quality and reliability of its electric network.
- 1.4 Celtins’ Investment and Refinancing Program comprises the following components:
 - (a) Distribution network expansion and upgrade: (i) construction of 585,5 kilometers (“km”) of distribution networks of 138-kilovolts (“kV”) voltage; (ii) construction and upgrade of substations between 13.8-kV and 138-kV; (iii) upgrade of 6,589-km

⁽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.

of distribution networks between 13.8-kV and 34.5-kV voltage; (iv) replacement of outdated material such as electricity poles; (v) installation of 103 reconnectors; (vi) installation of 138-kV voltage regulators; (vii) installation/adjustment of 291 distribution transformers, and (viii) installation of 71 capacitors. Projected results include (i) improving reliability and efficiency of electricity supply to Celtins' consumers, reducing power spikes, surges and voltage quality problems and increasing distribution coverage to several regions in the State of *Tocantins*.

- (b) Rural electrification expansion ("Luz Para Todos" Project): (i) construction of 17,643-km of distribution networks at 13.8/34.5-kV voltage; and (ii) installation of 25,631 rural distribution transformers. Projected results include (i) 40,000 new connections in rural areas; and (ii) substitution of diesel thermal plants currently operating in rural industries for clean electrical energy.
- (c) Urban networks expansion: (i) construction of 431-km of distribution networks at 220/380 V, (ii) construction of 447-km of distribution networks at 13.8 kV e 34.5 kV, and (iii) installation of 308 urban distribution transformers. Projected results include (i) 11,434 new connections in urban areas; and (ii) expand the existing distribution network to service additional new industrial and commercial clients.
- (d) Distribution system quality improvement: investment in reduction of losses and improvement in the quality of distribution system to include: (i) installation of digital sets of low and high-voltage measuring devices. Projected results include reduction of technical losses and revenue recovery.

- 1.5 However, as indicated in **Section III of this document**, given the nature and characteristics of the main components of the Investment and Refinancing Program, the majority of the projects and actions involved in Celtins' proposed Investment and Refinancing 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. Celtins' Environmental, Social, Health and Safety Management

- 1.6 It should be pointed out that Celtins is integrated in the *Grupo Rede*, which is very well organized and professionally managed, have specific environmental and health and safety policies, procedures and standards at corporate level and is presently undergoing a process of enhancing the environmental and social, and health and safety management systems of two of their other companies similar to Celtins (Celpa and Cemat), in operations supported, assisted and supervised by IDB. The knowledge and experience acquired in these two other operations will be used to the benefit of the Celtins operation, including in the improvement of management procedures and systems, if necessary.
- 1.7 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) some specific procedures and standards to address environmental and social issues, or health and safety aspects.

- 1.8 In addition, when new energy distribution lines and substations are involved, Celtins 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, Celtins 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.
- 1.9 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).
- 1.10 Celtins 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.
- 1.11 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.
- 1.12 It should also be pointed out that Celtins adopts an ethical behavior 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 Celtins’ projects included in the Investment and Refinancing Program under consideration by IDB (voltages up to only 138 kV). Nevertheless, in some particular instances, for example when conservation or other sensitive areas may be at risk of being adversely and significantly affected, the environmental licensing authority

may request submission of an EIS, even in those cases where transmission lines carrying electricity at less than 230 kV are involved.

- 2.2 The principal environmental licensing authority in the State of *Tocantins* is the Nature Institute of Tocantins (*Instituto Natureza do Tocantins* – NATURATINS). The state legislation foresees three sequential environmental licenses: (i) a Preliminary License (“PL”) at planning stage; (ii) an Installation License (“IL”) to initiate construction; and (iii) an Operating License (“OL”) authorizing operation of the facility. Projects that are not usually associated with significant environmental impacts and are therefore considered as of low impact potential, such as electric distribution lines involving voltages lower than 230 kV, as is the case for projects integrated in Celtins’ Investment and Refinancing Program, are allowed to go through a Simplified License (“SL”) procedure where the three previously mentioned licenses are granted simultaneously, and which requires the presentation of a simplified environmental document (called Environmental Project). Projects that involve removal of vegetation need to obtain prior authorization through a vegetation-clearing permit.
- 2.3 According to the information available, Celtins is currently in compliance with the applicable environmental legislation. The works involved in the Investment and Refinancing 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 go through the Simplified License procedure and require a vegetation-clearing permit. In the event that any of the projects may require a formal and more extensive environmental license process, 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.

III. POTENTIAL IMPACTS, RISKS AND CONTROL MEASURES

- 3.1 The majority of the works included in Celtins’ Investment and Refinancing Program will involve the installation of new aerial 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, medium and high-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, Celtins will integrate the appropriate control measures proposed in the studies and/or recommended by competent authorities.
- 3.2 Relative to the new medium to high-voltage distribution lines that may involve new corridors, Celtins 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. By adopting these criteria, the Company prevents many indigenous and resettlement issues. In projects that may interfere with sensitive areas, Celtins 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 and control measures. 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.)

- 3.3 Considering the procedures adopted by the Company to avoid or minimize environmental and social impacts and risks and the nature of the works involved, it is possible to anticipate that the Project will not: (i) convert or degrade critical natural habitats or damage critical cultural sites; (ii) significantly convert or degrade natural habitats; (iii) raise any significantly negative indigenous issues; (iv) generate resettlement issues; or (v) have associated any transboundary issue. Also, there is no risk related to associated facilities.
- 3.4 The main potential negative impacts during construction will be related to dust and noise emissions during excavation for installation of poles and towers, and traffic disruption or reduced access to local residents, along some segments of lines developing in urbanized areas. Disruption of electric energy services can also be a possibility, in some cases involving cable and equipment installation. However, these impacts usually occur on a limited scale, are temporary, and can be mitigated with standard construction environmental management procedures and by implementing the specific procedures the Company has to control impacts and risks during construction activities. Potential health and safety risks will be associated with possible accidents involving worker contact with energized lines, fall from high places during aerial cable installation, or minor accidents involving falls and cave-ins during excavation. 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.
- 3.5 In some instances it may not be possible to avoid interferences and the medium to high-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 20 and 30 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.

- 3.6 Other relevant potential negative impacts associated with the construction of new medium to high-voltage distribution lines 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. It should also be noted that some line segments in rural areas might need the creation of access roads. However, some of the accesses used during construction will only be temporary, as they are not needed for maintenance purposes (in many instances the access for maintenance can be performed through the right-of-way). When sensitive areas are involved the Company adopts procedures to minimize interference, such as reduction of the land to be cleared and prevention of worker disturbance to neighboring areas.
- 3.7 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.
- 3.8 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 and Refinancing Program. Celtins 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.
- 3.9 Another type of potential negative environmental impact associated with electric energy networks located in rural areas is the possibility of electrocution of animals. However, there is no record of this type of occurrence involving Celtins' lines.
- 3.10 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 Celtins (up to 138 kV) do not present a human health hazard. Nevertheless, Celtins 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.

- 3.11 In regard to possible environmental, social, health and safety liabilities associated with Celtins' existing facilities and operations, it should be pointed out that the Company does not operate hydro or thermal power plants, and concluded deactivation of all equipment containing PCBs and does not acquire anymore this type of equipment. Nevertheless, possible environmental and social liabilities need to be evaluated in association with existing substations, warehouses and mechanical shops, and in relation to possible illegal settlement (encroachment) within the right-of-way of existing medium to high-voltage distribution lines in densely urbanized areas.

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 Celtins, 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 and Refinancing Program have the potential to benefit several areas and communities throughout the State of *Tocantins*, 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 Celtins' Investment and Refinancing 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 Celtins 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 Taking into account the aspects discussed in **Section III** and the requirements outlined in Policy Directive B.3 of the OP-703 – Environment and Safeguards Compliance Policy, the Project Team proposes that the Project be classified as a Category B operation. It should also be pointed out that the Team will collaborate with the Project Company and

participating lending institutions to adopt a single environmental assessment process and unified documentation, consultation and disclosure requirements consistent with the requirements of the different lending institutions.

- 5.2 As the Investment and Refinancing 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 and Refinancing 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.
- 5.3 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 and Refinancing 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 annex**, 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.
- 5.4 As part of the ESDD process, the Project Team will: (i) analyze the environmental and social aspects of the Project and prepare an Environmental and Social Management Report ("ESMR") to be reviewed by the Committee on Environment and Social Impact (CESI); and (ii) establish the appropriate environmental, social, health, safety, and labor requirements in the Loan Proposal.

FIGURE 1

PROJECT LOCATION MAP

State of Tocantins
BRAZIL