

## Public Disclosure

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### A. Investment Summary

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| <b>Publication Date:</b>             | September 9th, 2018  |
| <b>Project Name:</b>                 | Second SIEPAC Circuit Investment Program                           |
| <b>Project Number:</b>               | 12086-01   |
| <b>Expected Board Approval Date:</b> | October 30, 2018   |
| <b>Borrower:</b>                     | Empresa Propietaria de la Red S.A                                  |
| <b>Sponsors:</b> <i>(if any)</i>     |  |
| <b>Sector:</b>                       | Energy / Transmission and Distribution                             |
| <b>Financing Requested</b>           | Approximately US\$225 million                                      |
| <b>Project Location:</b>             | Panama, Costa Rica, Nicaragua, Honduras, El Salvador and Guatemala |

#### **Objective of Project and IDB Invest's Participation:**

The project consists of expanding the electricity transmission capacity of the Central American Electrical Interconnection System [Sistema de Interconexión Eléctrica de los Países de América Central] (SIEPAC) through the installation of additional lines (second circuit), expansion of some substations, and reinforcement of some national interconnection systems. The SIEPAC is a high voltage line interconnecting the electrical systems of Panama, Costa Rica, Nicaragua, Honduras, El Salvador and Guatemala, allowing them to exchange electricity and enabling more efficient dispatch from the countries' generation systems.

The Borrower has estimated the total cost of these investments at US\$370 million. IDB Invest will participate in the financing of these investments through a loan of up to US\$225 million with a term of up to 25 years. Of this amount, US\$150 million would be funded by the IDB Group and the remainder with funds administrated by IDB Invest. The main objective of the financing will be to support the Borrower in making these investments and allowing repayment over a very long period, reducing the impact on the final cost appearing on end users' electricity bills.

### B. Review of Environmental, Social and Labor Issues

#### **1. General Information on the Scope of IDB Invest's Environmental and Social Review**

This report is based on information provided by Empresa Propietaria de la Red S.A (EPR) and the respective Environmental and Social Impact Assessments (ESIAs) for each of the six countries that are part of the SIEPAC; the Project Document; the Environmental Management Plan (EMP) for Construction and Operation; the SIEPAC Manual of Good Environmental Practices (Honduras–Techint Section); information provided by EPR's geographic data system; as well as the environmental and social due diligence visit conducted between May 21 and May 25, 2018, which included meetings with the EPR team, a ride along the line in section 16 (Costa Rica), focusing on analysis of critical points such as river crossings, natural woodlands and physical installations and

specific visits to some rural settlements located along the route and affected by the right of way (easement) strip.

## **2. Environmental and Social Classification and Rationale**

In accordance with the IDB Invest Environmental and Social Sustainability Policy, the project has been classified as category “B,” because it will produce moderate-scale effects that can be avoided or managed by following known performance standards, guidelines and construction and management criteria for projects of this kind. The principal environmental, social and labor effects related to the project include: impact on the biological environment and biodiversity, resource efficiency and pollution prevention, labor and working conditions, community health and safety. Given the nature of the financing (installation of the second circuit on pre-existing infrastructure and construction of substations), no significant social and environmental risks and/or impacts are anticipated in the second phase of the project.

The Project will finance the installation of the second circuit on the existing towers in addition to supporting investments in national reinforcements (to be defined). These actions, which will also have impacts of moderate effects, will be executed in accordance with the same environmental and social protocol used by EPR.

## **3. Environmental and Social Context**

The SIEPAC consists of a 230 kV transmission line nearly 1,793 kilometers long. It has 28 access bays and 15 substations across the six countries. The power line’s right of way strip (30 meters wide) covers an area of about 540 Km<sup>2</sup>, and close to 180 Km<sup>2</sup> of this area include sizeable plant cover (i.e. high shrubs and/or trees, plantings, etc. five or more meters tall), where close to 90 Km<sup>2</sup> require maintenance pruning. The rest of the easement area consists of pastures, water courses, urban/periurban areas, small crops, etc. The first phase is already installed and operating. The financing will be used for construction of the line’s second phase (second circuit), which will make it possible to boost electrical transmission capacity through the interconnected system.

In order to evaluate the environmental and social risks and impacts fully, a 4 km wide study corridor was established along the entire line, even though the right of way already established is 30 meters wide all along the route.

The SIEPAC includes a total of 4,622 towers, placed at intervals of between 350 and 400 meters each. Their path covers primarily rural areas, avoids population centers and has sought to avoid or minimize the installation of towers on agricultural land or in/near forests that are important or have conservation value and/or existing protected areas. The line does not intersect indigenous territories nor sites considered to have high archeological, paleontological or cultural value. Most of the tower pads can be accessed using already existing roads and paths.

## **4. Environmental Risks and Impacts and Mitigation Measures**

### **4.1 Assessment and Management of Environmental and Social Risks and Impacts**

#### **a. Environmental and Social Management System**

EPR has some elements of an integrated environmental management system, including:

- Environmental and Social Management and Risks Reduction Plan – SIEPAC Operational Phase;

- Code of Good Environmental Practices of the Central American Commission on Environment and Development [Comisión Centroamericana de Ambiente y Desarrollo] (CCAD);
- Manual of Good Environmental Practices for Construction - SIEPAC (Honduras Section – Lot 1– Contract EPR/CCL -01-L/1 - Techint);
- Specific requirements of the environmental licensing entities of each country and the SIEPAC’s backers (e.g., Inter-American Development Bank – IDB, the Central American Bank for Economic Integration-CABEI);
- Environmental monitoring instruments (Early Warning System, Environmental Monitoring Matrix, Environmental Traffic Light, Geographic Information System-GIS).

**b. Policy**

EPR has a Board-approved “Environmental Policy for the Operation and Maintenance of the Central American Electrical Interconnection System.” It binds EPR management, administrative personnel, supervisory personnel, operational personnel (national and foreign) to the commitments and applications (guidelines) of the policy, as follows: i) prevention, control, and elimination of occupational accidents and illnesses; ii) control of greenhouse gas emissions and noise; iii) management and care of natural habitats; iv) proper handling of non-hazardous solid wastes; v) proper handling of wastewater; vi) prevention of damage due to heightening of erosive processes and natural and anthropogenic threats; vii) proper and rational handling and use of water and energy resources; viii) proper use and handling of hazardous materials; ix) management of materials and machinery yards; x) management of quarries and borrowed materials; xi) handling of explosives (the use of which must be avoided whenever technically possible); xii) management of dumps and earth deposit sites; and xiii) construction of new access roads or reconstruction of existing ones.

**c. Identification of Risks and Impacts**

The risk factors that may affect the EPR and SIEPAC include amongst others the following: i) operational, technological, environmental, social and legal risks; ii) corporate governance risks; iii) reputational risks; iv) market risks; v) credit risks; vi) business risks; and vii) regulatory and political risks.

The SIEPAC has a Risks Management Policy approved by the Board of Directors for the control and management of all kinds of risks faced by the Company, which should be implemented in accordance with the EPR Strategic Plan. This policy, which is implemented through a Risks Management Program, is part of an Integrated Risks Control and Management System, based on a Risks Management Committee, is backed up by an adequate definition and assignment of functions and responsibilities at the operational level, and by procedures, methodologies and tools appropriate to the system’s various stages and activities.

Prior to the first circuit construction stage, the SIEPAC conducted Environmental and Social Impact Assessments (ESIAs) in each of the six countries where the line is located. These studies identified the most important environmental, social and occupational safety risks for the construction of the first phase (circuit), including: i) the loss and degradation of habitats with effects on biodiversity due to the fragmentation of habitats; and ii) increased runoff and surface erosion of lands. Similarly, it has been determined that the most important risks for construction of the second phase of the project (i.e. installation of cables and construction of substations) will be similar to

those of the first phase, but will be more localized in nature, temporary, usually reversible and can be eliminated or mitigated through appropriate management systems.

For SIEPAC's commercial operation stage, the principal environmental impacts are associated with the presence of the line on the landscape, the fragmentation of habitat, noise emissions and electromagnetic fields, and potential collisions of wildlife with the guard cables.

#### **d. Management Programs**

For construction of the first circuit, EPR had Environmental Management Plans (EMPs) prepared for each country establishing the bases for specific environmental management at points considered sensitive. The EMPs, which seek to comply with local regulations (e.g., environmental licenses) as well as the financing entity requirements, established the management, monitoring, mitigation and control measures for the various stages of construction and operation, the execution of which was quantified based on detailed environmental monitoring matrices that assessed progress made on issues of compliance such as: industrial, forestry, biodiversity, social/easements security, archeology and other development banking safeguards policies, based on measurable indicators.

The EMPs also provided for biological monitoring, particularly to verify potential mortality (due to collision with the line) of birds, targeting the most sensitive sections where flight diverters are currently installed. Such instruments were used by EPR to supervise the principal contractors under a "turnkey" contracting scheme that included design, provision of supplies, and construction of the work. The EMPs also included a risks and contingencies program, particularly for fires, explosions and earthquakes, including remediation measures in the event of environmental damages.

To install the second circuit, EPR proposes to adjust these monitoring and control instruments according to a direct administration execution scheme wherein the design, provision of goods, and supervision will be carried out directly by EPR.

In addition, for the operational phase, EPR has a "Social and Environmental Management and Risks Reduction Plan (SEM&RRP) for each country.

#### **e. Organizational skills and capacities**

To ensure compliance with EPR Policies, the Company's Board of Directors relies on General Management and other related submanagement groups. Environmental management and industrial safety fall under the Operation and Maintenance Division. To manage environmental issues, there is a Regional Environmental Coordinator and Environmental/Forestry Specialists in each country. The Regional Environmental Coordinator and the Environmental Specialists are responsible for ensuring compliance with environmental standards, laws and provisions for each SIEPAC country and for ensuring contractors' compliance with all requirements.

In the case of the second circuit, EPR will retain the same organizational structure and proposes to establish a temporary executing unit for the construction stage, which will be led by experienced EPR staff and reinforced by specific consultancy contracts to cover issues such as easements, management of the social setting and forest environment. The costs of this unit will be covered under the Project's budget.

#### **f. Emergency Preparedness and Response**

The Risks Management Program contains an Early Warning System based on a geographic information system (GIS) that monitors the principal environmental and social risks factors with regard to the SIEPAC. When necessary, this will enable the activation of management activities to deal with the respective contingencies. The Early Warning System uses various on-line databases to monitor the occurrence of extreme natural events such as hurricanes, earthquakes, storms, landslides, etc.

#### **g. Monitoring and Evaluation**

In the operation of the Project, EPR, its contractors and subcontractors are committed to complying with each one of the environmental commitments established in the corporate environmental policy, the corresponding EMPs, as well as local and international requirements on the handling, prevention, and mitigation of environmental impacts generated during the operation and maintenance of the line. EPR's Regional Environmental Coordinator is responsible for leading the national Environmental Specialists, for monitoring and evaluating environmental compliance, and ensuring that information from early warnings arrives on time to guarantee the integrity of the grid and prevent environmental damages.

For the first phase of the SIEPAC, EPR developed an Environmental Monitoring Matrix with approximately 97 measures or actions, their means of verification, units of measurement, percentage progress, etc., in order to monitor the performance of the mitigation measures set forth in the ESIA's. Additionally, during the construction stage for the first circuit, EPR developed and implemented a tool to monitor and control the environmental performance of contractors in the field. This is the so-called "environmental traffic light" that evaluates compliance with the technical specifications of the ESIA's and environmental management plans (EMPs) on the tower sites (pads), in forest buffers and on access roads. The results of the environmental traffic lights were considered in processing payments to contractors responsible for foundations, assembly of transmission structures, and stringing of conductors. This tool was used separately in the 20 SIEPAC sections and EPR proposes to continue using it in the second stringing phase.

#### **h. Participation of social stakeholders.**

The width of the right of way strip for power lines is established based on the lines' voltage levels. Imposition of the easement right requires a communication process and the involvement of those potentially affected to ensure quality and access to information for the target public, in accordance with each country's legislation.

For construction of the SIEPAC, EPR carried out a process to standardize the specifications of the ESIA's, including the respective disclosure and public consultation processes. The results of those processes were incorporated in framework documents that included a brief summary of the opinions of the population interviewed, the identification of sensitive topics, the identification of communication media, thematic lines for promotional actions and the design of participation instruments – including the costs of the actions and the schedule for their execution. To maximize citizen participation in the public hearings, the audiences were divided into sectors in the different regions of each country, providing transportation facilities, food for those interested, and informative materials suited to the socioeconomic and cultural environment of the target public. In

accordance with legal principles on the availability of information, the ESIA's were posted on the EPR's website,<sup>1</sup> and physical copies were delivered to the mayors' offices and the respective environmental authorities.

The conclusion of the citizen consultation process showed majority acceptance of the project, primarily based on the possibility of improvements in the quality and price of the electricity supply. The negative aspects indicated by those interviewed included the possible impact of visual pollution.

Due to the process of involving those affected and interested parties, EPR now personally knows the large majority of owners whose lands are crossed by the line; thus, it will determine whether to communicate individually or collectively with the neighboring communities to inform them regarding installation of the second circuit.

#### **i. External Communications and Complaints Mechanism**

EPR has standardized a procedure for receipt (capture), documentation, follow-up and resolution of complaints and claims from owners and communities located in the project's area of influence. The objective of this procedure, adopted for both the construction and operational and maintenance (O&M) stages of the line, is to improve the quality of engagement related to the SIEPAC's immediate surroundings, timely and accurately transmitting information to those responsible for decision-making and thus reducing the likelihood of complaint cases.

This procedure is applicable for all EPR departments that interact with landowners or are directly involved in operational project management activities. It also extends to companies contracted by EPR.

## **4.2 Labor and Working Conditions**

To manage human resources, EPR has a Human Resources Coordinator who is physically located at the company's headquarters. This individual, who is also linked to the Company's Comptroller, reports to the Administrative and Financial Division. Human resources management in the SIEPAC countries is the responsibility of Branch Managers, who coordinate their actions with the Coordinator at headquarters. The Coordinators is responsible for the recruitment and selection of new personnel in accordance with a specific procedure (Procedure for Attracting, Selecting and Hiring Human Talent PRH-011). This process is based on a determination of capabilities required according to the respective position descriptions in each area of the company. Position descriptions include: activities to be carried out, educational and training requirements, skills, knowledge and experience necessary, and the performance requirements sought.

Anyone who joins the organization (or changes their position) must go through an induction process in which they are given information and explanations regarding the basic rules on the subject of security, occupational health and care of the environment in addition to their work duties and responsibilities, the lines of authority they should follow, the principal functions and/or activities of the position, standards of conduct and internal and external communications and

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<sup>1</sup> <https://www.eprsiepac.com/contenido/>

media behavior. The induction process is incorporated in a specific procedure: "Induction Procedure PRH-012."

Although EPR does not have a comprehensive human resources policy, the company has approved a Code of Ethics and Conduct [Código de Ética y Conducta] (CEC), which presents ethical commitments and responsibilities in the actions and conduct of all interest groups. The CEC contains guiding principles that address, *inter alia*, topics such as conflict of interest situations, access to or disclosure of information, performance criteria at work and elsewhere, personnel selection and hiring process, prevention of workplace harassment, environmental and social commitments, etc. The CEC also prohibits discrimination of any kind and provides that internal job promotion is based on the principles of equality, transparency and impartiality.

The Company is developing internal workplace policies for each branch in order to prevent and punish discrimination, sexual harassment, and other related issues. The drafts of these documents are already available for Costa Rica and Panama. The EPR Comptroller is responsible for CEC disclosure, implementation and compliance, for following up reports or findings regarding failure to comply with the standards contained in the code, and for preparing the process for taking corrective or punitive action with regard to any failure to comply. Nonetheless, there is no internal mechanism or procedure for receiving and resolving complaints that workers may submit (i.e., confidential and anonymous receipt, investigation, follow-up and close).

EPR complies with national labor laws, as well as the standards of the International Labour Organization (ILO). The principal labor standards include: social security contributions, freedom of association in union representation of workers, non-discrimination in the workplace and elimination of the exploitation and abuse of child labor.

Given the nature of the business, EPR, whether for its headquarters or its branches, needs to hire additional temporary personnel relatively often. This process is customarily carried out through third-party human resources companies. However, such staff enjoy the same benefits and working conditions as permanent staff and, if necessary, EPR takes charge of termination notices and assumes the cost of indemnities required by law or collective agreements in each country. In addition, as much as possible, EPR tries to absorb within its workforce some of the temporary staff hired by third parties and also provides specific training on preparing resumes and participating in job interviews before the scheduled termination. Currently the Company has 112 permanent employees and 21 third-party hires.

EPR has an Occupational Health and Safety (OHS) Policy whereby senior management agrees to prevent damage and deterioration to the health of its staff, contractors, and visitors, in compliance with national legislation in each country and international legislation. To implement that policy, EPR is developing an OHS system based on the OHSAS 18001 standard, to include specific OHS plans for each country, emergency/fire brigades and training discussions and advisory services provided by the fire department and the Red Cross. In addition, the Company has begun to evaluate workplace ergonomics and lighting requirements in accordance with the ISO 8995 international standard.

Implementation of the OHS policy by EPR is the responsibility of the Human Resources Coordinator at headquarters, who also maintains the accident data registry and follows up the investigation of

root causes. Nonetheless, EPR does not have an internal/external audits process to guarantee continuous improvement.

During construction of the first phase of the SIEPAC, EPR required proof of origin for the provision of required construction aggregates (sand, stone, ballast), the wood used and other materials. These requirements will be retained for this operation.

#### **4.3 Resource Efficiency and Pollution Prevention**

Given the nature of its activities, EPR is not a large consumer of resources and inputs (water and power) at its facilities. However, the Company has taken some initiatives related to energy efficiency and responsible management of solid waste (including reusing materials, sorting waste, lamps and efficient sanitary facilities). The Company's greenhouse gas (GHG) emissions are associated with its vehicle fleet and electricity consumption. Nonetheless, not yet having calculated its carbon footprint, EPR is implementing some initiatives such as replacing conventional vehicles with hybrids and reducing paper by digitizing its processes and documents. In addition, no less than 500 hectares are being reforested with native species in biological corridors, which produces carbon sequestration with respect to the emissions associated with clearing the right of way strip and promoting connectivity among ecosystems.

For the construction phase of the first circuit, the EMPs contained the list of specifications for managing construction inputs and waste, in terms of both hazardous and non-hazardous products. Each specification established guidelines for handling the product, the field of application, those responsible for the management thereof, procedures to be implemented and records to be kept. For the construction of substation bays, the EMPs contained specifications for storing flammable and hazardous substances, and guidelines for the construction of dielectric oil containment pools in the event power reactors are installed. In the event of replacement of equipment using dielectric oil as part of the temperature regulation mechanism, agreements have been signed with companies specializing in the recycling of automotive oils for the preparation of asphalts or the cement industry.

With regard to the transport of construction materials, rubble and earth moving, the EMPs included specifications with respect to mitigation of impacts such as suspended dust and noise, weights and dimensions labeling, schedules and restricted speeds. In terms of access routes to the tower sites and based on the slope of the terrain, contractors had to satisfy mitigation conditions such as the construction of storm drains, sediment traps, sewers, etc.

In its tender documents, EPR stipulates the inclusion of recently manufactured equipment and machinery in perfect running order, so as to generate optimum performance conditions. EPR stipulates that maintenance and repair of equipment and machinery are not done at the work site.

For maintenance activities, EPR is developing a topographical survey using the latest LIDAR (Laser Imaging Detection and Ranging) technology, so a determination can be made as to how much tree trimming and cutting is strictly necessary all along the line. This drastically reduces environmental impacts and increases resource efficiency. EPR does not use any type of pesticide or herbicide in construction and maintenance activities.



For tasks related to the installation of the second circuit, EPR proposes to retain the same pollution control and prevention and resource efficiency tools.

#### **4.4 Community Health, Safety and Surveillance**

The risk of traffic accidents may increase due to increased volume resulting from the transport of construction materials and machinery. For the construction phase of the SIEPAC, the work front manager was responsible for taking the measures necessary to minimize any adverse effect on the population and avoiding changes in the rest periods of the area's inhabitants. In that phase, those measures emphasized work zone signage and points where heavy traffic was concentrated, the use of reflective clothing for laborers, as well as traffic flow planning in conjunction with the competent authorities for the purpose of implementing additional safety measures. As part of the induction processes for contractors prior to the construction stages, the inadvisability of setting up camps close to population centers was noted and the basic rules of conduct were reviewed to maintain good relations with neighboring communities.

Easements for the high voltage lines include limitations on the construction of buildings, earth movements and crops that ultimately grow more than five meters high. Prior to construction activities, EPR provided the communities with information regarding the project and resolved doubts that the population had. Nonetheless, and despite the effort made to avoid this situation, for technical reasons some project structures (towers and substations) inevitably had to be located close to public roads or homes. EPR installed warning signs on these structures as well as anti-climbing devices.

To safeguard its materials warehouses and the San Buenaventura substation it owns, ERP has a third-party armed security service provided by private companies that have verified the suitability and training of their personnel. In this regard, the officers have up-to-date permits to bear regulated arms and have practically no contact with nearby individuals or communities because they remain inside the installations' perimeter fences or walls. The remaining SIEPAC facilities (substations and warehouses) belong to the shareholder partners and thus security is handled directly by them.

EPR performs periodic measurements of electrical and magnetic fields (EMF) in the different SIEPAC sections. To date, no figures exceeding the limits recommended by applicable standards have been observed.

For installation of the second circuit, EPR proposes to continue implementing these good practices for addressing community health and safety.

#### **4.5 Land Acquisition and Involuntary Resettlement**

For construction of the first circuit, EPR needed to establish a 1,790-kilometer long, 30-meter wide easement in the six Central American countries. Within the ESIA's, a common methodology was followed in defining or designing the track, based on successive approximations, so it would be possible to obtain the best route and comply with the principle of avoiding important population centers with more than 500 inhabitants. The establishment of the easement strip affected 7,486 properties, where it was necessary to relocate 384 homes in the six countries (5.13% of the total number of properties affected), with the majority in Nicaragua (188 cases).

As part of managing acquisition of the right of way for the SIEPAC line, each property was visited to gather the following data: geographic location, map location, legal data, economic data, existence of crops, existence of structures/assets, existing public services, etc. The properties and other livelihood components were assessed by expert local appraisers who used the comparative method and replacement value as the principal methodologies for determining the real value.

To avoid significant social impacts, the decision was made, based on EPR corporate policy, to go beyond replacement of the economic and financial costs for each property affected. Thus, two basic aspects were established as the premises for appraising the properties: i) prevent affected individuals from having to leave the environment where they were living at that time, unless they chose to do so; ii) pay a minimum premium of 35% over the real appraised value of the homes.<sup>2</sup> This strategy made it possible to obtain nearly 95% of the easements without having to resort to forcible measures (expropriation). In addition, most of the owners voluntarily decided to relocate on their own land or, if not, in their villages.

To address the concerns of communities and property owners at the time, EPR had a team of easement managers who maintained direct communications with the owners, so that any query or doubt regarding the easements could be resolved efficiently.

There is a historical problem related to the lack of formalized land tenure in Central America in general; this has been affecting the legalization of rights of way in the six countries. Nonetheless, the SIEPAC has managed to record in land registries some 66.5% of all the easements. Currently, the SIEPAC easements area is engaged in a process of ongoing legalization of easements in all the countries.

For installation of the second circuit, EPR will continue to use the same already-acquired easements and, in the remote case of having to acquire new easements, it will continue to implement the same philosophy. For the second phase of the SIEPAC, no significant risks and impacts are anticipated due to the opening of new easements for installation of the second circuit, in that the line is already constructed and operating with its first circuit and it will not be necessary to open new strips.

#### **4.6 Biodiversity Conservation and Sustainable Management of Natural Resources**

The most sensitive habitats that could be affected by construction of the SIEPAC electrical line are those associated with forest ecosystems. However, the design of the track sought to minimize effects on these locations and in some cases the placement of the towers was modified to avoid

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<sup>2</sup> In reality, compensation has been paid that far exceeds the appraised values; this was done so that the individuals would have a better quality of life.

affecting them. This same criterion was followed in designing the roadways and plazas for assembling the towers, as well as in scheduling the logistics for moving materials and machinery for constructing foundations and stringing conductors.

It is important to emphasize that with very few exceptions the SIEPAC used the foundation piles system. This made it possible to adjust the structure of the tower to the topography of the terrain, reducing the need to build terraces and move earth. Prior to the opening of the clearings, prospecting activities were carried out to locate avifauna and relocate nests, mammalian litters and epiphyte species of ecological importance.

#### **4.7 Indigenous Peoples**

There are no indigenous peoples in the project's direct area of influence.

#### **4.8 Cultural Heritage**

As part of the ESIA's, an archeological impact study was conducted based on a survey of the relevant bibliography, analysis of maps and satellite images, field surveys and interviews with local residents. Although no items with heritage value were found that could be impacted by the course of the line, in the case of the Ticuantepe substation in Nicaragua there was a chance discovery of artefacts and pieces of pottery. EPR proceeded to retrieve all the material, which was delivered to the Nicaraguan Institute of Culture. This process resulted in the publication of "Rescate Arqueológico – Análisis Biocultural Realizado a la Colección Cultural Procedente del Sitio Subestación Eléctrica Ticuantepe II (N-MTP-S81)."

No impact on the cultural heritage is anticipated as part of the second phase of the project, given that there will be no significant excavations for tower installation. For the new substations, EPR will maintain the chance find discoveries procedure, which will consist of prior inspection of land works and if there are any relics, searches will be conducted under the supervision of an archeologist and measures included in the contingency plan for retrieval will be taken.

#### **5. Environmental and Social Action Plan**

The Environmental, Social and Health and Safety Action Plan for the project (ESAP) is summarized below:



| Item #<br>(Applicable standard)                              | Issue/Gap and Activities to be Developed  | Deliverable/Performance Indicator   | Deadline  |
|--|---|---|---|
| 1. Environmental Permits (PS 01)                             | 1.1 Maintain a <b>registry/control of environmental permits</b> for construction and operation as needed and obtained by section and/or country, as part of the ESMS (see below)  | 1.1.1 Submit the matrix of environmental permits and their status   | 1.1.1 Every six months starting with financial close  |
| 2. Environmental and Social Management System (ESMS) (PS 01) | <p>2.1 Implement a comprehensive corporate <b>Environmental, Social and Occupational Health and Safety Management System (ESMS)</b> for EPR, consolidating what already exists in terms of: i) <b>policies</b>; ii) <b>tools</b>; iii) <b>management programs</b>; iv) <b>follow-up and monitoring</b>; v) <b>organizational capacity and capability and those responsible</b>; vi) <b>emergency preparation and response</b>; and vii) <b>participation of social stakeholders</b>.</p> <p>2.2 Develop: i) <b>assignment of responsibilities</b> at all levels of the organization for application of the ESMS; ii) development of <b>procedures</b> (e.g. citizen participation and consultation, disclosure of information; audits; supply chain management; documentary record of the ESMS); and iii) preparation of the respective <b>action plans</b> (ESMS training and instruction plan; ESMS audit plan; and emergency simulations plan, etc.)</p> | <p>2.1.1 Submit the structure of the ESMS</p> <p>2.2.1 Submit the missing components (plans/documents) of the ESMS</p> <p>2.2.2 Submit evidence of the implementation of the ESMS</p> | <p>2.1.1 Prior to first disbursement</p> <p>2.2.1 Three months after the first disbursement</p> <p>2.2.2 Six months after the first disbursement, and annually during the operation of the second circuit</p> |

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| <p><b>3.</b> Labor and Working Conditions (PS 02)</p>                | <p><b>3.1</b> Develop and approve a <b>Human Resources Policy</b> suited to EPR's size and workforce, consistent with the requirements of PS02, the International Labour Organization (ILO) and adhering to the national legislation of the six SIEPAC countries.<sup>3</sup></p> <p><b>3.2</b> Develop a <b>Workforce Reduction Plan</b> to mitigate adverse impacts on temporary and outsourced workers of the executing unit to be installed for the second phase of the SIEPAC.</p> <p><b>3.3</b> Establish a <b>Procedure for Implementation of the Code of Ethics and Conduct (CEC)</b>,</p> <p><b>3.4</b> Carry out <b>internal disclosure of the revised CEC</b> and its Procedure for Implementation at EPR Headquarters and Branches.</p> <p><b>3.5</b> As part of structuring the ESMS, revise the EPR Occupational Health and Safety Management System to incorporate an <b>OHS control for (sub)contractors</b> in Construction and O&amp;M: i) establish a Procedure for Evaluating Execution of the Contractors' Occupational Risks Management Plans.</p> | <p>3.1.1 Submit the HR Policy and its Procedures</p> <p>3.2.1 Submit a Workforce Reduction Plan</p> <p>3.3.1 Procedure for Implementation of the Code of Ethics and Conduct (CEC)</p> <p>3.4.1 Internal disclosure of the CEC and its Procedure for Implementation</p> <p>3.5.1 Procedure for Evaluating Execution of Contractors' Occupational Risks Management Plans</p> | <p>3.1.1 Prior to the first disbursement</p> <p>3.2.1 Three months after start of second circuit operation</p> <p>3.3.1 Prior to first disbursement</p> <p>3.4.1 Three months after approval of the Procedure</p> <p>3.5.1 Prior to the first disbursement</p> |
| <p><b>4.</b> Resource Efficiency and Pollution Prevention (PS03)</p> | <p><b>4.1</b> Determine the <b>amount of greenhouse gases (GHG)</b> that will be produced in the construction phase (installation of second circuit) and for the first year of operation of the line with both circuits. Determine the total volume of water to be used by the Project in the second circuit construction/installation phase.</p>  | <p>4.1.1 Inventory of emissions (tons of CO<sub>2</sub>eq).</p> <p>4.1.2 Water used (m<sup>3</sup> of water).</p>  | <p>4.1.1 Prior to first disbursement</p> <p>4.1.2 Prior to first disbursement</p>  |

<sup>3</sup> As much as possible, a human resources policy would generally include the following issues: i) working conditions; ii) disciplinary and termination procedures and rights; iii) employees' right to form and join labor organizations of their choice; iv) right to negotiate collective employment contracts with management; v) right and payment of salaries and permissible salary deductions; v) overtime payments, working hours and any legal maximum; vi) right to leave for holidays, vacations, sickness, injuries, maternity and other reasons; vii) preparation in the event of emergencies and occupational health and safety; viii) promotion requirements and procedures; ix) vocational training opportunities; x) right to other benefits.

### C. Contact Information

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