Environmental and Social Review Summary (ESRS)
Project 14071-01 – Cidade do Livro (CDL) – Brazil

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1. General Information of the Project and Overview of Scope of IDB Invest's Review

The Cidade do Livro Thermal Power Plant ("CDL TPP", "Project" or "Plant") will be implemented by Grupo IBS Energy (the "Company") in the City of Lençóis Paulista, State of São Paulo, Brazil. The Plant will have approximately 80MW of installed capacity, and the power generated will be carried through a 138kV Transmission Line ("TL") originating at a substation ("SS") to be installed in the project area, covering a stretch of approximately 25km of simple circuit, and ending at the Barra Bonita SS (existing), which is owned by Transmissora ISA CTEEP.

The CDL TPP will export approximately 600.5 MWh per year, with a 95% guarantee. The Project will have wood chips and sugarcane bagasse as its main fuels. However, the plant will be able to operate with a full load of other types of biomass during 100% of the time, which provides flexibility of inputs based on local availability.

Since its conception, the Project incorporates several resource efficiency elements, such as: i) reuse of approximately 300 m^3/h of cooling water from the Wastewater Treatment Plant ("WWTP") in the City of Lençóis Paulista (with its reservoir located adjacent to the area where the Project will be implemented);[1] and ii) the potential sale of carbon credits and the I-REC certification[2] for 100% of the power generated by the plant.

The proposed credit transaction (the "Transaction" or "Financing") will be used to finance the installation and operation of the CDL TPP, including the acquisition of various pieces of equipment, such as turbogenerators, boiler, cooling tower, among others.

The Environmental and Social Due Diligence ("ESDD") process included technical visits, interviews, and meetings with the CDL TPP employees, managers, and upper management, in addition to local stakeholders. In addition, the Company's environmental, social, and health, safety, and security information was revised, particularly: i) business strategy; ii) social and environmental studies conducted for the Project's licensing process;[3] iii) policies and procedures related to environmental and social management; iv) workplace health, safety, and security programs; v) supplier management procedures; vi) solid waste and effluent management; vii) emissions into the atmosphere; and viii) potential risks to the safety of local communities during the project's construction and operation phases.

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1 The treated water will be used in a closed circuit to enable the reuse of industrial and household effluents in the Plant's process. This action will avoid the capture of more than 2,000,000 m^3/year of water from the environment and, consequently, its disposal.

2 I-REC(e) is global renewable energy attribute tracking system designed to facilitate the reliable accounting of renewable MWh attributed to a certain consumer, for Scope 2, and is consistent with various international standards.

3 The social and environmental studies are available on this operation' webpage at https://idbinvest.org/es/projects.

2. Environmental and Social Categorization and Rationale

In accordance with IDB Invest's Environmental and Social Sustainability Policy ("ESSP"), the Project was classified under Category B as it presents medium intensity risks and impacts, which may be mitigated through available and feasible measures in the context of the Transaction. The main risks and impacts identified include: i) creation of expectations with the implementation of the project; ii) pressure on road infrastructure from increased vehicle flow; iii) increased demand for public services; iv) inconveniences for the population; v) risk of work accidents during the construction phase and at the industrial facilities; vi) loss of biodiversity related mainly to the supply chain and compliance with the Brazilian forestry code; vii) waste, effluent, and hazardous product management; and viii) emissions into the atmosphere.

The Performance Standards ("PS") applicable to the Project are: PS1: Assessment and Management of Environmental and Social Risks and Impacts; PS2: Labor and Working Conditions; PS3: Resource Efficiency and Pollution Prevention; PS4: Community Health, Safety, and Security; PS6: Acquisition of Land and Involuntary Resettlement; and PS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

3. Environmental and Social Context

3.1 General characteristics of the project site

The CDL TPP will be installed in the City of Lençóis Paulista, approximately 300km from the City of São Paulo, in the Midwest region of the State. The main access road is Marechal Cândido Rondon (SP-300), which connects the City of Lençóis Paulista and the City of Bauru (to the West) and São Paulo (to the East). This is a paved divided highway with good traffic conditions. The stretch that crosses the city areas is approximately 30-km long.

The project site is located in a transition region between the Cerrado and Mata Atlântica biomes, in the Tietê River region, which is also the main local watercourse. The original vegetation is the Semi-deciduous Broadleaved Forest and Pioneer Formations from Fluvio-lacustrine Influence, which occurs in the region. However, the conversion of natural habitats in a large portion of the interior of the State of São Paulo occurred several decades ago due to its predominant flatness, which favors the mechanization of the agricultural process. Currently, the predominant land use is for sugarcane crops and commercial eucalyptus farming.

The natural habitats are currently restricted on the banks of watercourses due to the establishment of permanent preservation areas around rivers and springs under the Brazilian Forestry Code, in addition to small, isolated fragments that are part of rural properties' legal reserves. Most of these fragments show acute signs of anthropization and are occupied by more generalist species of flora and fauna, even if they represent the few habitats still available for biodiversity in the region.

The CDL TPP will be implemented in an area of modified habitat previously occupied by sugarcane crops. The nearby area is also dominated by sugarcane crops, except on its western side, partially bordering a fragment of native vegetation, which constitutes the legal reserve for the City of Lençóis

Paulista's wastewater treatment plant ("WWTP"). No conversion of natural habitats is expected for the implementation of the project.

The TL route was planned to minimize the environmental impact, through the selection of areas that are mostly agricultural, where there will be no need to displace populations or suppress vegetation more than necessary. According to the studies that were submitted, 95.86% of the area affected by the TL is occupied by modified habitats, which are characterized mainly by monoculture farming, roads and accesses, orchards, and subsistence gardens.

3.2 Contextual Risks

A particular characteristic of the area is the rainfall variability, which may impact the yield of subproducts (such as sugarcane bagasse and wood chips) to be used by the Plant.

The region is relatively calm and no records were found of public demonstrations against CDL TPP or similar projects. The degree of urbanization in the City of Lençóis Paulista is high (98.21%), above the State average. Lençóis Paulista's Human Development Index in 2010 was 0.764, which places it in the High Human Development range.

4. Environmental Risks and Impacts and Proposed Mitigation and Offset Measures

4.1 Assessment and Management of Environmental Risks and Impacts

4.1.a Environmental and Social Assessment and Management System

The Project has social and environmental impact assessment studies that envision the implementation of several programs to manage identified risks and impacts.

However, the CDL TPP does not yet have established policies and procedures that provide a methodological approach to managing social and environmental and occupational risks and impacts in a structured and systemic manner. Therefore, the Project will develop and implement an Environmental and Social Management System ("ESMS") to include environmental, social, and occupational health, safety and security actions and guidelines consistent with the basic principles of local standards (NBR ISO 14001) and international standards (such as ISO 45001 and others).

4.1.b Policy

The CDL TPP's actions both in developing the Project and in the environmental licensing process show their commitment to complying with the requirements established under Brazilian legislation and adopting internationally recognized good practices. However, the Company does not yet have established policies regarding the environmental and social goals and principles that guide their actions. Thus, in the context of the ESMS, the CDL TPP will develop and adopt a specific Sustainability Policy for the Project.

4.1.c Identification of Risks and Impacts

4.1.c.i Direct and Indirect Impacts and Risks

Physical, biotic, and social and economic impacts – whether direct or indirect – were properly identified, characterized, and assessed in social and environmental studies conducted for the Plant. In addition, several control and monitoring, mitigation, engagement and offset programs were proposed. As to the TL, the Basic Environmental Plan ("BEP") is being developed as part of the Installation License ("IL") application process, based on the same premises and technical rigor adopted by the Company.

Potentially negative risks and impacts identified in the environmental and social assessments include, among others: i) creation of expectations with the implementation of the project; ii) greater pressure on road infrastructure from increased vehicle flow; iii) increased demand for public services; iv) inconveniences to the population; v) risk of work accidents during the construction phase and at the industrial facilities; vi) potential loss of biodiversity related mainly to the supply chain and compliance with the Brazilian forestry code; vii) waste, effluent, and hazardous product management challenges; and viii) emissions into the atmosphere.

Several positive impacts were also identified and assessed: i) job creation and income increase; ii) greater opportunities for local businesses; and iii) increased government budget revenues from taxes.

4.1.c.ii Analysis of Alternatives

The social and environmental studies conducted include a study of alternatives that addressed technical and locational aspects of Project implementation. The selection of the CDL TPP's implementation location considered: (i) size of the area to be built to house the industrial facilities required to generate the expected power; (ii) proximity to the water source; (iii) connection to outflow the power that will be generated; and (iv) accesses to the location.

4.1.c.iii Cumulative Impact Analysis

The social and environmental studies conducted for the CDL TPP do not include a cumulative impact analysis. It should be noted that the future project will be located in an area less than 10km (8km on a straight line) away from BRACELL's industrial plant, which is recognized worldwide for the production of dissolving and special paper pulp. In addition, as part of the company's expansion process, a new tissue-paper plant is planned for the manufacturing unit in São Paulo. According to information available, the project will create more than 2,000 jobs during the construction phase and approximately 300 permanent jobs after its completion.

Having said that, the Project will conduct a Cumulative Impact Assessment focused on relevant VECs,[4] adopting as benchmarks the guidelines established in BID Invest's Practical Guide for Cumulative impact Assessment and Management in Latin America and the Caribbean.[5]

4.1.c.iv Gender Risks

In general, Brazil has a high incidence of gender violence, with a significant increase in the number of domestic violence cases in recent years resulting from the degradation of social and economic conditions imposed by the COVID-19 pandemic. As compared to other Brazilian states, São Paulo has the lowest rate of homicides against women, with a significant reduction in absolute terms in recent years (-38% between 2009 and 2019).[6] Despite the reduction in this rate in recent years, the numbers continue to be significant and higher than those of many other countries in the region.

Most of the workforce to be hired will be local workers. However, there may be need for temporary lodgings for more specialized workers and the resulting overburden on the host communities or risk of external disease vectors. Therefore, considering the data collected in the area and in order to prevent gender violence cases in the City of Lençóis Paulista, the CDL TPP will develop specific educational content and will undertake internal information campaigns for the workforce assigned to the Project. In addition, the Company will adopt, as part of their policies, effective measures to avoid, prevent, or mitigate gender risks and impacts, which will also be mandatory for contractors (construction companies, assemblers, and suppliers).

4.1.c.v Climate Change Exposure

The main physical risk for the Project is associated with the exposure to potentially intense droughts or rains that may grow more severe with climate changes. Some climate models[7] project that changes in rainfall patterns may be moderate by the end of the century under a conservative climate scenario.

Risks include the Plant's infrastructure as well as the supply chain. Forest fires, for example, may affect the infrastructure and spread to storage areas. With respect to the value chain, biomass may be indirectly sensitive to changes in temperature and rainfall, as these affect productivity.

Transition risks are deemed to be low and limited, given that the Project will use second generation biofuels (which do not involve farming food products). Lastly, the Project is consistent with Brazil's adaptation priorities,[8] thus contributing to the country's commitment to increase renewable sources in the energy matrix by 2030.

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4 Valued Environmental and Social Component

5 https://idbinvest.org/en/publications/practical-guide-cumulative-impact-assessment-and-management-latin-america-and

6 Data available at https://www.ipea.gov.br/atlasviolencia/publicações

7 Such as the GFDL-CM3, for example, developed by the U.S. National Oceanic and Atmospheric Administration (NOAA).

8 National Adaptation Plan (NAP, 2016) and First Submission of the Nationally Determined Contribution (NDC, submitted in 2016 and updated in 2022).

4.1.d Management Programs

The environmental measures and programs for the construction phase are in the CDL TPP's BEP, which was submitted to the local environmental agency ("CETESB") for review as part of the IL application process. The document was structured with Plans and Programs grouped so as to mitigate, monitor, and offset expected and undesirable social and environmental impacts during the future project's implementation and operation phases. The various social and environmental programs proposed during the licensing process will be integrated through the Environmental Management Program ("EMP"), which will include a set of systematized actions to ensure that the other programs are properly conducted and that the mitigation measures are applied as planned in the project's implementation phases.

It is important to note that the Project will have specific procedures to ensure the safeguarding of historic and cultural heritage during the construction phase, as approved by the National Historic and Artistic Heritage Institute ("IPHAN").

While the Project does not yet have an ESMS that includes technical procedures and guidelines related to the project's construction phase, the environmental programs proposed in the BEP are deemed to be adequate for the management of expected social and environmental impacts. Thus, the programs to be developed as part of the ESMS will be based on control and mitigation of occupational risks and social and environmental impacts caused by the activities to be performed during the construction and operation/maintenance phases.

4.1.e Organizational Capacity and Competency

The Project currently does not have a specific and dedicated management team to supervise the Environmental and Social ("E&S") activities planned for the implementation phase in order to produce monitoring results, critically evaluate the results, and demand improvements from contractors, nor to conduct internal monitoring of their own activities.

In light of the above, and in accordance with the Environmental and Social Action Plan ("ESAP"), the CDL TPP will implement an organizational structure that defines roles, responsibilities, and authorities to implement the BEP and ESMS, in order to achieve effective and continuous social and environmental performance.

4.1.f Emergency Preparedness and Response

The CDL TPP has not yet developed an Emergency Preparedness and Response Plan ("ERP") for the Project, in order to respond to environmental and work accidents on a timely basis, and prevent and mitigate any injuries to persons or damages to the environment and communities in the area.

Therefore, the Client will prepare and adopt an ERP which will consider: i) the areas where accidents or emergencies may occur; ii) the communities and persons that may be impacted; iii) the response procedures; iv) equipment and resource supply needs; v) the responsibilities of each worker; vi) the means of communication internally and with potentially affected communities; and vii) the periodic

training required to ensure an effective response. The ERP will be reviewed and revised periodically, as required, to reflect changing conditions.

4.1.g Monitoring and Review

The BEP includes the EMP, which is the element managing and integrating all the control measures proposed in the social and environmental studies, and defines the methodology to monitor, inspect, and manage their execution. Thus, the set of E&S programs for licensing follows the monitoring and analysis guidelines.

However, the Company does not yet have a methodology to monitor and evaluate the effectiveness of the other management programs beyond environmental licensing, as well as the compliance with any corresponding legal or contractual obligations. This methodology will be developed and adopted as part of the ESMS that the CDL TPP will implement.

In addition to logging information to monitor performance and setting up relevant operational controls, the Company will use dynamic mechanisms, such as inspections and internal audits, as required, to verify compliance and progress in the achievement of the expected environmental, health, safety and social ("EHSS") results. The results from these processes will be used to improve the ESMS performance and effectiveness.

4.1.h Stakeholder Engagement

The CDL TPP has performed a preliminary stakeholder identification process, including companies, government agencies, entities, institutions, and personnel connected to IBS Energy. In addition, several engagement activities have been conducted, such as meetings and Project presentations. However, these elements have not yet been consolidated into a Stakeholder Engagement Plan ("SEP"). Thus, the CDL TPP will develop and implement an SEP for the Project.

4.1.i External Communication and Grievance Mechanisms

4.1.i.i External Communication

As the Project is at an early stage, it does not have yet a specific mechanism for external communications to keep the community informed about the CDL TPP's E&S activities (hiring of workers, construction phase, safety, etc.).

The Plant conducted several meetings with public institutions and government agencies to present the project, as well as presentations in city government events and to potential suppliers. However, this process was not formalized, which would facilitate the organization and programming of these actions. Considering that the project involves the implementation of a new activity in the city, with their own and innovative characteristics, there is the need for more external communication.

The Social Communication Program proposed in the BEP defines some activities that the Client must conduct, including: i) preparing a Stakeholder Matrix; ii) holding periodic communication meetings; iii) creating a Project Monitoring Commission ("PMC"); iv) creating a Social Channel to log potential

questions and complaints related to the construction; v) creating a contact channel through a telephone number with the WhatsApp application and e-mail address; and vi) producing newsletters to report the construction progress of the CDL TPP. However, the Client will present, as part of the Stakeholder Engagement Plan, all planned actions, including details of the processes, flowcharts, teams, and respective responsibilities required to achieve sound communication with all stakeholders.

4.1.i.ii Community Grievance Mechanism

Although communities are distant from the CDL TPP's implementation area, in the TL's region there are two cities located near the easement area, which may express or develop concerns with respect to its implementation. Despite the distance from the city's urban center, it is important for the local population to have access to a mechanism to request clarifications and answers or submit complaints to the company.

In this context, mechanisms will be implemented for external communications, including: (i) receiving and logging external public communications; (ii) examining and assessing issues raised and determining how to address them; (iii) providing, monitoring, and documenting responses, if any; and (iv) adjusting the management program as appropriate.

The means of contact (telephone, e-mail, chat, or WhatsApp) will allow an adequate exchange of information and will be always available to the interested public.

4.1.i.iii Ongoing Reporting to Affected Communities

One of the goals of implementing the Social Communication Program proposed in the BEP is to maintain affected communities informed about the Project and its progress, as well as the results from the implementation of the environmental programs that are part of the environmental licensing process. The program provides for quarterly events during the construction phase, and half-yearly events during the project's operational phase.

As construction has not yet begun, no report with relevant information about the Project has been issued. In this regard, and in accordance with the Social Communication Program, the community in general and particularly potentially affected persons will periodically receive information on the progress of implementation of both the TPP and the TL.

4.2 Labor and Working Conditions

4.2.a Working Conditions and Management of Worker Relationships

4.2.a.i Human Resource Policies and Procedures

The CDL TPP, in their creation and definition of team size and management system, will develop and implement human resources ("HR") policies and procedures that are appropriate to their size and workforce, as well as require that companies that provide services also meet these requirements.

Information related to worker rights, applicable collective bargaining agreements and any significant changes in laws or internal procedures, should be documented and made available to all workers in a clear, objective, and understandable manner. This set of documents must outline their approach to managing workers in accordance with national laws and other applicable requirements.

4.2.a.ii Working Conditions and Terms of Employment

Work conditions will be defined in contracts signed by CDL TPP with their employees. The contracts will be consistent with the provisions of Brazilian labor legislation. The Company will offer competitive salaries to their employees and all basic benefits guaranteed under Brazilian law, as well as additional benefits (such as access to private health insurance, life insurance, transportation and meal vouchers, scholarships, among others), in order to attract and retain employees and enhance their performance.

The Company will clearly establish to all their workers salaries and benefits, payroll deductions, shift hours, understandings on overtime and their compensation, breaks, rest days, and medical, maternity, vacation, or holiday leaves, weather conditions, and the types of activities and risks involved in each specific task.

Should the Project require lodgings for workers, CDL TPP will consider specific requirements related to accommodation services, including facilities separated by gender and consistency with the principles of nondiscrimination and equal opportunities. The guidelines to be defined will take Brazilian legislation and international best practices into account, and should be included in the Contractor Management Manual to be developed by the Company.

Worker accommodation arrangements will not restrict their freedom of movement and association.

4.2.a.iii Workers' Organizations

The CDL TPP's employees do not yet have any form of labor or union organization. However, there is no evidence of any impediment for their workers to be associated with trade associations.

Thus, in the context of their HR Policy and Procedures, the CDL TPP will state that they honor collective bargaining agreements and that they do not restrict their employees' affiliation with representative bodies. In addition, the Company commits not to engage in any type of retaliation, intimidation, or harassment against employees affiliated with unions.

4.2.a.iv Non-discrimination and Equal Opportunities

The CDL TPP is in the process of building their staff and needs to establish parameters for the adoption of guidelines that guarantee equal opportunities for all.

The social and environmental policies will expressly establish the Company's commitments to the Fundamental Principles of the International Labor Organization ("ILO") with respect to the prohibition of any type of discrimination, whether in terms of compensation or access to training, promotion, or termination of employees on the basis of gender, age, political or religious beliefs,

race, caste, birth, social origin, disability, ethnic origin or nationality, affiliation with organizations, political affiliation or opinions, sexual orientation, family responsibilities, marital status, or any other condition that may give rise to discrimination.

4.2.a.v Grievance Mechanism

As the Project is at an early stage, there is not yet a specific procedure to receive and resolve complaints from any worker. Thus, before the Project is implemented, the Client will develop and adopt such a mechanism, which will also be available to contractors. This mechanism will be easily accessible and will allow anonymous registration, at the worker's discretion, to provide the worker with comfort to use it and to prevent retaliations. The system will ensure the confidentiality of information and an adequate investigation process.

4.2.b Protecting the Workforce

4.2.b.i Child and Forced Labor

The CDL TPP will address in their future policies – which will apply to contractors and suppliers – the non-use of child and slave labor, and compliance with this requirement will be verified periodically. Currently, the Company has only employees who are 18 years of age or older, and the same practice will be adopted in the context of the Project, and may employ young apprentices pursuant to Brazilian legislation.

The social and environmental policies will expressly establish the Company's commitments to the Fundamental Principles of the ILO with respect to combating child and forced labor. The Plant will make their best efforts to foster commitment to human rights among their suppliers, promoting and encouraging the various components of the value chain to develop their own commitment. In addition, the monitoring system to be implemented will ensure adequate documentation and management of identified noncompliance.

4.2.c Occupational Health and Safety

Brazilian legislation is aligned with international Occupational Health and Safety (OHS) good practices with respect to the establishment of guidelines for a safe and healthy workplace.

In order to provide a safe and healthy workplace, the CDL TPP will comply with local legislation applicable to their own employees and activities and ensure that the process of selecting, contracting, and supervising contractors considers the local requirements at a minimum.

In order to achieve an effective and continuous E&S performance with respect to occupational health and safety topics, the Client will implement an organizational structure that will define roles, responsibilities, and authorities to maintain the BEP and the ESMS. In this regard, it will define guidelines, guide, train, and ensure compliance with legal requirements through continuous monitoring and supervision.

4.2.d Workers Engaged by Third Parties

The Project will adopt means to ensure that contractors promote minimum conditions (according to the legislation and internal project guidelines) for their workers. To this end, the CDL TPP will establish policies and procedures to select outsourced workers, establish criteria for their joining and staying with the Project, as well as manage and monitor their performance. In addition, it will adopt means to log disputes, monitor their resolutions, and, if required, take administrative actions such as notification, warning, fine, suspension, contract termination, and blocking future submissions of price quotes. These requirements will be compiled in a Contractor Management Manual, as required under the ESAP.

4.2.e Supply Chain

Raw materials will be procured through leasing or purchase and sale agreements. The licensing process requires the implementation of an Environmental Regularization Support Program for suppliers and lessees' areas. At this time, the CDL TPP does not yet have a final list of suppliers, which will be verified for any irregularities or E&S improvement needs.

Thus, the CDL TPP should ensure that all requirements under Brazilian legislation and good international practices are met by the suppliers during the project' implementation and operation phases. Warnings, administrative penalties, and even the replacement of suppliers will be considered according to the seriousness of the incident. Therefore, the monitoring and measurement mechanisms are considered in this set of activities.

In addition, the Company will develop a manual of good practices to be distributed to and raise awareness among suppliers and will conduct enforcement activities. They will also provide periodic training (particularly to suppliers of raw materials) on OHS good practices and guarantee of worker rights.

4.3 Resource Efficiency and Pollution Prevention

4.3.a Resource Efficiency

The Project was designed considering resource efficiency and pollution prevention aspects in order to reduce or mitigate environmental impacts from its implementation and operation. Some examples of this include: i) using treated effluents from a local WWTP in the operational process; ii) using different types of biomass that are currently discarded as organic waste; and iii) adopting an air pollution control system consisting of various components in different stages of the process. More details are presented in the following items.

4.3.a.i Greenhouse Gases

During construction, it is expected that Greenhouse Gas ("GHG") emissions remain below 25,000t CO_2eq/year, linked to the combustion of diesel engines in heavy vehicles and machinery, and emergency power generators for the fields and on-site administrative offices. During the operation phase, a positive carbon balance is expected, as the production process envisions a considerable

reduction in CO_2 emissions. As part of the Company's strategy, the sale of carbon credits will also be explored. In addition, the Project is registered in the United Nations Framework Convention on Climate Change[9] as a candidate for Clean Development Mechanism ("CDM") and will obtain I-REC certification.

The CDL TPP plans to use, in their own fleet of trucks, less harmful fuels, such as vehicular natural gas ("VNG") and Ethanol and is committed to be totally free of fossil fuels in their industrial logistics within 10 years.

In the context of the ESAP, the CDL TPP will prepare, annually, an inventory of GHG emissions for the project's construction and operation phases, based on *GHG Protocol* guidelines and other internationally recognized methodologies.

4.3.a.ii Water Consumption

Water for the Project (approximately 300 m^3/h, which will be used in a closed circuit to enable the reuse of industrial and domestic effluents treated as part of the process) will be captured mainly from treated effluents from the City of Lençóis Paulista's Autonomous Water and Sewage Service ("SAAE", in the Portuguese acronym), the reservoir of which is located next to the area where the Project will be implemented. This action will avoid the capture of more than 2,000,000 m^3/year of water and, consequently, its disposal. In addition, underground wells may be used.

4.3.b Pollution Prevention

The TPP should not be a significant source of water pollution, given that, after water is captured and used, a closed circuit will be established to reuse industrial and household effluents treated as part of the process.

Chemical toilets will be used during the implementation phase (construction), and sewage will be sent to systems licensed by the proper agencies and chosen by the contractor under the CDL TPP's supervision. The slurry from the biomass yards will be released into the gross water reservoir for internal treatment (recirculation).

4.3.b.i Air Quality

Air quality may be affected by heavy construction equipment and machinery, which generate dust when moving earth or transporting materials, and by gas emissions from combustion engines. Other potential sources include potential fugitive emissions from stored chemicals. However, it should be noted that the BEP includes procedures for emissions into the atmosphere and dust control, as well as for monitoring emissions into the atmosphere during construction.

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[9] The United Nations Framework Convention on Climate Change (UNFCCC) is a treaty signed by several countries, the goal of which is to stabilize GHG concentration in the atmosphere at levels that avoid hazardous interference in the climate system. More information is available at https://cdm.unfccc.int/index.html

Historical data used in the E&S studies indicate that, in the last 10 years, concentrations of inhalable particles and nitrogen dioxide meet the air quality standards established under current legislation.

An Atmospheric Dispersion Model ("ADM") was conducted to assess the impact from the TPP's operations on air quality. The ADM indicates that, during the operation phase, there will be emissions into the atmosphere related mainly to particulate material ("PM_{10}"), nitrogen dioxide ("NO_2"), sulfur dioxide ("SO_2"), and carbon monoxide ("CO") from three specific sources and other fugitive sources, in this case, to build the stack after the chipper.

The results from the modeling indicate that all assessed pollutants will be kept within the established air quality standards, including at the receiving sites located in the vicinity of the project, within the distance considered in the study, which examined occupied areas within 5km, even when background concentration is added. In some cases (SO_x and CO), the values obtained were very below baseline standards established in current legislation and are also consistent with the standards established by the Environmental, Health, and Safety ("EHS") guidelines from the World Bank Group ("WBG").[10]

The CDL TPP will have an air pollution control system at different stages of the process. The system will be able to reduce or mitigate environmental impacts during the operation phase (air and gas ducts and chimneys). The Project will keep NO_x, PM_x and CO concentrations under the baseline references established under current legislation and in WBG's EHS Guidelines.

The log chipper system will have a dust collector, with particulate materials conducted to a system of sleeve-type filters before release to the outside environment. The chips are carried by totally covered belts and through enclosed transfer ducts, preventing the release of particles into the external environment.

Side protection screens will be installed in the biomass storage yards to prevent dust generated as material is moved enter the industrial area and surroundings. In addition, several other control systems are planned, including: i) multicyclone to collect larger and heavier particles from the flow of gases; ii) electrostatic precipitator to collect fine particles; iii) ash removal system; iv) continuous emission monitoring system, which will enable the on-line and uninterrupted qualification of emissions from the industrial process; among others.

4.3.b.ii Wastes

The CDL TPP has a Solid Waste Management Plan ("SWMP") that is consistent with the activities planned for the construction phase. The plan includes segregation, management, and final disposal. Contractors are responsible for the segregation and temporary storage of waste generated at the work sites, and the Project carries out inspections.

During the operation phase, the CDL TPP will develop a specific SWMP.

[10] Also known as EHS Guidelines.

4.3.b.iii Hazardous Material Management

Given the industrial process involved, the hazardous products to be used by TPP are few. The location selected for storage will have soil lining, a drainage system, and containment in case of accidents or spills to prevent soil and water contamination.

4.3.b.iv Pesticide Use and Management

The CDL TPP will use localized pesticides to manage pests at the unit, particularly due to the type of activity, which may attract pests, including flies and rodents. Control will be based on insect elimination through the application of insecticides (chemical treatment) and rodent elimination, in addition to the placement of bait stations.

For this purpose, the Company will use only approved chemicals that do not include Classes Ia (extremely hazardous) and Ib (highly hazardous) according to the World Health Organization ("WHO").

4.4 Community Health, Safety and Security

4.4.a Community Health and Safety

The impacts and risks to community health, safety and security are associated mainly to vehicle traffic during the construction phase and transportation of raw materials during the operation phase.

Currently, access to the CDL TPP area is through roads and highways that already carry a flow of agricultural products, particularly sugarcane. In the context of the BEP, the Traffic Control and Monitoring and Access Road Improvement Program is planned for implementation, which will establish measures to prevent and control these risks and impacts. For the implementation of the TL, a Subprogram for Signage and Maintenance of Site Access Roads as part of the Construction Environmental Control Program.

For the operational phase, the Project will use only major highways to transport raw materials, to avoid large-vehicle traffic in urban centers. However, a definition of supply chain for the operation has not yet been presented, nor specific measures to prevent risks to the community related to the traffic of material transportation vehicles.

Contracts with raw material suppliers will include specific clauses regarding the supplier's obligation to take the necessary precautions to ensure that transportation vehicles operate in accordance with safety transportation standards and traffic laws in effect.

For the TL, in the context of the ESAP, the CDL TPP will conduct a noise baseline study focused on critical receptors located along the route.

4.4.a.i Infrastructure and Equipment Design and Safety

The homes closest to the area are located within a radius of approximately 1km. The risks to the community related to the operation of the CDL TPP are deemed to be low and controllable if technical safety standards are adopted for the plant and support equipment's operational processes. Nonetheless, the preparation, construction, operation, and deactivation of structural elements or components to implement the Project will be done in accordance with Good International Industry Practices (GIIP), taking into account the risks to the safety of third parties or the Affected Communities.

4.4.a.ii Hazardous Materials Management and Safety

The Project will have an ethanol tank (100 m^3) and a diesel tank (30 m^3). As there is no community in the project's surrounding areas, the operation of these tanks imposes low risks to the communities. However, these product transportation vehicle routes and their impacts will be considered.

4.4.a.iii Community Exposure to Diseases

The Project will hire and train local workers to avoid the influx of populations and use of migrant workers. However, despite these measures, job creation expectations may attract people from other locations to the city[11].

In this regard, the CDL TPP prepared a Municipal Infrastructure Strengthening Program due to the potential increase in demand for public services, covering the quality assessment of public equipment available in the city. The program, which will be implemented in partnership with the City Government of Lençóis Paulista, includes actions to improve public services where they may be inadequate, particularly in health and education.

In addition, measures were established to prevent diseases among workers, which will be considered in the context of the Workers' Health Program. Communicable disease prevention activities will be included in the scope of Environmental Education Program actions to be developed in local communities.

If it becomes necessary to hire persons residing outside the region, management measures will be adopted for a systematic verification of lodging and housing conditions to ensure compliance with the requirements established under current legislation and applicable international standards.

[11] This issue was a concern raised by members of the public who participated in the assessment of environmental perception during the development of TPP's environmental studies.

4.4.a.iv Emergency Preparedness and Response

The TPP's operations impose risks related to accidents, such as fires and others. There are also fire risks in surrounding agricultural production areas, which may reach the TPP if not quickly controlled. However, these risks may be controlled and reduced with the adoption of adequate prevention measures. The risk that a fire at the TPP's facilities may affect the local population is deemed low as there are no communities in the operation's surrounding areas.

The Emergency Preparedness and Response Plan (ERP), to be developed by the CDL TPP, will consider the participation of the public in emergency plans and will include measures to disclose risks and provide guidance to the population both during the Project's construction and operation phases.

4.4.b Security Personnel

The CDL TPP does not yet have procedures or guidelines defined to engage property security services. Nor is it established whether there will be a need for security posts with armed guards. Also, the minimum requirements for an armed guard position have not been established.

Risks related to property security services and these types of services (with or without armed guards) will be periodically assessed as part of the scope of security risk evaluation in the context of the ESMS.

Should the Project have armed guards during the construction or operation phases, the CDL TPP will conduct a security risk assessment and will develop a corresponding management plan.

4.5 Land Acquisition and Involuntary Resettlement

4.5.a General

4.5.a.i Project Design

The project considered, in its design and planning, the selection of an area with low E&S impacts, including the need for involuntary resettlement, among other key criteria under review.

The area intended for implementation of the CDL TPP and other components (substation, external access, etc.) was acquired in 2020 through purchase and sale agreements) and consists of three farms totaling 12.1 hectares ("ha"). Another 2.4ha area is being purchased for the implementation of the project's main access road.

For the implementation of the TL, 61 properties will be affected in the cities of Lençóis Paulista (16), Areiópolis (21), São Manuel (7), Igaraçu do Tietê (16), and Barra Bonita (1). No homes were identified in these 61 properties and, therefore, there is no involuntary resettlement of families planned. However, there are records of 3 leisure residences in the proposed easement area in Igaraçu do Tietê, near the Barra Bonita SS.

4.5.a.ii Compensation and Benefits for Displaced Persons

No measures have yet been established to ensure the continuity of subsistence conditions for affected families after the economic displacement of an activity. However, there is an established process to negotiate and pay for land at market prices, compensation for improvements and loss of profits, as determined under Brazilian legislation.

Thus, the CDL TPP will adapt land acquisition processes, including, when necessary, monitoring affected families' social and economic conditions, and will record the compensation process.

4.5.a.iii Grievance Mechanism

The grievance mechanism to be implemented will enable the company to receive inquiries or complaints through various channels that are easily accessible to the affected public. The mechanism to be adopted will describe the procedures to capture and process grievances and complaints, as well as timing requirements.

4.5.b Displacement

4.5.b.i Physical Displacement

Of the 61 properties that will be affected by the construction of the TL, almost all are used to grow sugarcane or pastures, except for one, which is located in an urban area. The construction of the TL as planned will physically displace 3 existing buildings in the easement area, all leisure properties (with no permanent residents). However, there is not yet a baseline that shows a list of the affected properties, their owners, type of impact (improvement, agricultural production, subsistence agriculture), characterization of affected families, land regularization situation (legal or irregular), identification of families in vulnerable situations, etc.

The social and environmental studies that have been conducted contemplate an Expropriation, Removal, and Resettlement Program that will include measures for the different types of affected persons, including: (i) registration of properties and population; (ii) evaluation of properties and negotiation of compensation amounts; (iii) actual payment of compensations; (iv) provisional services and resettlements; and (v) support for the affected population.

4.5.b.ii Economic Displacement

An irregularly occupied area of land owned by the municipality was identified within the easement area (where occupants use the land to grow corn, vegetables, and fruit trees), which will be affected by the implementation of the towers. In this case, the Client will guarantee that the affected person will receive appropriate compensation for the investment made in the area, taking into account the loss of production and the time required to regrow the crop in a new area.

In light of the above, the CDL TPP will adapt the land acquisition and involuntary (physical and economic) displacement processes to guarantee: i) compensation for use restrictions when

properties without regulated titles are impacted; and ii) compensation for agricultural production or livelihood losses caused by the establishment of the TL's easement area.

4.5.c Private Sector Responsibilities Under Government-Managed Resettlement

As the land mentioned above is owned by the municipality, the Client will establish a partnership with local government entities for the resettlement. However, the fact that the occupants do not own the land does not exempt the project from removing their improvements through consent and negotiation and considering the rights over the possession of such improvements.

The Plan for Affected Populations to be developed will consider the need for negotiations with the local government as owner of the land.

4.6 Biodiversity Conservation and Sustainable Management of Living Natural Resources

4.6.a General

The Project was designed to avoid or minimize impacts on biodiversity or living natural resources. With respect to the biological baseline assessment, the social and environmental studies conducted for the CDL TPP's environmental licensing included flora and fauna baselines with secondary and primary data. However, specifically for the TL, no assessment of biodiversity baseline has been conducted. Considering the above, the CDL TPP will conduct the flora and fauna assessment in the natural habitats that will be affected by the TL, focusing mainly, but not only, on the characterization of the directly affected flora and bird fauna in the region, and conducting a critical analysis of the TL's potential impacts on biodiversity.

4.6.b Protection and Conservation of Biodiversity

The recovery and offset measures mentioned include the registration of legal reserve (through a forest easement agreement) and the preservation of 6 thousand hectares of native vegetation. It will also be necessary to submit documents detailing such measures. The monitoring programs include fauna monitoring during the operation in the TPP's direct area of influence, and the monitoring of run-over fauna as part of the traffic control program.

As to biomass suppliers, the proposal is for an Environmental Regularization Support Program to help obtain the Rural Environmental Registration ("CAR", in the Portuguese acronym) and the goal is to have 100% of suppliers regularized.

The proposed programs include the Vegetation Suppression Control Program, with germplasm rescue and fauna displacement measures, and the fauna monitoring program, which will be considered for the project as a whole (Plant and TL).

4.6.b.i Modified and Natural Habitats

The CDL TPP will be totally implemented in modified habitat, in land previously used for monoculture farming, and there will be no need for interventions in natural habitats to implement the Project.

As to construction of the TL, according to the studies that were submitted, 95.86% of the area affected is occupied by modified habitats, which are characterized mainly by monoculture farming, roads and accesses, orchards, and subsistence gardens. There will be a small intervention in existing Mata Atlântica natural habitats at the watercourses that the TL intersects, which will be offset through forest replacement.

4.6.b.ii Critical Habitat

The assessments that were conducted did not identify any threatened or restricted-distribution species. The Plant will be implemented in a totally anthropized area, and there is no possibility of critical habitat presence. As to the TL, it goes through modified habitats in more than 95% of its total area, with low probability that they may be critical due to the apparent characteristics of conservation of fragments. However, considering a) that there will be interventions in natural habitats (possibly vegetation in the medium stage of Mata Atlântica); b) the absence of a biodiversity baseline; and c) the project's potential risks and impacts on bird fauna, an assessment of priority biodiversity values will be conducted, focused particularly on bird fauna and flora species to be suppressed, to assess the possibility of critical habitat presence.

4.6.b.iii Legally Protected and Internationally Recognized Areas

The CDL TPP is not in protected areas or other areas that are nationally and internationally recognized as important for biodiversity. However, with respect to biomass suppliers, the radius of 150km established as the search region contains several protected areas with relevant biodiversity, including areas of the global Alliance for Zero Extinction and the Brazilian Alliance for Zero Extinction (AZE and BAZE sites). Thus, any potential overlaps between the properties and these areas should be verified as part of the search for suppliers.

4.6.b.iv Invasive Alien Species

The CDL TPP considers as one of the sources of biomass for their operations planting their own eucalyptus crops in areas to be leased but will primarily purchase biomass directly from producers (eucalyptus, sugarcane bagasse, among others), with their own crops as a secondary option, which will be detailed in future phases future of the project.

While eucalyptus is an invasive exotic species, farming it is allowed by law if it is duly licensed by the appropriate entities and does not imply the suppression of native vegetation or interventions in areas of permanent preservation. While it is an exotic species, its farming in Brazil is longstanding and broadly disseminated in the region for commercial use, and there are a range of technical and scientific studies on the crop's possible impacts on biodiversity and impact minimization strategies.

4.6.c Management of Ecosystem Services

The main point related to ecosystem services in the Project is the significant demand for water to cool the industrial plant and other activities.

In this regard, measures to reduce the need for capturing and improving the reuse of water were adopted, including: i) the resource will be partially captured from the city's WWTP (next to the TPP), which will supply a large part of the project's demand; and ii) the construction of a closed treatment system, in which effluents treated by the project's WWTP returns to the TPP's reservoir for reuse.

The initial proposal of capturing water from the Lençóis River was momentarily abandoned. And the authorizations needed for the other planned capture methods have already been obtained by the proponent.

Therefore, it is understood that the adopted measures are consistent with the mitigation hierarchy principles and help minimize the project's impacts on this priority ecosystem service. However, should the intention of capturing water from the Lençóis River be revisited in the future, the Client will prepare a study of the impact on ecosystem services and a revision of the measures to minimize and mitigate impacts.

4.6.d Sustainable Management of Living Natural Resources

Should their own eucalyptus farming activity materialize, it should be consistent with the premises of sustainable management of living resources, through the application of nationally and internationally recognized good practices, such as the WBG Industry EHS guidelines, and specific guidelines for the forest management industry, such as the Forest Stewardship Council ("FSC") standards and the Brazilian Forest Certification Program ("CERFLOR", in the Portuguese acronym) standards for native and exotic forest species management. The correct application of these practices should be verified and certified by an independent auditor.

4.6.e Supply Chain

The CDL TPP's operations will demand significant amounts of biomass (eucalyptus, sugarcane bagasse, among others) that will be supplied mostly by third parties. The Project is in the process of identifying and negotiating with possible suppliers in a region defined by a radius of 150km around the Plant.

The search for suppliers involves a preliminary verification of the existence of environmental restrictions, particularly the overlap of properties of interest and protected areas. However, this procedure has not yet been documented and made official and does not include a verification of other relevant areas for biodiversity or an identification, even if expedite, of potential critical habitats.

The contract templates include, as the seller's obligations, E&S provisions, such as: i) the need for the appropriate environmental licenses and authorizations; ii) use cultivation practices in

compliance with local environmental legislation; and iii) submission of compliance certificate issued by CERFLOR.

As part of the planned E&S programs, the Project developed an Environmental Regularization Support Program ("ERSP") to help obtain the CAR for suppliers' properties. However, there is no standard procedure documented for the selection of suppliers, containing the requirements, especially with respect to prohibited items, or control and evaluation mechanisms.

4.7 Indigenous peoples

The Project will not intercept indigenous areas or territories nor will it directly impact indigenous peoples.

4.8 Cultural Heritage

The project will be implemented in already altered agricultural areas that do not contain registered archaeological sites. Therefore, no negative impacts on cultural heritage are expected. However, the Client will develop a chance find procedure.

5. Local Access of Project Documentation

Documentation related to the Project may be found at http://www.utelencois.com.br.