

Soventix Guyana Inc. – Guyana Environmental and Social Review Summary (ESRS)

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

The transaction is an uncommitted, secured revolving working capital facility to support Soventix Guyana Inc. and other borrowing entities (collectively, "the Borrowers") who are to design, procure, construct, install, commission and turn-key deliver two non-grid tied solar photovoltaic ("PV") power plants, battery energy storage systems and interconnection facilities (each, an "Installation") in two remote areas in Guyana ("the Project"). The locations and systems will be in: (i) Bartica for a 1.5 Mega-Watt peak ("MWp") solar PV array plus 0.83MW battery energy storage system ("BESS"); and (ii) Lethem for a 1MWp solar PV array plus 0.57 MW BESS. The Project will also finance a subsequent set of similar Installations in Guyana.

The Borrowers were the selected bidders in a tender conducted by the Guyana Energy Agency ("GEA") to construct the two solar farms, which will be ultimately financed by the Inter-American Development Bank ("IDB") under another operation as part of the Energy Matrix Diversification and Institutional Strengthening of The Department of Energy ("EMISDE") loan. The Borrowers will use the proceeds of the IDB Invest financing to perform the Engineering, Construction and Procurement ("EPC") works for the Project.

Due to the travel restrictions imposed by the COVID-19 pandemic, the Environmental and Social Due Diligence ("ESDD") was done remotely. During this process, IDB Invest held conference calls and exchanged documentation with Borrowers' representatives, to assess the current environmental and social performance of the Project, identify potential gaps, and develop an Environmental and Social Action Plan ("ESAP") to close such gaps. The review assessed the Project's compliance with applicable environmental and social ("E&S") national laws, regulations and permits, and IDB Invest's Environmental and Social Sustainability Policy.

2. Environmental and Social Categorization and Rationale

The Project has been classified as a Category B operation according to Invest's Environmental and Social Sustainability Policy since it will likely generate, among others, the following impacts: (i) increase in occupational health and safety ("OHS") risks during construction; (ii) life and fire safety ("L&FS") risks during the operation of the Project; and (iii) generation of hazardous waste at the end of panels' and batteries' life cycles. These impacts are deemed to be of low to moderate intensity and can be reduced or managed by the implementation of mitigation measures.

The Performance Standards ("PS") triggered by the Project are: (i) PS1: Assessment and Management of Environmental and Social Risks and Impacts; (ii) PS2: Labor and Working Conditions; (iii) PS3: Resource Efficiency and Pollution Prevention; and (iv) PS4: Community Health, Safety, and Security.

3. Environmental and Social Context

The Installations will cover a total 5.47 hectares (“ha”) at both sites and involve the construction of ground mounted structures of 2,835 solar PV modules at Bartica and 1,890 solar PV modules at Lethem, in central and southern Guyana respectively. The Installation at Lethem will be on the northern outskirts of the small town which sits on the eastern side of Guyana-Brazil border separated by the Takatu River. The town is in the Rupununi Savannah, Region 9, and the Rupununi Road runs just south of the Installation site which will be on graded land previously used for industrial activities. Lethem has an estimated population of 5,000 residents; largely comprised of indigenous Amerindians. The community is rapidly developing, and the cost of electricity supply (provided by six diesel units) is high.

The Installation at Bartica will be on the town’s southern outskirts at Dogg Point, Agatash, Bartica (approximately 5 km from the town center), located in administrative Region 7 of Cuyuni-Mazaruni. In that place, 1.4 ha of forest vegetation will be cleared and graded to construct the Installation.

Bartica is on a hinterland of the confluence of the Cuyuni, Mazaruni and Essequibo Rivers, with an estimated population of 15,000 inhabitants, and is designated to be Guyana’s first Green Town.¹ Electricity is currently provided from an island grid and the population is expected to grow along with increased energy demand. Neither Installation site intersects any important biodiversity area, protected area or forest reserve.²

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

4.1 Assessment and Management of Environmental and Social Risks

An Environmental and Social Analysis (“ESA”)³, covering the scope of the Project was prepared for the IDB’s EMISDE loan operation following the IDB’s Environmental and Social Safeguards Policies and the national regulatory requirements. After approving the ESA, the Guyana’s Environmental Protection Agency (“EPA”) issued construction permits to the Borrowers for both Installations at Bartica and Lethem. For the land to be cleared at Bartica, corresponding approvals have been obtained from the Guyana Energy Agency (“GEA”), and the Mayor and Town Council of Bartica.

4.1.a E&S Assessment and Management System

The Project has various E&S elements (policies, programs, and procedures) of a basic Environmental and Social Management System (“ESMS”). Some of those elements, however, are currently being implemented by different entities within the Borrower group. Therefore, the Borrowers will prepare a consolidated ESMS, tailored specifically to the Project.

¹ The Green Bartica Development and Land Use Plan (GBDLUP), Ministry of Local Government and Regional Development, Guyana.

² As identified in the National Land Use Plan 2013, Guyana.

³ Diversification of the Energy Matrix and Energy Security (GY-L1066), Environmental and Social Analysis Report, Solar Photovoltaic (PV) Farms in Mahdia, Lethem and Bartica. August 2018.

4.1.b Policy

The Borrowers have drafted an Environmental Policy that defines their commitment to achieve a sound environmental and social performance. To make it applicable to the Guyanese context, the Borrowers will update the policy and make it Project-specific.

4.1.c Identification of Risks and Impacts

Potential risks during the construction, operation and decommissioning phases of the Project were identified in the ESA, including impacts related to: (i) air quality (dust generation, NO_x and CO_x emissions, noise); (ii) soil (top-soil loss, compaction, erosion and contamination); (iii) visual aesthetics; (iv) solid waste (generation and disposal); (v) water (surface and ground water pollution); (vi) natural habitat; and (vii) health and safety. Socio-cultural considerations and impacts to demography and employment were also identified. Positive socio-economic impacts are expected to benefit the utilities' customers at both Installation sites, through reliable provision of electricity. To address negative impacts, an Environmental and Social Management Plan ("ESMP") was prepared as part of the ESA. On top of the latter, the Borrowers have prepared two site-specific Environmental Management Plans ("EMP") that outline: (i) the identification of physical impacts; (ii) mitigation measures, indicators, and roles; (iii) environmental monitoring; and (iii) an E&S risk monitoring checklist.

A gender analysis⁴ that was carried out for both Installation sites concluded that the Project presents opportunities for women through sustainable development, especially where electricity is scarce in these communities.

4.1.c.i Climate Change and Natural Hazard Exposure

Guyana is vulnerable to floods and droughts.⁵ At both Lethem and Bartica this exposure is moderate for drought, and moderate to high for flooding (riverine and pluvial). There is low exposure to water scarcity and seismic activity, and the Project's exposure to climate transition risks are low as it supports Guyana's renewable energy industry.

Historically, Project sites have reported flooding at different magnitudes; however, the Installation locations are not considered low-laying (and not particularly vulnerable to flooding) according to the ESA. In addition, the Borrowers have undertaken a flood analysis (with a multi-year simulation) for both sites, and measures to prevent against damages from flooding (array placement, drainage, etc.) have been included in the Project.

4.1.d Management Programs

The Borrowers have policies, plans and procedures to prevent and mitigate E&S risks related to the Project, which include the following E&S elements: (i) an Emergency Preparedness Plan ("EPP"); (ii) an Incident Reporting Procedure; (iii) a Code of Conduct; and (iv) Journey Management and Working Alone Procedures

⁴ Diversification of the Energy Matrix and Energy Security; a gender approach, Cooperative Republic of Guyana, IDB. August 2018.

⁵ The National Integrated Disaster Risk Management Plan and Implementation Strategy for Guyana. Civil Defense Commission. 2013.

and Risk Assessments. They also have: (i) a Health and Safety Policy; (ii) an Anti-Bribery and Corruption Policy; (iii) a Quality Policy Statement; and (iv) a Procurement Procedure (flowchart).

As the ESMS is still in development, Scope of Works (“SOWs”) have been prepared for: (i) an Environmental Management Plan (“EMP”); (ii) a Health and Safety (“H&S”) Plan; and (iii) Security Guard Services and Allied Works, for both Installation sites. Complimentary to the ESMS, the Borrowers also have: (i) a Core Values Mission Statement; (ii) a Charitable Donations and Sponsorship Policy; and a (iii) Quality Policy Statement.

4.1.e Organizational Capacity and Competency

To manage E&S risks related to the Project, the Borrowers have a Health, Safety and Environment (“HSE”) Coordinator, a Security Manager, a Quality Assurance and Quality Control (“QA/QC”) Supervisor and a Site Manager at each Installation site. There is also a Health and Safety Advisor and an Assistant Health and Safety Advisor assigned to the Project. These persons will be overseen by other relevant managers, supervisors, and coordinators, including an E&S Supervisor who directly reports to the Project Manager. Key lines of responsibility are well defined and designated under the Project.

4.1.f Emergency Preparedness and Response

The Borrowers have a Project-specific Emergency Preparedness and Response Plan (“EPRP”) that is also applicable to contractors and sub-contractors, and provides basic guidelines for: (i) responsibilities; (ii) incident and accident related emergencies; (iii) Life and Fire Safety (“L&FS”); (iv) security; and (v) accident prevention, among others. The Borrowers will update the EPRP to address additional emergency risks associated with Project activities.

4.1.g Monitoring and Review

The Borrowers’ EMPs include monitoring and reporting mechanisms to manage E&S risks related to the Project, and that are in line with the ESMP. They include: (i) E&S parameters to be monitored (soil, air and surface water quality, noise level, fauna, and hazardous waste); and (ii) monitoring checklists (including monitoring activities, triggers for corrective actions and compliance).

4.1.h Stakeholder Engagement

A stakeholder and community consultation program, developed as part of the ESA, included four scoping meetings with 56 stakeholders in Bartica, and 26 stakeholders in Lethem, that took place between May and July 2018. The program involved a stakeholder analysis, mapping, and engagement planning to include communities from the towns, government institutions, civil society, local Amerindian communities (such as the Toshaos) and focused gender groups, among others. Risks and opportunities of the Project were identified, and the program gained insights into local issues and guided the planning and design processes. Illustrative presentations, questionnaires and interviews were conducted, and a Consultation Report (“CR”) was prepared. The findings concluded positive impacts of the Project such as: electricity cost reductions, greater energy security, the creation of local jobs, and education benefits, among others. No objections to the Project were expressed, and there was support for the site locations, including confirmation of no concerns about the potential impact on the Public Rights of Way in the area, nor about accessibility to the proposed sites.

4.1.i External Communication and Grievance Mechanisms

The Borrowers will develop an External Grievance Mechanism (“EGM”) to capture and resolve any concerns or grievances from affected communities. The Borrowers will appoint a Grievance Officer to manage the EGM.

4.2 Labor and Working Conditions

4.2.a Working Conditions and Management of Worker Relationships

The Borrowers’ team is comprised of 136 staff (31% female and 69% male) and 25 management positions (44% female and 56% male). These include direct and contracted employees. According to the Borrowers’ EMPs, it is anticipated that 30-56 workers will be required for on-site roles and an additional 39-72 workers for offsite roles at each Installation site. During construction, technical specialists will be supplied by the Borrowers, and labourers will be contracted. There may be an influx of non-resident workers, especially at Lethem.

The Borrowers have several employee policies, including: (i) a Code of Conduct; (ii) an Anti-Corruption and Bribery Policy; and (iii) a Core Values Mission Statement. The Code of Conduct includes provisions against discrimination, sexual harassment, and improper conduct. The Borrowers will develop and adopt an umbrella Human Resources (“HR”) Policy that sets out its approach to managing its employees and contractors.

4.2.b Protecting the Workforce

Guyana is signatory to the International Labour Organization (“ILO”) Conventions such as: (i) Forced Labour, 1930 (No. 29); (ii) Freedom of Association and Protection of the Right to Organise, 1948 (No. 87); (iii) Right to Organise and Collective Bargaining Convention, 1949 (No. 98); (iv) Equal Remuneration, 1951 (No. 100); and (v) Minimum Age (No.138) and Worst Forms of Child Labour (No. 182), among others. The Borrowers’ HR Policy will follow national labour laws, and explicitly prohibit the use of child and forced labour.

4.2.c Occupational Health and Safety

The Borrowers have an Incident Reporting Procedure that generally outlines: (i) definitions of workplace accidents and incidents; (ii) Lost Time Injury (“LTI”); (iii) first-aid and medical-aid; (iv) roles and responsibilities; (v) steps to be taken in the event of an accident or injury and; (vi) an investigation process. The Borrowers also have a Health and Safety Policy, that speaks to commitments that employees must take, to ensure workplace health, safety and welfare.

In savannah areas, such as the Lethem site, the temperature can rise to an average of 33.6°C and care should be taken to safeguard workers from heat stress and other on the job injuries. Therefore, the Borrowers will develop a Project-specific Health and Safety (“H&S”) Plan, and include adequate Personal Protective Equipment (“PPE”) for workers.

4.2.d Supply Chain

The Borrowers have a general Procurement Procedure and a Corporate Vendor/Supplier Approval Form to manage supply chain activities on the Project. Additionally, the Borrowers' solar PV provider is signatory to a Solar Industry Forced Labor Prevention Pledge that stipulates their opposition to the use of forced labor within the solar supply chain, and supports the development the Solar Energy Industries Association ("SEIA") supply chain traceability protocol.⁶

4.3 Resource Efficiency and Pollution Prevention

4.3.a Resource Efficiency

Electricity for the Lethem Installation will be supplied be via metered feed from the local power provider, the Lethem Power Company Inc. ("LPCI"), under a 24 hour supply. At the Bartica Installation, electricity will be supplied from two diesel powered generators under a 24 hour power supply. Water for the Lethem Installation site will come from the municipal utility through a fixed metered line.

Since Bartica is at a remote location, subject to drought impacts and near to an Amerindian community, an on-site well will be drilled⁷ to ensure a reliable supply of water and to reduce traffic impacts to the local community (via truck borne source).

4.3.b Pollution Prevention

The Project is not expected to generate significant quantities of waste. Solid wastes will include debris from land clearance and construction, and waste from packaging (e.g. food). Small amounts of hazardous wastes (e.g. fuel utilized for construction equipment) may be generated at the site, including solar panels that will be replaced during the Project's operation. Even though the Borrowers' EMPs currently include provisions for managing fuel and solid waste disposal, the Borrowers will update them to include reuse and recycling procedures for hazardous solar PV wastes at both Installation sites.

The Borrowers will use small septic systems at both Installation sites (as a primary disposal measure at Bartica and secondary disposal measure at Lethem). A municipal sanitary waste system is not available at the Bartica Installation site. Approval for construction of these facilities will be acquired by the local municipal authorities.

4.3.a.i Greenhouse Gases

Given the nature and the size of the Project, greenhouse gas ("GHG") emissions are considered non-material during its construction and practically non-existent during its operation. Since main objectives of the Project are to support renewable energy development and reduce fossil fuel consumption (reducing

⁶ A tool for identifying the source of primary raw materials and inputs and tracking their incorporation into finished products, including solar modules.

⁷ The Company is engaging a specialty service contractor to establish the well and ensure that: (i) the abstracted water does not affect the local water supply; and (ii) complies with local regulations.

diesel by 1,815,015 litres/annum) and CO₂ emissions (reduced by 4,759,536 kg/annum), the Project will positively contribute to GHG reduction.

4.4 Community Health, Safety and Security

4.4.a Community Health and Safety

Transport of equipment and an increase of traffic (in rural areas) may lead to minor traffic impacts on the public roads. Given the remote location of Bartica, its road network may require some upgrades, which will generate some traffic disruptions during their implementation. Therefore, the Borrowers will update the EMPs to include traffic and safety procedures, to avoid any potential impacts to affected communities.

4.4.a.i Infrastructure and Equipment Design and Safety

Following Good International Industrial Practices (“GIIP”), the Project’s PV panels will be mounted on galvanized fixed frame structures that have been designed to withstand wind loads of up to 150-200 km/h. The framework posts have been designed to counter-balance additional loads, and the material of the structures is estimated to last for 20 years. Therefore, the integrity of the structures will not pose safety risks to surrounding communities.

4.4.b Security Personnel

The Borrowers will employ 24/7 private and on-site security personnel at all both Installation sites. Therefore, the Borrowers will develop their Security Guard Services and Allied Works hiring requirements based on the principles of proportionality and good international practice.⁸

4.5 Land Acquisition and Involuntary Resettlement

The Installation sites at Lethem and Bartica are state owned and have been leased by the future undertakers of the solar PV systems. These are the LCPI at the Lethem site, and the Guyana Power and Light (“GPL”) at the Bartica site. The Borrowers will not be purchasing any land under the Project, and Installation sites are not allocated on land owned or claimed by Indigenous peoples as confirmed during the EIA stakeholder engagement process. Therefore, the Project will not involve any involuntary resettlement or produce any involuntary economic displacement.

4.6 Biodiversity Conservation and Natural Habitats

4.6.a General

The Installation site at Lethem lies an area that is already highly modified. At the Bartica Installation site, construction will require cleaning and leveling, and thus will generate some minor impacts on the local flora and fauna.

⁸ Including Voluntary Principles on Security and Human Rights Training.

4.6.b Protection and Conservation of Biodiversity

The Lethem Installation site exhibits lower levels of biodiversity than the areas beyond it, due to the high level of human disturbance in the area. Short shrubs and dense forests are associated with the Bartica Installation site. The forest canopy is approximately 30 feet tall and, according to the literature, includes the following species: the Guyana Black Kakaralli (*Eschweilera sagotiana/subgrandulosa*); the Greenheart (*Chlorocardium rodiei*); the Nato (*Mora gonggrijpii*), the Cuatrec (*Licania alba/majuscula*), and the Red Nato (*Mora excelsa*), among others. The avifauna species that could be found at the Installation site include: the Yellow Crowned Amazon (*Amazona ochrocephala*); the Orange-winged Parrots (*Amazona amazonica*); the Blue and Yellow Macaw (*Ara ararauna*); and the Blue-headed Parrot (*Pionites melanocephalus*). Jaguars (*Panthera onca*), classified by the International Union for Conservation of Nature (“IUCN”) as near threatened, and smaller cats, are likely associated with the area, including other mammalian fauna such as Agouti (*Dasyprocta leporina*) and Labba (*Cuniculus paca*). Reptiles include the Green Iguana (*Iguana iguana*), among others.

A Fauna Rescue and Redistribution Plan (“FRRP”) is included in the Borrowers’ EMPs and will be applied to both Installation sites by the GEA, with additional oversight from Soventix. The FRRP details a list of actions to be undertaken in the event fauna is impacted while performing the vegetation clearance, the construction, or other site-based activities.

4.7 Indigenous Peoples

4.7.a General

The Project is not expected to negatively affect Indigenous peoples near Lethem or Bartica. The Installation sites do not infringe any designated lands for Amerindians, and Project activities (construction and operation) will not negatively affect their rights or customs.

4.8 Cultural Heritage

The Project is not expected to impact any archaeological or cultural site. However, there are Amerindian communities adjacent to Bartica⁹ and Lethem. To secure any archaeological remains or vestiges found at Project sites and avoid adverse impacts to cultural heritage, the Borrowers will develop Chance Finds Procedures.

5. Local Access of Project Documentation

The documentation relating to the project can be accessed at the following contact:

Contact: Sandra Smith, Head of Finance, Commercial & Administration. Farfan and Mendes.

Phone/Mobile: +592-623-2913

Email: ssmith@fmlgy.com

⁹ The Bartica community was one of the earliest settlements (1842) in Guyana.