

Soleco Energy Limited – Jamaica Environmental and Social Review Summary (ESRS)

Original language of the document: English
Issuance date: August, 2021

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

The proposed operation consists of the financing of: (i) the development, construction, operation and maintenance of a portfolio of distributed generation assets in Jamaica, including ground mounted, rooftop and carport solar photovoltaic (“PV”) installations as well as energy storage solutions and interconnection facilities (each, an “Installation”) with an initial aggregate generating capacity of approximately 11.25 mega-watt peak (“MWp”), which will be contracted with commercial and industrial clients through long-term lease contracts (“Phase I”); and (ii) a subsequent set of Installations for additional generation capacity following the same long-term leasing structure (“Phase II”). Together, (i) and (ii) are the “Project”. The construction period is expected to be no longer than 12 months. The Project developer, Soleco Energy Limited (“SEL” or the “Company”) manages the Engineering, Procurement and Construction (“EPC”) and Operations and Maintenance (“O&M”) works contracted to Grupotec Servicios Avanzados, S.A. (or “Grupotec”) for Phase I of the Project.

Due to the travel restrictions imposed by the COVID-19 pandemic, the Environmental and Social Due Diligence (“ESDD”) was done remotely. IDB Invest held conference calls and exchanged documentation with representatives from SEL 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, the IDB Invest Environmental and Social Sustainability Policy and the International Finance Corporation (“IFC”) Performance Standards (“PS”).

2 Environmental and Social Categorization and Rationale

The Project has been classified as a Category B operation in accordance with IDB Invest’s Environmental and Social Sustainability Policy. Primary potential risks of the Project include the following: (i) increase in occupational health and safety (“OHS”) risks during construction; (ii) traffic safety risks; (iii) life and fire safety (“L&FS”) risks during the operation of the Project and (iv) generation of hazardous waste at the end of panels’ life cycles. These risks and impacts are deemed to be of medium-low intensity and are largely reversible and readily addressed through the appropriate mitigation measures.

The Performance Standards 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

3.1 General characteristics of the Project's sites

Installations of a total of 24,762 solar PV modules will be at five sites in Jamaica, within three parishes at in the south-eastern part of the island. They include piled, fixed-tilt ground mounted structures at the following three locations: the Jamaica Aluminum Company ("JAMALCO") refinery site in Halse Hall Clarendon; the Caribbean Broilers ("CB" or "CB Group") Freetown cold storage facility site in Longville Park, Freetown, Clarendon; and the CB Linstead hatchery, Peninsula Farms Limited site in Wakefield, Linstead, St. Catherine. They also include rooftop mounted systems at two other locations: the CB Newport Mills facility in Newport Crescent, Myers Wharf, Kingston 15; and the CB Old Harbour hatchery in Sharpers Lane, Old Harbour, St. Catherine.

The largest Installation, covering 11.4 hectares ("ha") and projected to generate 9.2 MWp power, will be located at two sites within JAMALCO's industrial compound. Two human settlements are located near this compound: Halse Hall just to the north, and Hayes Cornpiece bordering the compound to the south. Both settlements are connected via the May Pen to Hayes Road, which runs north-south through JAMALCO's compound. Webbers Gully (a tributary of the Rio Minho River) runs along the north boundary of the compound.

The four Installations on CB Group's commercial properties consist of the following: (i) a 1.1 MWp Installation on 2.4 ha of scrubland at the Freetown cold storage facility that is zoned for agriculture;¹ (ii) a 0.3 MWp Installation on 0.49 ha of scrubland at the Linstead hatchery on land also zoned for agriculture; (iii) a 0.25 MWp Installation on 0.34 ha of the roof and carport of the Newport Mills facility in an area zoned for heavy industry;² and (iv) a 0.18 MWp Installation on 0.13 ha of the CB hatchery roof within the Old Harbour community.

The JAMALCO compound and the Freetown cold storage facility both sit within the Portland Bight Protected Area ("PBPA"), and the Old Harbour facility is adjacent to it. The PBPA is a designated Ramsar Site.

4 Environmental Risks and Impacts and Proposed Mitigation and Compensation Measures

4.1 Assessment and Management of Environmental and Social Risks

Two Environmental Site Assessments ("ESAs") covering all five Installation sites were prepared for SEL for Phase I of the Project.³ The ESAs include an identification of compliance with local laws, including those enforced by the National Environmental Protection Agency ("NEPA"), and an evaluation of the existing environmental conditions in general accordance with the American Society of Testing and Materials ("ASTM") Standard Practices for Environmental Site Assessments.

¹ Clarendon Provisional Development Order, 2017.

² Kingston and St. Andrew Provisional Development Order, 2017.

³ Environmental Solutions Limited, July 17 2020, Environmental Site Assessment for A Proposed Solar Photovoltaic Project for JAMALCO & Environmental Solutions Limited, July 17 2020, Environmental Site Assessment for A Solar Photovoltaic Project At 4 Locations for Caribbean Broilers Jamaica Ltd.

For large Installations,⁴ NEPA construction permits are required; SEL has already submitted applications for these permits for the CB sites. Generation licenses issued by the Ministry of Science, Energy and Technology (“MSET”) are also required for all Installations, and this license has already been acquired for the JAMALCO site. SEL will identify and acquire all outstanding NEPA permits, MSET licenses and Municipal Corporation building permits necessary for the Project.

4.1.a E&S Assessment and Management System

The Project has various E&S elements (policies, programs, and procedures) forming a basic Environmental and Social Management System (“ESMS”). The core of these is the Occupational, Health, Safety and Environment Management Plan (“OHSEMP”), jointly developed by SEL and Grupotec. SEL will further develop its ESMS to ensure it is tailored specifically to this Project and that it meets the requirements of PS1.

4.1.b Identification of Risks and Impacts

4.1.b.i Direct and Indirect Impacts and Risks

Potential Project-specific E&S risks and impacts during the construction phase were identified in the ESAs for all Installations. They include the following: soil erosion, blocked drains, and sedimentation from topsoil removal; soil, groundwater and surface water contamination from surface runoff; air pollution from fugitive dust and vehicular emissions; land pollution from the generation of solid waste; noise and vibration pollution from construction activities; potential conflict between Affected Communities and CB Group and JAMALCO; road safety incidents from increased traffic and minor and major worker injuries from construction activities. The ESAs did not identify any significant E&S risks or impacts for the operations phase. The Company will develop and implement a Project-specific risk and impact matrices, to execute the mitigation measures outlined in both ESAs. Due to the worldwide COVID-19 pandemic, the risk of transmission and infection is possible during construction, therefore mitigation measures will be addressed in the Company’s ESMS.

4.1.b.ii Climate Change and Natural Hazard Exposure

Installations in or near the PBPA (i.e., JAMALCO, Freetown and Old Harbour) are susceptible to flooding, storm surge, forest fires and coastal inundation from sea level rise (“SLR”).⁵ The Newport Mills location is susceptible to flooding (from blocked drains in Kingston) and to hurricane force winds. Although the Freetown and Old Harbour locations are close to major fault systems, no earthquakes have been historically reported at these sites.⁶ The Project’s exposure to climate transition risks are low as it supports Jamaica’s renewable energy industry. To mitigate against hurricane related impacts, SEL will avoid heavy construction during the hurricane season (June 1st to November 30th) and additional precautions will be covered in the Company’s ESMS.

⁴ NEPA (Natural Resources Conservation (Permits and Licenses) (Amendment) Regulations, 2015) for; (i) Construction and operation of power generation plants of 200kW or above using renewable sources of energy & (ii) Construction of substations 69kv or above.

⁵ Climate Change Risk Assessment Report: Portland Bight Protected Area (2013), Climate Studies Group, Mona (CSGM), Jamaica.

⁶ The Freetown Facility is in the Rio Minho Watershed and the Old Harbour facility is close to the South Coast fault according to Environmental Solutions Limited, July 17 2020, Environmental Site Assessment for A Solar Photovoltaic Project At 4 Locations for Caribbean Broilers Jamaica Ltd.

4.1.c Management Programs

SEL has policies and plans to prevent and mitigate E&S risks related to the Project. In addition to the OSHEMP, the Company has also developed the following E&S elements: (i) an Employee Code of Conduct Company Policy, (ii) an Anti-Bribery and Anti-Corruption Policy, (iii) an Equality, Diversity, and Inclusion Policy, and (iv) an Internal Grievance Procedure. Grupotec has several relevant corporate plans and procedures, such as (i) a Communication and Complaint Channel, (ii) a Code of Business Ethics, and (iii) a List of Prohibited Conducts. SEL and Grupotec also have an array of E&S templates that they will adapt to the Project and incorporate into SEL's ESMS. These include the following: (i) a Standard Preventative Maintenance O&M Plan; (ii) a Solid Waste Management Plan ("SWMP"), (iii) Construction Phase Plan ("CPP"), (iv) an Emergency Response Plan ("ERP"), (v) an EMP, (vi) a Site Security Plan ("SSP") and (vii) a Construction and Decommissioning and Traffic Management Method Statement.

4.1.d Organizational Capacity and Competency

SEL has a cadre comprised of a Technical Specialist, a Senior Project Development Manager, and a Head of Administration, supervised by the Company's Chief Executive Officer ("CEO"), who is Occupational Safety and Health Administration ("OSHA") certified. To oversee Health, Safety and Environment ("HSE") matters, Grupotec has proposed an HSE corporate engineer and an on-site HSE site Manager, including other supervisors and managers for the Project's construction and operation phases. The Company will prepare a final organigram outlining the full E&S team for the Project and will appoint a dedicated E&S Specialist.

4.1.e Emergency Preparedness and Response

The ERP template provides employee information and the actions to be taken in the event of an emergency. It has provisions for (i) first aid, (ii) communications, (iii) L&FS (including risk assessment, prevention, and protection systems), (iv) training and drills, (v) disaster management and (vi) monitoring and review procedures. With this template as a starting point, SEL will develop and implement a Project-specific ERP that is fully aligned with PS1.

4.1.f Stakeholder Engagement

The largest Installation (at the JAMALCO site) is between the northern Halse Hall Settlement and southern Hayes Cornpiece Settlement, the latter of which contains 3,289 dwellings⁷. The CB Group Installations are also located within and adjacent to other settlements, including the site at Newport Mills, that is in Kingston - the capital city of Jamaica. Although public consultations are not typical requirements of Municipal Corporations, SEL will develop a Project-specific Stakeholder Engagement Plan ("SEP") tailored to the characteristics and interests of potentially affected communities. This will be especially useful for the JAMALCO Installation, given its size and location near a major thoroughfare that connects its bordering settlements.

⁷ 2011 Census of Population and Housing, Statistical Institute of Jamaica.

4.1.g External Communication and Grievance Mechanisms

SEL and Grupotec will develop an External Grievance Mechanism (“EGM”) to receive and facilitate resolution of any concerns or grievances from the affected communities. SEL will appoint a Social Liaison Officer to manage the EGM together with the SEP.

4.2 Labor and Working Conditions

4.2.a Working Conditions and Management of Worker Relationships

The Project anticipates a peak of 60 workers during its construction phase (15% women) and around 5 workers during its operational phase. SEL’s direct workforce (including part-time employees) are 75% female and 25% male. No migrant workers are expected to be employed under the Project.

To accommodate female members of the Project’s workforce, multiple and adjustable sizes of Personal Protective Equipment (“PPE”) will be acquired and distributed to workers, including the security team.

4.2.a.i Human Resources Policies and Procedures

SEL has several policies that cover its employees’ rights, including: (i) an Employee Code of Conduct Company Policy, (ii) an Anti-Bribery and Anti-Corruption Policy and (iii) an Equality, Diversity, and Inclusion Policy. For its part, Grupotec has a Communication and Complaint Channel, a Code of Business Ethics, and a List of Prohibited Conducts that is applicable to its direct workforce. SEL will create an umbrella Human Resources (“HR”) Policy that sets out its approach to managing its employees. The Company will require Grupotec to comply with this policy and ensure that it is disseminated to all Project workers. Additionally, the Company will provide IDB Invest with evidence of Project contractor compliance with national labor laws.

4.2.a.ii Working Conditions and Terms of Employment

SEL will comply strictly with Jamaica’s local labour laws and require the same of its principal contractors.⁸ Under the Company’s Equality, Diversity, and Inclusion Policy, SEL does not discriminate on the basis of age, disability, gender, marriage, pregnancy, race, religion or sex, among others.⁹ The Policy opposes and avoids all forms of unlawful discrimination, including those related to pay and benefits, terms and conditions of employment, dealing with grievances and discipline, dismissal, redundancy, and parental leave, among others. Jamaican legislation allows for collective bargaining, and industrial relations rights in the country, though SEL has not identified any trade unions under the Project.

⁸ Labour Relations & Industrial Disputes Act (2014) and The Occupational Health & Safety Act, (2017).

⁹ In accordance with UK Equality Act (2010).

4.2.a.iii Grievance Mechanism

SEL employs an Individual Grievance Procedure which outlines formal and informal methods for employees to raise grievances. It also provides an impartial and confidential hotline and website by which mediation services can be accessed through the UK-based, Labour Relations Agency. Grupotec's Communication and Complaint Channel provides a procedure whereby its employees can provide knowledge on any criminal behaviors or events. To ensure that all Project employees and contractors have access to SEL's grievance channel, the Company will update its Internal Grievance Procedure.

4.2.a.iv Child and Forced Labor

Jamaica is a signatory to various International Labour Organization ("ILO") conventions and its national legislation prohibits child labor and forced or unpaid labor. SEL's HR Policy will explicitly prohibit the use of child and forced labor by SEL and its contractors.

4.2.b Occupational Health and Safety

The Project's OHSEMP covers all Installation sites and is applicable to contractors and subcontractors who will work on construction and operation of the facilities. It is in line with Good International Industry Practice ("GIIP") as it identifies: (i) a stakeholder map and HSE roles and responsibilities; (ii) potential risks via task-based risk assessments and Hazard and Operability ("HAZOP") Analyses; (iii) Key Performance Indicators ("KPIs") and reporting of occupational accidents and incidents; (iv) first aid and L&FS measures (fire prevention and detection systems); (v) drugs and alcohol testing protocols; (vi) preventative measures for various occupational risks (e.g. working in extreme temperatures, working at heights, hearing/noise control, confined space work, etc.); (vii) list of Personal Protective Equipment and Clothing ("PPEC"); (viii) traffic management; (ix) housekeeping, waste and hazardous materials management, (x) HSE training and induction, (xi) internal emergency communication procedures; (xii) an HSE regulatory framework applicable to Jamaican national laws; and (xiii) general health surveillance and monitoring.

In addition to the OHSEMP, Grupotec has a CPP template for the Project's construction phase that covers several overlapping HSE arrangements under the OHSEMP, but with some additional details on (i) contractor selection and control; (ii) Permits to Work ("PTWs"), (iii) site rules, and the (iv) inspection rights of Enforcing Agencies ("EAs"). Grupotec has a standard preventative maintenance schedule typical of ground-mounted solar PV installations, that will act as an O&M Management Plan and the contractor also collects accident and incident reporting metrics such as annual hours worked by year and Lost Time Incident Rate ("LTIR"), among others. To incorporate the standards of the CPP template, the Company will be required to update the OHSEMP and also include accident reporting procedures for the Project.

4.2.c Supply Chain

Grupotec has a List of Prohibited Conducts for suppliers covering behaviors in areas such as public health, natural resources and the environment.

4.3 Resource Efficiency and Pollution Prevention

4.3.a Resource Efficiency

The electrical auxiliary load for the Project will be supplied from existing grid connections at all Installation sites, through existing networks from the Jamaica Public Service (“JPS”) corporation.

4.3.a.i Greenhouse Gases

Given the small size of the Project (comprised of several smaller Installations) greenhouse gas “GHG” emissions during its construction phase are considered to be non-material and practically non-existent during its operation.

4.3.a.ii Water Consumption

The water to be used for the Project will include panel cleaning water to be drawn from available on-site water wells at the JAMALCO Installation site. At the CB Group sites, water will be acquired from the National Water Commission (“NWC”) municipal supply, or will otherwise be brought to the sites by trucks.

4.3.b Pollution Prevention

4.3.b.i Wastes

SEL and Grupotec will work with third-party contractors to ensure that any solid wastes generated at the sites from the Project are disposed of in an environmentally sound manner. Grupotec has a generic SWMP that is guided by UK-based waste management regulations, which provides general guidance on waste storage, transportation and disposal. The SWMP includes a checklist to be applied to all third-party waste contractors. Since the SWMP is not yet specific to the Jamaican context, the Company will prepare a Project-specific SWMP.

4.3.b.ii Hazardous Materials Management

Significant quantities of hazardous materials are not anticipated under the construction phase of the Project. Actions to manage the use of smaller quantities of hazardous wastes (e.g., solvents, paints, oils, etc.) are covered by the OHSEMP. Solar panels contain heavy metals and are considered hazardous wastes when disposed of. Since solar PV wastes can be generated in the Project’s operations and end-of life phases, the Company will include reuse and recycling procedures for hazardous solar PV wastes in the SWMP.

4.4 Community Health, Safety and Security

4.4.a Community Health and Safety

Increased traffic from Project construction activities can potentially affect communities, as several Installation sites are located within or adjacent to settlements. To address potential traffic incidents, Grupotec has a generic Construction and Decommissioning and Traffic Method Statement template that guides (i) delivery and traffic hours (e.g., outside peak and school pick-up/drop off times), (ii) maintenance of highway conditions, (iii) signage and (iv) materials' storage, (v) safety, and (vi) site security. With this template as a basis, SEL will prepare a Project-specific Traffic Management Plan ("TMP") and apply it to all Installation sites.

4.4.a.i Infrastructure and Equipment Design and Safety

The Project involves the construction of lightweight¹⁰ and inclined solar PV arrays at each Project site, some of which will be installed on existing infrastructure at the Newport Mills and Old Harbour locations. For the ground mounted Installations at JAMALCO, Freetown and Linstead, the Company has conducted geotechnical investigation studies to ensure array feasibility at these locations. SEL has indicated that lightning protection systems will also be included at the Installations and that the facility will be designed to withstand Category 4 hurricanes. Therefore arrays should be properly secured to avoid displacement and risks to Affected Communities. Grupotec is certified under the Quality Management System ("QMS") of ISO 9001: 2015, ISO 14001:2015 and ISO 45001:2018 standards¹¹ and these standards will be used to ensure quality control during the construction and operation phases.

4.4.b Security Personnel

JAMALCO and CB Group employ 24/7 onsite security personnel at all their premises, and SEL and Grupotec do not have oversight of the existing arrangements. Grupotec has a SSP template that outlines general information on (i) possible security threats, (ii) security measures, (iii) vetting processes, (iv) emergency communications, (v) training, (vi) disaster management, (vii) grievance management, and (viii) review. The Company will update the SPP¹² to be Project-specific. SEL will oversee Grupotec's implementation of this plan.

4.5 Land Acquisition and Involuntary Resettlement

All Installations for CB Group are already owned by the corporation and SEL will be leasing land for the JAMALCO Installation. The leased land is already owned by JAMALCO and is unoccupied, therefore the Project does not require any land acquisition; it will not involve any involuntary resettlement or produce any involuntary economic displacement.

¹⁰ Expected loading is less than 50 psf (2.4 kPa) on lightweight aluminum based framing supports.

¹¹ For the following activities: design, development, and construction of turnkey projects (EPCs) of renewable energy plants/installations, including all the activities and tasks necessary for their start-up, as well as their operation and maintenance (O&M).

¹² Guided by the principles of proportionality and good international practice such as The Voluntary Principles on Security and Human Rights.

4.6 Biodiversity Conservation and Natural Habitats

4.6.a General

The ground mounted Installations will be constructed in highly modified areas within the properties of JAMALCO and CB Group. Both JAMALCO Installation sites will be on manicured lawns with a few coconut and palm trees. Currently, these areas are mainly used for aesthetics/green-spaces. The Freetown site will be within fenced scrubland and the Linseed Installation will be on graded land. The Old Harbour and Newport Mills Installations will be roof mounted within residential and industrial areas respectively.

4.6.a.i Legally Protected Areas and Internationally Recognized Areas

Three of the Project sites (JAMALCO, Freetown and Old Harbour) are located within and adjacent to the PBPA Ramsar Site which was designated by the Government of Jamaica (“GOJ”) in 1999.¹³ JAMALCO was commissioned prior to this in 1970 and will hold the largest Installation. The PBPA is an Important Bird and Biodiversity Area (“IBA”) for the vulnerable (“VU”) West Indian Whistling Duck (*Dendrocygna arborea*), the near-threatened (“NT”) Plain Pigeon (*Patagioenas inornata*) and the White-crowned Pigeon (*Patagioenas leucocephala*) (NT), as well as the restricted range (and endemic subspecies) Bahama Mockingbird *Mimus (Gundlachi hillii)*. Other species include Flycatchers (*Myiarchus sp*), and the Jamaican Lizard Cuckoo (*Coccyzus vetula*).¹⁴ Construction activities will generate noise and vibration pollution that can affect fauna (especially birds) near to these sites. To avoid any potential impacts to protected species and habitats, mitigation measures included in the ESAs will be observed under the Project’s ESMS. The Company is currently awaiting permitting approval from NEPA before beginning construction.

4.7 Indigenous Peoples

No Indigenous peoples are in the Project area.

4.8 Cultural Heritage

The ESAs did not identify any archaeological remains or vestiges at the Project sites.

5 Local Access of Project Documentation

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

Contact: Sheldon Wynter, Project Development Associate, Soleco Energy Limited.

Phone: +1 (876) 382-4947

Email: swynter@soleco-energy.com

Website: www.soleco-energy.com

¹³ Under the Natural Resource Conservation Act of 1991.

¹⁴ BirdLife International (2021) Important Bird Areas factsheet: Portland Ridge and Bight.