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Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 28-May-2024 | Report No: PIDISDSA37164



BASIC INFORMATION

A. Basic Project Data

Country Haiti	Project ID P181584	Project Name Additional Financing: Haiti Renewable Energy For All	Parent Project ID (if any) P156719
Parent Project Name Haiti: Renewable Energy for All	Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date 04-Jun-2024	Estimated Board Date 26-Aug-2024
Practice Area (Lead) Energy & Extractives	Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance	Implementing Agency MTPTC Energy Cell, Ministry of Public Works, Transportation and Communication

Proposed Development Objective(s) Parent

The Project Development Objective is to scale-up renewable energy investments in Haiti in order to expand and improve access to electricity for households, businesses and community services.

Components

- Grid-connected distributed renewable energy
- Off-grid distributed renewable energy

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	20.00
Total Financing	20.00
of which IBRD/IDA	20.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	20.00
IDA Credit	20.00



Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

Other Decision (as needed)

B. Introduction and Context

1. The proposed Additional Financing is intended to help finance the expenses associated with the cost overrun of the initial scope of the project and the extension of its closing date by 18 months from December 31, 2024, to June 30, 2026. This AF is an IDA grant in the amount of SDRxxxx million (US\$20 million equivalent) for the Haiti Renewable Energy for All project (the Project, P156719).
2. The Renewable Energy for All Project of US\$26.5 million (the Project), approved on October 25, 2017, is funded by three trust funds, totaling US\$22.5 million (including two grants from the Climate Investment Funds, one under the Scaling up Renewable Energy Program, SREP, and the other under the Climate Technology Fund (CTF), for a total amount of US\$19.6 million, and a grant from ESMAP in the amount of US\$2.9 million) as well as an IDA grant (IDA-D7300) in the amount of US\$4.0 million approved as an additional financing on September 20, 2020 for COVID-19 response. The Project was declared effective on July 28, 2018, and the first disbursement was made on April 29, 2019.
3. The project includes demonstrating the viability of integrating solar PV generation into the national utility grid and providing grant funding for mini-grids and off-grid electrification to accelerate market development, increase affordability, and support rural development. The Project Development Objective (PDO) and implementation arrangements will remain unchanged. As for the anticipated results, it is expected that 430,000 individuals, 4,700 enterprises, and various community services will benefit from enhanced broader access to electricity. This improvement will stem from the Project's investments in both grid-connected and off-grid distributed renewable energy. The Project is implemented by Energy Cell of the Ministry of Public Works, Transportation and Communication (MTPTC).
4. The environmental assessment category and Safeguard Policies would remain unchanged. All activities are already included in the Project and would therefore be covered under the existing safeguards documents. The Environmental and Social Risk Classification for the AF activities is Moderate.

Country Context

5. **Haiti is one of the poorest, most fragile countries in the Western Hemisphere and has been experiencing a series of natural disaster, climate, and political shocks, which have negatively affected project implementation.** Despite a gross national income (GNI) per capita of US\$1430, about 58 percent of the 11 million Haitians live below the poverty line, with 24 percent living in extreme poverty. Vulnerability to shocks, political instability, lack of security, and exposure to natural disasters are some of the most significant challenges holding up Haiti's development progress. The 2010 earthquake destroyed the equivalent of 120 percent of its gross domestic product (GDP), while Hurricane Matthew in 2016 caused losses and damages amounting to 32 percent of GDP. The 2021 earthquake caused more than 2,000 deaths, with damage estimated at 10.9 percent of the 2019-



2020 GDP. The impacts of climate change are catastrophic in Haiti due to the combined effects of natural hazards, institutional fragility, and lack of resilience.

6. **Haiti has been driven by political violence and instability.** Over the past decades, Haiti has demonstrated a high degree of vulnerability to a significant number of economic and social crises with increasing inequalities and territorial disparities. Limited institutional capacity and lack of trust in public institutions at different levels have over time contributed to hindering citizens' access to basic services such as electricity and fueled social unrest. The persistent legacy of political and economic elite capture, compounded by deficient institutional mechanisms and policy fundamentals essential to inclusive development, has resulted in extreme welfare inequality and socioeconomic exclusion of most Haitian people, which is fueling grievances and cyclical unrest and violence. The lack of security due to increased violence and gang activities has contributed to the current acute humanitarian and food crisis and created a difficult environment for project implementation.

Sectoral and Institutional Context

7. The institutional arrangements for the electricity sector consist of the Ministry of Public Works, Transportation and Telecommunications (MTPTC) - in charge of energy sector policy, planning and development, the Ministry of Economy and Finance (MEF), which manages the subsidies allocated to EDH, the energy sector regulatory authority (ANARSE), the state-owned vertically integrated utility Electricité d'Haiti (EDH), the Office of Mines and Energy (BME) and the Haitian Energy Institute (IHE). On this institutional front, several positive aspects in the sector to highlight: (i) an adequate legal framework through the 2016 sector law, (ii) the electricity sector regulator (ANARSE) is established since end 2017 and is actively promoting private mini-grids and the concession of several EDH isolated systems, (iii) participation of private operators in on-grid generation, as well in off-grid initiatives with promising potential to increase electricity access in isolated communities. However, the policy, planning and development of the electricity sector are not aligned with the economic and social importance of this sector (there is no institution or department in charge of energy within the MTPTC and the current political situation of the country hinders any sector reform notably EDH).

8. **The Energy sector in Haiti is experiencing a worst-in-a-decade situation marked by country's extreme violence, recurrent fuel shortages, and near-collapse of the national utility EDH.** Overall electrification rate in 2023 is less than 47% (according to the SE4ALL Tracking SDG 7 database). The energy sector faces interlinked and self-reinforcing challenges. The key challenges include: (i) low electricity access (only 47 percent of the population has access to electricity, representing over 5 million of Haitians); (ii) high cost of – predominantly diesel-based - electricity generation; (iii) high aggregated technical and commercial losses (more than 60%); (iv) unreliable & inefficient Electricity Supply with shortage of electricity supply up to 12h/day in average, up to 22h/day in poor households areas); (iv) poor management and performance of the national utility- Electricity de Haiti (EDH), which is a drag on public finances, and required GoH's budgetary support, representing in 2019 about 1.9 percent of GDP. Haiti's high reliance on back-up diesel fuels is extremely costly, contributes to negative climate impacts and local air pollution, and exacerbates fiscal deficit.

9. **Haiti has excellent, yet mostly untapped renewable energy resources, including hydropower, solar PV, wind and biomass generation.** The development of on-grid Renewable Energy (RE) and off grid RE projects is the way to reduce the dependency to fossil fuels, while attracting private investment. The vast untapped RE potential has been studied in detail over the last few years, and the most suitable sites for each technology have been identified. Renewable energy technologies have the potential to displace fossil fuels, resulting in more reliable, affordable, and sustainable electricity access, including for healthcare and other public sector facilities, with benefits to the users and fiscal savings for the Government. The SREP project has however developed a public



solar PV with storage for the Southern grid of the country and received offers from international suppliers: the inflated cost of these offers in 2022 did not allow to award this market, but the interest from solar suppliers is a positive signal for future similar projects. The off-grid project (mini grids, mesh grids, and standalone solar systems) are gaining pace and many private actors are developing projects with the support of the GoH and World bank assistance.

C. Proposed Development Objective(s)

Original PDO

The Project Development Objective is to scale-up renewable energy investments in Haiti in order to expand and improve access to electricity for households, businesses and community services.

Current PDO

The Project Development Objective is to scale-up renewable energy investments in Haiti in order to expand and improve access to electricity for households, businesses and community services.

Key Results

There is no change in Key results indicators.

D. Project Description

10. The additional financing will support the completion of following activities:

(a). Component 1: Grid-Connected Distributed Renewable Energy (US\$12.00million):

- (i) **Design and installation PV solar system and Battery Energy storage System (BESS.** The AF will finance:
 - a. **The Design, Supply, and Installation (DSI) and O&M for the first three years of ground mounted solar PV 2 MWp/1.7MWac** with a fix tilt mounting system to be connected on the regional grid in Jacmel. at the identified site. The proposed site is at Mont Fleury (18°15'58.30" N, 072°32'23.60"W see fig1) with the government already having 240 acres of land. The PV system will be interconnected to the existing 23kV medium voltage grid of Jacmel.
 - b. **The Design, supply, and installation of BESS** in the same site at Jacmel and connected to the MV (Medium Voltage) sub- transmission line through a step-up substation. The BESS system designs used is comprised of the following: (i) Battery units (containerized) complete with Battery Management System (BMS), cooling, and fire protection; (ii) Grid forming Inverter and Power Conversion System (PCS) for converting DC to AC, accommodating 2 battery strings; (iii) a dedicated step up transformer to be



used for stepping up the battery inverter output voltage to MV distribution voltage levels;(iv) Ring Main Unit (RMU) switchgear for connecting to MV substation, and the option of forming a ring if more battery strings are to be added.

- c. **The design and installation of Medium Voltage (MV)** substation to collect the MVac outputs from the solar PV field or the BESS, for further connection to the grid connection infrastructure.
- d. A SCADA system will be installed to supervise and monitor the power flow. The feasibility study is done, and the procurement launched.
- (ii) Costs associated to the sustainability mechanism of the 1MW solar PV and 1 MWh battery storage systems for five top priority hospitals, and the installation of solar-powered water pumps at five water pumping sites.
- (iii) The additional financing will cover the cost overruns associated with delays in reviewing, approving, implementing, and supervising the SREP project's activities, which result from country lockdowns, insecurity in the streets, lack of transport, and poor internet connection, among other factors. It will also finance technical assistance to supervise the construction of the PV power plant and battery storage and ANARSE to continue the development of a new energy policy, a national electrification strategy and plan and the establishment of a regulatory framework for mini-networks.

(b). Under Component 2: Off-Grid Distributed Renewable Energy (USD\$8.00).

The additional financing will complement the financing to:

- (i) contract private sector-led mini grid concessions for 5 sites in rural areas. There is a pipeline of 10 sites selected during the process of call for proposal to develop mini-grids
- (ii) support the distribution of solar lanterns and solar home systems in rural and peri-urban areas to reach the planned target MW via the OGF instrument.
- (iii) support the renewable Energy for Productive and Community Uses (PUE)
- (iv) continue the Technical Assistance of the international fund manager and Capacity Building

E. Implementation

Institutional and Implementation Arrangements

11. **Project Management:** The implementation arrangements will not change. The existing Project Implementation Unit (PIU) that is managing SREP will manage the activities to be supported by AF.

12. The Project's Operations Manual will be updated to reflect the additional resources to finish the ongoing activities before June, 2024.

13. The Energy Cell will be responsible for Project monitoring, including for the AF, following the Monitoring and Evaluation (M&E) framework and reporting procedures established in the updated Operations Manual. Due to the increased security concerns, the M&E systems will apply innovative technologies, including remote



monitoring, which will reduce the need for physical on-site inspections. For example, the renewable energy installations at the hospitals and mini-grids plants will include sensors, which will allow remote monitoring. The Energy Cell will also expand the use of cell phone-based methods for consultations and monitoring, including for citizen engagement and Grievance Redress Mechanism (GRM), building on the cell phone-based surveys included in the parent Project. In addition, Energy Cell is contracting services of a local non-governmental organization (NGO) to support local consultations. Given the continued fragile and volatile institutional context and security risks, the Project will have specific implementation support and ongoing evaluation of whether the project implementation arrangements and/or monitoring and supervision procedures need to be changed.

14. The Project has an established coordination mechanism with the Ministry of Health through a memorandum of understanding to agree on the long-term O&M arrangements of health electricity facilities. UNOPS retained under an output-based contract, has completed the execution of the health centers and water facilities activities

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

Project activities will be nationwide.

G. Environmental and Social Safeguards Specialists on the Team

Hana Salah, Social Specialist
Lisbet Kugler, Environmental Specialist
Bruce MacPhail, Social Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	
Performance Standards for Private Sector Activities OP/BP 4.03	No	
Natural Habitats OP/BP 4.04	Yes	
Forests OP/BP 4.36	No	
Pest Management OP 4.09	No	
Physical Cultural Resources OP/BP 4.11	Yes	
Indigenous Peoples OP/BP 4.10	No	
Involuntary Resettlement OP/BP 4.12	Yes	



Safety of Dams OP/BP 4.37	Yes
Projects on International Waterways OP/BP 7.50	No
Projects in Disputed Areas OP/BP 7.60	No

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

Environmental: Potential environmental impacts include production of waste in the form of batteries and solar PV components; potential impacts to the land, water and natural habitats (from the siting of renewable energy generation sites and transmission lines); health and safety issues. Impacts during construction could include those associated to the influx of workers; noise, traffic disruption and dust during construction. The AF will also allow for the provision of TA activities to support the GoH to develop a national strategic plan to recycle and/or safely dispose of renewable energy related e-waste.

Social: Potential land acquisition, resettlement (especially squatters), loss of economic livelihood, potential safety and security impacts are possible.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area: Individuals who may be adversely affected are those who charge phones for community members for a fee. When people have access to their own systems, such individuals may be forced to shut their business. The ESMF includes mitigation measures targeting this group, which entail providing training courses to store owners to train them to become authorized distributors or maintenance technicians. Indirect and long-term effects of the project include indiscriminate dumping of batteries, some of which could be toxic (containing lead). ESMF includes mitigation measures related to the disposal of batteries. However, beneficial impacts include increased use of solar power that would reduce use of kerosene, candles and disposable batteries.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts. Different alternatives were considered and were informed by two previous projects, Rebuilding Energy Infrastructure and Access (IDA funding) (PRELEN) (P127203) and Modern Energy for All Project (CTF funding) (P154351). Lessons learned in these projects, as well as from similar projects in other regions, were applied in selecting the current project design to overcome the key energy access barriers identified by the key stakeholders during the preparation of the SREP Investment Plan for Haiti in order to initiate a transformation from primarily diesel-based power generation to a more diverse generation mix relying on an increasing share of renewable energy (RE). These include the evolving legal policy and regulatory framework; fiscal policies that are unfavorable to RE; limited knowledge of RE systems with energy professionals, technicians, and users; lack of local capacity and skills; and the spoilage of the market due to an influx of low quality RE products. Based on this knowledge, the market-based, technology-neutral and business model-neutral alternative was selected.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.



The Borrower has engaged a consultant to address safeguards issues through the preparation of the ESMF and RPF, which have now been completed. The ESMF and RPF includes guidelines for the production of specific EAs, EIAs or RAPs for subprojects, depending on the magnitude of impacts e.g., solar panel arrays. These EAs/EIAs and RAPs will be subject to review and approval by the Bank, and will address, as needed, environmental, social, health and safety impacts. In the case of micro-hydro, generic safety measures designed by qualified engineers will be included as part of the EIA for small dams (large dams will not be financed by the project).

To manage used batteries, which will become obsolete in the next 5-10 years; the Borrower will:

- 1) Promote low toxicity (Li-ion) batteries. Sub-projects will provide recycling and disposal plans for larger batteries (e.g. for mini-grids), and propose systems to collect and dispose of used batteries (from SHS and lanterns) as part of their application for SREP funding.
- 2) In the meantime, the MTPTC will commission a study that will cover (i) evaluation of risks posed by batteries produced under the project; (ii) evaluation of options for disposal and (iii) possible private sector solutions to recycling / disposal of batteries. MTPTC will solicit financing to carry out the recommendations of the study once it is concluded. The Energy Cell and MTPTC have indicated that they are favorable to allocating land for the disposal/storage of used Li-ion batteries.

As detailed section II above, the project benefits from the extensive past safeguards experience of the MTPTC PIU to plan and implement safeguards measures, and based on experience in managing safeguards of complex energy infrastructure investments in Haiti for the last ten years, both Government and donors financed. MTPTC has created the Energy Cell in 2012, implementing unit for SREP, which includes a socio-environmental safeguards specialist with adequate qualification. The socio-environmental specialist has been trained on environmental and social screening and monitoring of sub-projects and on the design/ implementation of the project level Grievance Redress Mechanism. In addition, entities implementing sub-projects will be provided with support and training during the course of the project to ensure adequate impact monitoring.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

Stakeholders include entrepreneurs, households, businesses, communities, NGOs, the Ministry of Public works (MTPTC) and its Energy cell and FDI. Consultations were held in Port-au-Prince targeting entrepreneurs, Government agencies, and civil society.

Lastly, individual subprojects will be subject to dialogue and consultation between the sponsor and the beneficiary, as the private sector will present competing proposals for available sites.

B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank	Date of submission for disclosure	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
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"In country" Disclosure

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank

Date of submission for disclosure

"In country" Disclosure

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting) (N.B. The sections below appear only if corresponding safeguard policy is triggered)



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APPROVAL

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