

## TC Document

### I. Basic Information for TC

▪ Country/Region:	HAITI
▪ TC Name:	Support to the execution of electricity access programs in Haiti
▪ TC Number:	HA-T1323
▪ Team Leader/Members:	Vanegas Rico, Wilkferg (INE/ENE) Team Leader; Cuervo, Javier (INE/ENE) Alternate Team Leader; Baron, Marie Edwige (CID/CHA); Jorge Luis Malpartida (INE/ENE); Juan Tulande Lopez (INE/ENE); Laura Hinstroza Olascuaga (INE/ENE); Oscar Alvarez (INE/ENE); Sara Vila Saintetienne (LEG/SGO) Team Leader; Cuervo, Javier (INE/ENE) Alternate Team Leader; Baron, Marie Edwige (CID/CHA); Jorge Luis Malpartida (INE/ENE); Juan Tulande Lopez (INE/ENE); Laura Hinstroza Olascuaga (INE/ENE); Oscar Alvarez (INE/ENE); Sara Vila Saintetienne (LEG/SGO)
▪ Taxonomy:	Operational Support
▪ Operation Supported by the TC:	HA-G1045, HA-L1140
▪ Date of TC Abstract authorization:	22 May 2023.
▪ Beneficiary:	Ministry of Economy and Finance (MEF)
▪ Executing Agency and contact name:	Inter-American Development Bank
▪ Donors providing funding:	OC SDP Window 2 - Infrastructure(W2B)
▪ IDB Funding Requested:	US\$150,000.00
▪ Local counterpart funding, if any:	US\$0
▪ Disbursement period (which includes Execution period):	36 months
▪ Required start date:	Jan 5th, 2024
▪ Types of consultants:	Individuals
▪ Prepared by Unit:	INE/ENE-Energy
▪ Unit of Disbursement Responsibility:	CID/CHA-Country Office Haiti
▪ TC included in Country Strategy (y/n):	Yes
▪ TC included in CPD (y/n):	Yes
▪ Alignment to the Update to the Institutional Strategy 2010-2023:	Social inclusion and equality; Productivity and innovation; Gender equality

### II. Description of the Associated Grant

- 2.1 **The “Improving Electricity Access in Haiti” Program (HA-L1140 and HA-G1045).**  
This Technical Cooperation (TC) will provide support to the execution of the operation “Improving Electricity Access in Haiti” Program ([4900/GR-HA, HA-L1140](#) and [GRT/CF-17708-HA, HA-G1045](#)), whose general objective is to increase reliable electricity access in Haiti that promotes economic development and to strengthen electricity sector governance. The specific objectives of the Program are: (i) the development of decentralized electrical mini-grids with private sector participation; (ii) fostering the supply of electricity with Renewable Energy (RE) in the *Parc Industriel de Caracol* (PIC); and (iii) strengthening sector regulatory and planning capabilities.
- 2.2 The Program was approved on November 13<sup>th</sup>, 2019. The total approved financing for the Program is US\$38 million, including US\$31.5 million USD from Inter-American Development Bank (IDB) Grant Facility for Haiti, and US\$6.5 million from the United

States Agency for International Development (USAID). [4900/GR-HA](#)'s eligibility was granted on May 18<sup>th</sup>, 2020, while [GRT/CF-17708-HA](#)'s eligibility was on June 25<sup>th</sup>, 2020.

- 2.3 The execution of the Program has suffered significant delays mainly due to, among others: (i) the growing instability generated an atmosphere of distrust in the private sector, reducing its interest in participating in bidding processes, and causing obstacles for private companies and government institutions to function normally because of fuel shortages and insecurity; and (ii) lack of experience of the Executing Agency (EA) in the energy sector together with a weakened capacity to perform its fiduciary responsibilities resulting from personnel moving out of the country, and a lack of flowing coordination with sector's institutions. By the end of the third quarter 2023, the Program has disbursed 7.1%. Between December 2023 and the first quarter 2024, the main contract under component 2 of the Program is expected to be signed, as well as 4 mini-grids under component 1. These contracts, along with existing commitments, will allow 90% of the funds to be committed.

### III. Objectives and Justification of the TC

- 3.1 The general objective of this TC is to support the Government of Haiti (GoH) to advance in the implementation of reliable electricity access projects in Haiti that promote economic development and strengthen the sector's governance. The specific objectives are: (i) to coordinate the execution of the operation "Improving Electricity Access in Haiti" ([4900/GR-HA](#) and [GRT/CF-17708-HA](#)) with other related activities financed by operations "Battery Energy Storage System to maximize the use of surplus energy from a solar photovoltaic plant located in the Caracol Industrial Park of Haiti" ([GRT/TC-19125-HA](#)), and "Development of sustainable energy access projects in Haiti with private sector participation" ([GRT/LE-19861-HA](#)); and (ii) to support the preparation of tender processes and evaluation of proposals, including specialized services for modeling energy access projects.
- 3.2 **Context.** Haiti's energy landscape is characterized by: (i) low level of electricity access and consumption; and (ii) heavy dependence on fossil fuels and biomass. The country has an estimated population of 11.6 million people<sup>1</sup> of which 41%<sup>2</sup> live in rural areas, located mostly far away from the national electricity grid. Electricity coverage in the country is around 43%.<sup>3</sup> Electricity costs are among the highest in the Latin America and Caribbean region (US\$0.33/kWh for residential customers in the Caribbean and between US\$0.37–US\$1.8/kWh for Haiti, partly explaining the low electrification rate. Providing access to the remaining population and fostering RE as a long-term sustainable solution is a significant challenge, which is further aggravated by the fact that most underserved and unconnected vulnerable communities are geographically distant from the ten regional grids operated by *Electricité d'Haïti* (EDH),<sup>4</sup> resulting in a significant increase in connection costs.
- 3.3 Current electricity access levels represent over 7 million people with no or inadequate access to electricity, and it is unlikely that these will be addressed by EDH in the next

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<sup>1</sup> [World Bank](#).

<sup>2</sup> [World Bank](#).

<sup>3</sup> [Energy Hub](#).

<sup>4</sup> Electricity generation, transmission and distribution in Haiti has historically been the realm of EDH, a vertically integrated utility founded in 1971. EDH's electricity service primarily covers the PAP metropolitan area, ten small regional grids plus about 30 village-level grids.

years due to high investment costs estimated to be over US\$5,000 million.<sup>5</sup> Private-decentralized renewable energy in the form of mini-grids, mesh-grids, and solar home systems (SHS) offers alternative prospects for electrification. Given that there are no mini-grids demonstrating long-term financial sustainability in Haiti, commercial capital is difficult to access. Due to these circumstances, it becomes important to financially support private companies (via grants and credit access) to develop long-term financially viable RE-based mini-grids and set the path for new private investment in the sector.

- 3.4 **Gender.** As in many countries, women’s access to higher decision-making levels remains a challenge in most if not all government and private sectors. Additionally, women encounter challenges such as lower education levels with limited employment opportunities.
- 3.5 To close the access gap, reduce CO<sub>2</sub> emissions, and improve the competitiveness of the country, the GoH has been working on several initiatives to develop decentralized off-grid RE solutions, such as the development of a 12MW solar Photovoltaic (PV) power plant (SPP) for the PIC and its surrounding communities to be funded by the Program, with an Energy Battery Storage System (BESS) through operation [GRT/TC-19125-HA](#) with resources from the Climate Technology Fund (CTF); and the development of mini-grids with private sector participation. As part of these efforts, in 2019, the GoH with financing from the “Renewable Energy for All” Project (TF0A5191) funded by the World Bank (WB), launched a Request for Proposal (RFP1) for the construction and operation of mini-grids. In 2020, building-up on these previous experiences, the GoH launched the program “*Programme Haïtien d’Accès des communautés Rurales à l’Energie Solaire*” (PHARES), which is funded by IDB through operation “Improving Electricity Access in Haiti” and WB’s program TF0A5191.
- 3.6 RFP1 and PHARES finance the development of solar-based mini-grids by providing a subsidy per connection to eligible mini-grid developers. Mini-grids awarded under RFP1 and PHARES will be built and operated by private companies through long-term concession contracts granted by the MPTPC. Concession contracts are awarded to qualified developers through a competitive process. Grants per connection will cover part of the CAPEX costs of each mini-grid; the remaining balance will be covered by the mini-grid developers via private financing and equity. This operation will enable the concessionaires to obtain an acceptable financial return on investment and offer affordable and sustainable tariffs.
- 3.7 **Off-Grid Electricity Fund (OGEF).** In 2019, the GoH with support from the CTF-funded Modern Energy Services for All Project (CTF Project, P154351) CTF Project, enabled the OGEF with an initial budget of US\$12.5 million for a period of 10 years. The objective of this Fund is to promote access to energy in areas not served by the national electricity grid, in partnership with private entities providing electrical products or services to households, businesses, and institutions, either through mini-grids or through individual systems using renewable energy sources. The Fund is managed by a partnership between (i) a local financial institution the Industrial Development Fund, and (ii) an international fund manager with international experience in investing in energy access, and competitively selected, Bamboo Capital Partners.<sup>6</sup> OGEF has worked closely with most of the mini-grid companies and developers in Haiti, which

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<sup>5</sup> [Energy Hub.](#)

<sup>6</sup> [Summary of the selection process of OGEF's fund manager.](#)

has built valuable knowledge on aspects to be considered to develop feasible projects. On December 14<sup>th</sup>, 2022, the Bank approved operation HA-G1053 for an amount of US\$2.5 million with financing from the Low Carbon Energy Fund for People and Planet (LCE) to enable private sector investments in rural and semi-urban areas of Haiti for the implementation of sustainable energy access projects.

- 3.8 **TC Justification.** Program's component 1 supports the Development of decentralized electrical mini-grids with private sector participation. From RFP1 of the WB and PHARES, the program has received 32 proposals. As of October 30<sup>th</sup>, 2023, two concession contracts have been signed, and eight are under negotiations. These contracts which are expected to start execution during the first quarter of 2024, will allow the installation of 4 MW of new RE capacity with energy storage and the connection of 50,000 people currently without access to electricity. Mini-grid developers are currently seeking the required private co-financing for the mini-grids. Component I has suffered significant delays because the average tariffs proposed by the developers were above the value expected by the GoH and the projected average energy consumption was very low. This is a result of the worsening of the socio-political situation in Haiti, which has increased the country's risk, therefore, the costs and scarcity of materials and fuel, as well as increased the risks for private investments in the country. The current situation has also created delays, since the mobilization to the areas where the projects will be developed has been extremely difficult due to lack of fuel and insecurity, making it complicated to finalize the technical and socio-environmental studies, as well as to negotiate with local authorities and stakeholders.
- 3.9 Component 2 of the Program supports the supply of electricity with RE in the Caracol Industrial Park. The tender process for the 12MW SPP and the BESS was launched in September 2020. The contract was awarded in June 2021, after a long period of negotiations between the government and the awarded company. Nevertheless, after the assassination of the president in July 2021, the company requested to postpone signing the contract until the situation in the country normalized and the presidential elections were held. Due to the high risk of indefinite postponement caused by election uncertainties, the government declared the process unsuccessful and initiated a new competitive tender in September 2021, and the contract was subsequently awarded in December 2021. However, after the award, the consortium requested several changes in the contract terms, including advance payment, guarantees, payment structure, etc. Negotiations between the consortium and the UTE-MEF continued until June 2022, when the parties reached an agreement, and the Bank granted its No Objection (NO) for the signature of the contract. Following the signing of the contract, the consortium requested further extensions for the deadline to present the performance guarantee. The consortium failed to meet the last deadline granted by the government in November 2022. As a result, the GoH cancelled the contract following standard procedures. A new bidding process is ongoing considering modifications to the scope of the contract, which involve: (i) incorporating the operation of PIC's existing thermal plant and the distribution network of users outside the PIC for the next five years;<sup>7</sup> and

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<sup>7</sup> The GOH launched in 2019, a bidding process for the NE grid concession that included the operation and maintenance (O&M) of the existing 10 MW PIC thermal plant and the distribution network of residential customers. In 2021, the process was declared unsuccessful after no agreement was reached with the awarded consortium on the contract. Given this situation, the GOH requested the Bank to include the O&M of the entire system under the bidding of the PIC solar plants for a period of five years, while in parallel to design and launch a new process for the long-term operation of the entire system.

- (ii) installation of a battery system for energy storage, to be financed with funds from operation HA-G1048.
- 3.10 **IDB experience and knowledge of Haiti's energy sector.** The IDB has been a key partner for the GoH to finance the repair of damaged infrastructure after the 2010 earthquake and hurricane Matthews and has supported the reform and transformation of the sector through several investments: [GRT/HR-14830](#) and [3413/GR-HA](#) "Rehabilitation of the Peligre Transmission Line" (2015, US\$23.7 million), [2073/GR-HA](#) "Peligre Hydroelectric Plant Rehabilitation Program" (2008, US\$12.5 million), [2684/GR-HA](#) "Supplementary Financing for the Peligre Hydroelectric Plant" (2011, US\$20 million), [2394/GR-HA](#) "Rehabilitation of the Electricity Distribution System in Port-au-Prince" (2007, US\$29.5 million), GEF-funded operation [GRT/FM-12093-HA](#) "Emergency Program for Solar Power Generation and Lighting" (2010, US\$0.5 million) and the [GRT/MC-12067-HA](#) Sustainable Energy and Climate Change Initiative project "Emergency Program for Solar Generation" (2010, US\$1 million) and budgetary operations: [GRT/HR-13877-HA](#) and [2953/GR-HA](#) (2013, US\$25 million), [2735/GR-HA](#) "Institutional Transformation and Modernization Program of the Energy Sector II" (2012, US\$12 million), [2548/GR-HA](#) "Institutional Transformation and Modernization Program of the Energy Sector I" (2011, US\$35 million) and [ATN/SF-12271-HA](#) "Towards a Sustainable Energy Sector Haiti -White Paper" (2010, US\$0.1 million). More recently the Bank approved operations [4900/GR-HA](#) and [GRT/CF-17708-HA](#) "Improving Electricity Access in Haiti" (2020, US\$38 million), [GRT/TC-19125-HA](#) and [HA-T1302](#) "Battery Energy Storage System to maximize the use of surplus energy from a solar photovoltaic plant located in the Caracol Industrial Park of Haiti" (2021, US\$3 million), and [GRT/LE-19861-HA](#) "Development of sustainable energy access projects in Haiti with private sector participation" (2022, US\$2.5 million).
- 3.11 **Strategic Alignment.** The TC is consistent with the cross-cutting areas of said operation: (i) Institutional Capacity and Rule of Law, by providing the sector with planning tools and building up the capacity of the Haitian state and the sector stakeholders to manage renewable energy access projects; (ii) Gender Equality and Diversity, by promoting gender balance in the operation and maintenance of electric systems; and (iii) Climate Change and Environmental Sustainability, by supporting activities aiming at reducing Green House Gas emissions from the electricity generation in the PIC and RE based mini-grids. .
- 3.12 The TC is aligned with the Bank's Second Update to the Institutional Strategy 2020-2023 (AB-3190-2), by addressing the development challenges of: (i) Social Inclusion and Equality, through the provision of a more affordable and sustainable basic service (electricity) in vulnerable communities, which is essential to achieve inclusive development, close inequality gaps and increase the productivity of the population and small businesses; and (ii) Productivity and Innovation, by promoting innovative technologies for sustainable electricity access, with RE and energy storage. The TC is consistent with the Sustainable Infrastructure Strategy for Competitiveness and Inclusive Growth (GN-2710-5) and with the Climate Change (GN-2835-10) and Energy (GN-2830-8) Sector Frameworks, by supporting sustainability and security of the energy sector with the introduction of modern and sustainable RE decentralized solutions and investments that reduce energy expenditure, strengthen infrastructure, and reduce GHG emissions.
- 3.13 The TC contributes to the Corporate Results Framework (CRF) 2020-2023 (GN-2727-12) mainly through the following indicators: (i) the number of

households with improved access to energy services; and (ii) the amount of avoided greenhouse gas emissions resulting from the substitution of fossil fuels-based generation. The TC is also aligned with the Ordinary Capital Strategic Development Program (OC SDP) Window 2, Infrastructure (W2B), specifically, with the priority areas of: (i) climate change and environmental sustainability by supporting the execution of renewable energy projects; and (ii) effective, efficient, and transparent institutions by identifying and implementing best practices for projects from a procurement, operational and financial perspective, strengthening the capacity of the EA.

- 3.14 The TC is consistent with the IDB Country Strategy (CS) with Haiti 2017-2021 (GN-2904)<sup>8</sup> as it promotes the technical dialogue with the GOH in the energy area to foster sustainability of the energy sector (¶3.1 of the CS), by supporting the development of mini-grids and the continuous development of the PIC. This TC will also contribute to the overarching strategic objectives of the CS, to foster inclusive and sustainable growth by supporting GoH's goals of expanding and sustaining private and public investment and enhancing access to basic public services, by supporting the Program with the review, update, and evaluation of RE projects located in the Northern Department with a high concentration of poverty as prioritized in the CS.
- 3.15 This TC also contributes to Haiti's Post-COVID Recovery Plan with regards to Pillar 2 "Improvement of infrastructure and services" and its strategic objective of providing accessible and competitive energy based on low carbon emission technologies and promoting the diversification of the energy matrix.

#### **IV. Description of activities/components and budget**

- 4.1 **Component I. Support for the development of mini-grids in Haiti (US\$75,000).** Finance consultancies with firms and individuals to strengthen the capacity of the institutions involved in the execution of the Program in: (i) reviewing the updated financial models and technical design that the mini-grid developers with contracts awarded under the RFP1 and PHARES program will submit within three months after the signature of the concession contracts. That review will consider a gender approach to address specific needs of women to ensure that the benefits of increased access to energy are maximized; (ii) developing a set of recommendations with lessons learned for future rounds of PHARES. This component will also finance a local consultant to support the EA in monitoring all contracts' milestones, updating the results matrix, PEP and systematically collecting information for the preparation of the semiannual reports and final evaluation.
- 4.2 **Component II. Support for the sustainability of the Caracol electric network (US\$75,000).** Finance consultancies with firms and individuals to perform the following specific activities, to assist the Autorité Nationale de Régulation du Secteur de l'Energie (ANARSE) in developing the procedures and documentation for the right to operate PIC's electricity system for the next five years, which must be granted by ANARSE before the commissioning of the SPP, and the preparation of the selection process for a long-term operator for the system: (i) drafting contract terms for the right to operate, and developing a methodology for tariff adjustments to be used during the O&M phase of the contract; and (ii) preparing technical and financial models for the long-term operation of the system.

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<sup>8</sup> The GN-2904 document is still in force and extended until December 15, 2023 (GN-2904-2).

- 4.3 The following table provides the total amount of funding needed by components. The total cost of this TC will be US\$150,000 which will be financed by the IDB Ordinary Capital (OC SDP Window 2 – Infrastructure W2B).

**Indicative Budget**

Component	Description	IDB/Fund Funding	Total Funding
<b>Component I</b>	Support for the development of mini-grids in Haiti	US\$75,000.00	US\$75,000.00
<b>Component II</b>	Support for the sustainability of the Caracol electric network	US\$75,000.00	US\$75,000.00
<b>Total</b>		<b>US\$150,000.00</b>	<b>US\$150,000.00</b>

**V. Executing agency and execution structure**

- 5.1 At the request of the beneficiary, the IDB, through the Energy Division (INE/ENE) in coordination with IDB’s Country Office in Haiti (CHA), will act as the Executing Agency (EA) of this TC. In accordance with document OP-619-4, being the Bank the EA of this component is justified under Annex II: “Compliance with internal requirements would delay the execution of the technical cooperation, jeopardizing achievement of its objectives”. These internal requirements are related to several controls included in the procurement processes led by any public entity in Haiti. The review and update of the financial models, feasibility evaluation and areas of improvement of existing mini-grids models, together with bidding documents for the selection process for the long-term operator of the Caracol network requires immediate attention, and coordination with the new system operator, the current thermal operator, UTE-MEF, *Cellule d’Energie*, ANARSE and USAID. IDB’s procurement procedures together with the capacity of the team to coordinate the dialogue with stakeholders will ensure alignment of the project with the execution of the SPP.
- 5.2 **Procurement Policies.** The IDB will be responsible for the selection and contracting of consulting firms and individual consultants. Activities to be executed are included in the Procurement Plan (Annex IV) and will be contracted in accordance with Bank policies as follows: (i) Hiring of individual consultants, as established in the regulations AM-650; (ii) Policy for the Selection and Contracting of Consulting Firms for Bank executed Operational Work according to GN-2765-4 and its associated operational guides (OP-1155-4); and (iii) contracting of logistics services and other services other than consulting, according to the policy GN-2303-28. The beneficiary may provide technical inputs to the terms of reference and reports of the consultants, such inputs should be provided directly to the Bank. The Bank will have the autonomy to approve such documents. The Unit of Disbursement Responsibility (UDR) is CID/CHA. The execution and disbursement period is 36 months. All knowledge products derived from this TC will be the Bank's intellectual property.
- 5.3 **Supervision and monitoring.** This will be carried out in accordance with “The Technical Cooperation Monitoring and Reporting System” (OP-1385-4). Supervision costs will be met with transactional budget to include three missions a year to Haiti. Likewise, the team leader will prepare an evaluation report at the closure of the TC,

which identifies the achievements and lessons learned, which serve as a reference for related operations.

## **VI. Major issues**

- 6.1 Security constraints and civil disturbance from the current socioeconomic crisis in Haiti may result in project execution delays due to travel restrictions for international consultants who cannot travel to Haiti. In that regard, several of the activities to be financed by this TC will be performed mostly remotely, with site visits when possible. Also, the Team will schedule periodic virtual meetings with all the stakeholders and consultants involved. In this way, the team will verify that the consultants have access to all the information necessary to carry out their work promptly. The bank, with support from CHA, will monitor the security situation in the country to identify the periods when travels to Haiti represent a lower risk for international consultants. Another risk is the lack of interest from international individual consultants and consulting firms in the procurement processes to be financed under this TC. This risk will be mitigated through extensive dissemination activities through different platforms and networks like ConnectAmericas. In addition, there is the risk of potential delays in the execution of this TC derived from slow progress in the implementation of component I and component II of the Program. This risk will be mitigated through regular meetings to follow up on the execution of the grant operation, together with supervision meetings to be scheduled with the executive agency.

## **VII. Exceptions to Bank policy**

- 7.1 No exceptions to the Bank's policies are requested.

## **VIII. Environmental and Social Aspects**

- 8.1 This TC will not finance feasibility or pre-feasibility studies of investment projects with associated environmental and social studies; therefore, it is excluded from the scope of the Bank's Environmental and Social Policy Framework (ESPF).

### **Required Annexes:**

[Results Matrix\\_83127.pdf](#)

[Terms of Reference\\_32128.pdf](#)

[Procurement Plan\\_11123.pdf](#)