

TC Document

I. Basic Information

▪ Country/Region:	Honduras/CID
▪ TC Name:	Renewable Energy Development in the Bay Islands
▪ TC Number:	HO-X1030
▪ Team Leader/Members:	Carlos Jácome (ENE/CHO) Team Leader; Edwin Malagón (INE/ ENE); Liliana López (INE/ENE); Maria Cristina Landazuri-Levey (LEG/SGO), Kelvin Suero (FMP/CHO); Juan Carlos Martel (FMP/CHO); and Ana Paz (CID/CHO).
▪ Indicate if: Operational Support, Client Support, or Research & Dissemination	Client Support
▪ Beneficiary (countries or entities which are the recipient of the technical assistance):	Republic of Honduras, Secretary of Energy, Natural Resources and Environment - SERNA and Governmental General Coordination Secretary
▪ Executing Agency and contact name	The Inter-American Development Bank (IDB), through Energy Division (INE/ENE).
▪ Donors providing funding:	Nordic Development Fund (NDF) – Project Specific Grant
▪ IDB Funding Requested:	US\$ 625,000 equivalent ¹
▪ Local counterpart funding, if any:	0
▪ Disbursement period (which includes Execution period):	30 months
▪ Required start date:	January 2015
▪ Types of consultants	Firm and Individual Consultants
▪ Prepared by Unit:	Energy Division (INE/ENE)
▪ Unit of Disbursement Responsibility:	Energy Division (INE/ENE)
▪ TC Included in Country Strategy:	Yes
▪ TC included in CPD:	No
▪ GCI-9 Sector Priority:	The TC is consistent with the following priorities: i) support the development of small and vulnerable countries and (ii) support climate change initiatives, renewable energy and the environmental sustainability.

II. Objectives and Justification

- 2.1 The overall objective is this TC is to support the Government of Honduras and local authorities of the Bay Island to determine the renewable energy potential specifically wind and solar resource in Utila, Guanaja and Roatán and evaluate the feasibility of using these sources to supply energy

¹ These funds will be administered by the IDB through a non-reimbursable project-specific grant (PSG). The Nordic Development Fund (NDF) will contribute 500,000 Euros which is equivalent to USD 625,000, based upon the exchange rate as of November 17th, 2014. This PSG will be administered by the IDB pursuant to document SC-114. In accordance with that document, the commitment of Nordic Development Fund (NDF) for the PSG will be established through a separate Administrative Agreement.

now dominated by fossil fuels. The assessment will be used to prepare a strategy and investment plan in order to reduce gradually the use of fossil fuels in the Bay Islands.

- 2.2 Roatán, Utila and Guanaja, the so called Bay Islands, together with Copan Ruins are the most touristic places in Honduras. The Islands have been favored because of their rich environment and marine diversity crossed by the second largest coral reef in the world. Its isolation from the mainland has contributed to keep its sensitive environment. Nevertheless, in order to satisfy the energy needs of the inhabitants and to develop economic activities fossil fuels need to be imported, transported and handled. The continued use of fossil fuel poses a high risk of environmental accidents caused by oil spills; some oil spills from fossil fuels to be used in the transport sector and power generation have been reported.
- 2.3 According to the National Tourism Institute 200,000 tourist visit the Islands due to its natural beauty. Tourists visit the Islands flying with domestic flights from the mainland and foreign visitors visit the Islands from cruisers and direct flights from Europe and North America. These visits contribute the economy of the country but at the same time increase the demand on fossil fuel. Power generation in the three Islands is carried out 100% on thermal fossil fuel, using high speed diesel equipment with low efficiency. Each Island has its own power utility that generates, distributes and commercializes electricity, all of them are private utilities. The National power Utility – ENEE does not participate in the power sector in the Islands but all the utilities are regulated by the Nacional Commission of Energy (CNE), the existing Power Regulatory Agency. According to the new General Law for the Electric Industry of 2014, the generation and distribution utilities will be regulated by the new Comisión Reguladora de Energía Eléctrica. Considering the high cost of fossil fuel, transportation, storing and distribution inside the Islands the production cost of electricity varies between 45 to 65 ¢USD/kWh, more than three times in comparison to the mainland.
- 2.4 High cost of electricity becomes a serious barrier for competitiveness of the tourism industry in the Islands and has affected the development of infrastructure projects such as water supply and wastewater treatment these projects demand energy for their operations. In addition, high prices affect social welfare limiting the opportunity of vulnerable groups to electricity access. According to statistics of the Social Development Secretary the Islands have around of 60% inhabitants reported as being poor or extremely poor and some of the most vulnerable inhabitants are English speaking afro-descendent ethnic groups, a traditional indigenous group from the country. Due to logistic constrains linked with the high cost of producing electricity there is a group of people that do not have access to electricity and one of the main reasons is the high cost of electricity in such places.
- 2.5 Bay Islands as other Caribbean Islands have good wind resource. The wind map of the country reported by SWERA conducted by the National Renewable Energy Laboratory – NREL shown that Guanaja and Roatán places with excellent wind resource in the country. There is not available information of solar resource in the Bay Islands; nevertheless, it is a well-known fact there is good solar radiation in the Islands. There is not available information on hydroelectric and biomass potential. The present proposal will collect the necessary data on renewable energy potential in the Bay Islands in order to prepare a strategy and an investment plan for changing the energy matrix. The renewable energy potential would be harnessed to supply clean, local and cheaper energy sources in comparison with thermal energy.
- 2.6 Finally, there is an important consideration expressed by the authorities of the government of Honduras and the local government of the Islands asking support to the bank (see the [Request from the Client](#)) aiming to reduce gradually the use of fossil fuels for power generation, increase access to electricity for the local population in the Islands, and make the Bay Islands a showcase

for the use of renewable energy. The government has identified the lack of local experience and knowledge of conducting strategic planning for introducing renewable energy in Island due to the fact that a governmental action is needed to encourage the private sector to allocate resources in the use of technology that due to the high level of participation in the energy matrix represent an relevant challenge, at the same time SERNA needs to strengthen its capacity to promote the use of clean technologies in high sensitive places according to good practices implemented in other places.

- 2.7 This strong commitment from the Government is an important asset for the implementation of a renewable energy program.
- 2.8 Strategic alignment. This TC is consistent with the lending program priorities of the Ninth General Increase in the Resources of the Inter-American Development Bank (GCI-9) of: (i) support the development of small and vulnerable countries and (ii) support climate change initiatives, renewable energy and the environmental sustainability. It is also consistent with the country strategy 2015-2018, which seeks to improve the sustainability and competitiveness of the power sector, increasing the quality of electricity service, and power generation from low emission sources providing the analysis to consider investment of SG and NSG loans in the sector.

III. Description of activities/components and budget

- 3.1 **Component 1: Renewable Energy Resource Assessment and feasibility studies:** This component will evaluate technical aspects for developing different renewable energy projects (wind energy and solar PV). This includes wind and solar resource assessment, the execution of feasibility (technical, environmental, economic and financial) studies to determine the viability of the project including engineering, environmental and financial aspects and other fields related to the project.
- 3.2 **Component 2: Renewable Energy Strategy & Investment Plan:** Based on the information of component 1 a renewable energy strategy will be prepared and this will identify suitable proposals for the short, medium and long term in the different islands considering technical, environmental, institutional organization and economic considerations. The renewable energy proposal will be necessary to prepare the investment plan that will summarize the investment requirements for the project and technical details.
- 3.3 **Component 3: Support to national and local authorities and project stakeholders.** This component will provide support to the different decision makers involved in the project; especially considering the new legal framework with the participation of a new power sector regulator, the natural resource and environmental institutions, municipalities and tourism authorities. In addition it will include capacity building and training of the local staff involved in the collection and monitoring of the data.
- 3.4 **Component 4: Coordination, Supervision and dissemination.** This component will provide support to finance a Project Management Unit that will work with the Renewable Energy Department of the Ministry of Natural Resources and Environment (SERNA) for the project implementation. Due to the multiple stakeholders that will be involved during the execution of the TC and the necessity of conducting activities in the Bay Islands there is the necessity of having a Project Management Unit that will coordinate directly with the different government entities such as the Energy Steering Committee responsible for establishing the energy policy in the country in compliance with the Ley General de Industria Eléctrica as well as with CREE for regulatory issues specific for the private utilities that operate in the Island and according to LGIE

will be regulated for the implementation of a new tariff system, it will also coordinate with other entities from the Government as Tourism Direction, Presidential Department and COALIANZA. The project management unit will also coordinate a dialog and guarantee the normal execution of the project with local stakeholders such as municipalities and environmental non-government organization. SERNA will profit from the experience and support from a high qualified and experience project coordinator hired under the TC. On the other hand in order to provide follow up to the TC and fulfill the monitoring of the project from IDB and NDF a monitoring consultant will also be hired.

- 3.5 Regarding dissemination and implementation of good lessons from other places the project will share experiences from other experiences on other Islands from the region such as Galapagos Islands, Alberto de Noronha of Brazil, Aruba and Bonaire.
- 3.6 The table 1 shows the Indicative Results Matrix, including the timing for completion as well as expected outputs of the TC. The expected time is 30 months taking into account that some activities, such as those related to component 2, depend on the results of component 1, which expected length is at least 18 months given the resource assessment process and procedures.

Table 1. Indicative Results Matrix

Component/ Activity	Results				Product
	Base 2014	2015	2016	2017	
Component 1: Renewable Energy Resource Assessment and feasibility studies					
Wind and solar measurement campaign			✓		Assessment Report
Wind and solar feasibility studies			✓		Final Report
Component 2: Renewable Energy Strategy & Investment Plan					
Renewable energy strategy Investment plan				✓	Final Report and Investment Plan
Component 3: Support to national and local authorities and project stakeholders					
Renewable energy policy impact assessment			✓		Final Report
Component 4: Coordination, Supervision and dissemination					
Project management unit reports dissemination		✓	✓	✓	Monthly Reports. Workshops

Table 2. Budget

Activity/ Component	Description	IDB/Fund Funding (US\$)
Component 1	Renewable Energy Resource Assessment Feasibility studies	300,000
Component 2	Renewable Energy Strategy Investment Plan	137,500
Component 3	Support to national and local authorities and project stakeholders	31,250
Component 4	Project Management Unit	100,000
	Contingency	25,000
Fee 5%		31,250
Total		625,000

- 3.7 The NDF expects to commit 500,000 Euros to this project, which is equivalent to USD 625,000. Final resources in USD will be dependent on the exchange rate of the date when the resources are received by the bank from NDF in Euros and converted into Dollars, pursuant to the terms of the arrangement to be entered between NDF and the Bank, as further detailed below. If a significant adverse movement in exchange rates reduce the amount of dollars contemplated in this budget from NDF's contribution and such amount cannot be covered by the contingency line item, the activities contemplated in the project will be decreased appropriately and the budget will be adjusted according by the project team.
- 3.8 Resources of this project to be received from NDF will be provided to the Bank through a Project Specific Grant (PSG). A PSG is administered by the Bank according to the "Report on COFABS, Ad-Hocs and CLFGS and a Proposal to Unify Them as Project Specific Grants (PFGs)" (Document SC-114). As contemplated in these procedures, and in the "Cooperation Agreement between Nordic Development Fund and the Inter-American Development Bank for the Cofinancing of Programs and Projects" dated as of October 2, 1994, amended and restated as of January 26, 2010 (Article IV, Section 6), the commitment from NDF will be established through a separate administration agreement. Under such agreement, the resources for this project will be administered by the Bank and the Bank will charge an administrative fee of 5% of the contribution, which is duly identified in the budget of this project. The 5% administrative fee will be charged after the contribution has been converted into US dollars.

IV. Executing agency and execution structure

- 4.1 The Republic of Honduras has requested the Bank to hire the consultants to be financed under this project. The Bank will contract individual consultants, consulting firms and non-consulting services in accordance with the Policies for the Selection and Contracting of Consultants Financed by the IDB (GN-2350-9), Corporate Procurement Policy and procedures (GN-2303-20) and Human Resources procedures (AM-650). This exceptional circumstance is justified due to the reform that is underway in the public sector of Honduras. The transition process in the energy sector makes it difficult to advance with the execution of this TC in a timeline that would guarantee the achievement of the objectives the TC. The Country Office Representation of IDB will coordinate with SERNA and the Governmental General Coordination Secretary.
- 4.2 The project team will be responsible for the preparation and submission to the donor of the project reporting in compliance with the stipulation of the Administration Agreement.
- 4.3 If at the end of project execution the project was closed with a positive uncommitted and unspent balance, the project team will be responsible for informing ORP/GCM to transfer the unspent balance as agreed to by the NDF and the Bank pursuant to the terms of the PSG Administration Agreement

V. Major issues

- 5.1 The main risks in the execution of this TC are: (i) adequate capacity of national staff and institutions to implement the project; (ii) difficulties in coordinating with different institutions involved, (ii) political willingness to promote changes (iii) delays in the implementation of the LGIE. To mitigate these risks (i) the consultants provided in this TC will be hired by the IDB following the Bank's procurement policies to select the consultants; (ii) support to local institutions will be conducted by this project including the national and local stakeholders; (iii) the bank is supporting the reform process of the power sector through a PBL.

VI. Exceptions to Bank policy

6.2 Exceptions to any Bank policy are not expected for this TC.

VII. Environmental and Social Strategy

7.1 The proposed TC will not finance direct investments in infrastructure. The Environmental Screening and Classification Toolkit have been applied, and the result was a “C” classification, under which no environmental assessment studies or consultations are required. The documents resulting from the use of the toolkit can be found under the following links: [Safeguard Policy Filter](#) and [Safeguard Screening Form](#)

7.2 It is expected that during this phase of the project there will not be environmental and social risks associated with the implementation of technical cooperation

Required Annexes:

- [Request from the Client](#)
- Terms of reference for consultancies:
 - ✓ [Project Manager IDBDOCS#39269803](#)
 - ✓ [Feasibility Studies IDBDOCS#39269800](#)
 - ✓ [Renewable Resources Evaluation IDBDOCS#39269801](#)
- [Procurement Plan IDBDOCS#39289319](#)