Climate Investment Funds

August 23, 2017

[APPROVAL BY MAIL]: HONDURAS: ERUS UNIVERSAL ENERGY ACCESS PROGRAM (SREP)(IDB)- XSREHN010A-

IDB RESPONSE TO COMMENTS FROM UNITED KINGDOM

A1: The Honduran Government selected Guanaja and Brus Laguna as beneficiaries of SREP resources because of the level of isolation of the towns, the socio-economic difficulties of their citizens, and the opportunity for the development of RE projects that will be catalyzers for using RE technologies in the surrounding areas.

As part of IDB's technical Cooperation "renewable energy resource evaluation in the Bay Islands", different alternatives for renewable energy production in Guanaja were assessed. Based on the available renewable energy resources and the financial resources for the ERUS project, it was recommended that a microgrid using solar power should be deployed first. Guanaja has good sites for PV production with capacity factors higher than 23%. In addition, the project team could find a good option for locating the PV panels, despite the land scarcity in the island (some of the surface area is reserved as protected areas, some surface has geographic and topographic constrains, and some land is devoted to private economic activities).

One area of Guanaja has the best wind resource in the Bay Islands. The development of this windy site will imply the development of infrastructure, including access roads and harbor improvement. The government is currently preparing a pre-feasibility study, including an assessment of the impacts of wind turbines on the local flora and fauna (results will be ready next year).

In the Moskitia region the use of local biomass is an option, but more detailed analyses in terms of biomass availability and environmental impacts are needed, especially because most of the area is protected.

Summing up, based on readiness for project implementation, environmental safeguards compliance, land access, RE resource availability, infrastructure requirements, and economic viability, microgrids based on PV and supported with energy storage were the selected option.

The main reason for the high costs of electricity in Guanaja and Brus Laguna is the complexity involved in logistics. The Gracias a Dios - Mosquitia Region, where Brus Laguna is located, is the Amazons of Central America: It is the only department in the Honduran mainland that has no road connection to other departments. Reaching Brus Laguna involves traveling by boat from Puerto Lempira, the capital of Gracias a Dios, or from La Ceiba. These logistics constraints increase the price of goods and services. For both projects, civil and logistics cost represent 30 to 36% of the total investment.

As we informed before, the GoH has demonstrated its commitment for expanding the market of RE and its effort has been widely recognized. Nevertheless, most efforts have been focused on grid-connected RE market development, and a different framework is needed for isolated places. The ERUS micro-grid project will be the first of its kind and will provide key information and practical experience for the design of policies and regulations for the use of RE in isolated areas. Thanks to the SREP resources and other resources that the Bank administrates, IDB will continue supporting the GoH with technical assistance for the development of the appropriate legal scheme that will enable reducing the electrification gap.

A2: As we informed in our previous response (A3 to the UK), the NPV was calculated considering the total cash flow of expenses and revenues.

Revenues only take into consideration the electricity sales. In order to be conservative, we considered the electricity sales with the current rate, which has been relatively low, given the current price of diesel (for more details please see A3). Benefits from GHG emission reduction or the potential sale of renewable energy certificates were not considered.

Expenses include operation and maintenance expenses, and the replacement of batteries, inverters, and other critical equipment.

A3: In Honduras, the price of oil products is regulated by the Oil Administration Commission (CAP), a government agency. The price of diesel, in particular, depends on the international prices, plus transportation costs inside the country, plus dealer costs and taxes. Transport costs are determined by each agent as a function of distance, complexity of transportation and the infrastructure available in both ends.

The diesel for both Guanaja and Brus Laguna comes from Puerto Castilla in the Caribbean coast. The navigation distance from Puerto Castilla to Guanaja is 45 km and the power plant is located next to the shore. The distance to Brus lake (entrance point to Brus Laguna) is 310 km by sea, 13 km to cross the lake, and finally 1.2 km by truck. This makes oil products more expensive in Brus Laguna than in Guanaja.

With regards to your concern about the NPV turning negative, the economic analysis was made considering a reference scenario with electricity rates that correspond to an oil price of USD 50/barrel. The sensitivity analysis considered a theoretical worst-case scenario of electricity rates that are approximately 20% lower than the reference scenario (in which case NPV would indeed be negative). However, the rules for determining electricity rates in Honduras establish that when the international price of oil is lower than USD 46/barrel, electricity rates will remain constant at the USD 46/barrel level. This means that the worst-case scenario cannot happen under the current regulations and with the current generation technology and fuel.

Summing up, under the current regulations, electricity rates in Guanaja and Bruss Laguna cannot be lower than 5% under the reference scenario, and there is no risk that NPV could reach negative values. We used the same constant value of electricity rates during all the lifetime of the project in the cash flow to make a conservative analysis.

A4: The capacity factor for PV projects in Guanaja is 22%, in Brus Laguna is 18% and in Choluteca 25%. Data for Guanaja come from solar measurements conducted under the IDB-funded technical cooperation study. Data for Brus Laguna comes from a Multilateral Investment Fund's project that has installed meteorological stations (the focus of this project is climate change adaptation, but it has produced useful solar radiation data). Finally, data for Choluteca come from a nearby large-scale PV project connected to the grid.

A5: Consultations will take place before the project goes to the IDB's Operation Policy Committee, a phase before contract negotiation and Board approval. It is a Bank requirement to have the public consultations. A map of principal stakeholders has already been carried out. Invitations will be sent in accordance to this map. Public consultations should be held in a public place and easily accessible by the stakeholders. They should take place in a date in which the stakeholders would most probably be able to attend, given their social and economic activities.

The IDB has provided guidelines to the executing agency to carry out a meaningful consultation process, following the Bank's procedures. A consultation report will be annexed to the final environmental and social analysis of the operation prior to the IDB's OPC. Recommendations raised on the consultation process should be reflected.

The IDB group has experience carrying out consultations and executing projects in the communities where the projects will be implemented. Therefore, there is knowledge of the local customs, institutional setup, and governance.

In addition, given that some of the beneficiaries are defined as belonging to indigenous groups, the consultations will need to take into consideration their socio-cultural particularities, as established by

the IDB's environmental and social standards. For instance, since there are some stakeholders who do not speak Spanish, the consultation should be performed as well in the local language (Miskito language in Brus Laguna and Caribbean English in Guanaja).

In Brus Laguna, the Biocultural protocol for the consultation process is followed with Moskitia communities. This procedure, under the characteristics of a free, prior and informed consultation, ensures a wide and fair participation of the beneficiaries of an activity or project in indigenous territories. It includes the following aspects:

a) First contact
b) Agreement on the process
c) Discussion of relevant information
d) Decision making
e) Negotiation between communities and relevant actors
f) Agreement on Consent
g) Implementation and monitoring

The Bio-cultural protocol defines also the actors that should be contacted and how the consultations should be made. The political organization of the Miskitu People in Honduras is MASTA "Miskitu AslaTakanka" (Miskita Unit). This organization has a Board of Directors, Territorial Councils and their respective Communal Councils, which have in turn their own Boards of Directors. The project consultation processes are managed in coordination with these structures and according to their guidelines.

What interest do they represent?
According to the IDB guidelines for Public consultations, the executing agency should ensure representation of all sectors with interests. Community authorities, government institutions (Ministries of Natural Resources and Environment, Health, Education), mayor of the city, the productive sector (tourism in Guanaja and fishing in Brus Laguna), representatives of political organizations, other stakeholders. All stakeholders will be part of the consultation processes during the project lifecycle. When required, bilateral meetings with stakeholders could also be held to explore specific issues.

How will less educated, or less vocal people be heard?
In Brus Laguna (Moskitia) and in Guanaja, local translators will be available during the consultation process, so that they can translate to people who do not speak Spanish. A strategy that works very well to promote the participation of the shier or less educated people, and in some cases of women, is the division into smaller discussion groups, so that they present the results of their discussion and reflections on the subject. The executing agency has also a strategy to receive questions, comments and suggestions by means of an open mail box and a telephone line to receive calls. After the consultation period, the executing agency is compelled to report all the comments and questions

The implementation strategies of the consultations will consider these elements, in addition to those that are provided in the free, prior and informed consultation protocol (Prior Consultation).

Will the decisions taken be robust?
The decisions taken will be backed up by key stakeholders, through a transparent exchange of information and opinions in a free, secure and trustworthy space. The participants will jointly construct an agreement that will be written and signed as a testimony of their consent and conditions.

A6: We suppose you mean Q5, which refers to the solar home systems in Choluteca. Here, only the upfront investments will be subsidized. The level of subsidy will be determined as a function of the socioeconomic situation of the beneficiaries by the executing agency, with the support of the National Center of Information for the social sector (CENIS), which is the entity responsible for establishing social programs for poor communities. The level of subsidy will be determined using the Single

Registration of Participants, a national tool for focusing and allocating subsidies, that allows knowing the socioeconomic situation of the beneficiaries.

The period of time for allocating the subsidies will depend on the improvements of the economy of the country, but also on the level of progress of other programs (rural electrification with grid connections, rural roads development, and microgrid development). It will also depend on the evolution of the solar PV and energy storage markets for individual home systems (given the high dispersion of houses in Choluteca, micro-grids are currently more expensive, but this may change in the future). If the prices of PV systems come down, the need for subsidies would be lower.