

Annex I: Common Format for Project/Program Concept Note for Applying Resources from the SREP Competitive Set-Aside (Round II)

1. Country/Region:	<i>Honduras</i>	2. CIF Project ID#:	
3. Project/Program Title:	<i>Honduran Self-Supply Renewable Energy Guarantee Program</i>		
4. Date of Endorsement of the Investment Plan:	<i>November 1, 2011</i>		
5. Funding Request (in million USD equivalent):	<i>Grant: \$500,000</i>	<i>Non-Grant (guarantee): \$5M</i>	
6. Implementing MDB(s):	<i>Inter-American Development Bank</i>	<i>X Private sector arm</i>	
7. Executing Agency:	<i>Inter-American Development Bank</i>		
8. MDB Focal Point and Project/Program Task Team Leader (TTL):	<i>Headquarters- Focal Point: Claudio Alatorre, Climate Change and Sustainability Division</i>	<i>TTL: Patrick Doyle, Structured and Corporate Finance Department</i>	

I. General Project/Program Description: The proposed \$5 million SREP reimbursable contribution will be used to establish a Guarantee Program that will provide first-loss guarantees to Inter-American Development Bank (IDB) loans for self-supply renewable energy projects in Honduras. In 2013, the IDB’s Structured and Corporate Finance (SCF) Department established a \$50 million Facility to offer loans ranging in size from US\$500,000 to US\$5,000,000 for investments in self-supply (“behind the meter”) renewable energy projects across Latin America and the Caribbean. The IDB has also been conducting detailed self-supply renewable energy engineering feasibility studies in Honduras with non-reimbursable funding from the Nordic Development Fund. Eight of these investment grade studies have been conducted in Honduras and have demonstrated the economic viability of numerous solar and biogas projects to the company’s management. However, in many cases, the loan size, tenors, and security requirements of these investments exceed both local bank and the IDB’s risk tolerances. The proposed \$5 million SREP Honduran Self-Supply Renewable Energy Guarantee Program will be used to provide first-loss guarantees for IDB direct loans to corporations, improving the credit profile of the projects and allowing access to appropriate finance. With this Fund the Bank expects to support over \$40 million of investment in self-supply renewable energy projects in Honduras. Additionally, these projects will establish local engineering capacity for their technical design, establish supply chains for equipment procurement, and demonstrate the market potential to local financial institutions. The requested \$500,000 grant contribution would support training and capacity building activities, as well as additional feasibility studies or legal costs if they make the projects economically unviable. The market potential for biogas, small-scale biomass and solar projects is significant, and the demonstration impact of the SREP and IDB supported projects could lead to significant replication, reaching \$100 million or more in investment in similar projects in the near future.

II. Context and market: Honduras' electricity sector is under stress, with high costs for electricity distribution, transmission, peak demand and energy consumption. The electric utility (ENEE) has showed weaknesses in its corporate and business practices in the past therefore the electricity sector is currently being reformed. For heat, it has limited access to natural gas, and relies heavily on expensive oil-derived bunker fuel for industrial processing that requires thermal energy. Yet it has ample distributed renewable resources that can be captured to provide electrical and thermal energy on-site. Biogas alone is estimated to have an economically exploitable potential of 366 million Normal cubic meters (Nm³) annually according to a study carried out by the United Nations Development Programme in 2011 (equivalent to 366 MW of thermal and 146 MW of electric capacity)¹. Moreover, according to Ministry of Natural Resources, the biomass electricity potential is around 361.1 MW² which represents about 20% of the existing generating capacity.

Distributed self-supply with renewable energy will have many benefits including reducing the strain on the electricity and transportation systems, decreasing electricity costs, enhancing energy security and improving trade balances. In addition distributed self-supply with renewable energy can provide significant greenhouse gas savings derived from the substitution of fossil fuels already used in industrial processing and capture of methane when dealing with biomass waste. Self-generation of energy from on-site renewable systems is increasingly economical as technology costs decrease, fossil fuel prices rise, and new business models for financing projects emerge. Unfortunately currently there remain considerable market barriers to Honduran companies who wish to implement these technologies. As renewable technologies generally have higher initial capital costs and longer pay-backs than more polluting alternatives-any risk premiums, including traditional credit, currency and political risks, are amplified. In addition, renewable technologies are less proven which results in higher risks. Therefore, access to affordable, long-term finance is essential to level the playing field. This long-term debt is unavailable in Honduras for many companies. And even under the third-party finance model or "PPA" model, common in the U.S. and Europe, the Honduran corporate that is purchasing the power or heat must have strong creditworthiness or the third-party company will not be able to access the credit it needs to finance the project and operate and sell the renewable energy to the Honduran corporation. Particularly when the solar panels or biogas system will be incorporated into the facilities of a manufacturing plant (placed on the companies' rooftops or into their wastewater treatment system), strong corporate credit of the host company is vital to access finance. By financing these projects directly, the IDB will prove both the technologies and their financial returns.

III. Detailed Project description and Innovation:

a. Innovation: The proposed Program financial structure is innovative in that it will allow the IDB to provide debt to private companies in Honduras that it otherwise could not. It will also support innovative renewable projects, such as a 3MW rooftop project, the first commercial scale solar projects in Honduras, effectively creating a more robust market for these technologies in the country. Lastly, it may support new business models such as third-party finance of projects within companies' facilities. This third-party finance or "PPA" model has greatly expanded the growth of the solar industry in the U.S., resulting in over half the installed

¹ SNV/UNDP/SERNA (2012) Estudio sobre el potencial de desarrollo de iniciativas de biogás a nivel productivo en Honduras.

² SERNA/DGE (2009) Desarrollo Energético del Subsector Biomásico de Honduras.

solar for residential and commercial consumers in recent years. There are no such projects in Honduras to date, but there are several solar companies in discussions with corporations to provide power from rooftop solar under long term PPAs. The \$500,000 grant funding requested may be used to reduce the contractual and legal costs associated with these projects to the extent they make the projects economically unviable.

- b. Technology, Product, and/or Business Model:** The primary technologies proposed are solar, thermal or photovoltaic, and the use of non-sugar cane agricultural wastes and wastewater to produce biogas or biomass thermal and electrical energy.
- c. Increased supply of renewable energy or increased access to modern energy services, as applicable:**
 - i. Increased supply of renewable energy.** The project is expected to support directly at least \$40 million in investment, 20MW or more installed capacity, Based on the capacity factors provided by the admin unit³ and assuming this is 10MW of biogas/biomass and 10MW of solar⁴, this would result in over 80,000 MWh produced each year.
 - ii. Increased access to modern energy services:** The project will directly support at least 20 companies to supply their own renewable energy. These companies each employ hundreds of women and men who will benefit from the project due to the companies lower long-term energy costs, increased energy security and enhanced competitiveness, which should normally contribute to continuous and increased employment.
- d. Increased supply of renewable energy:** The total capacity in Honduras was of 1.7 GW in 2012 according to CEPAL⁵ and the direct projects financed by SREP Guarantees would be at least 20MW. However we expect several hundred MW to follow.
- e. Commercial sustainability:** There are risk barriers to these projects currently in Honduras which will be overcome by the IDB providing the long-term financing necessary to install 20MW or more in self-supply from renewable energy. The IDB and other MDBs have credit lines with local banks for renewable energy investment currently in place, but they have not been used for the small-scale renewable energy projects that this Program will support. In 2012, the IDB's Structured and Corporate Finance (SCF) Department has conducted training on renewable energy with the Honduran Banking Association⁶ and two banks which have "planetBanking green lines" with the IDB. The \$500,000 in grant funding requested will be used in part to provide additional training to local banks which is focused on the opportunities to lend for small-scale self-supply projects. The Program will "crowd in" rather than "crowd out" private sector lending for climate change, and the first-loss guarantees will be provided on case-by-case basis to address risk and cost barriers identified in each project and will be allocated based on the principle of minimum concessionality. The IDB will lend no more than

³ For consistency across proposals, we suggest that we stipulate the assumption regarding average capacity factors for each RE technology; e.g., 30% for wind, 20% for solar PV; 85% for geothermal; 50% for hydro; 60-80% for biomass. (xx MW installed X 8760 hours X capacity factor = annual MWh)

⁴ A significant amount of the solar will be solar thermal which may have higher capacity factors than the 20% assumed.

⁵ CEPAL (2012) Centroamérica: Estadísticas del subsector eléctrico 2012.

⁶ Asociación Hondureña de Instituciones Bancarias (AHIBA)

50% of the total project costs to each project, and although the remaining 50% is expected to be corporate equity until risk perceptions are reduced, the IDB will seek local bank co-financiers for the remaining debt. With regard to the third-party PPA model, the grant funding requested may be used to pay for the contractual and legal documentation necessary for the establishment of this business model and its acceptance by local financial intermediaries.

f. Other benefits: The IDB will document the GHG reductions and other environmental benefits (such as waste reductions). Other benefits include increasing energy security, reducing fossil fuel imports, and decreasing the need for costly transmission and distribution investments. The project will directly support at least 20 companies to supply their own renewable energy. These companies each employ hundreds of women and men who will benefit from the project due to the companies lower long-term energy costs, increased energy security and enhanced competitiveness, which should normally contribute to continuous and increased employment.

IV. Rationale for SREP funding: Small-scale, self-supply renewable generation lending is an underserved sector. The project sizes are small in terms of installed capacity (relative to utility-scale projects), but large in comparison with the balance sheets of the companies that can implement these projects. The projects themselves do not provide significant security to allow for standard, asset-based lending, which results in unnecessarily high risk premiums, high collateral requirements, and short loan tenors. The proposed Guarantee Fund is designed to address these financial barriers by providing loans with minimal transaction costs, at sufficiently long tenors and without high collateral requirements – yet within the risk appetite of the IDB due to the credit enhancements provided by SREP.

V. Consistency with Investment Criteria: The project will directly increase installed capacity from renewable energy and support the affordability and competitiveness and productive use of renewable energy from on-site sources. In addition it will reduce energy costs of Honduran businesses, and help reduce dependence on imported petroleum products. It will also support the establishment of a new business model and associated legal and contractual frameworks for self-supply project financed by third parties.

VI.

VII. Financial Plan (Indicative):

Source of Funding	Amount (USD million equivalent)	Type of instrument	Percent age (%)
Project developer - Corporations	\$20	Equity or corporate debt from local bank loans if possible	50%
IDB	\$15 (\$20M total debt, with \$5M guaranteed by SREP)	Loans	37.5%
SREP	\$5	Guarantee of IDB Loans	12.5%
TOTAL	\$40		100

VIII. Implementation Feasibility: This program will be implemented immediately upon the establishment of the Guarantee Fund. The IDB Board has already approved a \$50 million Facility (RG-X1136), allowing SCF to provide loans of up to \$5M per project with facilitated approval procedures for these self-supply renewable energy projects. IDB has previous experience with

similar donor-backed Guarantee Funds and has established legal and administrative procedures. Over the past two years, with funding from the Nordic Development Fund, IDB has completed eight detailed self-supply renewable energy feasibility studies with private companies in Honduras and four more are underway. These studies demonstrate the economic viability of over \$35 million in solar PV, solar thermal, and wastewater biogas projects with diverse companies including an aquaculture producer, rice processor, recycling plant, a meat processor, a hospital and a university as well as beverage and textile plants and commercial buildings. The \$500K in grant funding requested may support additional studies as necessary. IDB is currently conducting financial due diligence with several of these companies currently, one of which is a borrower with a strong credit rating and could be the first commercial scale solar plant in Honduras. A first-loss guarantee from SREP will greatly facilitate IDB's ability to finance these projects, as many Honduran corporations have risk profiles that prevent access to the long-term capital needed for their implementation.

IX. Potential Risks and Mitigation Measures: Due to the degree of knowledge that IDB has developed in Honduras by working with private companies on feasibility studies through the support of the Nordic Development Fund, the economic viability of the projects is not a risk. As the proposed projects are “behind the meter” and do not require regulatory approval, this significantly lowers implementation risks. Currently, the private sector in Honduras is interested in investing in long-term investments such as the renewable energy projects proposed. But the success of the SREP Guarantee Fund requires private companies to take on debt to make long term investments. There is a risk that if the macro-economic situation in Honduras changes, private investment could become restrained.