Cover Page for Project/Program Approval Request			
1. Country/Region:	Honduras	**2. CIF Project ID#**:	PSREHN012A
3. Source of Funding:	☐ FIP	☐ PPCR	☑ SREP
4. Project/Program Title:	ERUS – Solar-Powered ~~Peripheral Clinics~~Mobile Health Units for Honduras		
5. Type of CIF Investment:	☐ Public	☑ Private	☐ Mixed
6. Funding Request in million USD equivalent:	*Grant:* 1.4	*Non-Grant:* 0	
7. Implementing MDB(s):	Inter-American Development Bank (IDB) Group		
8. National Implementing Agency:	Fundación Ayuda en Acción (AeA)		
9. MDB Focal Point and Project/Program Task Team Leader (TTL):	*Headquarters- Focal Point:* Claudio Alatorre (calatorre@iadb.org)	*TTL:* Fausto Tomas Castillo (faustoc@iadb.org)	

10. Project/Program Description (including objectives and expected outcomes)**:**

This cover page and project document is an updated version prepared in October 2020. A new approval by the SREP Technical Committee is hereby requested, because the co-financing figures have changed since the original approval was granted in June 2020.

Introduction to the Changes in Co-Finance

The original project was approved on June 12, 2020. On June 23 the IDB Lab contribution to this project was reduced from USD 400,000 to USD 150,000, with the aim of simplifying the approval process, considering the project's emergency-response nature. As the counterpart financing is proportional to the IDB Lab contribution, it was also reduced from USD 350,000 to USD 150,000. Finally, on June 29, it was confirmed that the Nordic Development Fund (NDF), which had contemplated a possible contribution of USD 550,000, would not prioritize this project for funding, since it fell outside the fund's strategic focus.

Considering the importance of the batteries in this project, the IDB is planning to request USD 500,000 for this project from the CTF's Global Energy Storage Program (the project proposal will be submitted once the GESP pipeline is endorsed by the CTF Trust-Fund Committee). Assuming that the CTF GESP resources are approved, the net reduction in funding for this project would be USD 500,000.

The IDB Lab addressed this decrease by reducing the amount of Component 2 (Improvement of Health Service Quality) from USD 650,000 (originally budgeted) to USD 110,000. First, negotiations held with the Public Health Ministry led to an increased allocation of qualified medical personnel to the SHUs. Second, opportunities were identified to reduce the costs related to the telemedicine systems, thanks to inputs from the World Health Organization, the Pan-American Health Organization, and the European Union, which enabled the project team to identify existing and available telemedicine systems, without the need to procure them.

On account of these opportunities, the IDB Lab team managaed to restructure the project without reducing its original scope (20 solar-powered health units) and its key results, including renewable energy capacity and GHG emission reduction. Furthermore, the restructuring led to an increase in the expected number of beneficiaries from 73,080 to 97,444. Also, an additional component (4) related to the management of the project was included (which will be covered by the counterpart contribution).

The project title was changed to *Mobile Health Units*, in order to be consistent with the nomenclature given by the health sector to this sort of health infrastructure.

Fit with the Investment Plan of Honduras:

The Scaling-Up Renewable Energy in Low-Income Countries (SREP) Investment Plan (IP) for Honduras, endorsed by the SREP Sub-Committee on 4 November 2011, includes three components: (i) Strengthening the Renewable Energy Policy and Regulatory Framework (FOMPIER); (ii) Grid-Connected Renewable Energy Development Support (ADERC), and (iii) Sustainable Rural Energization (ERUS).

The ERUS component is divided into two subcomponents: 1) Renewable energy systems for isolated communities (rural electrification), and 2) Sustainable and efficient firewood use (clean cook-stoves). The last subcomponent includes the project *Promoting Sustainable Business Models for Clean Cook-stoves Dissemination (PROFOGONES)*, with an amount of USD 2.435 million.

PROFOGONES achieved its objective of foresting the sustainable private market for clean cookstoves. The Project has granted subsidies for the construction of more than 17 thousand clean cookstoves, trained more than 100 beneficiaries through the program "Maestro Fogonero", assisted in the development of national regulations, supported the promotion and dissemination of efficient models and the strengthening of the financial offer, promoted demand, and contributed to avoiding 33 thousand tons of CO_2 emissions. From the authorized budget to this project USD 1,017,145.27 were utilized to achieve these results (see Annex I). The IDB noteds that executing the remaining financial resources (USD 1,417,854.73) would ~~will~~ add more value if redirected to support health services in rural communities under the current COVID-19 context.

~~Through this document,~~ The IDB requested ~~is proposing~~ the reallocation of PROFOGONES' non-executed resources to a new project aimed to deploy mobile Solar~~-~~ Powered ~~Peripheral Clinics~~Mobile Health Units (SHUs) ~~(SPC)~~ to ease the pressure exerted by the COVID-19 pandemic upon the health system in Honduras – "Solar-Powered ~~Peripheral Clinics (SPCs)~~Mobile Health Units (SHUs) for Honduras". The ~~SPCs~~ SHUs will be designed with recycled shipping containers and will operate entirely with solar energy.

Program Description:

The general objective of the program is to ease the pressure exerted by the COVID-19 pandemic upon the health system in Honduras by deploying mobile Solar-Powered ~~Peripheral Clinics (SPCs)~~Mobile Health Units (SHUs) ~~–~~in specific suburban areas and Departments with poor

electricity access[1]. In coordination with the Public Health Ministry, these units will deliver medical services to people with COVID-19-related symptoms, via direct consultation, medical treatment, telemedicine, and eHealth solutions. The ~~SPCs~~ SHUs will include a cluster of recycled shipping containers and will work as mobile subsidiary units of public hospitals, which will be responsible for the supervision of their medical services, whilst the facilities management will be entrusted to the project's executing agency. The project considers ~~three~~ four components:

1. Component 1: Deployment of the SHU~~PC~~s (USD 1,~~800~~960,000). Activities would include acquisition of the infrastructure and equipment (including the photovoltaic modules and storage batteries), allocation, installation, the establishment of a governance model, monitoring, and maintenance.
2. Component 2: Strengthening of medical service delivery (USD ~~650~~110,000). Activities would include the allocation of medical professionals and training for users and installation and monitoring of telemedicine systems.
3. Component 3: Capacity building to ensure financial and technical sustainability (USD ~~250~~30,000). Activities would include networking with municipalities, private companies, and NGOs, and communication strategies with stakeholders.
4. Component 4: Project management and evaluation (USD 100,000).

Key results of the project:

At least 20 ~~SPCs~~ SHUs installed[2], operating, and offering medical services to patients with COVID-19-related symptoms; at least ~~85,260~~97,440 people receiving medical care in the SHU~~PC~~s (a minimum of 14~~7~~ people per SHU~~PC~~ per day, in 87 weeks/20 months of operation); at least 536.5 tons of greenhouse gas emissions avoided per year; ~~at least 4 public hospitals reducing by 10% their COVID-19 patient influx (for medical consultation) via referral to the SPCs;~~ no less than 2 telehealth solutions installed and supporting medical intercommunication and remote monitoring of patients in the ~~SPCs~~SHUs; no less than 100 professionals trained in the operation of the ~~SPCs~~SHUs, telehealth solutions, and general COVID-19-related medical care; a network of at least 10 local partners (public, private or NGOs) operating in support of the sustainability and improvement of the ~~SPC's~~ SHU's services; 2 nationwide communication strategies successfully implemented with an estimated reach of 300,000 people. ~~Results a), b), c), and d) are deliverables of Component I, whilst e) and f) correspond to Component II, and g) and h) to Component III.~~

11. Consistency with SREP Investment Criteria:	
(a) Increased installed capacity from renewable energy sources	Component 1 will finance a renewable energy (RE) capacity of 5~~1~~00 kWp based on solar generation.
(b) Increased access to energy through renewable energy sources	Component 1 will provide energy access to at least 20 peripheric clinics that will provide health service up to patients with COVID-19 related symptoms. ~~At least 4 public hospitals will be able to reduce 15% their COVID-19 patient influx by 15% via referral to the proposed SPCs.~~
(c) Low Emission Development	The Nationally-Determined Contribution (NDC) of Honduras to the UNFCCC includes the energy sector as part of its mitigation objectives.

[1] It includes most COVID affected locations

[2] An additional request for USD 0.5 million to the CTF's Global Energy Storage Program (GESP) will be submitted.

(d) Affordability and competitiveness of renewable sources:	The proposed containers combine photo-voltaic generation, energy storage, grid connection transfer systems, and meter. The ongoing reduction in costs of photo-voltaic and energy storage technologies[3], increasingly makes them cost-competitive.
(e) Productive use of energy	Reliable electricity produced on-site has proven capable of delivering high-quality electricity for vaccine refrigeration, lighting, communication, medical appliances, clean water supplies, and sanitation. It can also improve management, logistics, distribution of information, education, and communication.
(f) Economic, social and environmental development impact	Access to health services is the main sources of socio-economic improvement expected. The Project will expand the services offered by primary health centers in under-served communities and reduce the need for patients to travel to larger, more distant health facilities by providing energy-efficient medical devices, combined with off-grid renewable energy and telecommunications. Staff and maintenance technicians in rural areas will be also trained to ensure the long-term sustainability of renewable energy systems and to further improving the reliability and continuity of rural medical services.
(g) Economic and financial viability	Options to increase access to electricity in most COVID-impacted communities were assessed based on cost-effectiveness analysis of different possible optional solutions available. The analysis verified the Solar-Powered ~~Peripheral Clinics~~Mobile Health Units model to be the best option in terms of relative costs for achieving the expected results.
(h) Leveraging of additional resources	See below (section 15)
(i) Gender	See below (section 13)
(j) Co-benefits of renewable energy scale-up	See paragraphs above
12. Stakeholder engagement:	
Main stakeholders include the Public Health Ministry, the Pan-American Health Organization (PHO), the municipalities of the Central District and San Pedro Sula, NGOs such as the Red Cross, Fundación Alivio del Sufrimiento, and World Vision; and NGOs working as decentralized health managers of the public system, such as Fundación Agrolibano, and the National power utility (ENEE) through the Social Fund for electric power department – FOSODE, which is in charge for rural electrification in Honduras.	
13. Gender considerations:	
A women's participation strategy will be developed as part of the activities under the program, to train women in construction, operation and supervision of the Solar-Powered Peripheral Clinics in isolated areas.	

[3] BSW-Solar PV Price Index

14. Indicators and Targets (consistent with results framework):	
Core Indicator	**Target**
(a) GHG emissions reduced or avoided over lifetime (tons of CO_2-eq)	10,731[4]
(b) Annual GHG emissions reduced or avoided (tons of CO_2-eq/year)	536.5[5]
(c) Capacity of renewable energy (MW)	0.5
(d) Increased supply of renewable energy (MWh/year)	
(e) Increased Access to Modern Energy Services for communities (public clinics)	~~At least 4 p~~Public hospitals will be able to reduce ~~15% their~~ COVID-19 patient influx by 15% via referral to the proposed ~~SPCs~~SHUs.
Development Indicator(s):	
(a) Number of people benefited by the clinics	~~85,260~~97,440 as a minimum, in 20 months

15. Co-Financing:[6]		
	Amount (in USD million):	*Type of contribution:*
Government (local counterpart)	~~0.350~~N/A	~~Grant~~N/A
MDB (IDB)	0.~~400~~150	Grant
Private Sector (local counterpart)	0.150	
Bilateral (Nordic Development Fund)	~~0.550~~N/A	N/A~~Grant~~
Non-CIF Co-Financing Total:	~~1~~**0.300**	
CIF co-financing (CTF GESP)	0.500	Grant
Total co-financing including CTF	0.800	

16. Expected Board approval date:
~~July~~ October 2020

[4] Assumes a lifetime of 20 years.

[5] GHG emissions reductions assuming 25% of plant capacity factor, and an emission factor of 0.75 $kgCO_2e/kWh$

[6] ~~An additional request for USD 2 million to the CTF's Global Energy Storage Program (GESP) is being considered (to support the investment in batteries for the containers). If it moves forward, the total budget and the expected results would increase.~~

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Solar-Powered ~~Peripheral Clinics~~Mobile Health Units for Honduras

Project Co-financing Proposal

1. Summary of the Project

This project has been conceived as self-autonomous energy, climatically smart, and sustainable contained solution to ease the pressure exerted by the COVID-19 pandemic upon the health system in Honduras. In support of the central hospitals, which are to experience saturation within months due to the pandemic, the project will deploy at least 20 mobile Solar-Powered ~~Peripheral Clinics (SPC)~~Mobile Health Units (SHU) in specific suburban areas[7] and Departments with poor electricity access[8]. Post-COVID, these facilities will be able to further provide clean, reliable, and cost-effective electricity to rural health centers, which can dramatically transform the quality of healthcare services provided to rural communities.

In coordination with the Public Health Ministry, these units will deliver medical services to people with COVID-19-related symptoms via direct consultation, medical treatment, telemedicine, and eHealth solutions. The ~~SPCs~~ SHUs will include one or a cluster of containers and will work as mobile subsidiary units of public hospitals. The corresponding hospitals will be responsible for the supervision of the medical services of the ~~SPCs~~SHUs, whilst the facilities management will be entrusted to the project's executing agency.

The project considers the utilization of recycled shipping containers as infrastructure for the clinics – a solution that is being used in Italy, the UK and elsewhere[9]. It also includes the use of photovoltaic modules and Energy Storage Systems (ESS), grid connection transfer systems and meter. The ~~SPCs~~ SHUs will be equipped with appropriate medical devices and furniture (beds, spirometers, stethoscopes, defibrillators, echocardiologic accessories, insulin tests, diagnostic tools, emergency implements, and others) and personnel to facilitate its functioning as a standard clinic. It will also include COVID-19-specific treatment devices such as ventilators, medical airways, and biosecurity implements. The containers will be equipped as well with water pump and purification systems, high-efficiency refrigeration and cooling systems, and a telecommunication system. One advantage of the containers is that they are modular, which means that depending on the necessities more than one ~~SPC~~ SHU could be installed. The estimated budget per each ~~SPCs~~ SHUs goes around USD 75,000 (based on suppliers' market prices). The project will last two years.

2. Activities and Results

The project will have three components: a) deployment of the ~~SPCs~~ SHUs (activities would include acquisition of equipment, allocation, installation, the establishment of governance model, monitoring, and maintenance); b) strengthening of medical service delivery (activities would include allocation of medical professionals and training for users, and installation and monitoring of telemedicine systems); and c) capacity building to ensure financial and technical sustainability

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7 Including the Central District and San Pedro Sula, two of the most COVID-19 affected locations.
8 For example, the Department of Colon – the third most COVID-19 affected location in the country.
9 World Economic Forum, *Hospitals made from shipping containers could help tackle COVID-19*, 2020.

(activities would include networking with municipalities, private companies, and NGOs, and communication strategies with stakeholders).

3. Relevance and viability

The project will be a contribution to the Government of Honduras's strategy to contain the novel coronavirus pandemic and provide adequate electricity supply for basic healthcare services in rural communities. By enlarging the quantity and quality of infrastructure in the health sector, the project will permit the expansion of the existing services' coverage, ensuring the benefit of a wider number of people, mainly those affected by the current pandemic. The project is highly relevant for the country as it will contribute to the hospitals' decentralization and will decrease the likelihood of the health system saturation.

The project will supply energy needs from the ~~SPCs~~ SHUs (cooling, lighting, refrigeration, water pumping, telecommunication, and other uses) harnessing the solar renewable energy resource and avoiding greenhouse gas emissions (GHG) from the existing electricity network[10]. One individual container could have the possibility to install in the roof up to 3 kWp and one space for energy storage (up to 15 kWh), conversion system and a transfer system to supply electricity to the grid when the ~~SPC~~ SHUs and batteries will not need power.[11] In communities with poor electricity access or nor electricity access, the SHUs~~SPCs~~ will be run 100% with solar photovoltaic + the ESS solution, avoiding the use of gen-sets that uses fossil fuels. All these effects will provide energy autonomy and reduce GHG.

Financial sustainability will be achieved via agreements with the Government, NGOs, and other relevant stakeholders. There is a potential synergy between this project and the Model of Decentralized Health Management, implemented in Honduras since 2011, by which the Government entrusts to NGOs the administrative coordination of public health centers, including the hiring of services and the management of external grants. These NGOs might serve as focal points to negotiate with municipalities and other stakeholders, and to canalize funds for the ~~SPCs~~SHUs.

[10] According to the IFI Approach to GHG Accounting for Renewable Energy Projects, the emission factor of the Interconnected power system in Honduras is 0.61-ton CO2/MWh.

[11] There could be cases when an ~~SPC~~ SHU could include up to 10 containers and in this case the solar installed capacity could be up to 30 kWp and the energy storage system could be 450 kWh. This system will be equipped with a transfer system to feed electricity into the grid.

4. Financing Needs, Instruments and Structure

The financing scheme proposed for this project would be as follows:[12]

Fund	Financial tools	USD	Activity
IDB Lab	Grant	~~400~~150,000	Consulting services
SREP	Investment grant	1,400,000	Works, goods and non-consulting services
~~NDF~~GESP	Investment grant ~~(Booster Facility)~~	5~~0~~50,000	
Local counterpart	----	1~~3~~50,000	
Total		**2,2~~7~~00,000**	

This scheme seeks to blend IDB Lab's financial focus on innovative solutions for inclusion (in this case, telemedicine and eHealth solutions to improve COVID-19-associated medical attention) with CIF's ~~and NDF's~~ financial support for sustainability and climate change mitigation.

5. Implementation Arrangements

The project's executing agency will be Fundación Ayuda en Acción (AeA), an NGO of Spanish origin with solid experience in humanitarian aid in Honduras. AeA was chosen on account of its high capacity of articulation of humanitarian and development initiatives, and its experience with renewable energy project development in Honduras including isolated areas. IDB Lab will establish, via agreement, a nonprofit partnership with AeA under which the latter will commit itself to administer the IDB Lab, CIF and NDF's funds. AeA will contribute to the project with counterpart funds, in either kind or cash (to be complemented with other local sources).

The Public Health Ministry will be the legal representative and intermediary of the hospitals which will be benefitted by ~~SPCs~~SHUs. It will collaborate with AeA and IDB's Health Sector, to select the most adequate public hospitals and to allocate (or relocate) the SPCs. The Ministry will also facilitate the distribution of medical equipment and staff to the ~~SPCs~~SHUs. The agreements for the deployment of the ~~SPCs~~ SHUs will be signed by AeA and the respective beneficiary hospitals. As stated above, these hospitals will supervise health service-delivery, but AeA will be responsible for the management of the ~~SPCs~~ SHUs facilities. Thus, each ~~SPC~~ SHU will be co-governed by AeA and a public hospital. The installation and maintenance of the ~~SPCs~~ SHUs will be performed, under the supervision of AeA, by a private company selected via competitive bidding. AeA will also coordinate the participation of stakeholders in the operation and maintenance of the ~~SPCs~~SHUs.

6. Stakeholders

Main stakeholders include the Public Health Ministry, the Pan-American Health Organization (PHO), the municipalities of the Central District and San Pedro Sula, NGOs such as the Red Cross, Fundación Alivio del Sufrimiento and World Vision; and NGOs working as decentralized health managers of the public system, such as Fundación Agrolibano. Other stakeholders will include the

[12] An additional request for USD 2 million to the CTF's Global Energy Storage Program (GESP) is being considered (to support the investment in batteries for the containers). If it moves forward, the total budget and the expected results would increase.

National power utility (ENEE) through the Social Fund for electric power department – FOSODE which is in charge for rural electrification in Honduras.

7. Budget (indicative, in USD)

	IDB Lab	SREP	~~NDF~~GESP	Local counterpart	Total
Component 1: ~~Installation and Maintenance of the SPCs~~Deployment of the SHUs	10,000	1,~~4~~300,000	500,000	50,000	**1,960~~800~~,000**
Component 2: Improvement of Health Service Quality	11~~30~~0,000		~~50,000~~	~~300,000~~	**~~650~~110,000**
Component 3: Capacity building to ensure financial and technical sustainability~~Partnership Building and Sustainability~~	2~~10~~0,000	~~100,000~~		1~~5~~0,000	**30~~250~~,000**
Component 4: Project Management and Evaluation	10,000			90,000	**100,000**
Total	**15~~40~~0,000**	**1,400,000**	**5~~05~~0,000**	**1~~3~~50,000**	**2,~~72~~00,000**

Annex I: Profogones – Status of Implementation

PROFOGONES has granted subsidies for the construction of more than 17 thousand clean cookstoves, trained more than 100 beneficiaries through the program “Maestro Fogonero”, assisted in the development of national regulations, supported the promotion and dissemination of efficient models and the strengthening of the financial offer, promoted demand, and contributed to avoiding 33 thousand tons of CO_2 emissions. From the authorized budget to this project (USD 2,435,000), USD 1,017,145.27 were utilized to achieve these results.

After the mid-term review of the PROFOGONES project, decisions were made to direct special efforts toward the improvement of the standardization of quality in existing improved stove models in the country. This was achieved through the creation of national standards for improved stoves, promoted in a participatory manner by national implementers, and following international standardization mechanisms. In this way, the performance of the technologies promoted by the project was enhanced, offering a minimum of quality to the users and clients who have the desire to acquire these devices. In this sense, the conditions were also created for what would later be the marketing and sales exercise of improved stoves in Honduras. It’s worth highlighting the effort of Fundación VIDA – the executing agency – through the PROFOGONES project to promote and accompany national actions in the generation of evidence and the development of impact on public policies to address the issue of access and availability of improved stoves in sectors defined by this program, through the involvement of the project in the "national platform for the development of the value chain of improved stoves" promoted and coordinated by SNV and its Voice for Change program.

The lessons learned in the implementation of the PROFOGONES project attest to the necessity of redirecting interventions toward the strengthening of private markets rather than focusing merely on the provision of subsidized goods and services. The program faced serious challenges as public social programs started distributing the same product, on a donation basis, to the very poor and the rest of social classes. This created duplicity in the interventions and diminished the market opportunities for Honduran cookstove manufacturers. Likewise, it became clear soon that the program’s strategy, based on the provision of subsidized cookstoves, was not promoting the private market distribution of cookstoves and was, rather, reinforcing the donor-driven logic of distribution, to the detriment of local manufacturers.

PROFOGONES successfully overcame these challenges by moving its strategy from the subsidized provision of clean cookstoves to the strategic reinforcement of the conditions that would facilitate the transformation of the current donor-driven system of distribution into a strong demand-driven private market. These market-reinforcing actions included the creation of a national quality standard for cookstoves, the integration of a coordinating unit for stakeholders, the promotion of reforms to the legal framework, the refocusing of target population on small coffee farmers, and the advancement of technological innovation for the development and replication of new models of cookstoves (in the context of which new models were created that are best suited for coastal, rural, and cold areas, respectively). On the one hand, this strategy allowed complementarity with the social programs that distributed clean cookstoves to the very poor, permitting the PROFOGONES to target the poor population with higher rent. On the other

hand, reinforcing the private market ensured the benefits of both the households and the local manufacturers, and contributed to safeguarding the sustainability of the intervention over time.

According to the aforementioned, PROFOGONES achieved its objective of foresting the sustainable private market for clean cookstoves. It was achieved with the disbursement of 45% of the total approved financial support. The IDB notes that executing the remaining financial resources will add more value if redirected to support health services in rural communities under the current COVID-19 context.