PROJECT INFORMATION DOCUMENT (PID)

APPRAISAL STAGE

Report No.: 104994

Project Name	Philippines Renewable Energy Development (PHRED)
Region	EAST ASIA AND PACIFIC
Country	Philippines
Sector(s)	Other Renewable Energy (60%), Energy efficiency in Heat and Power (40%)
Theme(s)	Rural services and infrastructure (50%), Infrastructure services for private sector development (50%)
Lending Instrument	Guarantee
Project ID	P147646
Borrower(s)	Department of Energy
Implementing Agency	LGU Guarantee Corporation (LGUGC)
Environmental Category	Guarantee
Date PID Prepared/Updated	13-April-2016
Estimated Date of Board Approval	12-May-2016

I. Project Context

Country Context

1. The Philippines is a middle income, archipelago nation in Southeast Asia with a population of about 100 million and recent, strong economic growth of over 6 percent. The country has earned investment grade ratings from major credit rating agencies as a result of its sound macroeconomic fundamentals. It is increasingly characterized by robust inclusive economic growth, low and stable inflation, healthy current account surplus, adequate international reserves, and a sustainable fiscal position. The government is pursuing the following measures under its Philippine Development Plan 2011-2016: (i) attain high and sustained economic growth that provides productive employment opportunities; (ii) promote equal access to development opportunities through better education, primary health care and other basic social services; equal access to infrastructure, credit, land, technology, and other productive inputs; (iii) reduce the cost of doing business, consistent with upholding good governance and strong institutions to encourage competition; and (iv) establish effective and responsive social safety nets to assist those who are less capable of participating in economic activities. Adequate investment in the electricity sector, in which the service providers are mostly private companies and electric cooperatives, is essential. Reliable and affordable electricity supply is a top concern of both businesses and households. Half of the country's households, and many businesses, are served by 120 rural electric cooperatives (ECs). This project is focused on facilitating the flow of private commercial debt to support EC investments in electrification and renewable energy.

Sectoral and institutional Context

2. The Philippines has a rapidly growing electricity sector. Generation capacity is nearly 16,000

megawatts and electricity demand has hit 80,000 gigawatt-hours. But per capita electricity consumption is only 800 kilowatt-hours per year. The country is making a major electrification push and is on track to reach its interim goal of 90% household electrification by 2017. The country aims to be fully electrified within the next decade. This will be challenging, because the remaining unconnected households tend to be remote, dispersed, and poor; and because the key service providers will be electric cooperatives which themselves are still in the midst of a reform process begun 15 years ago.

3. The Philippines passed the Electric Power Industry Restructuring Act (EPIRA) in 2001. This law transformed the electricity sector from one with significant public sector ownership and operation of key components (generation, transmission) and little competition, to one that is almost completely privately owned and operated, and is increasingly competitive. The Department of Energy (DOE) is the lead policy agency. The Energy Regulatory Commission (ERC) regulates retail electricity tariffs, transmission and distribution services and tariffs and monitors market competition.

4. There are two major regional grids (Luzon-Visayas, and Mindanao), and many smaller islands with isolated networks. The National Grid Corporation of the Philippines (NGCP) is the private concessionaire for the high-voltage transmission network. There are 140 electricity distribution companies operating in the Philippines; of these, 20 of these are privately owned, including the largest distribution companies in the country – Meralco (serving Manila), Davao Light & Power (Davao City), and Visayas Electricity Company (VECO, in Cebu City). The remaining 120 are electric cooperatives that provide the bulk of electricity services in smaller cities, rural areas, and unconnected islands. Household electrification stands at 88% as of end-2015.

5. The generation mix has been balanced among renewables, coal and natural gas, but is changing as more coal-fired power plants come on-line. Prices are high by regional standards. Several factors explain high prices. EPIRA eliminated almost all subsidies. Generators face market prices for coal, natural gas, and oil. The country has only recently worked off a significant surplus of generation in the Luzon market. Certain contractual rigidities related to IPPs also increase average generation costs. Generation capital costs even for conventional power plants are at the high end of the range for East Asia. Transmission and distribution costs are also at the high end of the range, due to challenging geography. Prices have been coming down with better regulation, lower oil, gas, and coal prices, and greater investment and competition in generation.

6. In this setting, Government wants to push through the remaining elements of market reform and generation privatization, achieve full household electrification, manage electricity costs and the related price risk to consumers, accelerate reform and restructuring of the electric cooperatives, and ensure that a diversified and clean mix of new generation is developed. Two significant issues can be highlighted. First, over 80% of all credible generation projects under construction or development are coal-fired. Second, moving new power plants from development to actual construction requires creditworthy buyers for that power – and some of the country's ECs remain financially weak. Because they are regulated on a non-profit basis, the ECs have a thin operating margin. Any strategy to meet electricity demand, improve the quality of power supply, and expand access in a sustainable manner will need to address the twin challenges of lessening the country's dependence on coal-fired power plants for incremental generation needs, and improving EC governance, operations, and finances.

7. The National Renewable Energy Plan (NREP, formulated in 2012 and currently being updated) aims to triple the installed capacity of renewable energy (RE) by 2030, to over 15,000 MW of capacity, from the 2010 level. There is a good base of larger geothermal and hydro projects on which to build, and in 2015 and 2016 hundreds of megawatts of wind and solar were commissioned as high feed-in rates were set to expire. The Renewable Energy Act 2008 aims to accelerate the development of renewable energy (RE) sources. The Act provides a diverse set of policy incentives including feed-in tariffs (FIT) for specific on-

grid emerging technologies, and a Renewable Portfolio Standard (RPS) and associated market for Renewable Energy Certificate (REC) trading. The first rounds of FITs expired in March 2016, and the achievement against the installation target is still being tallied, as operating megawatts are assessed. There is an increasing likelihood that in the next round of FITs, auction processes will be used to set prices.

8. The key challenges in the Philippines electricity sector are (i) to complete the electrification of the country; and (ii) to meet growing electricity demand with a balanced, sustainable mix of generation. Both challenges imply a significant focus on the electric cooperative sector. ECs already serve over half the households in the country (approaching 12 million households in total). More than half the remaining unconnected households will wind up being served by ECs. ECs, regulated on a not-for-profit basis and still emerging from a legacy of poor governance, will struggle to electrify households while simultaneously preserving their hard-won financial gains of recent years. They also need alternatives to the coal-heavy mix that now represents over 80% of incremental generation in the Philippines. The proposed project addresses these challenges. It will facilitate the flow of affordable financing for EC network expansion, so that the current customer base and new connections can be adequately and efficiently served. It will also help to finance renewable energy projects.

9. This project is proposed for financing by the Clean Technology Fund (CTF). The CTF Trust Fund Committee approved the Philippines CTF Investment Plan in December 2009, with an allocation of $250 million. A portion of this total was allocated for energy efficiency and renewable energy. The proposed project seeks to help finance renewable energy projects that are less likely to obtain commercial financing – especially in the small hydro sector – while also supporting supply-side energy efficiency in the rural electricity sector. The country's ECs are at the heart of this approach, as developers and/or offtakers (for generation projects) and as operating companies (for energy efficiency investments). This approach is aligned with a key element of the CTF investment plan – that of improving the financial strength of the ECs so that they will be more reliable buyers of renewable energy over time.

10. The proposed project is designed to expand the capacity of the Government's Electric Cooperative Partial Credit Guarantee (ECPCG) program which has been successful in reducing the commercial banks' perceived risks of lending to ECs and leveraging private investment into the sector, thereby enabling ECs to increasingly connect new consumers and improve operational performance. ECPCG has essentially made a market for commercial lenders. With 5 year capital expenditure needs of the ECs (excluding grant financing by the government for electrification) estimated at over $1 billion for network and operational performance improvement investments alone, and NEA able to finance only around 10% of this, leveraging commercial finance into the EC sector is critical. Capital requirements for renewable energy investments are even higher, and NEA will not lend to this sector. ECPCG was originally established by a Global Environmental Facility (GEF) grant, under the Electric Cooperative System Loss Reduction Project, or ECSLRP, with IBRD as the implementing partner. The proposed instrument for ECPCG expansion is a CTF Guarantee of $44 million.

11. The project reflects the energy sector engagement strategy of the World Bank, which is to focus on ECs and help improve governance, operations, and finances. On this platform, the Bank concentrates on access and renewable energy. Access is supported by mobilizing network investment to complement the electrification grants of Government, and by supporting alternative access approaches when grid expansion is not economically sound. Renewable energy is supported with technical assistance, institutional strengthening, and investment mobilization. PHRED supports expansion of a successful Government guarantee facility that helps enhance the flow of commercial credit to the ECs, both for network investment and for renewable energy projects that will directly supply ECs. A parallel, grant-funded project complements PHRED: the Access to Sustainable Energy Project (ASEP), which is funded on a grant basis by the European Union (EU) and the Global Partnership on Output-Based Aid (GPOBA), and administered by the World Bank. ASEP will provide performance-based grant support for remote electrification (solar

home systems) and small, grid-connected solar power plants. ASEP also includes a Bank-executed package of technical assistance supporting ECs, NEA, ERC, and DOE in a range of technical areas.

12. Both PHRED and ASEP focus on EC governance, access, and clean energy issues, and help bolster the enabling environment for private investment and effective oversight and regulation. ASEP supports off-grid electrification, solar energy, technical assistance (including through the parallel Bank-executed grant from the EU), and introduces an output-based subsidy approach to electrification and renewable energy programs. PHRED focuses on leveraging $500 million in commercial lending that will fund EC grid extension and renewable energy. It is highly commercially-oriented and demand-driven. Together, the operations provide an array of interventions that reflects the diversity of circumstances involved in the electrification of the last 10%, and the institutional development requirements of 120 electric cooperatives that will be key service delivery agents. The operations together will benefit a majority of the ECs ranging from top-rated cooperatives to the financial struggling ECs of Muslim Mindanao. There is no one-size-fits-all; and the complementary designs of ASEP and PHRED reflect this reality.

II. Project Development Objective(s)

13. The project development objective is to catalyze private investment in renewable energy and electrification.

III. Project Description

14. The project is designed as a stand-alone Clean Technology Fund (CTF)-financed guarantee in the amount of $44 million. The guarantee will be provided to the LGU Guarantee Corporation (LGUGC), a private entity that operates the Electric Cooperative Partial Credit Guarantee (ECPCG) program for the benefit of the Republic of the Philippines, which owns ECPCG. The CTF Guarantee will be contingent finance that is callable cash, and as such, counts as Tier 1 capital. It can therefore be leveraged in the same manner as the cash which is today sitting in ECPCG-owned accounts, which are managed by an escrow agent (the Development Bank of the Philippines provides escrow services). In terms of financial risk, the guarantee only covers 80% of regular principle and interest payments and there is no option for accelerated payment, both of which provide incentives to keep the lender in the deal. ECPCG cash will be first loss; the CTF Guarantee will be second loss, and will only be drawn upon in the event that ECPCG's cash in escrow is insufficient to pay a call. There have been no defaults to date in the ECPCG program.

15. The proposed project will greatly expand the capacity of the ECPCG program. As stated above, ECPCG has approximately $16 million in Tier 1 capital. This capital can be leveraged five times, meaning that $80 million in lending can be covered. ECPCG covers 80% of the underlying loans to Electric Cooperatives, so the program leverages the other 20% of the debt, and leverages additionally up to 20% of total project costs as equity from the borrowing EC. $44 million from the CTF will increase ECPCG capital to $60 million. Over five years the project is designed to leverage $500 million in private investment.

IV. Financing (in USD Million)

16. The instrument will be a stand-alone guarantee from the Clean Technology Fund of $44 million. Pricing is risk-based which will help encourage more sophisticated approaches to EC credit risk with an enhanced focus on governance aspects. A provision for expected portfolio losses is included in the pricing, and in the base case, this provision is sufficient to pay for all anticipated losses of the program over 20 years.

17. Total investment attraction is estimated to be $500 million, the entirety of which is sourced from the private sector, over the 5 year availability period of the CTF Guarantee. This amount is net of the capital resources of ECPCG, which with PHRED financing will grow to as much as $60-million. Private financing leveraged by ECPCG funds is sourced from commercial banks (senior debt) and ECs (equity) for the EC distribution networks; and from commercial banks (senior debt), ECs (equity, in some cases), and private developers (equity) for renewable energy.

Project Components	Project cost*	CTF Financing	Counterpart and private sector funding**	% IBRD Financing
1. Expansion of ECPCG program	$500 million	$44 million (CTF guarantee) in addition to $16 million existing program capital	$300 million commercial debt covered $75 million commercial debt uncovered $75 million equity $50 million reflows	n/a

*Project cost is an estimate of the investment flow to electric cooperative and renewable energy investments that will be directly supported by ECPCG over the five year open commitment period of the CTF guarantee.
**Estimates only

V. Implementation

18. The implementing agency is the LGU Guarantee Corporation. LGUGC is a private entity owned by the Philippines Banker's Association and the Development Bank of the Philippines. LGUGC has been managing guarantee operations with multiple donors and in multiple sectors for well over a decade. LGUGC will continue in its role as the program manager of ECPCG. The Guarantee Agreement will be with LGUGC, acting on behalf of ECPCG.

VI. Safeguard Policies (including public consultation)

Safeguard Policies Triggered by the Project	Yes	No
Environmental Assessment OP/BP 4.01	[X]	
Natural Habitats OP/BP 4.04	[X]	
Forests OP/BP 4.36		[X]
Pest Management OP 4.09	[X]	
Physical Cultural Resources OP/BP 4.11	[X]	
Indigenous Peoples OP/BP 4.10	[X]	
Involuntary Resettlement OP/BP 4.12	[X]	
Safety of Dams OP/BP 4.37	[X]	
Projects on International Waterways OP/BP 7.50		[X]
Projects in Disputed Areas OP/BP 7.60		[X]

19. The LGU Guarantee Corporation (LGUGC) will follow the project's Environmental and Social Safeguard Framework (ESSF). The procedures outlined in the framework indicate how their potential clients will carry out the assessment of environmental and social safeguard issues and the process by which the documents prepared would be reviewed by LGUGC and the World Bank to ensure that Bank policies

are being followed. There are no large-scale, significant or irreversible impacts anticipated since the targeted projects under the EC-PCG are small-scale renewable energy projects. It is expected that the significant adverse direct impacts of the sub-projects will be related to: (i) localized environmental and social impacts and potential site-specific damages due to clearing of the area that will lead to small-scale vegetation loss and construction activities (noise, safety, air pollution); (ii) management of environmental flow and habitat alterations in the case of mini hydropower projects, (iii) change in land use or disturbance in protected areas (iv) management of the health and safety of workers during construction and operation; and (v) interaction of workers with the local community. Each sub-project will undergo the ESSF process which begins with the screening and scoping to determine its environmental category and assessment of the scope and coverage of significant impacts. The potential impacts are those associated with the construction and operation of small hydropower plants, installation or upgrading of power distribution lines and construction of substations.

VII. Contact point

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