DRAFT FOR COMMENT

PHILIPPINES

RURAL POWER PROJECT

PROJECT IMPLEMENTATION PLAN
AND
OPERATIONS MANUAL

PREPARED BY

PHILIPPINES DEPARTMENT OF ENERGY AND DEVELOPMENT BANK OF THE PHILIPPINES
MANILA, PHILIPPINES

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Program Description

The proposed APL, with an indicative total amount of $180 million, would assist the country in the implementation of priority reforms and investments necessary for achieving the targets for substantially improved state of the rural power sector. In particular, the APL is designed to support the implementation of difficult, long-term solutions through new business approaches. Phasing of the APL generally follows the “horizontal expansion” model to progressively adapt and expand the earlier successful approaches to include new areas and cohorts in other parts of the country. Given the process-oriented nature of this operation which demands more built-in flexibility and allows for learning by doing, management of the process would be complex and less predictable than conventional projects. To avoid over extending the absorptive capacity of institutions concerned, the proposed APL has been designed with manageable “bite size” modules, to be rolled out in four phases over a period of 12-14 years. In the event the government is successful in overcoming the serious constraints in fast tracking universal electrification, the APL would be scaled down considerably in terms of the time horizon, the number of phases and Bank loan amount.

Phasing and Triggers of Investment Support

Under the first phase APL, the core component would test and demonstrate alternative business models for decentralized electrification, based on effective public/private partnership that maximizes the participation of the private sector and extends the reach of available public resources for improving social welfare. In addition, subject to NEA and selected ECs’ commitment to a satisfactory restructuring program, additional project components could include support for the implementation of the recommendations emerging from the planned TA noted above for (a) NEA restructuring program and related social impact mitigation measures (including early retirement package); and (b) high impact, viable investments for rehabilitation and transformation of about three to five ECs that are not able to attract private financing but are committed to reforms. Separately, an additional project component could be included to support expansion investments (grid or off grid) for financially viable ECs. In the event some or all of the contingent components are not yet ready for APL1, they could be considered for support under APL2.

As triggers for APL2, the following performance indicators are proposed:

For the off main grid subsector,

(a) stand alone renewable energy system subcomponent – about 5,000 connections/households served; and b) mini-grid subcomponent – about 2,000 connections/households served.

(b) For the on-grid subsector, about 50% of participating ECs achieved increases in their net operating cash flows.

However, similar to the condition of disbursement for a multi-component project, it is proposed that specific triggers for proceeding to the next phase of APL support for each of the subcomponents, whether on grid or off-grid, be made independent from each other, since the
trigger for one subcomponent is not critical for the successful implementation of the other subcomponents. Thus, for an individual phase of the APL, the project components could comprise one or both subsectors. An indicative phasing of the APL investment support is as follows:

<table>
<thead>
<tr>
<th>APL Phase</th>
<th>Stand-alone Renewable Energy System Subcomponent</th>
<th>Mini-grid Subcomponent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of connections/households</td>
<td>No. of connections/households</td>
</tr>
<tr>
<td>APL1 (5 years)</td>
<td>10,000</td>
<td>6,000</td>
</tr>
<tr>
<td>APL2 (3 years)</td>
<td>25,000</td>
<td>9,000</td>
</tr>
<tr>
<td>APL3 (3 years)</td>
<td>45,000</td>
<td>18,000</td>
</tr>
<tr>
<td>APL4 (3 years)</td>
<td>65,000</td>
<td>27,000</td>
</tr>
<tr>
<td>Total</td>
<td>145,000</td>
<td>60,000</td>
</tr>
</tbody>
</table>

Co-financing with GEF grant (in the form of both a direct financial contribution and contingent finance) would be sought to overcome the information, institutional capacity, high up-front system cost and financing barriers that are critical for the successful implementation of the new and renewable energy (NRE) component in the targeted barangays for possible support under the APL. In addition to technical assistance and training related to NRE, GEF support could include:

(a) limited amounts of capital cost subsidies for SHS based on incremental costs and principles acceptable to GEF; and
(b) partial credit risk guarantees for NRE suppliers and purchasers.

Special attention is required to coordinate with UNDP initiatives to ensure complementary rather than overlapping GEF support in the Philippines. Towards this end, the PHRD grant is financing an integrator to facilitate coordination of all the donors’ initiatives in

**Objectives and scope**

**Decentralized Electrification**

Support small scale energy generation and distribution of basic electricity services to households, public centers (e.g. schools, health clinics) and productive applications. For purposes of testing different business models, these customers would be classified into two broad categories: concentrated and dispersed. The least-cost electrification solution for the concentrated users is normally a mini-grid (or micro-grid depending on the number of connections) powered by a centralized generation system, usually diesel, hydro or biomass power. For the dispersed users, the least-cost solution is normally individual photovoltaic (PV) systems, also called solar home systems (SHS). The first phase APL is intended to support systematic piloting of market-based electrification services at a sufficient scale and visibility, and generate needed interest and support by the private sector and municipalities. In addition, for dispersed users that are not feasible to connect to the grids, the project will include support for battery charging stations or SHS for direct or credit sales to customers. Recognizing the generally low incomes of dispersed users and the still high capital costs of PV systems, the project will co-finance with GEF grants and perhaps government grants as well, and provide medium term financing to reach the poorer segments of the communities.
Small scale energy generation and mini-grids

The strategy for this subcomponent is to group the target barangays into “market packages” of sufficient critical mass for business operations. Depending on the characteristics of each package, one or more minigrids may be installed. For example, several barangays could be linked into one minigrid powered by a single hydro resource or the barangays could each have their own microgrids powered by small diesels. In any case, the business model is for a single entity to be contracted to provide long-term services to all customers in the entire package (e.g., as in a concession). Consistent with the provisions of the EIRA, qualified third parties would be allowed to provide energy services in the unserved franchise areas of the incumbent ECs. These parties could be private rural energy service companies (RESCO), qualified NGOs or local cooperatives organized for this specific purpose. An important objective of APL1 is to pilot these various types of service mechanisms and adopt the most successful ones for the subsequent phases. To the extent possible, the priority packages for project support are those that are commercially viable in themselves and require only non-financial incentives. It is recognized, however, that many of the offgrid communities have very low-income consumers, and that some form of “smart” subsidies may need to be provided by the government to enable the subprojects to be implemented.

Stand-alone Renewable Energy Systems

For dispersed users that are not feasible to connect to the grids, this subcomponent will make available for direct purchase various capacities of PV systems through private vendors and NGOs. Recognizing the generally low incomes of dispersed users and the still high capital costs of PV systems, the project will provide, through GEF and government funds, subsidies to lower the cost to consumers, and financing to spread out the payments. The suppliers would offer small PV system options (e.g. 20-60 Wp) sufficient to provide basic services to households. Competing vendors would be enticed to do business through incentives that include assistance in market development and capacity building, product promotions and other risk-reducing activities funded by the proposed GEF grants in order to reduce the critical barriers of PV market development. GEF grants would be leveraged with government subsidies to render PV systems affordable for the rural poor. Further, to remove the barrier of credit access, this subcomponent would provide a line of credits to financial intermediaries (such as rural banks and micro-finance institutions) to enable them to provide consumer loans for the PV systems and financing of incremental working for dealers. In addition, as elaborated below, GEF funding would support the provision of training in PV financing operations and partial credit risk guarantees for the suppliers and users of PV systems.

Capacity Building and Program Management Support

This component would be financed by GEF to cover the reduction of market barriers to the commercialization of RETs suitable for offgrid electrification through a comprehensive range of activities to build capacity on RET matters in the various energy agencies (DOE, NEA, ERC), the financial intermediaries (DBP, rural banks, microfinance institutions, etc) and private participants (solar PV companies, ECs, NGOs, etc); reduce investment risks by more detailed characterization of market packages; develop and operationalize policies on subsidies, tariffs, regulation and integration of RETs into the missionary electrification program. Taking into account the lessons learned from similar projects in other countries, the technical assistance
component to reduce market barriers to the commercialization of RETs would be front-loaded during the first phase of APL. Care has been taken to coordinate with other donors’ initiatives to ensure complementary rather than overlapping GEF support in the Philippines.

EC Grid Subcomponents

This includes (i) rehabilitation and upgrading of the existing systems of participating ECs to improve their efficiency and creditworthiness; this category of investment is generally expected to be financially viable; and (ii) expansion of the power distribution systems of financially sound ECs, focusing on intensification which is far more cost effective than extension to unelectrified barangays to serve additional households.

NEA Restructuring

Following recommendations from the recently completed rural power sector strategy study, this component will support the restructuring of NEA, refocus its role on priority non-lending activities and streamline its staffing pattern consistent with the institutional realignment. Bank loan to the government would help finance the social costs of retrenchment. This component is subject to confirmation by project negotiations that the design of the restructuring program is satisfactory to the Bank, including compliance with the Bank policy on financing severance pay in public sector reform operations.

Strategy and implementation plan - Decentralized Electrification

Institutional and Implementation Arrangements

- DBP shall be the borrower on record for the IBRD Loan. The DBP will be responsible for the financial management and supervision of its respective loan from IBRD. The DBP will on-lend funds to Mini-grid developers for investments and to participating PV companies for investment and incremental working capital. Sub-loans for consumer financing will be channeled by DBP to the qualified Participating Credit Institutions (PCIs), namely, the Countrywide Financial Institutions, Microfinance Institutions, and Rural Banks. The PCIs must meet the minimum performance standards set by DBP in order to qualify to receive funds.

- Project development and supervision of the capacity building program and provision of TA will be the responsibility of the Project Management Office appointed by DOE. DOE has delegated the responsibility of GEF grant administration to PNOC-EDC, an experienced Bank borrower with a good track record of project implementation. PNOC-EDC will establish a PMO for this purpose (see Annex 1 for Organization Structure for PMO). Core staffing of the PMO will be in accordance with the project readiness filter requirement: namely project manager/director, procurement specialist and financial management specialist. The DBP will be responsible for coordinating with the DENR to ensure all projects comply with environmental standards and practices.

- The private sector, the participating credit institutions, and other project implementors will be responsible for the distribution, construction, installation and/or operation of each project component as required.
As Borrower of the Bank loan, DBP will establish a Project Management Office (PMO) for this project.

Responsibilities: DBP has the primary responsibility in overseeing the implementation of project components financed by the Bank loan; (b) PNOC-EDC as the PMO is responsible for the implementation of the GEF grants; and (c) the oversight agency, DOE has the primary responsibility for overseeing policy and institutional reforms.

During project implementation, NGO participation in monitoring and evaluation of project output and impact would help promote transparency, accountability and anti-corruption.

Approach to Financing Solar PV systems

The approach builds on the positive experiences of solar credit lines in Bank and GEF-funded projects in India, Sri Lanka and Indonesia, among others. In the proposed scheme participating PV companies sell PV products and provide services to rural households and institutional customers who have no access to grid electricity services. Country-wide Financial Institutions (CFI), Microfinance Institutions (MFI) or Rural Banks provide consumer financing. The government provides grant assistance and as the market enabler, oversees the implementation to ensure that consumers receive good quality products and services. They also assist in ensuring coordination between grid-service and off-grid service provision. The GEF provides grant assistance necessary to remove barriers that constrain the use of PV and other technologies that reduce greenhouse gas emissions. Bank loan funds are coursed through DBP who in turn provides financing to the PCIs. The participating companies can obtain investment and incremental working capital for their businesses through DBP. Partial credit guarantee using GEF funds would also be available to reduce the perceived credit risks faced by the retail bankers.

Flow of funds are shown schematically in Figure 1.

Participating Companies

Participation would be open to all companies, including private firms, non-governmental organizations and cooperatives. Eligibility criteria that the entities must meet are given later.

Obtaining Investment and Working Capital Loans from DBP

The PCs may obtain investment and incremental working capital loans from DBP. The borrowers will have to meet the collateral and other requirements established by DBP. The procedures used by DBP in on-lending Bank funds to the borrowers are detailed in the DBP “Desk Manual.” This Manual, by reference is an integral part of the PIP and Operations Manual.

Grant Assistance for Stand-alone Systems

In APL 1, grants from the GEF and the Government will be available to the PCs for eligible products that are sold to consumers. The grant amount and source of funding is as follows:

- **GEF Grant**: APL 1: For 20 to 50 Wp systems: US$ 2.50/Wp. For 51 Wp to 100 Wp/system: $1.50/Wp. No GEF grants are available for stand-alone units larger than 100 Wp, unless they are battery charging stations, each serving 10 or more households, then it is US$1.50/Wp. Grant amount gradually declines to an average of $0.50/Wp (year 2002 dollars) by APL 4.
Government Grant: For 20 to 30 Wp PV systems: P 8000 per system. For 31 to 50 Wp PV systems: P 4000 per system.

Only one Government and GEF grant is available per household, institution or commercial establishment.

Eligibility Requirements

This section sets forth the eligibility criteria for: (i) companies; (ii) system equipment; (iii) customers and (iv) sales dates. It also describes the procedures for approving a PV company’s participation in the Project and for grant payments, including arrangement for escrow accounts.

Grant Eligibility Criteria

Eligible equipment

While the eligible stand-alone systems initially during APL 1 are expected to be SHS or solar battery charging stations, other technologies would be eligible for financing. Candidate renewable energy technologies to provide stand-alone or off-grid electricity services include:

- Individual solar PV systems (or, solar home systems – SHS). Consumers desiring higher service levels would buy a larger unit. Studies in the Philippines and elsewhere find that solar PV can be the least cost solution to providing basic electricity services for lighting,
communications and other household/community needs etc. in areas with small dispersed populations and remote from the grid.¹

- Battery charging stations of 300 Wp serving 10 households. Each would cost around $3500-$4500. Households would bring the batteries to the charging station to be recharged once every week or ten days.

Quality and performance standards to be met are given in Annex 1.

Other products which may become eligible for support include:

- Small wind or wind-PV systems for household service or battery charging. These are appropriate in areas with good wind resources. Typically these systems have lower unit costs compared to SHS, but applicability is more site specific.

- Pico-hydro units. These are small, typically 200-500 W units that operate with a head of 1 – 1.5 meters. Units are installed in streams with power lines, usually strung on trees or bamboo poles, taking power to households.

**Eligible Participating PV Companies**

In order to be accepted as a “Participating Company (PC), the entity must meet the following criteria:

1. have a business plan (Annex 2), acceptable to the Department of Energy, DBP and the Bank that demonstrates that:
   a) the systems sold would meet the project technical specifications;
   b) a financial plan demonstrating that the company’s operations would be commercially viable;
   c) the company has made arrangements to increase its sales either by expanding its service network or by increasing marketing efforts in existing market areas;
   d) the company would abide by adequate consumer protection plans, including a returns policy, warranties, and adequate after-sales service networks; and
   e) the company has a system to provide data required for project monitoring by the PMOs at DBP and PNOC-EDC. The company would retain documentation for the full period of the warranty of each system sold. It would also allow access to representatives of the PMO to its customer data base, including records of sales, installations, collections, complaints, repairs and warranties.
   f) a commitment letter from a commercial bank confirming that the company will have access to necessary financing for working capital or investments.
   g) if credit sales are anticipated, commitment letter from a DBP, and PCIs showing that adequate financing will be available for sales to consumers.
   h) If local government infrastructure grant funds are to be utilized, a Sangguniang Bayan (Municipal Council) / Panlalawigan (Provincial Council) / Panlungsod (City Council) (SB) resolution (as an expression of interest), which confirms the municipalities’ financial support.

2. agree to abide by competitive code of norms for dealing with customers, employees, and other companies, including:

¹ A SHS kit usually consists of the PV module, controller, battery, several fluorescent lamps along with cables and support structure. A PV battery charging station can charge batteries brought to it by users who usually recharge the battery every 1-2 weeks. Electricity available from a PV system is proportional to the size of the PV module/array and sunlight availability and brightness. Each household/facility has its own unit. Electricity is stored in a rechargeable battery for use when needed.
a) providing customers with complete and correct information about products, services and prices;
b) competing openly, not engaging in actions that might prevent competitors from entering or operating in particular market areas.

3. have annual, audited accounts that include its power systems sales that demonstrated that the company is financially sound.

*Eligible markets*

Sales all across the Philippines will be eligible for support so long as the PCs meet all qualification requirements with respect to provision of responsive sales and service etc.

*Eligible customers*

Qualifying sales are final sales to eligible customers. Eligible customers are individual households, shops and other businesses, and government institutions and community groups.

*Eligible sales dates*

Qualifying sales are those made after the World Bank has issued its (a) no objection letter to the PMOs for the participation of the PV company in the project, (b) participating company has signed the Sub-grant agreement, (c) sales take place after the legal agreements for the Philippines Rural Power Project have been signed by the Government of the Philippines and effectiveness conditions have been met. Grant payments may be requested by the PCs from the PMO no later than six months prior to the closing date of the project.

*Other subsidies*

The project is intended to support competitive commercial market development. Grants will not be paid for sales by companies which benefit from other subsidies if these other subsidies benefit one or few companies over other companies or in other ways distort or hamper market development. Nevertheless, companies benefiting from other subsidies will be able to obtain investment and/or working capital loans and PV sales financing through MFIs.

*Approving off-grid electrification company for participation*

The steps for approving a company’s participation in the project are as follows:

1) company applies to the PNOC-EDC PMO to participate in the Project.
2) The PMO will appraise each company that applies to participate and submit the appraisal together (1) Business plan (2) First year plan (3) Audited financial statements (main content as shown in Annex 2).
3) if acceptable, the PMO forwards the appraisal package to the DOE and Bank, including: (a) A description the company and an appraisal of their sub-project (b) business plan (c) first year plan, requesting the Bank to issue NOL for the company’s participation in the project
4) after a satisfactory review, the DOE and Bank issue letters indicating no objection to the company’s participation
5) upon receipt of the no objection letter (NOL), the PMO enters into a Sub-grant Agreement (Annex 3) with the company indicating the terms and conditions for the company to receive the GEF and government sub-grants.
6) The PC enters into a Memorandum of Understanding with an accredited Participating Credit Institution that will provide consumer loans for off-grid systems sales. See Annex 4 for a sample.

This process is shown schematically in Annex 5.

As noted previously the company may apply for and obtain investment and working capital loans from DBP, as necessary. Taking a loan from DBP utilizing Bank funds is not a necessary condition for becoming a PC.

Procedures for grant payments

A Special Account will be established by the PNOC-EDC for the GEF grant, according to established procedures. PMO would pay grants from the Special Account to the PC’s bank account. Flow of grant funds are shown in Annex 6.

Grant payment requests would be made by the companies to the PMO. The PMO would review the documentation and, if complete and in compliance with the requirements, would authorize the payment and send the payment directly to the company.

The PMO’s authorization and disbursement procedure for grant payments would be as follows:

1) Customer signs the PV system Acceptance of Installation Certificate (Annex 7), Warranty (Annex 8), and sales invoice which gives details of the PV system including the serial number of the PV module, the owners name, address and identity card number.
2) The PC makes a grant payment request to the PMO in the form of a list with key information on customers and systems for which grant payments are requested. The request would be sent at agreed intervals (e.g., three months) and in agreed minimum size batches (e.g., 50 units) to the PMO along with its request for grant payment. Copies the AOI and the sales invoice should be submitted along with the list.
3) PV module suppliers/manufacturers will send the PMO a copy of the “Bill of Lading,” insurance policy and the packing list with the PV module ratings, their serial numbers, and date shipped to the PC.
4) PMO verifies that the modules reported as sold came from a shipment of a qualified manufacturer. This verification is intended to prevent companies from attempting to obtain multiple grants per module and is also one check on quality.
5) PMO audits 50 sales reported by each company to verify sale and confirm compliance with specifications, before authorizing grant payment for the first time. Sample Technical Verification Form is given in Annex 9.
6) After satisfactory results of audit,
   • PMO authorizes the Special Account to make GEF sub-grant payment to PC’s bank account.
   • PMO authorizes SPUG (?) to make the government sub-grant payment to the PC’s bank account.
7) PMO authorizes subsequent sub-grant payments as described above, while conducting random audits, as necessary, to confirm that reported sales meet project requirements.
The process is shown schematically in Annex 10.

**Program Management and Technical Assistance**

**Off-grid TA and Program Management Services**

The PNOC-EDC PMO will be responsible for developing and managing the Program Management and TA work program, through an active process of seeking requests or proposals from consumers, communities and companies, PCIs, DBP, and developing ideas for activities that respond to market conditions. It is expected that most of the activities would be carried out by sub-contractors, or project participants. The GEF grants would provide full funding or a partial share of the funding, including for pilot marketing efforts proposed by the PCs, depending on the type of activity and the availability of co-financing from sponsors.

Before GEF Grant and IBRD Loan effectiveness, the PMO would prepare a one year detailed work program and submit to DOE for approval and subsequently to the Bank for NOL. The program would be prepared in consultation with representatives of companies, consumers, other agencies, communities affected by the project, PCIs, DBP and NEA. This program would show for each major activity the implementation plan, the budget and grant support needed, and the expected results in relation to the overall project objectives. Thereafter, on an annual basis, the PMO would present a review of the past year’s program and its proposed work program and budgets for the next year. The annual plan will be submitted to the DOE and Bank by October 31 of each year and finalized after review by the DOE and Bank by December 31 of each year. Each year’s work program would be approved by the DOE and the Bank. This would be timed to coincide with Bank supervision missions.

The indicative outline of work program activities and tentative GEF funding levels follows. Specific tasks and activities are given in Annex 11.

- **Market monitoring activities coordination ($__ million GEF).** The program would support market monitoring. This would include collecting retail and supplier price information, conducting consumer focus groups, conducting annual sample surveys in the project area, and reviewing customer satisfaction information from the results of end-user verifications and other sources. The monitoring would provide information to support the design and evaluation of market development initiatives and to assist in monitoring the effectiveness of project interventions. There would be regular reporting on prices, the results of consumer focus groups and other information. This work would be coordinated by a full time manager of the off-grid stand-alone systems program manager.

- **Public Information Program ($__ million GEF).** The program would provide objective information on product quality, performance, prices, warranties, and consumer protection measures, using radio, TV and newspaper ads, etc.. It would also inform PCs about qualified suppliers and products. It would make available channels for consumers to complain, receive compensation, or provide feedback to the PMO. This would include regular focus group sessions with customers and potential customers. It needs to start early and continue throughout the project. On a routine basis information would be provided to companies and suppliers on the status of the market and the project. It is envisioned that this would include a Web site containing updated information on eligible equipment and suppliers, price data, key events, and the availability of support through the project and other mechanisms.

- **Business Development Support ($__ million GEF).** Since most of the PCs will be new to commercial off-grid sales business, it is necessary to strength on their capability for
marketing, management and operation. These activities will provide assistance to PCs to adopt conventional business practice, and also extend their business views. Training, and technical assistance would be used to assist the PV companies to improve in the following areas: (a) financial management, contract management, accounting and auditing; (b) development of sales and after-service networks; (c) product development and quality control; (d) marketing (surveys, promotion, small demonstrations) and business development; and, (e) industry association/accreditation. Some training will take place in other countries to ensure companies to learn about international best practices. Selection of companies to participate in international training will be based on their sales performance more than one year after project start-up (e.g. sold more than 2,000 systems in the year). The PMO will design and operate a Quick Response Support Facility (QRSF) to permit the companies to obtain cost-shared grant support for business development support. For example, the companies would be required to submit a short proposal indicating the services they plan to obtain along with a budget. The QRSF could provide say, 50% of the cost of such support up to, for example, $10,000 of total grant assistance during APL1.

- **Support to PCIs on Strengthening the Off-grid Systems Financing ($__ million GEF)**. Financing through the PCIs is of critical importance in increasing affordability. Therefore, GEF grant funds have been tentatively designated for supporting PCIs strengthen their capabilities to offer such credit. Eligible activities for support include, development of credit financing approaches, limited support to monitoring and evaluation of credit schemes, workshops and meeting of PCIs to share experiences, visits to other countries to learn from successful experiences, etc.

- **PMO Support ($ __ million GEF)**. Technical assistance and training, including international adviser(s) acceptable to the Bank, would be provided to strengthen the PMO’s capacity in the following areas: (a) project management, including financial management, accounting, contract management and grant processing, including verifications the systems meet the project’s technical specifications and that the companies are adhering to the consumer protection requirements; (b) reporting on progress, updating the strategy and addressing issues that arise. Funds would be also available for consultants and firms recruited to support program management and operations of the PMO.

**Other Technical Assistance**

Technical Assistance and Program Management support for the Mini-Grid Electrification is described in a later section. In addition, GEF grant funds will be also used for policy support and institutional strengthening services to DOE, ERC, NEA/EC, DBP and others. These services include the following:

**Policy Development and Planning Support to DOE**

- Policy Support (Policy Studies in subsidy, regulation, tariff with respect to off-grid services)

- Integration of Renewable Energy into the Missionary Electrification Development Plan

- Project Subsidy Fund Allocation Rationalization Studies

**Institutional Strengthening**

- Improve ERC’s regulatory function for off-grid services - capacity building for regulator (tariff setting, renewable energy service model for off-grid, monitoring/compliance with standards, due diligence for issuing operating licenses, conditions/ guidelines/standards for getting operating licenses)
• Livelihood /productive uses promotions in partnership with local government units
• Capacity Building and Technical Support for NEA/EC (Contract Management, Supervision capacity enhancement etc. for integration of renewables into their programs and in awarding mini-grid concessions)
• Capacity Building for GFI, MFI, CFI and RBs.

Management Structure

**DOF.** The Department of Finance is the financial management agency for GEF projects. Under the Project and Grant Agreements, the PMO will manage the SA for GEF funds, disburse grant payments. The MOF will conduct internal audits of grant use and contract independent external auditors annually to audit the project accounts (check!!!).

**DOE.** The Department of Energy will have oversight responsibility over the PMO. They will appoint an advisory committee to advise them and the PMO on the project implementation and support inter-departmental coordination. The advisory committee will comprise of the DOE (Chair), NEDA, DOF, ERC, NEA, NPC/SPUG and DBP and representatives from PCs, PCIs and consumers.

**PNOC-EDC Project Management Office.** A Project Agreement will be signed between the PNOC-EDC and the Bank to specify their roles and responsibilities in running the PMO. The PNOC EDC will appoint their staff, acceptable to DOE and the Bank for the key positions of PMO Director, Contracts and Procurement Specialist and Accounts Manager. Contract staff paid by the GEF grant will comprise the Off-grid and Minigrid Program Managers and other support functions. The PMO carries out the following tasks:

- authorizes payments from the Special Account and from the SPUG account.
- enters into grant agreements with PCs
- enters into other grant agreements and contracts
- maintains the Project accounts
- issues Project financial reports
- maintains the management information system
- confirms whether equipment meets the project’s technical specifications
- verifies that sales and installations are in compliance with project requirements
- prepares an annual plan and budgets for the Program Management and TA
- Manages the TA Program
- Monitoring and Reporting responsibilities, including
  - monitors and reports on project implementation,
  - monitors and reports on off-grid market development,
  - issues Project Management Reports (PMRs) and other reports,
  - liaises and communicates directly with all project stakeholders,
  - facilitates Bank supervision missions and takes follow-up actions as agreed,
  - prepares a mid-term review progress report in advance of an external mid-term
review, and
- other tasks that may be assigned to it during project implementation

The organizational structure of the PMO is given in Annex 12. The brief descriptions and responsibilities of key staff are given in Annex 13. The key staffing and organization will be as follows:

- **Director’s Office.** The PMO Office of the Director is responsible for implementation of both the off-grid and mini-grid sub-components. It is headed by the PMO Director who is a PNOC-EDC staff member with signature authority. The Director, in addition to overseeing the work of the PMO, has specific and direct responsibilities for heading the Financial Management, Accounting and Contract Documentation Section.

- **Financial Management, Accounting and Contract Documentation Section.** This section is responsible for,
  - maintaining the project accounts and documentation, administering all contracts and grant agreements, and maintaining the project’s management information system
  - ensuring that project funds are prudently managed, that expenditures and activities are well-documented and that internal procedures and controls are in compliance with the requirements of the World Bank/GEF and the Government.
  - support the Commission on Audits in preparing the annual audits.
  - Reviewing and providing feedback to the PCs on their financial reports and annual audited reports.
  - Operating the MIS and issuing reports
  - Clearing the sub-grant application submitted by PCs after field verifications are completed and authorizing the release of grant funds to the PCs.

This section will be staffed by PNOC EDC staff serving as Accountant and Contracts/Procurement Manager. The MIS services will be contracted out to a information technology company. The Section will

- **Off-grid Sub-Component Section** is headed by a Off-grid Program Manager and assisted consultants, as needed. This sections consists of three sub-sections as noted below:
  - **Off-grid Installations Verification.** It will be responsible for confirming that products meets the project’s technical specifications and to verify that the system sales for which GEF and government grant payments are requested by the PCIs are in compliance with project requirements. The Manager or designee will communicate with PCIs and suppliers. The field verifications will be undertaken by contracted firms. This section will issue notifications to companies to confirm that their equipment meets the specifications and will main an updated registry of equipment which has been confirmed as eligible for use in the project. This updated list will be openly available to all PCIs and to suppliers and others. This section has
the responsibility to conduct verifications to ensure that the grants are paid to PCIs only for certified equipment and that the consumer protection provisions, including after sales service and warranties, are honored by the companies. Most of the actual verifications conducted in the field will be done by firms contracted as and when needed by the PMO. This section will follow up on complaints received from customers or others, in coordination with the institutional development section when appropriate.

- **Capacity Building Technical Assistance.** The Off-grid Program Manager will be responsible to coordinate the PMO’s TA activities to support the off-grid market support activities. The manager will be assisted by short-term international and national advisors. This person will also be responsible for consolidated project reporting. This section has the key responsibility for the successful implementation of the project’s support for market development and quality improvement. This section will also coordinate support to the PCIs. It is expected that many of the tasks of market development, consumer financing network strengthening and quality assurance will be conducted by persons or organizations contracted as and when needed by the PMO. These sections will also monitor market development, using information from various sources including the monthly sales reports of the PCIs and their annual audited reports. These sections will prepare and report on the annual program for the Market Development Program.

**Participating Companies.** A few PCs will be accepted into the program before project effectiveness. Other companies may enter the project later. The companies are responsible for selling off-grid systems in accordance with project requirements, for which they will receive GEF and government grant payments. The companies will report their quarterly sales performance to the PMO, and will also send the PMO copies of their audited annual financial statements. The PCIs will enter into a Sub-grant agreement with the PMO when they join the project. The sub-grant agreement was given in Annex 3.

**Development Bank of the Philippines.** The DBP as borrower of record for the Project, will on-lend the funds to the PCs and PCIs. Thus, it has the following responsibilities:

(a) Update as necessary, the DBP “Desk Manual” which will serve as the Operations Manual for their on-lending operations.

(b) Credit evaluation of the PCs including determining the investment envelopes and borrowing capacities and conducting credit investigation. For construction supervision, DBP shall contract a consultant who shall be responsible for quality assurance during construction up to commissioning of facilities.

(c) Accreditation of the PCIs. The criteria DBP will use to accredit the PCIs include the following

   o …
   o …
   o …

(d) Ensure appropriate use of loan funds by the PCs and PCIs

(e) Financial management including procurement matters. Lastly, DBP/LBP shall undertake the following activities relating to financial management:

<table>
<thead>
<tr>
<th>Area</th>
<th>Activity</th>
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</table>
Area Organization Activity

Reporting system Project Management Reports (PMR) shall be used to report on the financials, progress and procurement of the Project.

Accounting system The accounting systems shall be modified to allow for the accounting of transactions and the generation of PMRs.

Internal control:
(a) Policies and Procedures
A financial management manual will be prepared.

(b) Awarding of Contracts
The DBP shall review the award of contracts by the sub-borrowers and The DBP will obtain written confirmation from PNOC-EDC PMO that the PCs have met the technical requirements for becoming a participating company. DBP will recommend clearance to the World Bank before the latter issues its no objection.

(c) Loan, Subloan and Contract Agreements
All borrowers shall be required to submit periodic status reports on project implementation. These documents shall be revised to incorporate issues and concerns encountered during APL1 implementation.

Disbursement requests from the World Bank The disbursement requests shall be based initially on the Statement of Expenditures but eventually be PMR-based.

Audit The Commission on Audit shall prepare annual audit reports. Internal audit reports on the Project shall be required.

Financial Ratios Financial ratios on capital, liquidity and past due shall be included in the Loan Agreement with the World Bank.

Training Prior to loan effectiveness, all FM personnel involved in the Project shall be trained by the World Bank on the latter’s financial management, disbursements, audit and procurement requirements.

DBP will organize its project management office with staff to undertake day-to-day operations and management of the Project.

**Participating Credit Institutions.** The PCIs are those duly accredited by DBP as eligible to participate as sub-borrowers of the IBRD Loan. The PCIs will enter into agreement with the PCs for the supply of customer financing. The PCIs would conduct their own credit investigation of end-users availing of credit for purchase of off-grid systems or local entrepreneur availing of a battery charging station (BCS) loan. They will likewise enter into agreements with the PCs that provide off-grid systems and services to their end-user borrowers. Annex 4 gave a sample of such an agreement between the PCI and PC.

### Performance Indicators and End of Project Targets

#### Project Schedule

The project is a four-phase Adaptable Program Loan. Phase I is from 2003-2007; Phase II from 2008-2010; Phase III from 2011-2013 and Phase IV from 2014-2017.

#### Project Performance Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Comment</th>
<th>APL 1</th>
<th>APL 2</th>
<th>APL 3</th>
<th>APL 4</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Off-grid system sales</td>
<td>Market development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companies operating on sustainable basis selling to consumer market</td>
<td>Market development</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
## World Bank Supervision

**World Bank supervision.** The supervision will be relatively heavy up to midterm, and will require assistance from the Bank Office in Manila, specially on matters related to disbursements, procurement, audits and accounts. It is expected that this would help to reduce any implementation problems as well as ensure that the PMO, PCs and PCIs activities are in compliance with project design and standards. There will be two supervision missions per year, initially schedules in April and October, following submissions of biannual project reports in March 15 and September 15 of each year.

## Compliance and performance monitoring

The PMO will monitor the PCs to ensure that: (a) grant funds are being used for the intended purpose; (b) the companies are complying with pre-established technical, after sales service, and consumer protection standards; and, (c) customers are satisfied with their systems.

Verifying that the PV companies are complying with the project requirements is the primary responsibility of the verification section of the PMO. The PMO will act on two kinds of non-compliance. In the case of isolated incidents, the PMO will give the PC the opportunity to remedy the problem within a given time limit. In the case of fraud or repeated incidents or technical and management failings, the PMO would notify the DOE and Bank, obtain their no objection, and suspend disbursements to the company and take other actions to terminate the company’s participation in the project.

Monitoring methods for this component would include the following:

- end-user level audits of 50 systems sold by each company to ensure satisfactory product quality, before initiating grant payments;

- random, unannounced, independent end-user level audits of subsequent reported sales, as needed;\(^2\)

- customer surveys using simple, short postcards and questionnaires;

- provision of a free consumer hotline;

- small focus group sessions with companies and consumers in different regions conducted as part of the market monitoring;

\(^2\) These are *ex-post* verifications done on a routine basis. This permits grant payments to the PV companies to continue without hindrance. The sampling methodology is determined by the PMO.
• complaint based end-user audits and other data gathering in response to complaints or information received from customers or others;
• reviews of documentation and reports provided by PCs, local and international suppliers and others;
• direct observation and verification during regular field visits;
• annual reviews of the audited financial statements submitted by each company, including counter-audits as necessary to verify information.
• performance reviews with individual companies, their accountants, auditors and commercial banks as necessary; and annual meetings with companies to discuss ways to improve the compliance monitoring system.

In addition to the end-user audits and other compliance monitoring activities, the verification section of the PMO, in collaboration with the product quality assurance and market development staff, will conduct technical performance audits of PV systems or components.

**Reporting**

**PCs to PMO**

The main approach for company reporting requirements is that they should be the minimum necessary to verify sales and installations for which GEF payments are made and to monitor market development. Additional information gathered through company visits and reviews of the annual audited statements of the companies will be conducted by the PMO to monitor the overall progress in developing sustainable enterprises.

Quarterly, within one month of the end of the quarter, the participating companies will report to the PMO. The report will include three tables (Annex 14):

(a) Table Form 2 - GEF grant payment tracking report of the company’s requests to the PMO for GEF grant payments and of receipts of grant payments. Form 1 is used by the PCs when submitting a grant payment request to the PMO.

(b) Table Form 3 - report on company’s unit PV system sales during the period by Wp size and province. In addition to the table, the companies should indicate in text the main factors affecting their sales.

(c) Table Form 4 – report on company’s purchases of PV modules, batteries and other system components during the period.

Annually, the companies will submit to the PMO copies of their audited financial statements no later than the end of March of the following year.
PMO to DOE and IBRD

The PMO will issue Project Management Reports consisting of financial, progress and procurement reports. The report will comprise of the following:

1) Financial Reports
   a. Project Balance Sheet
   b. Project Sources and Uses of Funds
   c. Project Cash Withdrawals (Disbursement)
   d. Special Accounts Statement
   e. Project Cash Forecast

2) Monthly Progress Reports
   a. Output Monitoring Reports due only quarterly (see below)

3) Procurement Management Reports, as applicable
   a. Procurement Process Monitoring Reports (Goods and Works)
   b. Procurement Process Monitoring Reports (Consultants)
   c. Contract Expenditure Reports (Goods and Works)
   d. Contract Expenditure Reports (Consultants)

The Output Monitoring Reports will comprise of five tables generated by the MIS and one brief narrative statement. These are the following (see Annex 14):

(a) Table Form 3 (consolidated) - summary report on total unit and Wp sales by size of unit and province, based on the Form 3 reports submitted by the PCs.
(b) Table Form 5 - GEF and government grant payment requests received and payments authorized by the PMO, by PCs, province, units and value.
(c) Table Form 6 - GEF and government grant payment requests submitted and payments received by the PCs, by company and province, in number of units and value, based on reports submitted by PCs
(d) Table Form 7 – information on end user verifications completed of the system sales and installations, by PC
(e) Table Form 8 - GEF and government payment requests received and authorized by PMO by date
(f) statement on urgent issues and recommendations for adjustments to improve implementation performance

Biannually, the PMO will send a report to DOE and IBRD which will include the above tables and statement, plus:

(a) statement of the results and status of completed, on-going and upcoming PMO activities, including the TA Program.
(b) statement on the main trends and factors affecting off-grid market development and the companies participating in the project.
(c) progress report against key performance indicators and milestone dates. The indicators should be consistent with the PAD. The indicators will include: cumulative systems sold, installed MWp, installed cost in $/Wp, pv sytems sold and operating under project in units, pv systems sold and operating under project in MWp, number of pv companies with satisfactory quality control systems in place.
(d) PMO’s current organization chart indicating any significant changes, if any.
Standard financial management, contracts and procurement reporting tables as agreed between IBRD and MOF. The financial reports will be generated by the financial MIS to be provided by the IBRD. The financial reporting on expenditures will follow the budget line items and sub-lines as agreed. These reports are:

Annually, the PMO will issue a summary report on the financial performance of the PCs. This report should be submitted to the DOE and the Bank within 6 months of the reporting year end. This analysis will take into account the audited financial statements submitted by the companies, data from the Project information maintained by the PMO, and information gathered during company visits, consumer and company focus groups and discussions with other knowledgeable sources, which might include representatives of commercial banks and suppliers. This report will compare estimated financial performance of the companies against the performance indicators included in the PAD.

The PMO will assist in preparation of the Project Implementation Completion Report three months before the closing date of the Project.

DBP to IBRD

The DBP will issue Project Management Reports consisting of financial, progress and procurement reports. The report will comprise of the following:

1) Financial Reports
   a. Project Balance Sheet
   b. Project Sources and Uses of Funds
   c. Project Cash Withdrawals (Disbursement)
   d. Special Accounts Statement
   e. Project Cash Forecast

2) Monthly Progress Reports (Use Annex 14 forms)

3) Procurement Management Reports, as applicable
   a. Procurement Process Monitoring Reports (Goods and Works)
   b. Procurement Process Monitoring Reports (Consultants)
   c. Contract Expenditure Reports (Goods and Works)
   d. Contract Expenditure Reports (Consultants)

Project Budget

The budget for the PNOC EDC PMO was given in Annex 11.

Procurement

The procurement of goods by PCs will be governed by World Bank procurement guidelines. In the case of the off-grid equipment, procurement shall be done independently by each PCs following established commercial practices acceptable to the Bank. PV components and systems are essentially off-the-shelf items and commodities. International or national competitive bidding for equipment and services—such as procurement of solar panels, batteries, light fixtures, electronic controllers—would not be feasible for the PV companies because the size of individual procurement would be too small, and the grouping of contracts is not practical due dispersal in time and location. All of the contract packages would be under $1.0 million, with the typical package in the range of $0.10-0.20 million.
The typically small sizes of the individual procurement lots offer the possibility of just-in-time procurement, which reduces inventory carrying costs, and the opportunity to take advantage of low prices which are frequently available on the spot market. Efficient procurement is ensured by the competition in the project areas of multiple suppliers and multiple buyers of PV system components. For the PCs, low cost procurement of certified equipment, especially of PV modules, is a key factor affecting their profitability. The PCs are required by the competitive market conditions to follow good commercial practices, ensuring that the components and services which they purchase are procured at a reasonable price, account being taken also of other relevant factors such as time of delivery and efficiency and reliability of the goods and availability of maintenance facilities and spare parts.

All materials and equipment must comply with technical specifications and standards adopted for the project by DOE. Equipment that do not meet required standards will not qualify for the grant component of the project and will also be ineligible for financing using IBRD funds. Technical specifications for solar PV stand-alone systems and BCS was given in Annex 1.

Consultant and training services to be financed will be procured by the PMO in accordance with the current World Bank Guidelines for the Use of Consultants. All contracts will be subject to prior review and approval by the World Bank.

PNOC-EDC PMO Procurement Plan is given in Annex 16.

The TORs are in Annex 17.

**Annual Plan**

The Annual Plan for Year 1 is given in Annex 18. The implementation schedule is given in Annex 19.
Annex 1 – Quality and Performance Standards for Off-grid Systems (Indonesia sample attached)

Annex 2 – Business Plan Outline and Qualifications for Participation

Annex 3 – Sub-Grant Agreement (draft for comment)

Annex 4 – PC and PCI Memorandum of Understanding (tbd)

Annex 5 – PC Approval Schematic (draft for comment)

Annex 6 – Flow of Funds (draft for comment)

Annex 7 – Acceptance of Installation Form (draft for comment)

Annex 8 – Warranty for Off-Grid Systems (draft for comment)

Annex 9 – PV Systems Technical Field Verification Form (draft for comment)

Annex 10 – Schematic of Installation Verification Process (draft for comment)

Annex 11 – PNOC-EDC PMO Work Program and Budget (TBD)

Annex 12 – PNOC-EDC PMO Organization Structure (draft for comment)

Annex 13 – Key PMO Staff Responsibilities (draft for comment)

Annex 14 – GEF and Government Grant Reporting Forms (draft for comment)

To be cleared by Banks Financial Management Specialist
Annex 15 – PMR Reporting Forms and Formats (draft for comment)

[Financial reporting forms should be obtained from Bank’s Financial Management staff. Procurement reporting forms included in file: Annex 15a….xls, they need to be reviewed and cleared by Procurement Specialist]

Annex 16 – PNOC-EDC PMO Procurement Plan (TBD)

Annex 17 – Terms of Reference (TBD)

Annex 18 – First Year Plan (TBD)

Annex 19 – Project Implementation Gantt Chart (TBD)