

INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

Report No.: ISDSC14154

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I. BASIC INFORMATION

A. Basic Project Data

Country:	Pacific Islands	Project ID:	P152653
Project Name:	Sustainable Energy Industry Development (P152653)		
Task Team Leader(s):	Roberto Gabriel Aiello		
Estimated Appraisal Date:		Estimated Board Date:	21-Aug-2015
Managing Unit:	GEEDR	Lending Instrument:	Investment Project Financing
Sector(s):	Other Renewable Energy (75%), General energy sector (25%)		
Theme(s):	Other environment and natural resources management (100%)		
Financing (In USD Million)			
Total Project Cost:	5.87	Total Bank Financing:	0.00
Financing Gap:	0.00		
Financing Source			Amount
Borrower			0.00
Strategic Climate Fund Grant			1.92
Energy Sector Management Assistance Program			3.70
Global Facility for Disaster Reduction and Recovery			0.25
Total			5.87
Environmental Category:	B - Partial Assessment		
Is this a Repeater project?	No		

B. Project Objectives

The project development objective (PDO) is to increase the data availability and capacity in Pacific Island power utilities to enhance their ability to incorporate and manage renewable energy technologies and long-term disaster risk planning.

C. Project Description

The growth of sustainable energy technologies in the Pacific region has accelerated the need to fill gaps in the establishment and adoption of training standards, installation and design guidelines for renewable energy systems and the powers for the industry to provide self-regulation during this period of rapid growth.

Successful quality driven and sustainable industries require a skilled workforce and appropriate guidelines and standards that the industry applies. Together the Pacific Power Association (PPA) and the Sustainable Energy Industry Association of the Pacific Islands (SEIAPI) have identified a suite of activities to be implemented over the coming four years to support the creation of an enabling environment for renewable energy investments in the Pacific Island Countries (PICs). The proposed projects will increase the understanding and willingness of the PICs' utilities to accept renewable energy systems through a greater understanding of the expected impacts on grid stability, load forecasting as well as to facilitate better knowledge and data sharing. In addition, the project will also lead to consistent competencies amongst practitioners in the field through development of standards and the creation of certification pathways for practitioners to receive formal recognition of their technical training.

This project has three components:

- Component 1: Renewable Energy Resource Mapping Phase 1-3: This component will conduct a resource mapping assessment of solar and/or wind capacity across 10 PICs. The objective of this component is to enhance awareness and knowledge among governments, utilities and the private sector about the resource potential for renewable technologies (solar and/or wind), and provide the governments with a spatial planning framework to guide investment in the renewable energy sector. These resource maps will (a) provide a detailed assessment for solar and potentially also wind and other renewable energy resources in the islands, (b) increase the awareness and knowledge of the governments and other energy-sector players on renewable energy potential, (c) provide baseline information for potential new public and private sector investments projects and (d) serve as input for grid integration studies.

The abovementioned Phase 1-3 of the resource mapping will be undertaken with support from the Energy Sector Management Assistance Program (ESMAP):

- o Phase 1 – Project inception, preliminary modeling and implementation planning: Project inception and stakeholder engagement; preparation of an initial resource estimate at the country level based on a mesoscale model using satellite and reanalysis data; preliminary validation using existing ground-based data; preparations for the implementation of Phase 2;
- o Phase 2 – Ground-based data collection: Implementation of a ground-based measurement campaign using high quality measurement devices, with real-time data transmission and reporting, for the purpose of validating and improving the mesoscale model and generating reliable benchmarking data;
- o Phase 3 – Production of validated wind resource atlas: Prepare validated resource maps and Atlas reports that describes the final outputs, methodology and process, and includes provision of the final geographic information system (GIS) data.

The activity will ensure the sharing of knowledge about the current existing information and will avoid duplication of data collection. Use of the ESMAP approach will make it possible to continue with the next phases (phases 4 and 5) under a different project if additional funds become available or if the funds allocated to phases 1-3 allow to cover additional scope in some islands.

- Component 2: Technical Assistance: This component will conduct a program of activities designed to increase capacity within the utilities in 10 PICs and PNG on planning for and management of the integration of variable RE in their systems, data collection and management and

knowledge-sharing across jurisdictions. This program of activities is to include:

- A grid stability modelling sub-component including: (a) purchase of modelling software and tools to support utilities with network expansion planning, variable renewable interconnection studies and grid stability and protection coordination studies (building on the work started by IRENA in 2013/14); and (b) training of PPA staff in the use of the software in order to support utilities through the conduction of independent grid stability studies.
- A power benchmarking sub-component including: (a) development of an online Power Benchmarking data submission tool to support PPA's coordination of the annual Power Benchmarking Report with input from member utilities; and (b) training of PPA staff in the use of the tool in order to support utilities with their independent data collection/entry using the tool
- An industry guidelines and competency standards sub-component including: (a) Hiring of a consultant to develop solar and wind grid codes in order to establish the minimum interconnection standards for renewable energy systems, and (b) development of industry guidelines (design, installation, operations and maintenance) and competency standards to support certified technical training in RE technologies.
- A training/ workshop sub-component for PPA members including: (a) support for training courses in a range of demand-driven RE technologies, industry guidelines, standards and other relevant industry issues in each PIC (thus reducing the cost of bringing people from multiple PICs to a single location and reaching more staff within utilities, system planning (including energy efficiency considerations) and demand-side management; (b) support for the PPA to undertake an online training needs assessment among its members to identify training and skills-enhancement needs at the individual utility level to then draw common issues/themes for multi-utility staff training sessions; and (c) support for the PPA's management of workshops focused on developing utilities' understanding of frameworks for private sector involvement in the energy sector (links with IFC's P600131 Pacific RE Gen focused on developing business models for private sector engagement in the energy sector).
- A career development sub-component for the PPA to hire a consultant who would assist with the development of career development initiatives aimed at attracting and retaining talented staff within utilities (e.g., staff development and training, performance incentives etc.). The PPA will also join PIC university career fairs to encourage both female and male high school students to study engineering and other energy-related majors at universities and will provide internship opportunities for them.
- A disaster-recovery and risk-reduction subcomponent that supports PIC power utilities' efforts to improve their preparedness for responding to natural hazards/climate shocks and to reduce economic losses when disasters occur. This component will include the provision of advisory services to the utilities on the planning and prioritization of investments in resilience in the power sector, as well as an emergency response window to assist utilities with post-disaster needs assessment reports. Risk-reduction/adaptation measures will include engineering (e.g., designing more robust design specifications; relocating or retrofitting extremely vulnerable existing infrastructure; designing new systems better able to capture the energy of increased wind speeds, flood protection, underground distribution for protection against wind, high temperatures, corrosion, and flooding), and non-engineering options (more robust operational and maintenance procedures, improved and better-coordinated land-use planning; for example, rezoning land use so that future power infrastructure is located in less vulnerable areas).

This component will complement Component 1 by providing training and workshops to power sector utility staff on technical skills related to renewable energy integration so that they can better use the information that is obtained through the resource mapping component.

- Component 3: Project Implementation Support. This component will conduct a program of activities designed to enhance the PPA's capacity for overall project coordination, management and monitoring. These activities include coordination, administration, technical operation, procurement, financial management, environmental and social management, monitoring, evaluation and reporting. The project's incremental operating costs will also be financed through this component. This program of activities will include:

- A project management support sub-component including: (a) hiring of a full-time project implementation support officer to support the PPA throughout project implementation; (b) hiring of a part-time procurement support officer to assist with procurement processes throughout project implementation; (c) provision of technical assistance to support mainstreaming of safeguards and gender dimensions in the Project; (d) purchase of video conferencing equipment to support enhanced interaction and training support between the PPA and utilities; (e) support for the PPA to organize training courses and workshops on RE technologies and key issues facing utilities; and (f) support for PPA to update its website to facilitate links to the resource mapping online tool, online grid stability software, online benchmarking tool and other resources generated throughout project implementation.

- An incremental operating costs sub-component.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

Component 1 (Phases 2 of the ESMAP process) comprises the temporary installation of wind monitoring masts and solar monitoring equipment, but the proposed locations will not be known until the desk-based research under Phase 1 has been completed. They may be located in 10 of the 11 countries. The installation of ground based measurement equipment under Phase 2 of the project is expected to be on Government land but this may not always be the case (for example wind monitoring will depend on the location of the wind resource). Custom or community land may be required temporarily. The Environmental and Social Management Framework (ESMF) will be used to inform site selection and the mitigation measures required at each site. Sensitive sites, such as physical cultural resources, nests or productive gardens, can be avoided through the use of the ESMF in the site selection process.

The ESMF will also include methods to identify and minimize impacts during installation, use and decommissioning, and will include voluntary land donation protocols and consultation methods. Potential impacts to be managed are: 1) minimizing vegetation clearance for mast installation and associated track clearances; 2) ensuring land access is secured (as discussed in Section E above); 3) avoiding nests, gardens, houses, sites of significance to local people and other physical cultural resources etc.; and 4) ensuring affected parties are consulted and are fully informed of the activity.

Technical Assistance activities under Components 1 and 2 will produce outputs, such as resource maps and training materials, that will influence infrastructure planning and decision making in these countries in future (not funded by this project). Technical Assistance will be guided by ToRs approved by the Bank which will ensure safeguard issues are adequately addressed in activities.

E. Borrowers Institutional Capacity for Safeguard Policies

The PPA will be responsible for the implementation of the ESMF, preparing TOR's for consultants that include safeguards clauses, and reviewing the consultants' outputs in relation to the TORs and the ESMF. PPA has five staff, none of whom have safeguards experience or skills in environmental or social impact assessment. Therefore, one of the consultants selected to support PPA under Component 3 will require experience in donor safeguards to undertake this role.

The ESMAP consultants engaged under Component 1 will be required to develop the ground monitoring program in accordance with the ESMF, and will be required to use the site selection checklists and the guidelines in the ESMF for installing, maintaining and removing the equipment. The task team safeguards specialists will provide further training and support to PPA during implementation.

The World Bank task team will conduct training and awareness on safeguards relevant to the project and the proposed instruments, and supervise the site screening processes.

F. Environmental and Social Safeguards Specialists on the Team

Penelope Ruth Ferguson (GENDR)

Ross James Butler (GSURR)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	Screening has identified low risk of environmental and social impact, from the installation of wind monitoring masts and solar monitoring equipment and the indirect implementation of recommendations from Component 1 desk-based research. An ESMF will be prepared that will include guidelines and a screening checklist to avoid or manage impacts from the siting of the equipment. PPA will ensure that all terms of reference for technical assistance and studies carried out under the Project are consistent with the WB's environmental and social safeguards policies and requirements.
Natural Habitats OP/BP 4.04	No	The footprint of the infrastructure is very small and through the desk top study any natural habitats can be avoided in Component 1.
Forests OP/BP 4.36	No	The footprint of the equipment required in Component 1 is very small and will not adversely affect forested areas or the use of forests.
Pest Management OP 4.09	No	There is no pest management under this project.
Physical Cultural Resources OP/BP 4.11	Yes	The footprint of the equipment required for Component 1 is very small and physical cultural resources can be avoided. Physical cultural resources will be screened as part of site selection, hence the policy is triggered.
Indigenous Peoples OP/BP 4.10	Yes	Because the project will apply to a number of Countries where Indigenous Peoples reside and have strong relationships with land, OP/BP 4.10 is proposed to be triggered. For the Component 1 land requirements, it is expected that Government land

		will generally be available, and use of this land will be prioritized, but this may not always be possible. Land acquisition will not be required, but there will be some temporary use of land and this will require either voluntary land donation or temporary land lease or similar arrangement; some of this land may be in areas used/inhabited/owned by indigenous communities.
Involuntary Resettlement OP/ BP 4.12	Yes	Under Component 1 there will be temporary use of land for wind monitoring masts and solar monitoring equipment. Government land will be prioritized, but if community or custom land is required, a process for consultation and access agreements is required and this will form part of the safeguards documentation as described under 4.01. PPA will ensure that all terms of reference for any technical assistance or studies carried out under the Project are consistent with the requirements of this policy.
Safety of Dams OP/BP 4.37	No	This project does not involve the construction of dams or rely on the performance of an existing dam or a dam under construction.
Projects on International Waterways OP/BP 7.50	No	No studies or activities are proposed international waters.
Projects in Disputed Areas OP/ BP 7.60	No	No studies or activities are proposed in disputed areas.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 01-Jul-2015

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:

The ESMF will be drafted by the end of June 2015, and key stakeholders will be consulted, prior to appraisal.

IV. APPROVALS

Task Team Leader(s):	Name: Roberto Gabriel Aiello	
<i>Approved By:</i>		
Safeguards Advisor:	Name: Peter Leonard (SA)	Date: 26-Jun-2015
Practice Manager/ Manager:	Name: Julia M. Fraser (PMGR)	Date: 29-Jun-2015

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.