INTEGRATED SAFEGUARDS DATA SHEET
CONCEPT STAGE

Report No.: ISDSC3437

Date ISDS Prepared/Updated: 10-Oct-2013

Date ISDS Approved/Disclosed: 24-Oct-2013

I. BASIC INFORMATION

A. Basic Project Data

Country:	Tuvalu	**Project ID:**	P144573
Project Name:	Energy Sector Development Project (P144573)		
Task Team Leader:	Roberto Gabriel Aiello		
Estimated Appraisal Date:	06-Feb-2014	**Estimated Board Date:**	22-Jul-2014
Managing Unit:	EASNS	**Lending Instrument:**	Investment Project Financing
Sector(s):	Other Renewable Energy (40%), Transmission and Distribution of Electricity (30%), Energy efficiency in Heat and Power (30%)		
Theme(s):	Infrastructure services for private sector development (100%)		

Financing (In USD Million)

Total Project Cost:	7.00	Total Bank Financing:	7.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	0.00
International Development Association (IDA)	7.00
Total	7.00

Environmental Category:	B - Partial Assessment
Is this a Repeater project?	No

B. Project Objectives

The project development objective is to support Tuvalu enhance its energy security by improving the efficiency and sustainability of the electricity system.

C. Project Description

The project will consist of three components to be implemented by the Tuvalu Electricity Corporation (TEC).

Component 1: Improving the efficiency of TEC's electricity system (estimated cost: $0.8M). This component will involve two subcomponents:

Pre-payment meters (estimated cost: $0.4M): TEC has a high level of outstanding debtors, with accounts receivable standing at over 100 debtor days, i.e. over 3 months. The project will finance the procurement and installation of pre-payment meters on all accounts, with Smart meters being considered for large accounts. The project will also include a capacity building program for TEC staff and a program to raise awareness of consumers.

Communications system, data and voice communications (estimated cost: $0.4M): Poor communications between Funafuti and the outer islands is an impediment to utility operations and customer service, and the current communications system is highly unreliable. The project will finance the installation of a satellite and wireless communication system to facilitate voice and data communications between the outer islands and the head office in Funafuti.

Component 2: Renewable Energy and Energy Efficiency (estimated cost: $5.9M, depending on total grant allocation). In line with the Energy Master Plan and TEC's vision for 100% renewable energy generation by 2020, this component will focus on improving Tuvalu's renewable energy penetration in Funafuti. By carrying out energy and power system modeling for the system, a best solution for increase RE penetration will be proposed. Applying a process of grid integration and enabling technologies, and combining with energy efficiency measures, significant improvements can be made, increasing the overall RE penetration by up to 25%.
Key elements of the process involve:

a. Power System Modeling: By carrying out energy and power system modeling for the system, a best solution will be proposed for increasing RE penetration. The modeling will factor in the renewable energy plans of other development partners, such as NZ's plan for 618kWp solar and 299kWp wind energy and build upon the existing system.
b. Generation Economic Load Dispatching System: With fuel accounting for the majority of costs for Tuvalu's power generation, more efficient use of the generators will bring about savings in fuel consumption. Installation of a generator load dispatch system at the Funafuti power generation plant will lead to improved fuel efficiency of the operations, translating into direct cash savings for TEC.
c. Load control and automated demand side management: Load control and load shifting initiatives can reduce reliance on diesel generation by matching demand more closely to the supply profile for RE. Energy efficiency initiatives will reduce overall demand, hence enhancing overall RE penetration of the network.
d. Grid stabilization: Managing the active and reactive power will improve efficiency of the system, minimizing network losses, and protecting against equipment damage and outages caused by overloading and voltage fluctuations.
e. Energy Storage: Combined with the initiatives implemented above, assessments will be made on the cost benefit of adding storage to the Funafuti grid.

This is a layered process, and greater funding will enable greater gains to be made towards achieving the 100% RE target for Tuvalu.

Component 3: Technical Assistance to TEC (estimated cost: $0.3M). This component will support project implementation and build capacity to operate, manage and maintain systems. This also

includes collecting electricity data and statistics, and development of information management system.

Gender screening analyses will be conducted during project preparation. Depending on results, appropriate gender actions, and monitoring and evaluation will be conducted accordingly.

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

Tuvalu is a group of nine inhabited islands (4 reef islands and 5 coral atolls) with a land area of 26 km2 and maximum elevation of 4.5 meters. Few atolls are more than 800 meters wide. Roughly half the country's population of some 9,847 lives on the main atoll, Funafuti. On the outer islands three-quarters of the people still live in traditional-style housing. Transport to the Outer Islands is by boat, and may take a week or more for a round trip from Funafuti.

Tuvalu is vulnerable to sea level rise, and currently experiences surface flooding in low areas during king tides.

The location for the installation of communications equipment (i.e. satellite dishes) (Component 1) is not currently known, although locations on Government leased land will be prioritized.

The location for renewable energy projects (component 2c) and for possible battery storage (Component 2e) will not be known until project implementation.

E. Borrowers Institutional Capacity for Safeguard Policies

Tuvalu is the World Bank's second newest member.

TEC's current capacity to implement the project needs to be strengthened. Although TEC has not acted as an implementing agency for a similar project previously, key managerial staff members are capable and can be trained to carry on additional tasks that will be required to integrate the components of the project. TEC has basic awareness of, and willingness to work with safeguards policies. Capacity building activities have been included in the proposed project as well as a technical assistance allocation to support project implementation, and this should include safeguards. Adequate monitoring and evaluation arrangements are critical during project implementation.

F. Environmental and Social Safeguards Specialists on the Team

Beverly Ann McLean (EASNS)

Penelope Ruth Ferguson (EASIS)

II. SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/ BP 4.01	Yes	Screening has identified some activities that may have a social or environmental impact. These include the installation of communications infrastructure, energy efficiency investments and the installation of energy storage (batteries or fly wheel). Some of these investments will not be known until project implementation. Therefore an

		Environmental and Social Management Framework has been prepared that will provide assessment methods and other tools to apply to activities as they are identified, and prior to implementation. For activities that have already been identified, Codes of Practice have been annexed to the ESMF. The project will ensure that the TOR for the Technical Assistance under Component 3 include, as relevant, safeguards policies considerations and processes for environmental and social safeguard compliance.
Natural Habitats OP/BP 4.04	No	The project can be designed to avoid investment in areas that may cause adverse impacts on any natural habitats.
Forests OP/BP 4.36	No	The project can be designed to avoid any activities that would affect the health/quality of forests, or the rights/welfare of people who depend on forests for livelihoods, or the management/protection/utilization of natural forests or plantations.
Pest Management OP 4.09	No	No use or procurement of pesticides is required.
Physical Cultural Resources OP/ BP 4.11	No	The project can be designed to avoid activities that could impact on physical cultural resources. A chance find protocol will be included in the Environmental and Social Management Framework.
Indigenous Peoples OP/BP 4.10	Yes	96% of the inhabitants are Polynesian. The remaining 4% are mostly Micronesian originally from Kiribati, with which Tuvalu was joined under the colonial administration as the Gilbert and Ellice Islands. Inhabitants speak and identify themselves as Tuvaluan. The project will not impact their livelihoods, language or culture. It is entirely for the benefit of the indigenous population groups. Consultation planning in the ESMF will ensure that information about the project is in appropriate languages, and will use local institutions such as the village councils (kaupule) and women's groups to ensure effective communications. Social assessment will be included in the ESMF and the outcomes incorporated into project design. Since the majority of people in the project area are IPs, an IPP is not required.

Involuntary Resettlement OP/BP 4.12	Yes	Improvements to the communications system will require installation of some physical infrastructure. Though its physical footprint will be small, it may be installed on land that is not already government-leased. An RPF will be prepared and will lay out the stepsto be taken when any land is involuntarily acquired or voluntarily donated for project activities.
Safety of Dams OP/BP 4.37	No	This project does not include any dam structures.
Projects on International Waterways OP/BP 7.50	No	There are no international waterways within the area of influence of the project.
Projects in Disputed Areas OP/BP 7.60	No	This project is entirely in Tuvalu and there are no disputed areas.

III. SAFEGUARD PREPARATION PLAN

A. Tentative target date for preparing the PAD Stage ISDS: 03-Feb-2014

B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing[1] should be specified in the PAD-stage ISDS:

During project preparation, a Project Information Bulletin will be prepared in English and Tuvaluan and released to the Tuvalu News and the Tuvalu Media Corporation. The immediate aim will be to communicate to the public the changes that will directly affect them such as changes in the mode of metering, and possible installation of communications infrastructure, and to invite and direct comment to take into account in implementation planning.

The draft ESMF and RPF will be prepared, disclosed and consulted on during this time. A social assessment will be carried out during this time.

IV. APPROVALS

Task Team Leader:	Name: Roberto Gabriel Aiello	
Approved By:		
Regional Safeguards Coordinator:	Name: Peter Leonard (RSA)	Date: 23-Oct-2013
Sector Manager:	Name: Michel Kerf (SM)	Date: 24-Oct-2013

[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.