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Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 05-Apr-2017 | Report No: PIDISDSC19618



BASIC INFORMATION

A. Basic Project Data

Country Marshall Islands	Project ID P160910	Parent Project ID (if any)	Project Name Sustainable Energy Development Project (P160910)
Region EAST ASIA AND PACIFIC	Estimated Appraisal Date May 12, 2017	Estimated Board Date Oct 05, 2017	Practice Area (Lead) Energy & Extractives
Financing Instrument Investment Project Financing	Borrower(s) Republic of Marshall Islands	Implementing Agency Division of International Development Assistance (DIDA)	

Proposed Development Objective(s)

The project development objective (PDO) is to increase renewable energy generation and promote energy efficiency in project supported areas.

Financing (in USD Million)

Financing Source	Amount
IDA Grant	25.00
Total Project Cost	25.00

Environmental Assessment Category B-Partial Assessment	Concept Review Decision Track II-The review did authorize the preparation to continue
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Other Decision (as needed)



B. Introduction and Context

Country Context

1. The Republic of the Marshall Islands (RMI) is one of the world’s smallest, most isolated and vulnerable nations. The country consists of 29 atolls and 5 isolated islands (24 of which are inhabited) and has a total land mass of just 181 km² set in an area of over 1.9 million km² in the Pacific Ocean. The population of the RMI is estimated at 53,000¹ of which the two largest urban centers, Majuro and Ebeye (a small islet on Kwajalein atoll with a land area of 40 hectares), have populations of 28,000 and 9,614, respectively. Ebeye has the highest population density in the Pacific, equivalent to an estimated 66,750 people per square mile; this is much higher than the population density in Tokyo, estimated at 15,619 people per square mile.

2. The RMI is a sovereign nation in a “Compact of Free Association” (CFA) agreement with the United States. The first CFA was signed in 1983 and continued in force through 2003, while an amended CFA entered into force on May 1, 2004, and is in effect through 2023. No Compact financing is assured beyond the life of the current CFA arrangement, which presents a key challenge to the country’s fiscal sustainability. While a Compact Trust Fund (CTF) was established to replace Compact grants from 2024 onward, based on current projections, contributions to the CTF are inadequate to assure a smooth transition, and annual CTF income can be expected to fall short of what is needed to replace Compact grants in 2024.

3. The Marshall Islands faces many of the development challenges common to small, remote economies with dispersed populations. Small size and remoteness increase the costs of economic activity and make it difficult to achieve economies of scale. Remoteness also imposes transport costs that increase the costs of trade and fundamentally constrain competitiveness of exports of goods and services in world markets. These same factors also increase the cost and complexity of providing public services. Moreover, geographical characteristics, including populations centered on small, low-lying atolls, make the country extremely vulnerable to natural disasters.

4. These barriers have led to an undiversified economic base and persistent current account deficits. With limited export and domestic production opportunities, public administration and social services constitute the largest share of the economy – approximately 45 percent of Gross Domestic Product (GDP). The fisheries sector comprises around 10 percent of GDP, while manufacturing makes up less than 2 percent. Copra and fisheries are the most significant exports, while the country is almost completely reliant on imports for food, fuel, and other basic needs. With substantial constraints to export-led growth, the Marshall Islands is heavily dependent on aid and other fiscal transfers. The current account deficit is largely financed by grant inflows. Aid and fiscal transfers, primarily from the US, support reasonable though declining standards of living for the majority of the population.

Sectoral and Institutional Context

Institutional context

5. The RMI energy sector is led by the Ministry of Resources and Development (MRD) through the Energy Planning Division (EPD). EPD is composed by two officers and a national energy adviser. MRD is responsible for implementing the

¹ 2011 RMI Census



energy policy's plan of action. The Marshalls Energy Company (MEC), the vertically integrated state-owned utility, is in charge of electric power generation and distribution in Majuro, Jaluit and Wotje, and has been committed by the EPD for the installation, operation and maintenance (O&M) of RE installations in remote areas. MEC also imports and distributes petroleum products and is hierarchically under the Ministry of Public Works.

6. The 2008 fuel crisis pushed MEC towards insolvency with the company requiring continual cash transfers and advances from the national government placing additional pressure on an already stressed fiscal system. In depth diagnoses of MEC's financial and operational performance in 2008 and 2009 revealed numerous long-standing problems including deteriorating financial, deficient asset management, and continuous operational losses. In that context, MEC adopted a series of reform measures and prepared a Comprehensive Recovery Plan (CRP) aimed at achieving an important improvement in MEC's financial position. The CRP short-term measures included the review and update of company asset management and a debt restructuring plan, and the implementation of new tariff template, a program to reduce non-technical losses by improving collection of receivables as well as a plan to reduce its annual operating costs by reducing non-essential expenditures and streamlining Board and utility expenditures, etc. Medium term actions were designed to address MEC's governance and management structure, debt management, audit and system losses. Longer-term reform measures included prepaid/debit metering system, overhaul of the main generators, improvement of organizational and personnel management and addressing water and sewage problems. The implementation of those measures have improved the financial and operational situation of the utility but further reforms are still needed, especially regarding the need to reduce the dependency on fossil fuels and the implementation of additional efficiency measures.

7. In Ebeye, the Kwajalein Atoll Joint Utility Resource (KAJUR), is responsible for providing power, water, sewer and potable water. Most Atolls have a Development Authority overseeing all operations on that particular atoll. KAJUR was run by KADA (Kwajalein Atoll Development Authority), which was closed down in the late 90's. The RMI government took control of KAJUR after a private management company left around 2005, and later, according to cabinet minutes, the government directed the MEC board of Directors, to oversee the daily operations of KAJUR. Currently, KAJUR is managed as a subsidiary of MEC but it's legal status is uncertain. The company has its own separate power system and facilities.

Sector Context

8. More than 90 percent of energy provision in RMI is dependent on imported fuels, and the rest comes from biomass and solar. The imported fuel consumption breakdown is as follows: 68% for transportation, 30% for power generation, and rest is for commercial enterprises and private homes. Biomass energy in the country is produced from waste materials, coconut stalks and copra (coconuts oil), and used for cooking and water heating in households. There are approximately 1,850 standalone Photovoltaic (PV) Solar Home Systems (SHS) and some small grid connected solar PVs in Majuro (described below). The rate of electrification in Majuro atoll is 93 percent and 97 percent in Ebeye², however, propane and petroleum are still broadly used for cooking.

² JICA. Marshall Islands Project on the Formulation of a Self-Sufficient Energy Supply System Final Report. January 2015.



9. Majuro and outer islands electricity system. MEC operates two diesel power stations (located adjacent to one another) on Majuro. Due to several generators being out of order, there is a total available capacity of approximately 16MW. This means that MEC has very limited reserve capacity during peak times, and is vulnerable to blackouts. The diesel power station is ageing and has been plagued with problems including a major fire that permanently damaged two generators. Generator No. 7 (6 MW) is being rebuilt and will improve MEC's reserve capacity. Typical daytime loads are approximately 7-8MW, with peaks up to 11-12 MW, which results in limited reserve capacity. Loads have decreased over the last decade, mainly due to tariff increases and the introduction of prepayment meters. As well as the loss of two large scale customers (a major fisheries company and a supermarket) in Majuro since 2006 are the major factors for the drop in demand. Currently, most of the existing transmission facilities are at least 30 years old, so they need to be replaced as they have become decrepit. Transmission and distribution losses are about 18 percent. This value is increasing as transformer capacity relative to demand load is excessive amid the continuously declining demand, which leads to increased transformer losses.

10. The residential sector, which is 86 percent in customer numbers, accounts for 41 percent of the energy sold. Governmental and commercial sectors accounts 11 percent and 3 percent in customer numbers, and 40 percent and 19 percent in electricity sales respectively. Average monthly sold energy per customer is 133kWh for residential, 3,526kWh for business and 5,458kWh for government.

11. There are also several grid-connected PV systems already installed in Majuro, including a 600kW MASDAR system, located near the Airport, a 205kW Japan International Cooperation Agency (JICA) system on the hospital roof, a 111kW at the College of Marshall Islands (privately owned system), a 35kW at the University of South Pacific (USP) campus and a few small privately owned grid-connected PV systems (under 5kW each). MEC's distribution network is aged (over 30 years old), in need of significant reinvestment and modernization, and was not designed to accommodate significant distributed generation from intermittent renewable resources (i.e. solar). Preliminary findings of an analysis conducted by JICA under its hybrid islands program reveal that the current system can accommodate no more than 890kW of PV-grid connected energy without advanced control or storage. As the current amount on the grid is approximately 950 kW, it is not recommended that any more grid-connected PV be installed without storage or advanced control.

12. Outer Islands. MEC operates diesel mini-grids on the outer islands of Wotje and Jaluit, and also a small diesel mini-grid on RongRong island, on the Majuro atoll. Wotje, with a population of 860, has 2 x 275 kW generators and a load of 70-110 kW that drops to 40kW during school holidays. Jaluit has a population of 1,780 (890 served by mini-grid) and has 2 x 300 generators and a load of 80-100 kW that drops to 40kW during school holidays. RongRong with a population of 60 has 2 x 60 kW diesel generators and a load of 10-15 kW. The mini-grids on the Jaluit and Wotje receive an annual subsidy of approximately US\$800,000 as the tariffs do not cover costs. The remaining islands are served by SHS supplied and maintained by MEC. A number of primary schools are also served by small stand-alone PV systems. The systems have been provided by various donors over the years and vary in age and technical condition.

13. Ebeye electricity system. KAJUR has a generation capacity sufficient to meet Ebeye's population demand. The power station houses three generators rated at 1,286 kW each. The generators are manually operated and the total power demand fluctuates between 1.5 MW and 1.8 MW from midnight to about 8 pm after which it peaks at 1.9-2.1 MW for 3-4 hours. This rise in demand is attributed mostly to the air conditioning load and the television sets being



turned on. The last major upgrade of the diesel generating plant was carried out in 2012. The engines are dilapidated and would need to be replaced as part of any new generation project implemented in island. The last upgrade of the existing power distribution system was carried out in 2004/2005. During this upgrade all high voltage overhead transmission lines within Ebeye Island were replaced with the underground cables and all pole mounted transformers replaced with the cubicle type units mounted on the concrete plinths on the ground. KAJUR is technically and financially weaker compared to MEC on which it relies for important O&M aspects.

14. There is currently no solar PV or any other RE on Ebeye at present, but JICA has planned a 600kW grid-connected PV system to be located on land behind the power station. The installation will also include a new generator control system to allow automatic operation. The start date for this project is not known but it is expected to occur in 2017. A JICA grid study found that the maximum installed capacity for PV on Ebeye without additional controls was only about 270kW. The new 600kW JICA system near the Ebeye power station will likely include curtailment controls for the PV, which would require the new generator control system to facilitate this. JICA is also planning to include storage in its solar PV project.

15. *Electricity tariffs.* Electricity tariffs are determined by MEC and approved by Cabinet and the President. Tariffs are adjusted based on imported diesel prices. On-grid tariffs are uniform across all grids supplied by MEC (Majuro, Jaluit, Wotje, Rongrong) and are relatively high even for the Pacific region at US\$0.42 per kWh for Government, US\$0.41 for commercial, US\$0.35 for residential. There is also a lifeline tariff of US\$0.33 for low use customers. KAJUR has similar tariffs of US\$0.33 for residential and US\$0.40 for commercial/government. Tariffs are adjusted for the diesel price, so the utilities have little ability to put aside money for investment when the diesel price drops. According to a JICA study and MEC records, the tariff is high enough to achieve cost recovery on the commercial and government tariffs in Majuro, but not on residential tariffs or in Ebeye or any of the outer islands. There are no direct subsidies to lower the electricity tariffs, but important governmental support to meet these shortfalls is provided such as i) no tax on MEC's imported fuel; and ii) US\$800,000 to MEC annually to supply fuel and power to Wotje and Jaluit atolls (National Energy Support Fund, NESF) and US\$ 1 million for KAJUR. The government also provide all land owners (approx. 700) with US\$1,000 per month, for providing their lands for various power equipment and distribution lines; and electricity is free of charge for the owners of land used by power stations.³

16. MEC manages the supply and maintenance of SHS for many of the outer islands. When this program was first introduced, customers were charged a flat monthly fee of US\$12 for servicing and replacement of parts. According to MEC, this fee adequately covered their costs to make service of the SHS sustainable. However, due to social considerations, there was a subsequent decision by Government to reduce the monthly fee to US\$5, which does not cover the cost of replacement parts. This means that the program is likely to end once the batteries in the existing systems fail, without additional government action on monthly payments or further donor funds (which will not encourage the Government to set appropriate fees). Even with the lower monthly charge, revenue collection is poor on the outer islands and MEC is still trying to find ways of improving collection. Cultural factors are also an important consideration, as it is difficult for local staff in small communities to disconnect or otherwise fine customers for non-payment.

³ JICA. Marshall Islands Project on the Formulation of a Self-Sufficient Energy Supply System Final Report. January 2015.



17. *National Policy.* The RMI adopted its "National Energy Policy" (NEP) in September 2009 and reviewed it in 2015. The NEP was developed with the vision of "improved quality of life for the people of the Marshall Islands through clean, reliable, affordable, accessible, environmentally appropriate and sustainable energy services", and has the broad goals to: i) strengthen financial, policy and legislative frameworks for the energy sector; ii) supply 100 percent of urban households with electricity by 2015; iii) provide 95 percent of rural outer atoll households with off grid electricity by 2015; iv) provide access to modern forms of cooking to 90 percent of all households by 2020; v) make households and businesses 50 percent more energy efficient and government buildings 75 percent more energy efficient by 2020; vi) achieve a 20 percent efficiency improvement in transport sector fuel use by 2020; vii) reduce supply side energy losses from MEC by 20 percent by 2017; and viii) provide 20 percent of power generation through indigenous renewable resources by 2020. The NEP also identified four priority outcomes that are i) improved enabling frameworks for reducing dependence on imported fossil fuel; ii) all Marshallese have equitable access to modern energy services; iii) smarter uses of energy in households, businesses, government, transport sector and power utilities; and iv) reliable, sustainable and affordable energy supply.

18. Regarding the potential for renewable resources, various studies have assessed their potential in the Marshall Islands. These studies have concluded that solar PV resource is the most feasible and cost efficient technology for the country. The Marshall Islands receive about 2,480 hours of direct sunlight per year. Sunlight is highest in August at around 7.5 hours per day and even in November the region receives almost 6 hours per day. Wind resource is not well understood but there may be potential in some locations. There are no hydro or geothermal resources and there is no data on tidal resources. Ocean Thermal Energy Conversion (OTEC) was considered by the US Military Base at Kwajalein but was found to be economically and technically unfeasible. There is a coconut oil (CNO) resource on the outer islands, and there is a mill on Majuro producing oil (mostly for export but also for blending with diesel in one of the MEC generators). The Asian Development Bank (ADB) is funding a project to trial the use of CNO in one of MEC's generators.

Relationship to CPF

19. The project is consistent with the RMI Country Partnership Strategy (CPS) (FY13-FY16, February 19, 2013). Reflecting the Government's development priorities and the World Bank Group's engagement in the Pacific, the CPS for the Marshall Islands is focused on "strengthening economic governance and promoting the effective use of public resources to enhance living and service delivery standards for all Marshallese". The CPS identifies "building resilience against external shocks" as a major theme of the World Bank's engagement in the country. Reducing RMI's dependence on imported diesel fuel by increasing the share of RE will reduce its exposure to oil price shocks, such as the one that severely affected the region in 2008. The proposed project forms an integral part of the Bank's overall energy sector engagement in the Pacific. In addition, the project will contribute to the CPS's cross cutting issue of climate change by supporting RE that will reduce the country's greenhouse gas emissions.



C. Proposed Development Objective(s)

Note to Task Teams: The PDO has been pre-populated from the datasheet for the first time for your convenience. Please keep it up to date whenever it is changed in the datasheet.

The project development objective (PDO) is to increase the share of renewable energy generation and improve energy efficiency in project supported areas.

Key Results

20. Key project results will be further defined during project preparation but will most likely include the following:

PDO indicators:	Unit of measure
Fuel saving	kilojoules (kJ)
Energy savings	Kilowatt-hour (kWh)
Increased share of renewable energy generation	Megawatt-hour (MWh)
Intermediate indicators	Unit of Measure
Project beneficiaries (% of which female)	Number
Changes to project activities as a result of consultations	Yes/No
Renewable energy generation capacity (other than hydropower) constructed under the project	Megawatt (MW)

D. Concept Description

1. Description

21. The Government of Republic of Marshall Island’s (GoRMI) formally requested the Bank’s support in advancing its energy sector objectives of (i) increasing the use of RE to at least 20 percent by 2020 while reducing by 20 percent its greenhouse gas emissions; and (ii) reducing subsidies to the sector by lowering the operating costs (i.e. by reducing the share of expensive imported fuels in its generation matrix and by increasing its energy sector utilities’ efficiency). In that context, the World Bank commissioned a pre-feasibility study to conduct a preliminary analysis of potential options that would increase the share of RE in the country, thereby reducing the dependency on imported fuels. The recommendations of the Report are based on a technical mission to the country, a review of available studies in the energy sector and a review of a proposal from a US company – Solar City – submitted to the GoRMI for the development of a solar project on Ebeye and three outer islands. The study made by Solar City forms the basis of a US\$11 million financial request (non -concessional funding at 1% interest rate) submitted by the GoRMI to the ADFD (Abu Dhabi Fund for Development) via IRENA (Decision expected early in 2017). The Options Report proposes three options for the development of RE in Majuro, Ebeye and the outer islands. To undertake all three options concurrently would be



extremely expensive, therefore a phased approach will be implemented over a period of 5-7 years to achieve the RE goal is proposed.

22. **Option 1 – Outer islands - Mini-grids:** This option would support conversion of the existing diesel mini-grids on three atolls: Wotje, Jaluit and Rongrong, into solar hybrid mini-grid systems and creation of one new solar-hybrid mini-grids in Santo (Kwajalein atoll). The hybrid systems would use a well-proven Sunny Island type equipment, with which utility staff are already familiar and at least 90% energy supply is achieved with renewable energy contribution. The project would cost approximately USD \$10 million and would provide a fuel cost savings to MEC of approximately USD \$700,000 per year. The development of new PV mini-grids on other atolls could also be included at an additional cost. This component would be implemented by MEC.

23. **Option 2 – Ebeye- Centralized storage and control system:** This option would involve building a centralized storage and control system and 3.4 MW of solar PV to increase the share of renewable energy supply to approximately 30% for Ebeye. This project would cost approximately USD \$19 million and would save USD \$720,000 per year on fuel cost. More importantly, the project will facilitate higher RE contribution in the overall power supply in the future. It could support the construction of:

24. A Battery Energy Storage System (BESS) to be located at KAJUR power station. Based on site visit to Ebeye, distributed storage units is not recommended because of (a) security issues, and (b) communications and controls, which are a major failure point and would be critical to a distributed system. Locating it in one place at the KAJUR power station makes controls much more straightforward. The BESS should be of open-protocol so that it is open to expansion in the future and can communicate with devices from different manufacturers. As the BESS will be a new and relatively complex technology, the project should include assistance in O&M and capacity building for at least 2 years. This could be in the form of a remote support arrangement supplemented by periodic visits by the installer.

25. Solar PV systems, totaling 3.4 MW, to be located at several locations, due to limited availability of land on Ebeye. Using the reef flat next to the causeway would avoid land issues, but increase the technical complexity as well as potential safeguard issues of the project. There are some smaller sites that could host shed-type systems to provide shade.

26. This option would be implemented by KAJUR with support from MEC.

27. **Option 3 – Majuro – Centralized storage and control system:** This option would involve building a centralized storage and control system and at least 3.4 MW of solar PV to increase the share of renewable energy supply to approximately 10% for Majuro. This project would cost approximately USD \$19 million and save USD \$800,000 per year on fuel cost subsidies from avoided diesel oil consumption for power generation. For a budget of USD\$30 million, a larger system could be built to achieve 15-20% renewable energy supply. The project would comprise:

28. The A BESS to be located at MEC power station. The BESS should be of open-protocol so that it is open to expansion in future and can communicate with devices from different manufacturers. As the BESS will be a new and relatively complex technology, the project should include assistance in O&M and capacity building for at least 2 years. This could be in the form of a remote support arrangement supplemented by periodic visits by the installer.



29. Solar PV systems, totaling 3.4 MW, to be located at several locations, due to limited availability of land. A previous study conducted by JICA has concluded that only of the existing building structures are able to host solar panels.

30. The final project design and size of components will depend on government priority, availability of resources, the outcomes of the financial/economic analysis, land availability and complementarity to financing from other partners. Detailed feasibility studies of Option 1, 2 and 3 will be completed, including detailed cost estimation and economic and financial justifications. Due to the important financial and technical resources required to implement the three options, a phased approach is recommended. One out of the three options will be selected, considering the technical and financial issues as well as environmental and social impacts of each option (availability of land, environmental and social impacts, etc.), for implementation under the proposed project. Depending on findings of the studies including financial and economic analysis, IDA resources available and discussions and agreement with the Government, the final scope of the Project will be decided ahead of the appraisal stage.

31. The proposed project will include the following three components:

32. **Component 1: Renewable energy investments (IDA US\$10 to US\$19 million. Cost will depend on selected option).**

Depending on the selected option, this component will include the following sub-components:

- **Sub-Component 1.1: Solar PV generation with storage or mini-grids for outer islands.** This sub-component will finance the supply and installation of solar power-generation capacity and grid-management equipment (depending on which of the three options is selected) to increase the contribution of RE in RMI's generation system and to reduce diesel generation.
- **Sub-Component 1.2: Distribution network extension.** This sub-component will finance installation of battery storage, inverters and ancillary equipment needed to handle the impact and maintain grid stability—voltage and frequency regulation—as generation from intermittent energy sources increasingly becomes the dominant portion of the RMI's power mix.
- **Sub-component 1.3. Operation & Maintenance.** Adequate O&M of generation equipment is critical to ensure its sustainability, especially in the Pacific region. This sub-component will include financing for training of MEC and/or KAJUR on the O&M of the selected system. In addition, during preparation it will be decided if the contractor should operate the system for a few years before passing it to the utility.

In case option 1 is selected, this component will also finance a satellite-based communications system to enable the relevant utility to remotely monitor the performance of solar PV and other RE installations on the outer islands that lack such remote monitoring capability, diagnose impending problems, and provide timely intervention. Maintenance of PV installations will also be facilitated by ensuring that all equipment and installations under the project conform to the set of standards developed for Pacific Region PV systems and components, or other standards that promise at least substantial equivalence.



33. Component 2: Promotion of energy efficiency (IDA US\$5 million). This component will complement Component 1 by reducing energy demand through improving the efficiency for both use and supply of electricity from MEC and KAJUR. It will include the following two sub-components:

- **Sub-Component 2.1: Demand Side Management.** A program of activities designed to enhance efficient use of energy will be carried out. The program to be defined during project preparation could include: (a) Supply and installation of selected Energy Efficiency (EE) investments, such as enhanced insulation in buildings, and replacement of inefficient lighting and appliances in said buildings; (b) Development of policy, standards and labeling for EE including phasing out inefficient incandescent bulbs, and (c) Activities aimed at raising consumer awareness on EE and related capacity-building activities and training.
- **Sub-Component 2.2: Loss Reduction Program.** A loss reduction program for MEC and KAJUR will be designed and implemented. Current losses are at approximately 26 percent in Majuro and believed to be higher in Ebeye. A loss reduction study will be prepared by external consultants to provide recommendations to achieve loss reduction in the two utilities.

34. Component 3: Institutional strengthening, Capacity building and Technical assistance to EPD, KAJUR, MEC and Division of International Development Assistance (DIDA.) (IDA US\$2 million).

- **Sub-component 3.1. Institutional Strengthening and Capacity Building.** A program of activities designed to enhance the capacity of MEC and KAJUR will be carried out. These activities could include technical operation, procurement, financial management, environmental and social management, monitoring, evaluation, and reporting.

A training needs assessment will identify specific training and skills-enhancement activities. Accordingly, a training plan will be prepared and implemented. Several essential training activities are expected to be provided by equipment providers as part of their contracts.

- **Sub-component 3.2: Project management.** This component will support and strengthen DIDA's capacity for project management, coordination, monitoring and evaluation, and reporting. This component will also provide support for procurement, financial management, contract and project management, and oversight of social and environmental safeguards. Provision of technical assistance to support mainstreaming of gender dimensions in the Project will also be financed under this sub-component. The project's incremental operating costs will also be financed through this component.

Note to Task Teams: The following sections are system generated and can only be edited online in the Portal.

SAFEGUARDS

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

The proposed project locations for the options are: Option 1, outer islands; Option 2, Ebeye islet, Kwajalein atoll; Option



3: Majuro.

The Republic of Marshall Islands (RMI) comprises 29 atolls and 5 isolated islands, 24 of which are inhabited by a population of around 53,000 people. Two-thirds of the population live on Majuro atoll, the capital, and Ebeye, a densely populated islet of Kwajalein atoll. Outer islands are sparsely populated due to lack of employment opportunities and economic development. Both Majuro and Ebeye have highly modified and degraded environments due to uncontrolled and unmitigated development. There is little land available for development as most of the land is already occupied and utilized.

The project is a Category B. The anticipated impacts from energy infrastructure investments and demand management will be localized and able to be mitigated through good design and operation, and no anticipated impacts will be irreversible.

B. Borrower’s Institutional Capacity for Safeguard Policies

The Division of International Development Assistance (DIDA), as the unit responsible for coordinating all international development assistance to the Government of Marshall Islands, will be in charge of project implementation. DIDA has been also selected as the implementation unit for the World Bank- funded RMI Pacific Resilience Project (RMI PREP), under preparation. DIDA will ensure project coordination among the different stakeholders, and act as the focal point for the World Bank. The two projects will share safeguards resources and work collaboratively. This will lead to efficient and effective use of resources.

DIDA currently has limited institutional capacity for safeguard policies. The Project Implementation Unit (PIU) will hire an experienced Safeguard Adviser to coordinate the implementation of the safeguards instruments during project implementation. This person will be responsible for providing safeguards awareness raising and training to the DIDA team, the Energy Department and Contractors. This person may be shared with RMI PREP, as mentioned above. Consultancy teams will be hired by the PIU to provide safeguards input into the options analysis and prepare the safeguards instruments during project preparation. The task team safeguards specialists will help with the preparation of the Terms of Reference.

World Bank safeguards specialists for the two projects will provide training and ongoing mentoring and support to the safeguards advisor and the other project stakeholders during project missions.

C. Environmental and Social Safeguards Specialists on the Team

Penelope Ruth Ferguson, Ross James Butler

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	This policy is triggered. Option 1 energy investments include the development of solar – diesel hybrid energy systems on outer islands. Potential impacts could arise from the removal of obsolete equipment, ongoing management of diesel and use of village /



	<p>community land. Option 2 and 3 energy investments include solar panel arrays or roof top mounted arrays and battery storage. Land is scarce on Ebeye and the reef rock shelf will be considered a possible option for locating solar panels. Potential impacts could arise from the use of scarce land, modification to the foreshore, ongoing management and final disposal of batteries, and from the influx of temporary construction / installation workforce on Majuro and Ebeye. There may be cumulative impacts on the community from a number of infrastructure projects on Ebeye, causing a strain on community engagement, community resources and services, accommodation, food outlets, etc.</p> <p>As part of options analysis, the environmental and social safeguards issues will be screened and preliminarily assessed. At this time, the appropriate safeguards instruments will be identified and will be prepared prior to appraisal. This could be an ESIA, ESMP and /or Environmental Codes of Practice, depending on the option selected and the nature and scale of potential impacts.</p> <p>The project is a Category B. The anticipated impacts from energy infrastructure investments and demand management will be localized and able to be mitigated through good design and operation, and no anticipated impacts will be irreversible.</p>
<p>Natural Habitats OP/BP 4.04</p> <p>Yes</p>	<p>All three options may require some modifications to ship-to-shore facilities to transport equipment and materials. There is the potential to create disturbances to foreshore environments that host natural habitats. Option 2 may include solar arrays constructed in the foreshore environment, which could cause long term ecosystem modifications in the immediate footprint. The environmental assessment on the selected option will identify the potential for impacts on natural habitats and the policy will be reassessed prior to appraisal. If relevant, the safeguards instrument will identify suitable mitigation measures to avoid or minimize impacts and comply with the policy.</p>
<p>Forests OP/BP 4.36</p> <p>No</p>	<p>The project activities are not expected to create or induce deforestation and their environmental impact is not expected to compromise the integrity and health of forested areas (including mangroves). Some minor clearings of trees, shrubs and undergrowth may</p>



		be required on outer islands to construct or renovate generation and distribution infrastructure but the scale will be less than 1ha.
Pest Management OP 4.09	No	The proposed project will not the purchase of pesticides and pesticide equipment, nor will lead to increase usage of pesticides.
Physical Cultural Resources OP/BP 4.11	TBD	World War II relics and / or culturally significant sites, including grave sites, may be discovered during the ESIA process, particularly on Majuro and Ebeye. If PCR impacts are identified in the ESIA, the policy will be triggered for appraisal. The ESMP will include mitigation measures for PCR and will include a chance find procedure.
Indigenous Peoples OP/BP 4.10	No	RMI's population is relatively homogenous. The policy is not triggered because there are no social groups that meet the characteristics of the policy.
Involuntary Resettlement OP/BP 4.12	Yes	Land acquisition will be negotiated, either via voluntary land donation where communal land owners are also the beneficiaries, or through lease or willing buyer / willing seller arrangements. A Voluntary Land Donation Protocol will be prepared. There will be no involuntary land acquisition. Due diligence during project preparation will identify whether there will be any involuntary resettlement for tenants, squatters or any economic displacement. The policy will be triggered and the appropriate safeguards instrument will be prepared. A Resettlement Action Plan (RAP) will be prepared if the location of project supported investment is known by appraisal and if due diligence screening shows the presence of tenants, or other people who may be affected by displacement as a result of such investments. If, after selecting an option, the location of project-supported investments is not identified by appraisal, an RPF will be prepared to guide the preparation of site specific RAPs, if needed during project implementation.
Safety of Dams OP/BP 4.37	No	The project does not involve the construction of a new dam nor dependent on existing dam, or a dam under construction.
Projects on International Waterways OP/BP 7.50	No	There are no international waterways in the project area.
Projects in Disputed Areas OP/BP 7.60	No	There are no known disputed areas in the project areas of influence.



E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Aug 10, 2017

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

The safeguards screening on options will be completed and the instruments confirmed by 30 April 2017. The instruments will be prepared and disclosed by the recipient over the four month period of May to August 2017.

CONTACT POINT

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APPROVAL

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Approved By

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Country Director:	Michel Kerf	01-May-2017
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Note to Task Teams: End of system generated content, document is editable from here.