

**ASIAN DEVELOPMENT BANK
CONSULTATION AND FACT-FINDING MISSION
RENEWABLE ENERGY DEVELOPMENT PROJECT (PROJECT NO. 49450-023)
KOSRAE STATE, FEDERATED STATES OF MICRONESIA
(20 MAY 2019)**

A. Overview

1. ADB is conducting a Consultation and Fact-Finding mission¹ to the Federated States of Micronesia (FSM) from 12-26 May 2019 to agree the scope, implementation arrangements, and schedule for Project 49450-023 - FSM Renewable Energy Development Project (REDP) with the state utilities in Yap and Kosrae, the Yap and Kosrae state governments, and the FSM national government in Palikir.

2. The mission visited Kosrae from 17-21 May 2019 to discuss the Kosrae portion of the project. This Aide Memoire (AM) summarizes the main conclusions and preliminary agreements reached with the management of the Kosrae Utility Authority and the Government of Kosrae State. The ADB mission team will continue to Palikir to agree a memorandum of understanding (MOU) capturing the final project scope, implementation arrangements, and schedule for the ensuing grant for the FSM REDP. The content of this AM will inform discussions with the Government of FSM and the MOU for the FSM REDP.

3. The FSM REDP will contribute to the implementation of FSM's 2018 Energy Master Plan² in Kosrae and Yap. The project will increase FSM's energy security and reduce reliance on fossil fuels for power generation through investment in renewable energy generation. Project investments will include (i) solar photovoltaic (PV) capacities and a battery energy storage system (BESS) for Yap State Public Services Corporation (YSPSC) in Yap, and (ii) solar PV and mini-grid investments for Kosrae Utility Authority (KUA) in Kosrae. The cost of the FSM REDP is estimated at \$15 million, of which investments in Kosrae will account for approximately \$6.1 million. The scope of investments and estimated associated costs for KUA are presented below in Table 1 and Table 2, respectively.

B. Proposed Kosrae Project

4. **Project Preparation.** ADB employed consulting firm Entura (Australia) under the Pacific Renewable Energy Investment Facility (TA 9242-REG) to prepare the FSM REDP. Entura is finalizing its feasibility studies for investments in Kosrae. This AM is based on preliminary findings of the Entura feasibility study for Kosrae which considers: (i) available financing, (ii) least-cost generation options for meeting electricity load and demand growth projections, (iii) FSM's renewable energy targets, and (iv) related projects planned and under implementation by KUA and other development partners. Entura has presented its preliminary feasibility study to KUA.

5. **Project Scope.** The Kosrae investment scope and forecast renewable energy contributions are presented in Table 1.

¹ The mission team comprised (i) Michael Trainor, Energy Specialist, ADB (Mission Leader), (ii) Teresita Leono, Project Analyst (ADB); (iii) Taniela Faletau, Safeguards Specialist (ADB); and (iv) Jim Liston, Consultant (ADB). The mission team were accompanied by project feasibility study consultants from Entura.

Table 1: Kosrae Project Scope

Subproject 1	Subproject proposed component size			Resulting RE contribution
	BESS	Solar	Diesel	
KUA Main Grid		1.15 MW		Year 1: 33% Year 10: 27% Year 25: 25.4%
Subproject 2				
Walung Mini-grid 100% RE	30 kW / 320 kWh	60 kW		100%
SHS x 9	2.5 kW / 4 kWh	1.14 kW		100%

BESS = battery energy storage system, KUA = Kosrae Utility Authority, kW = kilowatt, kWh = kilowatt-hour, MW = megawatt, PV = photovoltaic, RE=renewable energy.

Source: ADB consultant (2019)

6. **Project Costs.** The Kosrae investment costs are in Table 2.

Table 2: Kosrae Project Costs

		CAPEX cost (\$ million)
Subproject 1 - KUA Main Grid		3.3
Subproject 2		
Walung Mini-grid 100% RE	1.10	
Walung SHS x 9	0.09	
	Subproject 2 sub-total	1.19
	Total CAPEX	4.5
PIC		
PIC International	0.51	
PIC National	0.25	
	Total PMU	0.76
Taxes and Duties		
Custom Duties	0.15	
	Total Taxes and Duties	0.18
Contingency		
Physical Contingency	0.53	
Price Contingency	0.10	
	Total Contingency	0.64
	Total Project Budget	6.08

CAPEX = capital expenditure, KUA = Kosrae Utility Authority, PIC = project implementation consultant, RE = renewable energy, SHS = solar home system

Source: ADB consultant (2019)

C. Safeguards

7. **Environment.** The overall project is categorized B with two initial environmental evaluations (IEEs) prepared for both Yap and Kosrae. On Kosrae the mission met with representatives of the Kosrae Island Resources Management Authority (KIRMA) and Historic Preservation Office (HPO). An update of the project was provided outlining the selected subprojects, the environmental assessments completed and the anticipated subproject development schedule. A draft IEE was submitted to the Kosrae State EPA for review. The final IEE will be submitted to KIRMA together with a Preliminary Environmental Impact Statement (PEIS) to commence the environmental approval process pursuant to relevant legal requirements.

8. **Involuntary Resettlement.** The overall project is categorized B for involuntary resettlement safeguards with a Resettlement Plan (RP) prepared covering project components on both Yap and Kosrae. For Kosrae, no land acquisition will be required for the ground and roof-mounted solar PV arrays as they will be installed on government land and on government buildings sitting on government land in Tofol. No land will be acquired for the Walung mini-grid power station or for the section of the distribution system leading from the power station to residential areas as both will be installed within an existing 99-year utility easement. Land will be acquired in Walung from approximately two dozen landowners for the remainder of the distribution system and for the SHSs. Acquisition will be in the form of voluntarily 99-year utility easements with no cost for the easements or for any damage to non-land assets. KUA has begun the process of executing those voluntary agreements with landowners, and KUA expects that process to be completed by 01 September 2019.

9. **Poverty and Gender.** The infrastructure components of the project will not have direct poverty impact and will have only a modest gender impact but will benefit all KUA customers generally by increasing renewable energy penetration in the electricity grid. The Walung mini-grid will have a modest gender impact by providing grid-quality power to approximately 32 households and lower quality power from solar home systems (SHS) to another 8 or 9 households. Roughly half of those households already have some access to electricity in the form of access to a home generator (theirs or a neighbor's) and/or to a small SHS. In order to provide direct gender benefits and to further enhance KUA operations, the project's institutional strengthening component will provide technical assistance for capacity building to help KUA develop and begin implementing a gender strategy to broaden the available pool of technical and trade expertise by attracting and retaining more females to those roles.

D. Implementation Arrangements

10. The FSM national government will enter into a grant agreement with ADB for the FSM REDP. The Department of Finance and Administration (DFA) of the FSM national government will serve as the project's executing agency (EA), and will make funding available to each of KUA and YSPSC to finance the investments in each of those utilities.

11. A project steering committee (PSC) will be established to manage coordination of project implementation between KUA and YSPSC, and for coordination with other development partners implementing or planning investments in KUA and YSPSC. The PSC will also manage common project issues such as use of contingency (which will be a single FSM REDP allocation) and approval of PIC invoices where common expenses are incurred. The PSC will comprise: (i) the CEO (or his designed) of KUA, (ii) the CEO (or his designee) of YSPSC, (iii) a representative of DFA, and (iv) a representative of the FSM national government Department of Resources and Development (R&D). The PSC will convene on an ad hoc basis as necessary, but no less frequently than twice per year.

12. Each of KUA and YSPSC will serve as implementation agencies (IA) for their respective portions of the overall project. Each implementing agency will contract with a project implementation consultant (PIC) to support project management, design audit, and construction

supervision services and will contract with an engineering, procurement, and construction (EPC) contractor to execute the works. KUA will designate personnel from among their existing staff who will bear overall responsibility for project management, safeguards compliance, and technical and financial oversight. If KUA requires, the project may support recruitment of additional national personnel to supplement KUA existing staff to support the project's implementation.

13. Under its current contract under TA 9242-REG, Entura will continue to support KUA and YSPSC through to award of EPC contract(s). This will include to include preparation of bidding documents, assistance in bid evaluation, and preparation of bid evaluation reports (BER). BERs will be presented to the PSC, which will in turn submit these to ADB for its review and issuance of a no-objection prior to conclusion of contracts for EPC packages. Each of KUA and YSPSC will enter into its own contract(s) with EPC contractors. Selection of EPC contracts will be made on the basis of least overall cost for FSM.

14. **Project Implementation Schedule.** The project implementation schedule is in Table 3.

Table 3: Kosrae Project Implementation Schedule.

#	Action	By When	Remarks
1	Award of PIC contract	Q1 2020	-
2	Award of EPC contract(s)	Q1 2020	-
3	Execution of EPC contract(s)	Q1 2020	Q4 2022

15. **Recruitment and Procurement.** A single PIC will be recruited to support both KUA and YSPSC in project implementation. While a single PIC will be recruited to provide this support, each of KUA and YSPSC will hold separate contracts with the PIC. Selection of the PIC will be delegated to ADB who will prepare the PIC's terms of reference, issue the request for proposal, and evaluate proposals that it receives. The request for proposals (RFP) will state a dedicated scope of work for each state while requiring bidders to propose to serve as PIC for both KUA and YSPSC concurrently. Bidders will be permitted to use same resources in both states. This will permit efficiency of resource utilization while minimizing travel expenses. ADB will evaluate bids on a quality and cost based selection (QCBS) methodology with a quality:cost weighting ratio of 90:10. Contingency will be shared.

16. A single Bidding Document (BD) to be prepared by Entura, will be issued for EPC bids for KUA and YSPSC with KUA and YSPSC works separated into separate lots. KUA and YSPSC will enter into separate contracts with the EPC contractor(s). Bidders will be permitted to bid for one or both lots and to offer a discount in the event they are awarded both lots. Price evaluation will be on the basis of least overall cost across both lots.

E. Next Steps

#	Action	By When	Responsibility(ies)
1	KIRMA Approves IEE	01 June 2019	KUA, Entura
2	MOU(s) signed with landowners	01 July 2019	KUA
3	Approval of PIC Terms of Reference	15 June 2019	KUA, Project Steering Committee
4	MOU signed with Government of FSM on project scope and implementation arrangements	15 June 2019	ADB, FSM Department of Finance and Administration
5	Approve draft bidding documents for EPC contractors	01 July 2019	Project Steering Committee
5	Approval of Grant	Q4 2019	ADB
6	Grant Effectiveness	Q4 2019	ADB, Government of FSM
7	Conclusion of land parcel leases	Q1 2020	KUA
8	Award of PIC and EPC Contracts	Q1 2020	KUA

F. Acknowledgements. The ADB mission team expresses its sincere appreciation for the hospitality and support extended to it by the Government of the State of Kosrae and Kosrae Utility Authority.

Kosrae, Federated States of Micronesia, 20 May 2019

J. Michael Tramor
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Pacific Department
Asian Development Bank

Appendix: List of Key Persons Met

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Office of the Governor of Kosrae State:

Governor Carson Sigrah

Kosrae State Legislature:

Kosrae Island Resources Management Authority

Kosrae Historic Preservation Office

Kosrae Agriculture and Forestry Department

Kosrae Utility Authority

Fred Skilling, CEO
Casey Freddy
Robert Tualupe
Gerardo Protacio