



Micronesia, Federated States of: Yap Renewable Energy Development Project

Project Name	Yap Renewable Energy Development Project								
Project Number	44469-013								
Country / Economy	Micronesia, Federated States of								
Project Status	Closed								
Project Type / Modality of Assistance	Loan								
Source of Funding / Amount	<table><tr><td colspan="2">Loan 3004-FSM: Yap Renewable Energy Development Project</td></tr><tr><td>Ordinary capital resources</td><td>US\$ 4.68 million</td></tr><tr><td colspan="2">Loan 3005-FSM: Yap Renewable Energy Development Project</td></tr><tr><td>Asian Development Fund</td><td>US\$ 4.36 million</td></tr></table>	Loan 3004-FSM: Yap Renewable Energy Development Project		Ordinary capital resources	US\$ 4.68 million	Loan 3005-FSM: Yap Renewable Energy Development Project		Asian Development Fund	US\$ 4.36 million
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Loan 3005-FSM: Yap Renewable Energy Development Project									
Asian Development Fund	US\$ 4.36 million								
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth								
Drivers of Change	Gender Equity and Mainstreaming								
Sector / Subsector	Energy / Conventional energy generation - Renewable energy generation - solar - Renewable energy generation - wind								
Gender	Effective gender mainstreaming								
Description	The Yap Renewable Energy Development Project (Project) supports development of the power system in State of Yap (Yap), Federated States of Micronesia (FSM) in order to reduce dependency on imported diesel through expansion of renewable power generation and improving the supply-side efficiencies of power delivery.								
Project Rationale and Linkage to Country/Regional Strategy	<p>Yap (population 11,400) is one of four states within FSM (population 107,000). Yap State is nearly entirely dependent on imported diesel for power generation on the main island (Yap Proper). Power generation is supplied by Yap State Public Service Corporation (YSPSC) which is a 100% state owned corporatized utility. Approximately 65% of the population lives on the main island (Yap Proper), while the remainder lives on outer islands. There is a single power grid on Yap Proper with an installed capacity of 8.3MW (peak load 2.4MW) and about 1,500 residential customers. Access to electricity is high on Yap Proper (estimated 97%). Each state in FSM has a separate utility corporation with separate tariff structures. Due to remoteness and high diesel transportation costs, power tariffs are high and the Yap economy is highly vulnerable to fuel price shocks. In 2010 average power tariff was \$0.45/kWh (generation cost \$0.32/kWh). Power tariffs allow for full cost recovery for YSPSC; however, tariff reform is required to ensure YSPSC can continue to operate on a sustainable basis, while reduction in generation costs is needed to moderate the impact on YSPSC's customers. In Yap, about half of all imported fuel is used for power generation. In 2005 and 2006, the value of diesel imported to Yap for power generation exceeded the total value of exports. In 2008, diesel imported for power generation represented 17.6% of all imports by value to Yap.</p> <p>The power supply in Yap is relatively stable, with adequate capacity, however oversized diesel generators have resulted in low generation efficiencies. Due to low terrain and small catchments, Yap does not have potential for hydropower, however initial assessments indicate financially viable wind and solar resources. There is currently no wind power generation in Yap, however there are a number of community solar power mini-grids established in the outer islands which are managed by YSPSC. While household consumption is low due to predominance of traditional buildings, power usage by Government offices is relatively high. Through improved supply side energy efficiency and conversion to renewable energy under the Project, it is estimated that Yap can convert 28% of power generation to renewable energy and reduce diesel consumption for power generation by 32%. The Project is supporting (i) development of grid-connected wind power generation (originally about 1.5MW, but now revised down to 875kW) on Yap Proper, (ii) development of grid-connected solar power (about 0.3MW) on Yap Proper, (iii) improved generation efficiencies of the existing diesel generation through a modernized integration and control system appropriately-sized diesel generators to be operated during low demand periods, and (iv) capacity building within YSPSC, through targeted training and development of required systems, tentatively to include procurement, financial management, fiduciary controls, asset management and system operation management.</p> <p>The project is in line with the (i) ADB's country operations business plan for FSM, which prioritizes energy as a key area of support, and (ii) FSM's energy policies that set a national renewable energy generation target of 30% by 2020. All components of the Project are listed in the Yap State Energy Action Plan as priority activities.</p>								
Impact	Energy security of Yap has improved								

Project Outcome	
Description of Outcome	YSPSC supplies an increased amount of clean and renewable energy to Yap
Progress Toward Outcome	--Contracts for all packages under Loan 3004-3005-FSM, viz (i) design/supervision consultants; (ii) supply of solar panels; (iii) supply and installation of diesel generators; (iv) wind and integration & control system have all been awarded and project is closing on 31 December 2018. Safeguards Monitoring Reports and Audited Project Financial and Audited Financial Statements are complied with. Final commissioning of both wind and integration control packages was successful and completed in first quarter of 2018. Project is on-track. PCR mission is proposed to be fielded first or 2nd quarter of 2019.

Implementation Progress	
Description of Project Outputs	1. YSPSC installs wind power generation 2. YSPSC expands solar power generation 3. YSPSC improves efficiencies of diesel power generation 4. Efficient project management services
Status of Implementation Progress (Outputs, Activities, and Issues)	1. Complied. 2. Complied. 3. Complied. 4. Complied.
Geographical Location	State of Yap

Safeguard Categories	
Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects	
Environmental Aspects	The project has been classified as category B for environment following ADB's Safeguard Policy Statement. An initial environmental examination has been prepared for the project. The main potential impacts identified include (i) noise from the wind turbines, (ii) impacts on flora and fauna during construction of the wind farm, and (iii) soil erosion during construction of the wind farm. A heritage survey was conducted at the proposed wind farm site, and sites to be avoided during construction were specified. Adequate mitigation measures were incorporated into the environmental management plan as part of the initial environmental examination. The plan will be included in the wind farm construction contract. A climate change adaptation risk evaluation was conducted and will be incorporated in infrastructure detail design.
Involuntary Resettlement	The project has been classified as category B for involuntary resettlement and category C for indigenous peoples following ADB's Safeguard Policy Statement. The project does not involve physical displacement of people or structures. There will be no impact on distinct and vulnerable indigenous peoples. The wind farm to be built on Kabul and Madeqdeq ridges, however, requires acquisition of 7.5 hectares of land. A resettlement plan has been prepared. YSPSC will update and finalize the plan during project implementation after detailed design and survey of the wind farm. YSPSC will coordinate with the state government, the Division of Land Resources, and other relevant government and nongovernment agencies to implement and monitor the land acquisition and compensation activities.
Indigenous Peoples	Safeguard documents have been endorsed by the Yap State Government, disclosed to affected persons and local stakeholders, and posted on ADB's website. The project will support capacity within YSPSC to manage safeguard aspects through international and national environment, and social safeguard specialists who will be working within the PMU. They will organize and conduct trainings on safeguards and other necessary skills to the relevant staff of YSPSC, the Division of Land Resources, and other agencies that will be involved in the project's safeguard activities.

Stakeholder Communication, Participation, and Consultation	
During Project Design	
During Project Implementation	The PMU will prepare a stakeholder communication strategy and submit to ADB for review by the end of Month 3 after loan effectiveness. All communication will be in language suitable for the specific audience and will follow the ADB Public Communication Policy. The stakeholder strategy will incorporate the following components: (i) compilation of stakeholder communication activities already undertaken; (ii) role of Project Steering Committee in coordinating and communication with relevant Government stakeholders; (iii) public communication plan for disseminating information regarding project development to the public who may be impacted by the proposed projects; and (iv) project landowner consultation activities.

Business Opportunities	
Consulting Services	Design and supervision consulting firm-Entura was contracted in 2014. All tasks had been completed, as per TOR.
Procurement	All four procurement contract packages (Diesel, Solar, Wind and Integration and Control) have been awarded.

Responsible ADB Officer	Trainor, James Michael
Responsible ADB Department	Pacific Department
Responsible ADB Division	PAEN
Executing Agencies	Yap State Public Service Corporation Steve Savage VNABEYAN@GMAIL.COM Colonia Yap 96943 Federated States of Micronesia

Timetable	
Concept Clearance	13 May 2011
Fact Finding	21 Jan 2012 to 04 Feb 2012
MRM	10 Apr 2012
Approval	20 Jun 2013
Last Review Mission	-
Last PDS Update	28 Sep 2018

Loan 3004-FSM

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
20 Jun 2013	24 Jun 2013	26 Nov 2013	31 Dec 2017	31 Dec 2018	27 Aug 2019

Financing Plan			Loan Utilization			
	Total (Amount in US\$ million)		Date	ADB	Others	Net Percentage
Project Cost	6.80		Cumulative Contract Awards			
ADB	4.68		17 Jun 2022	4.68	0.00	100%
Counterpart	2.12		Cumulative Disbursements			
Cofinancing	0.00		17 Jun 2022	4.68	0.00	100%

Loan 3005-FSM

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
20 Jun 2013	24 Jun 2013	26 Nov 2013	31 Dec 2017	31 Dec 2018	27 Aug 2019

Financing Plan			Loan Utilization			
	Total (Amount in US\$ million)		Date	ADB	Others	Net Percentage
Project Cost	4.36		Cumulative Contract Awards			
ADB	4.36		17 Jun 2022	3.90	0.00	100%
Counterpart	0.00		Cumulative Disbursements			
Cofinancing	0.00		17 Jun 2022	3.90	0.00	100%

Project Page	https://www.adb.org/projects/44469-013/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=44469-013
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