



Maldives: Accelerating Sustainable System Development Using Renewable Energy Project

Project Name	Accelerating Sustainable System Development Using Renewable Energy Project																																
Project Number	55191-001																																
Country / Economy	Maldives																																
Project Status	Approved																																
Project Type / Modality of Assistance	Grant Loan																																
Source of Funding / Amount	<table border="1"><tr><td>Grant 0900-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Asian Development Fund</td><td>US\$ 41.50 million</td></tr><tr><td>Grant 0901-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Climate Change Fund</td><td>US\$ 500,000.00</td></tr><tr><td>Grant 0902-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Japan Fund for the Joint Crediting Mechanism</td><td>US\$ 6.20 million</td></tr><tr><td>Grant 0903-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Asia Pacific Climate Finance Fund</td><td>US\$ 3.80 million</td></tr><tr><td>Grant 0904-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Clean Technology Fund</td><td>US\$ 5.00 million</td></tr><tr><td>Loan 4344-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Concessional ordinary capital resources lending</td><td>US\$ 8.50 million</td></tr><tr><td>Loan 8454-MLD: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Clean Technology Fund</td><td>US\$ 10.00 million</td></tr><tr><td>Loan: Accelerating Sustainable System Development Using Renewable Energy Project</td><td></td></tr><tr><td>Private Sector</td><td>US\$ 23.00 million</td></tr></table>	Grant 0900-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Asian Development Fund	US\$ 41.50 million	Grant 0901-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Climate Change Fund	US\$ 500,000.00	Grant 0902-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Japan Fund for the Joint Crediting Mechanism	US\$ 6.20 million	Grant 0903-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Asia Pacific Climate Finance Fund	US\$ 3.80 million	Grant 0904-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Clean Technology Fund	US\$ 5.00 million	Loan 4344-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Concessional ordinary capital resources lending	US\$ 8.50 million	Loan 8454-MLD: Accelerating Sustainable System Development Using Renewable Energy Project		Clean Technology Fund	US\$ 10.00 million	Loan: Accelerating Sustainable System Development Using Renewable Energy Project		Private Sector	US\$ 23.00 million
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Operational Priorities	OP2: Accelerating progress in gender equality OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability OP5: Promoting rural development and food security OP6: Strengthening governance and institutional capacity																																
Sector / Subsector	Agriculture, natural resources and rural development / Agricultural policy, institutional and capacity development - Agricultural production - Rural market infrastructure Energy / Energy sector development and institutional reform - Energy utility services - Renewable energy generation - solar - Renewable energy generation - wind																																
Gender	Effective gender mainstreaming																																
Description	<p>The Maldives has significant renewable energy resources, i.e., the potential to generate solar power, ocean energy and in some pockets, wind power. To improve energy security, the government has committed to increase the use of renewable energy and promote energy efficiency. In 2014, the government has initiated two major programs (i) Preparing Outer Islands for Sustainable Energy Development (POISED) supported by the Asian Development Bank (ADB) to introduce solar photovoltaic battery-based hybrid systems in outer islands; and (ii) Accelerating Sustainable Private Investments in Renewable Energy supported by World Bank to mobilize private sector investments in solar photovoltaic in greater Male region. The POISED project was approved by ADB's Board of Directors on 29 September 2014 and is one of the largest renewable energy sector interventions in Maldives. The project finances the replacement of inefficient diesel-based power generation grids in 160 outer islands of Maldives and in Male with renewable-energy-ready grid systems, energy management systems, upgraded distribution grids including online monitoring and supervisory control systems. These interventions will contribute to reducing the cost of electricity, the subsidy burden on the government budget, and emissions, and will diversify the power generation mix. ADB also approved a second additional financing on 30 October 2020 to expand the POISED project. The POISED project has played a vital role in escalating the penetration of renewable energy and the project has installed more than 10.5 MW of solar photovoltaic capacity, 5.6 megawatt-hours of battery storage, and 11.6 MW of energy-efficient diesel generators and associated investments covering 70 outer islands across eight atolls. The implementation is in various stages for remaining 90 islands. The project also supported the preparation of renewable energy road map for the energy sector; initiating regulatory and net metering reforms; and improving the capacity of the Ministry of Environment (MOE), FENAKA, and STELCO focusing on renewable energy. The project also supports several gender initiatives such as (i) awareness campaigns on renewable energy covering island communities, women development councils, students, and government organizations; (ii) providing training and creating internship and employment opportunities for women in utilities; and (iii) developing gender inclusive renewable energy-based income generation activities through fisheries and other pilot interventions.</p>																																
Project Rationale and Linkage to Country/Regional Strategy	Maldives, with its 1,192 islands spread across 800 kilometers in the central Indian ocean, is one of the world's most geographically dispersed countries. This dispersion and small size of most inhabited islands make it extremely challenging to generate electricity centrally and distribute it through a comprehensive grid network to realize economies of scale. The Maldives has about 290 megawatts (MW) diesel generators, and more than 22 MW in renewable energy installations in 186 inhabited islands, and about another 144 MW diesel generators in resort islands. The cost of generation is unaffordable at \$0.30-\$0.70 per kilowatt-hour (kWh) (depending on the island) and requires government subsidies in excess of \$62 million or 1% of gross domestic product (GDP) in 2019. Fossil fuel imports account for about 10% of the country's GDP, about half of this is for electricity generation. The heavy diesel dependence of Maldives also makes its carbon emissions per unit of electricity among the highest in the region. The State Electric Company (STELCO) and FENAKA Corporation Limited (FENAKA) are the main electricity utilities responsible for supplying electricity to the communities of inhabited islands, except for a few where island councils are still responsible for electricity supply.																																
Impact	Energy security and sustainable transition of electricity sector in Maldives improved (Strategic Action Plan 2019-2023, Government of Maldives).																																
Project Outcome																																	

Description of Outcome	Share of renewable energy sources in power generation mix increased.
Progress Toward Outcome	
Implementation Progress	
Description of Project Outputs	Private sector investments in renewable energy enhanced. Solar IPP projects de-risked. Renewable energy penetration using new technologies and net metering increased Capacity of MOECCT, STELCO, FENAKA, and regulator strengthened. Disaster-resilient, innovative, and gender- and socially inclusive renewable energy-based farming technologies pilot tested and promoted.
Status of Implementation Progress (Outputs, Activities, and Issues)	
Geographical Location	Nation-wide

Safeguard Categories	
Environment	B
Involuntary Resettlement	C
Indigenous Peoples	C

Summary of Environmental and Social Aspects	
Environmental Aspects	
Involuntary Resettlement	
Indigenous Peoples	

Stakeholder Communication, Participation, and Consultation	
During Project Design	
During Project Implementation	

Business Opportunities	
Consulting Services	Individual consultants are envisaged similar to the ongoing POISED project to support the project implementation.
Procurement	Estimated about 6 procurement Packages. This includes 2 packages battery energy storage systems including grid upgrades and energy management system, one package for wind - solar hybrid system , one package for ocean energy system, one goods package for rooftop solar system and one works contract to support rooftop solar installations.

Responsible ADB Officer	Kolantharaj, Jaimes
Responsible ADB Department	Sectors Group
Responsible ADB Division	Energy Sector Office (SG-ENE)
Executing Agencies	Ministry of Finance (formerly Ministry of Finance and Treasury)

Timetable	
Concept Clearance	27 Jul 2021
Fact Finding	29 Aug 2022 to 02 Sep 2022
MRM	12 Apr 2023
Approval	12 Sep 2023
Last Review Mission	-
Last PDS Update	12 Sep 2023

Project Page	https://www.adb.org/projects/55191-001/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=55191-001
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