



Maldives: Preparing Outer Islands for Sustainable Energy Development Project - Additional Financing

Project Name	Preparing Outer Islands for Sustainable Energy Development Project - Additional Financing								
Project Number	46122-005								
Country / Economy	Maldives								
Project Status	Active								
Project Type / Modality of Assistance	Grant Loan								
Source of Funding / Amount	<table border="1"><tr><td colspan="2">Grant 0748-MLD: Preparing Outer Islands for Sustainable Energy Development-Additional Financing</td></tr><tr><td>Asian Development Fund</td><td>US\$ 2.73 million</td></tr><tr><td colspan="2">Loan 3995-MLD: Preparing Outer Islands for Sustainable Energy Development-Additional Financing</td></tr><tr><td>Concessional ordinary capital resources lending</td><td>US\$ 7.74 million</td></tr></table>	Grant 0748-MLD: Preparing Outer Islands for Sustainable Energy Development-Additional Financing		Asian Development Fund	US\$ 2.73 million	Loan 3995-MLD: Preparing Outer Islands for Sustainable Energy Development-Additional Financing		Concessional ordinary capital resources lending	US\$ 7.74 million
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Loan 3995-MLD: Preparing Outer Islands for Sustainable Energy Development-Additional Financing									
Concessional ordinary capital resources lending	US\$ 7.74 million								
Operational Priorities	OP1: Addressing remaining poverty and reducing inequalities OP2: Accelerating progress in gender equality OP3: Tackling climate change, building climate and disaster resilience, and enhancing environmental sustainability OP6: Strengthening governance and institutional capacity								
Sector / Subsector	Energy / Energy efficiency and conservation - Renewable energy generation - solar								
Gender	Effective gender mainstreaming								
Description	<p>The impact and outcome of the overall project remain the same as defined in the current project design. Following the current project, the additional financing will finance selected subprojects on the basis of eligibility criteria agreed between ADB and the government. The additional financing will scale up and change the scope of outputs 1 and 2 below.</p> <p>Output 1: Renewable-energy-ready grid systems developed for outer islands and the Greater Mal region. The additional financing will scale up this output by introducing renewable-energy-based hybrid systems with grid upgrades, energy management systems, and supervisory control and data acquisition (SCADA) systems in an additional 12 outer islands. The output's scope will also be expanded to include (i) installation of solar-photovoltaic-based ice-making machines for four outer islands to support fisheries (the main economic activity in the outer islands), (ii) development of a climate- and disaster-resilient distribution system in identified outer islands, and (iii) pilot testing of a renewable-energy-operated ferry for transport.</p> <p>Output 2: Capacity of the Ministry of Environment, State Electricity Company, and FENAKA to implement renewable energy grid interventions enhanced. The additional financing will continue to support the project management unit (PMU) within the MOE to ensure close project monitoring and implementation of the overall project. Capacity building support to the MOE will be included for project monitoring and implementation, along with assistance for planning, designing, and implementing disaster-resilient project components.</p>								
Project Rationale and Linkage to Country/Regional Strategy	<p>Maldives is one of the world's most geographically dispersed countries with 1,192 islands spread across 800 kilometers of ocean. This dispersion and the 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 generation costs are estimated at \$0.30-\$0.70 per kilowatt-hour (depending on the island), and this required government subsidies of \$58 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, followed by about 40% for the transport sector. The heavy diesel dependence of Maldives also makes its carbon emissions per unit of electricity among the highest in the region. As a low-lying archipelago, with an average elevation of 1.5 meters above sea level, Maldives is one of the most vulnerable countries globally to climate and disaster risks. Maldives consistently faces risk of small-scale and recurrent hazards, such as excessive precipitation, cyclonic winds, storm surges, saltwater intrusion, and coastal flooding. It is estimated that Maldives may face an annual loss of up to a 2.3% of GDP by 2050 because of the impacts of climate change. To improve energy security, the government has committed to increase the use of renewable energy and promote energy efficiency. The current project has played a vital role in escalating the penetration of renewable energy in Maldives from less than 0.1 megawatt (MW) in 2008 to more than 21.5 MW in 2020. The project was approved by the Asian Development Bank (ADB) Board of Directors on 29 September 2014, financed through a grant from the ADB Special Funds resources (Asian Development Fund) not exceeding \$38.0 million, and a grant from the Strategic Climate Fund, administered by ADB, of \$12.0 million. The first additional cofinancing was approved on 19 March 2015 and consisted of a grant of \$5 million from the Japan Fund for Joint Crediting Mechanism, administered by ADB. The current project and the first additional financing remain ongoing, with the grants expected for closure in the first quarter of 2021. The objective of the current project is a shift towards clean and cost-effective energy sources. The current project finances the replacement of inefficient diesel-based power generation grids in 160 outer islands of Maldives and in Mal</p> <p>with hybrid (solar photovoltaic/battery/diesel) generation, energy management systems, and upgraded distribution grids. 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. The project has two outputs: (i) renewable-energy-ready grid systems developed for outer islands and the Greater Mal region; and (ii) capacity of the Ministry of Environment (MOE) and the utilities the State Electricity Company (STELCO) and FENAKA Corporation Limited to implement renewable energy grid interventions enhanced.</p> <p>The current project has installed more than 9.5 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. Also, the project supported the government in developing a low-carbon development road map for the energy sector; initiating regulatory reforms; and improving the capacity of the MOE, FENAKA, and STELCO focusing on renewable energy. The additional financing will be prioritized in providing optimal renewable-energy-based solutions targeting islands (i) operating purely on inefficient diesel generators; (ii) with heavy demand for ice to support fisheries; and (iii) pilot testing innovative components which have potential for future replication.</p>								
Impact	More sustainable energy sector based on renewable resources (Strategic Action Plan 2019-2023).								
Project Outcome									
Description of Outcome	Shift towards clean and cost-effective energy sources								
Progress Toward Outcome	The Implementation is progressing as envisaged and to meet the project outcome.								
Implementation Progress									
Description of Project Outputs	Renewable-energy-ready grid systems developed for outer islands and greater Male region Enhanced capacity of MOE, STELCO and FENAKA to implement renewable energy grid interventions								

Status of Implementation Progress (Outputs, Activities, and Issues)	One of the major contracts covering 12 islands in Thaa Atoll was signed in November 2021 and capacity building activities are being provided to PMU and utilities. The bidding is in progress for the remaining 2 packages (solar based ice-making plants and solar-battery hybrid ferry).
Geographical Location	Nation-wide
Safeguard Categories	
Environment	C
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	The first stakeholder communication was conducted during project processing. The next phase of consultations will start after the contract award of the packages when contractor finalizes the design.
During Project Implementation	This will be conducted as required before site activities.
Business Opportunities	
Consulting Services	Individual consultants (National & International) will be engaged to support the PMU with project monitoring and implementation support, design of climate resilient and innovative components under this project.
Procurement	There are 3 open competitive bidding packages in this additional financing. Advanced procurement cation will be used for procurement of EPC contractors. Ministry of Environment (MOE) will be responsible for all the procurement actions.
Responsible ADB Officer	Kolantharaj, Jaimes
Responsible ADB Department	South Asia Department
Responsible ADB Division	Energy Division, SARD
Executing Agencies	Ministry of Finance (formerly Ministry of Finance and Treasury)
Timetable	
Concept Clearance	28 Oct 2019
Fact Finding	21 May 2020 to 21 May 2020
MRM	07 Aug 2020
Approval	29 Oct 2020
Last Review Mission	-
Last PDS Update	16 Sep 2022

Grant 0748-MLD

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
29 Oct 2020	16 Nov 2020	07 Jan 2021	31 Mar 2024	-	-

Financing Plan		Grant Utilization			
	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	3.26	Cumulative Contract Awards			
ADB	2.73	14 Sep 2022	2.18	0.00	80%
Counterpart	0.53	Cumulative Disbursements			
Cofinancing	0.00	14 Sep 2022	0.24	0.00	9%

Loan 3995-MLD

Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
29 Oct 2020	16 Nov 2020	07 Jan 2021	31 Mar 2024	-	-

Financing Plan	Loan Utilization
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	Total (Amount in US\$ million)	Date	ADB	Others	Net Percentage
Project Cost	7.74	Cumulative Contract Awards			
ADB	7.74	14 Sep 2022	6.17	0.00	84%
Counterpart	0.00	Cumulative Disbursements			
Cofinancing	0.00	14 Sep 2022	0.66	0.00	9%

Project Page <https://www.adb.org/projects/46122-005/main>

Request for Information <http://www.adb.org/forms/request-information-form?subject=46122-005>

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