

## RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Risk Assessment	Mitigation Measures or Management Plan
Implementation could be delayed, leading to cost and time overruns.	Medium	Implementation is planned atoll by atoll with agreed eligibility and selection criteria for investments after the phase 1 subprojects are completed. Adequate contingencies are provided. Advance procurement is initiated. The project will have strong project management unit support and timely guidance from the inter-ministerial technical steering committee. The sector project approach being followed is flexible, and periodic reviews will assess the need for course changes.
A shortage of technical qualified staff or rapid turnover of qualified staff in implementing agencies can undermine project implementation.	Medium	The staffing shortage will be mitigated by the capability augmentation by a team of functional specialists and a project manager to support the PMU and steering committee. This team will be responsible for coordinating capacity development programs for the utilities' staff
Technical challenges in integrating solar photovoltaic into the grid.	Medium	The Maldives Energy Authority, in coordination with the utilities, will ensure that required interconnection regulations are in place before implementation and that final designs are in line with international standards. Initial focus is on Type A and Type B island configuration.
Uncertainty over availability of government land and rooftops for installing solar photovoltaic equipment	Medium	For the five phase 1 islands, consultations were undertaken with the government and local island councils to shortlist the sites. Local councils have been very supportive and have offered sites. Similar consultations will be carried out in future phases.
The solar power systems and equipment may not be operated and maintained properly.	Medium	The contractor will be responsible for O&M post commissioning of the subproject. The utility and the PMU will need to report regularly on O&M activities. Training on O&M will be carried out by the contractor and experts.
More than expected increase in electricity demand could offset the diesel savings achieved through renewable energy	Medium	Demand-side energy efficiency measures to be supported, e.g., through ongoing sources of bilateral funding. The proposed solutions are modular and can be scaled up to meet increases in demand.
Decommissioning of equipment and disposal of batteries could harm the environment.	Medium	The environmental management plan has a section on compliance with international regulations on safe handling of hazardous waste.
The financial position of the utility, FENAKA, is weak.	Medium	A road map with requirements on completion of annual accounts, statutory audits, asset verification, valuation, and periodic tariff resets based on cost increases agreed and implemented in a timely manner.
Lack or limited interest in private sector participation in renewable energy generation on the islands	Medium	Phased approach to private sector participation on the islands, starting with public sector investments initiated by ADB in 2014 followed by possible private investments supported by the planned World Bank guarantee in 2015.
Risks related to climate change	Medium	The project will provide solar photovoltaic systems, which will be mounted on structures of 3 meter–4 meter height. Other project facilities will have resilience to climate change through compact and preassembled systems resistant to extreme weather conditions. The project will not be affected by sea level rise.
<b>Overall</b>	<b>Medium</b>	

O&M = operation and maintenance, PMU = project management unit.  
Source: Asian Development Bank estimates.