



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
 TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Outer Island Renewable Energy Project		
Country(ies):	Kingdom of Tonga	GEF Project ID: ¹	
GEF Agency(ies):	ADB (select) (select)	GEF Agency Project ID:	43452
Other Executing Partner(s):	Ministry of Finance and National Planning, Kingdom of Tonga	Submission Date:	16/12/2015
GEF Focal Area(s):	Climate Change	Project Duration (Months)	48 months
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	250,731

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CCM-1 Program 1 (select)	GEFTF	2,639,269	13,230,000
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
(select) (select) (select)	(select)		
Total Project Cost		2,639,269	13,230,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: The project will reduce Tonga's dependence on imported fossil fuel for power generation and provide increased consumer access to electricity generated by solar power at a lower cost.						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Solar photovoltaic (PV) module procurement and solar PV power system development and grid stability	Inv	On-grid and off-grid generation systems are optimized and provide increased consumer access to electricity generated by solar power at a reduced cost.	Construction and installation of approximately 1.32MWp solar capacity on up to 9 outer islands including storage	GEFTF	2,639,269	6,390,000
2. Institutional strengthening and project management support	TA	Operation and maintenance (O&M) knowledge transferred through training	O&M trainings including a program manual for O&M of solar generation and distribution systems to the implementing agencies for up to 5	GEFTF		1,400,000

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

			years after plant commissioning			
3. Goods, works, and services (power distribution network)	Inv	Allow Tonga to reduce power distribution losses and fuel consumption while delivering the same amount of electricity to consumers	Rehabilitation of the existing grid network on Vava'u and 'Eua.	GEFTF		4,650,000
4. Contingencies	Inv			(select)		790,000
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal						2,639,269
Project Management Cost (PMC) ⁴					(select)	
Total Project Cost						2,639,269
						13,230,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	Asian Development Bank	Grants	3,440,000
Others	Government of Australia	Grants	4,500,000
Recipient Government	Kingdom of Tonga	In-kind	970,000
Others	European Union	Grants	3,570,000
Others	Second Danish Cooperation Fund for Renewable Energy and Energy Efficiency for Rural Areas	Grants	750,000
(select)		(select)	
Total Co-financing			13,230,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
ADB	GEFTF	Kingdom of Tonga	Climate Change	(select as applicable)	2,639,269	250,731	2,890,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total GEF Resources					2,639,269	250,731	2,890,000

a) Refer to the [Fee Policy for GEF Partner Agencies](#).

E. PROJECT PREPARATION GRANT (PPG)⁵

⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

Is Project Preparation Grant requested? Yes No If no, skip item E.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: \$					PPG Agency Fee:		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
Total PPG Amount					0	0	0

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>75,300 metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>metric tons</i>
	Reduction of 1000 tons of Mercury	<i>metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed: Tonga is a kingdom of 177 islands divided into five island groups—'Eua, Ha'apai, Niua, Tongatapu and Vava'u. Its 103,000 people inhabit about 36 of these islands. About 75% of its population live on Tongatapu, the main island and location of the capital, Nuku'alofa. About 89% of all households have access to electricity—out of them 97% in urban areas and 86% in the rural parts of the islands.

Like many other island countries in the Pacific, the country faces dire and immediate consequences from Climate Change impacts—from sea level rise and more frequent and stronger storms to the changing distribution of disease vectors—that are markedly disproportionate to its contribution to global greenhouse gas (GHG) emissions. Climate change can compromise Tonga's prosperity, stability, and security and economic development potential. The impacts

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

on food production, land and marine resources use, as well as damage to infrastructure, water resources, and human health will result in economic losses that might cause large-scale migration, both internally and externally.

Although their footprint to the global climate change impact is fairly marginal, the power sector of the country heavily relies on imported fossil fuels, particularly diesel. Petroleum dependency makes Tonga highly vulnerable to oil price changes and shocks, which in turn affect the affordability of food, goods, electricity, and transport. Changing diesel-based power generation to the one based on renewable energy sources is expected to reduce diesel consumption for power generation, and will contribute to sustainable social and economic development. Lowering Tonga's reliance on fossil fuels will also help free up government funds for other needs while improving national energy security and sustainability and potentially affordability.

Like many other small island nations in the Pacific, the power generation from renewable energy resources has only recently become a feasible solution because the up-front capital costs were previously very high and there were high perceived and real technical risks. In addition, the cost of electricity storage technologies (e.g. battery, etc.) that are of the essence for grid stability was too high. For the past few years, some renewable energy technologies, especially wind power and solar PV, have become cost-effective compared to power generation using fossil fuels, particularly for increasing the modern electricity access in the isolated small islands.

Increasing the modern electricity access and transitioning to clean and sustainable energy systems is a key priority of the Government of Tonga, demonstrated by the adoption of 50% renewable energy targets in the power sector in 2010 and the willingness to use the entire, flexible GEF-6 STAR allocation toward enhancing the Outer Island Renewable Energy Project (OIREP) currently being funded by the Government of Tonga, the Asian Development Bank (ADB), the Australian Department of Foreign Affairs and Trade (DFAT), and the European Union (EU) (see Section C above).

2) the baseline scenario or any associated baseline projects:

Tonga Power Limited (TPL) is solely responsible for providing grid-connected electricity services in Tonga. It has concessions to operate four independent grids—the largest, which is on the main island of Tongatapu, and three smaller grids on the main islands of the 'Eua, Ha'apai, and Vava'u island groups. Peak demand on the four TPL grids in 2014 was about 9.7 megawatts (MW), and demand for the year totalled about 55 gigawatt-hours. More than 95% of its overall grid-connected electricity demand is supplied by generators fuelled by imported diesel at a cost equivalent to about 10% of total gross domestic product and 15% of the value of total imports. It is expected that the peak capacity demand will increase to 17.2 MW by 2020 and that annual consumption will rise to 62 GWh.

The Niuaus—the northernmost group of islands—consists of three islands (Niuafu'ou, Niuatoputapu and Tafahi). There is no grid-connected electricity supply in these islands. The local school and a church have their own diesel generator sets, and a few households have individual solar home systems.

The government has been trying to reduce the high cost of electricity and Tonga's extreme economic vulnerability to oil price increases, a great part of which is due to the electricity sector's high dependence on imported diesel. Power tariffs are inherently high in Tonga because of the high costs of transporting imported diesel to the remote Pacific nation and between its scattered islands and the reasonably small storage capacity on land.

In 2008, the government approved the Renewable Energy Act, a regulatory instrument to promote the use of renewable energy technologies. Under its 2009 National Strategic Planning Framework, it also created the 2010–2020 Tonga Energy Road Map (TERM) for the general development, reform, and improvement for the energy sector. TERM aims to generate 50% of Tonga's grid-based electricity from renewable energy resources by 2020 and consequently to reduce the country's diesel consumption and environmental impact.

To meet the target of renewable energy penetration under the TERM, the government has decided to develop the OIREP, which will construct and install solar power systems with a preliminary capacity of 1.32 megawatt-peak (MWp) on nine outer islands in Tonga. This capacity will be provided as follows: (i) a total of 0.75 MWp on 'Eua and Ha'apai, including a repair program on Vava'u; (ii) a total of 0.39 MWp on the four Ha'apai outer islands of

'Uiha, Nomuka, Ha'ano, and Ha'afeva; and (iii) 0.18 MWp of the solar home systems (SHS) on Niuafu'ou and Niuatoputapu.

In addition, the project will update the existing electricity distribution network near the solar power generation system on 'Eua and Vava'u. The standard losses in rural power distribution networks are generally about 5%, and yet the rate is more than twice as high in Tonga (around 13%). Greater losses mean that more fuel is consumed in power generation, which makes improving the efficiency of the country's power system a matter of interest for both TPL and Tonga's consumers. This component aims to reduce technical power distribution losses on the network and, consequently, the consumption of the diesel to generate the lost electricity.

The current project has hired project management consultants (PMC) to (i) draft the final designs of equipment, (ii) support the bidding process, (iii) conduct training on the O&M of solar equipment, and (iv) provide efficient project implementation and management services for at least 5 years after the plants are commissioned.

The OIREP is estimated to cost \$13.23 million. The government has requested grants totalling \$12.44 million to finance project goods, works and services. The grants comprise (i) \$3.44 million from ADB's Special Funds resources, (ii) AU\$4.50 million from the Government of Australia, (iii) €3.00 million from the European Union, and (iv) \$0.75 million from the Second Danish Cooperation Fund for Renewable Energy and Energy Efficiency for Rural Areas, administered by ADB to help finance the project. The government will provide the equivalent of \$0.97 million as an in-kind contribution toward land-related and administrative costs through the Energy Department (ED) and TPL.

The impact of the OIREP will be the reduction of Tonga's dependence on imported fossil fuel for power generation. The outcome of the OIREP will be an optimization of on-grid and off-grid generation systems to provide an increase in consumer access to electricity generated by solar power at reduced cost.

Tonga's dependence on fossil fuels will be reduced under the OIREP as it is expected to generate about 1.67 GWh of clean electricity using solar power coupled with battery system. This will result in annual savings of 0.60 million liters of diesel consumption and annual reduction of about 2,000 tons of carbon dioxide emission; the estimated lifetime of the project is 25 years.

3) the proposed alternative scenario, GEF focal area strategies, with a brief description of expected outcomes and components of the project:

Additional grant funding of about \$2.89 million from GEF will increase the overall project investment to about \$16.12 million from the current \$13.23 million. The GEF grant would be used for enhancing the OIREP, particularly it will allow the building of a solar mini-grid system on Niuatoputapu of the Niuva group in lieu of currently planned solar home systems. The investment costs of additional GEF grant include a turnkey contract for solar PV system development including the mini-grid system.

This enhancement through the GEF funding will allow Tonga to accelerate its timeline to meet 50% renewable energy goals under the TERM. The proposed solar-based mini-grid system will allow residents on Niuatoputapu to access grid-connected electricity, which is more reliable than the currently planned solar home systems and cleaner than the electricity supply generated by diesel generators. Furthermore, Tonga will gain valuable experience that can be useful for other islands in the region that are sharing similar struggles on their trajectories to meeting renewable energy targets, especially in isolated islands without the grid-connected electricity access. Through similar efforts by ADB and partners in the region, this project could be replicated on other islands in the Pacific facing similar challenges.

This links to the GEF6 Strategic Objective CCM-1: Promote the timely development, demonstration, and financing of low-carbon technologies and mitigation options. The additional \$2.89 million from GEF would be used to enhance the OIREP project by allowing Tonga to accelerate its timeline to meet its renewable energy goals.

4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LCDF, SCCF, and co-financing:

The originally approved grants will be used to (i) construct and install solar power systems with a total capacity of 1.32 MWp on 9 of Tonga's outer islands, (ii) provide O&M trainings including a program manual for O&M of solar generation and distribution systems to the implementing agencies for up to 5 years after plant commissioning, and (iii) help the implementing agencies implement the project efficiently by recruiting the project management consultant. The grants will also be used to upgrade the existing power distribution grids of 'Eua and Vava'u.

ED and TPL will prepare the final technical and engineering designs, conduct the bidding processes, and be responsible for the installation and supervision of the component to upgrade the power distribution network under the OIREP.

Procurement of goods, works, and services will be conducted through turnkey contracts. The turnkey contracts will include final design and engineering, supply and installation of equipment, construction works and commissioning, and an O&M knowledge transfer program.

The additional GEF grant will be used for additional solar PV generation including a mini-grid and the related energy management system. Further assessment of the energy management and storage options would be undertaken as part of further project preparation. ADB will also undertake a rapid climate risk screening, and if necessary (for medium to high risk), a more detailed climate risk and vulnerability assessment will be undertaken (with ADB resources) to ensure that the design will incorporate adequate climate-resilience measures to protect the funded assets. The rapid assessment will be undertaken with "AWARE for Projects" - an online tool used by ADB project teams to screen projects for climate risks. The tool uses data from 16 general circulation models, as well as databases on a range of variables including temperature increase, wildfire, water availability, precipitation change, flooding, tropical storms and landslides.

5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF):

The OIREP will result in annual savings of 0.60 million liters of diesel consumption and annual reduction of about 2,000 tons of carbon dioxide emissions. The project lifespan is estimated at 25 years. The additional financing would help to ensure that GHG emissions reductions are realized throughout the lifespan of the project through climate resilience measures and contribute to an accelerated timeline in Tonga's efforts to meet its goals for decarbonization in the power sector without negatively affecting the grid stability in the future.

The direct GHG emissions reductions from the OIREP including additional financing from GEF are estimated at about 50,200 tonnes of CO₂ equivalent (CO₂e) throughout the lifespan. This project does not include activities that would result in direct post-project greenhouse gas emission reductions. Using the GEF bottom-up methodology, consequential emission reductions attributable to the project are 75,300 tonnes of CO₂e using a replication factor of 1.5.

6) and innovation, sustainability and potential for scaling-up:

Innovation- The OIREP is ADB's first intervention for expansion of renewable energy in Tonga. It allows subproject development, institutional strengthening, and capacity development to roll out various types of solar energy deployment – grid-connected, mini-grid and off-grid solar power system – coupled with the battery system on nine outer islands. Technically, the power outputs from the grid-connected subprojects will be synchronized and integrated into the existing electricity grid using battery storage to make up for the intermittent nature of solar energy and ensure electricity supply even during the night. This will help make the electricity system sustainable, stable, and reliable, allowing it to supply clean electricity and meet more than 90% of electricity load demand. Moreover, the additional grant from GEF will allow the government, the local grid-operator and communities to build capacity for the O&M of the solar powered mini-grid. The project will facilitate the achievement of the government target to supply the country's energy with 50% renewable energy by 2020.

Sustainability – The OIREP will support the government’s efforts to reduce Tonga’s heavy reliance on imported fossil fuels for power generation by providing secure, sustainable, clean electricity. The project will also improve affordability of consumers by supplying electricity generated from solar PV plants at lower costs than the one from diesel generators. By optimizing TPL and ED systems, the project can exert downward pressure on tariffs for private and commercial consumers. The consultant, the project owner’s engineer team, has provided project management support for the ED and TPL to help implement the OIREP. The turnkey contractor(s) of both grid-connected and mini/off-grids subprojects will provide specialized O&M knowledge transfer to ensure sustainable operation. For both mini and off-grid components, more sustainable O&M model has been proposed compared to the current situation for both systems.

Scaling up – With the GEF-6-STAR allocation funding, activities at the mini/off-grids component can be enhanced through improved renewable energy generation and storage (if possible) as well as improved climate-resilience measures. Allowing for innovative technical and operational combinations, such as improved management, multiple storage technologies and pv generation, provides Tonga with the means to meet its goals of 50% renewable energy in a timely manner and also without affecting the grid stability. Under the project scopes, the feasible renewable technology options to achieve the national goals of 50% renewable energy will be assessed, particularly the role of solar PV and batteries.

Likewise, many small islands in the Pacific are facing similar technical questions related to the transition from fossil fuels to renewables. In addition, the GEF funding may allow testing to find the most suitable and cost-effective options for the country and other similarly placed countries in the Pacific.

2. *Stakeholders.* Will project design include the participation of relevant stakeholders from [civil society organizations](#) (yes /no) and [indigenous peoples](#) (yes /no)? If yes, identify key stakeholders and briefly describe how they will be engaged in project preparation.

The government will be the grant beneficiary. The executing agency of the OIREP, including the additional GEF financing, will be the Ministry of Finance and National Planning. TPL and ED will be the implementing agencies.

The social survey conducted during the project preparatory technical assistance in 2012 showed that communities in the outer islands identify lack of employment and other income-earning opportunities as the main cause of hardship. Other causes cited included too many dependents, landlessness, the burden of family, community obligations, poor health, and poor family budgeting. The groups most vulnerable to hardship include children, youth, women, the disabled, and the elderly. The project will address hardship by reducing the monthly expenses for electricity services. In addition, in the case of Ha’apai outer islands and Niuaus, the project will contribute to promote development of local craft manufacturing and sustainable tourism, which will benefit the poor.

The project is not expected to impact any distinct and vulnerable group of indigenous peoples, as defined under ADB’s Safeguard Policy Statement. The beneficiaries in the project sites are part of mainstream Polynesian society and are not considered to be distinct from the mainstream society. They are not discriminated against due to their language, skin color, or education level and do not require protection or special attention from the project. All project outputs will be delivered in a culturally appropriate, participatory manner. The project team will consider engaging with a Civil Society Organization, if necessary, in the further project design making process.

3. *Gender Equality and Women’s Empowerment.* Are issues on [gender equality](#) and women’s empowerment taken into account? (yes /no). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

The project is classified as effective gender mainstreaming, with the majority of project outputs having specific gender design features to ensure that women participate in the project and have access to project benefits. The survey showed that the significant concerns of women include (i) affordability of urban services, (ii) improving power usage (conservation), (iii) improving the health and well-being of households and the community, (iv) having greater access to information on urban services and urban planning, (v) having greater involvement in developing solutions for communities through women’s committee support, and (vi) being involved in consultation and decision making.

The project gender action plan will address these concerns and ensure that any potential harmful effects on women are avoided. The gender action plan includes specific actions that will benefit women. Key gender aspects have been

assessed through gender analysis and community consultations. It was found that the project will not have any negative impact on women. The project will include the engagement of women in consultation activities; provision of gender awareness to target groups, including participation in income-generating activities; encourage women to participate in project-related contracts; and collection of gender-related data for monitoring purposes.

4 Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

Risks identified in the early stages of the project included: Policy actions and development partner support are inadequate to implement the TERM; Implementation can be delayed due to delays in land acquisition, and procurement; Support, performance, and coordination at ED and TPL are weak/inadequate. Extreme weather events are an on-going and increasing risk for islands in the Pacific.

Mitigation actions include: engagement of the project management consultants, establishment of a project steering committee consisting of relevant Ministries, ED and TPL representatives and establishment within ED and TPL of a project management unit to handle the day-to-day running of the projects.

The GEF funding will help to de-risk the entire project by furthering country goals and financing incremental costs on the way to meeting Tonga's renewable energy goals.

5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives.

The project is coordinated with other relevant initiatives (including those funded by ADB as well as by other banks and donors). These include IRENA activities in the region and the following GEF Phase 4 Projects:

UNDP's Marshall Islands - Action for the Development of Marshall Islands Renewable Energies (ADMIRE);
World Bank's Kiribati - PAS: Grid-connected Solar PV Central Station Project;
World Bank's Papua New Guinea- PAS: PNG Energy Sector Development Project;
World Bank - Solomon Islands Development of Community-based Renewable Energy Mini-grids.

Furthermore, the Asian Development Bank (ADB) provided project preparatory technical assistance to ensure the success of this project. ADB 2012. Technical Assistance to Tonga for Preparing the Outer Island Renewable Energy Development Project. Manila (TA 7940- TON, \$500,000 approved on 2 December 2011, financed by the Japan Fund for Poverty Reduction). The lessons learned from this GEF 6-funded project and the similar project underway in the Cook Islands will hopefully inform future activities in the Pacific and in small island nations.

6. Consistency with National Priorities. Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

Government of Tonga 2010. Tonga Energy Road Map, 2010–2020. Nuku'alofa. Government of Tonga 2008. Renewable Energy Act. Nuku'alofa.

Tonga Strategic Development Framework (2015 – 2025)

Tonga National Infrastructure Investment Plan (2) 2015 - 2025

The project is in line with the objectives of ADB's 2009 Energy Policy to promote energy efficiency and renewable energy; provide access to energy for all; and support reform, capacity building, and improved governance in the energy sector. It is included in ADB's country operations business plan for Tonga for 2015–2017, which makes energy a priority area of support. A primary goal of the plan is to reduce the country's dependence on imported fossil fuels through energy efficiency and conservation operations, including support for power generation from renewable energy sources.

7. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

This project can serve as a model and lessons can be disseminated through networks such as Small Islands Developing States (SIDS Dock) and the Alliance of Small Island States (AOSIS). As demonstrated in the preparation of the PIF for a similar project in the Cook Islands, much of the knowledge sharing happens peer-to-peer. The GEF Secretariat and other international organizations, such as the International Renewable Energy Agency,

have activities targeted at the Pacific Islands. ADB may share results through knowledge products and Forums such as the Asian Clean Energy Forum.


PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)

A. RECORD OF ENDORSEMENT⁹ OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):
 (Please attach the [Operational Focal Point endorsement letter](#)(s) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Paula MA'U	CEO	MINISTRY OF METEOROLOGY, ENERGY, INFORMATION, DISASTER MANAGEMENT, ENVIRONMENT, CLIMATE CHANGE & COMMUNICATIONS	08/04/2015

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹⁰ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Nessim J. Ahmad Deputy Director General, SDCC concurrently Chief Compliance Officer Sustainable Development and Climate Change Department, Asian Development Bank		16/12/2015	Woo Yul Lee, Energy Specialist	+632 683 1803	wylee@adb.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

⁹ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹⁰ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

For newly accredited GEF Project Agencies, please download and fill up the required [GEF Project Agency Certification of Ceiling Information Template](#) to be attached as an annex to the PIF.