

Readiness Proposal

with UNEP – CTCN for the Kingdom of Tonga

10 April 2017 | Strategic Framework



**GREEN
CLIMATE
FUND**

Readiness and Preparatory Support Proposal

How to complete this document?

- A [readiness guidebook](#) is available to provide information on how to access funding under the GCF Readiness and Preparatory Support programme. It should be consulted to assist in the completion of this proposal template.
- This document should be completed by National Designated Authorities (NDAs) or focal points with support from their delivery partners where relevant.
 - Please be concise. If you need to include any additional information, please attach it to the proposal.
 - Information on the indicative list of activities eligible for readiness and preparatory support and the process for the submission, review and approval of this proposal can be found on pages 11-13 of the guidebook

Where to get support?

- If you are not sure how to complete this document, or require support, please send an e-mail to countries@gcfund.org. We will aim to get back to you within 48 hours.
- You can also complete as much of this document as you can and then send it to countries@gcfund.org. We will get back to you within 5 working days to discuss your submission and the way forward.

Note: Environmental and Social Safeguards and Gender

Throughout this document, when answering questions and providing details, please make sure to pay special attention to environmental, social and gender issues, in particular to the situation of vulnerable populations, including women and men. Please be specific about proposed actions to address these issues. Consult page 4 of the readiness guidebook for more information.

SECTION 1: SUMMARY	
1. Country submitting the proposal	Country name: Kingdom of Tonga Name of institution (representing National Designated Authority or Focal Point): Ministry of Meteorology, Energy, Information, Disaster Management, Environment, Climate Change and Communications (MEIDECC) Name of official: Mr. Paula Pouvalu Ma'u Position: Chief Executive Officer Telephone: +676 28170 E-mail: paulm@mic.gov.to Full Office address: Taufaaahu Road Nukualofa, Tonga
2. Date of initial submission	24/01/2017
3. Last date of resubmission (if applicable)	07/03/17
4. Which entity will implement the Readiness and Preparatory Support project? (Provide the contact information if entity is different from NDA/focal point)	<input type="checkbox"/> National Designated Authority <input type="checkbox"/> Delivery partner <input checked="" type="checkbox"/> Accredited entity Name of institution: The Climate Technology Centre and Network (CTCN), United Nations Environmental Programme (UNEP) Name of official: Jukka Uosukainen Position: Director Telephone: +4545335380 Email: jukka.uosukainen@unep.org Full Office address: UNFCCC Climate Technology Centre and Network - UN City, Copenhagen, Denmark
5. Title of the Readiness and Preparatory Support Proposal	Development of an Energy Efficiency Master Plan for Tonga
6. Brief summary of the request (200 words)	<p>Tonga depends entirely on imported fossil fuel for its energy. To outline a pathway towards sustainable development and to help mitigate any impacts of increased fuel costs or fuel supply disruptions, the Tongan government developed a national target in 2012, to achieve 50% of its electricity generation from renewable energy by 2020, followed by its Tonga Nationally Determined Contributions:</p> <ul style="list-style-type: none"> • 70% renewable energy generation by 2030 • Improve Energy efficiency through reduction of electricity line losses to 9 percent by 2020 (from a baseline of 18 percent in 2010) • Sector Emission Reduction Targets: Transport, Agriculture, Environment Friendly Waste Management and Reforestation • Other Sectors Climate Resilience: Public Infrastructures, fore-shore protection, buildings and houses. <p>The technical assistance aims to support the development of a Tonga Energy Efficiency Master Plan (TEEMP) with achievable energy efficiency (EE) and greenhouse (GHG) targets to ensure the transition to an energy efficient future for Tonga. Tonga has determined that EE policies and strategies are the cheapest and most reliable initiatives for saving energy and reducing costs and GHG emissions.</p> <p>Hence, the Energy Department of Tonga is seeking assistance to develop the TEEMP with achievable EE and GHG targets to ensure the transition to an energy efficient future.</p> <p>The specific objectives of this technical assistance are:</p> <ul style="list-style-type: none"> • The development of a survey, data collection, and a baseline/benchmarking study; • The development of EE and GHG targets (including energy intensity targets);

	<ul style="list-style-type: none"> • A needs assessment of potential least cost EE options for the energy sector; and • Initial capacity development and training for Energy Department staff and identification of a longer-term capacity building plan. • The development of the Tonga Energy Efficiency Master Plan for Power, Transport, Building/Infrastructure, Tourism, Education, Fisheries and Agriculture.
7. Total requested amount and currency	200,000 USD
8. Anticipated duration	6 months
9. Is the country receiving other Readiness and Preparatory Support related to the GCF?	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Tonga is receiving support from the Readiness Programme on the establishment and strengthening of National Designated Authority for Tonga, a total requested cost of \$300,000.</p>

SECTION 2: COUNTRY READINESS LOGICAL FRAMEWORK

Please complete the table below, which enables a country to assess its readiness for the GCF and set targets for strengthening its readiness, including proposed outputs and activities to improve the country's readiness. For further guidance on completing the table, please refer to the guidebook "Accessing the GCF Readiness and Preparatory Support Programme".

OUTCOMES ¹	BASELINE	TARGET	ACTIVITIES <i>(including key outputs or deliverables where applicable)</i>
1. Country capacity strengthened	0-8	0-8	
1.1 NDA/focal point lead effective coordination mechanism	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	
1.2 No objection procedure established and implemented	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	
1.3 Bilateral agreements between the country and the GCF executed	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	
1.4 Monitoring, oversight and streamlining of climate finance	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	
2. Stakeholders engaged in consultative processes	0-8	0-8	
2.1 Stakeholders engaged in consultative processes	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<ul style="list-style-type: none"> The project will conduct wide energy-focussed consultations with energy related stakeholders (Power Utility, Government agencies, NGOs, women groups, private sectors, and communities). The arrangement and conducting of these specific consultations will be closely coordinated with the NDA to ensure there are no duplications, and are in line with NDA policy while at the same time enhance collaboration and cooperation with NDA to ensure greater input and commitment from stakeholders
2.2 Country programmes, including adaptation priorities, developed and continuously updated	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2	<ul style="list-style-type: none"> TEEMP will mainstream and reflect vision of National climate priorities including National Climate Change Policy (2016), Joint National Action Plan on Climate Change Adaptation and Disaster Risk Management, Tonga Strategic Development Framework (2015-2025), Tonga Intended Nationally Determined Commitments 2015 (INDC), Tonga Energy Road Map (2010-2020), Renewable energy plan (REEP), and other climate relevant instruments, and the Fund's Initial results management framework: Contribute to the TERM (2010 – 2020) and Tonga NDC targets (2015):

¹ Based on decisions: B.08/10, annexes XII, XIII & XIV; B.08/11; B.11/10, annex I; B.12/20, annex I



2016

**READINESS AND PREPARATORY SUPPORT
PROPOSAL TEMPLATE**

PAGE 5 OF 18 | ver. 13 October

			<ul style="list-style-type: none"> ○ 70% renewable energy generation by 2030 ○ Improve Energy efficiency through reduction of electricity line losses to 9 percent by 2020 (from a baseline of 18 percent in 2010) ○ Sector Emission Reduction Targets: Transport, Agriculture, Environment Friendly Waste Management and Reforestation ○ Other Sectors Climate Resilience: Public Infrastructures, foreshore protection, buildings and houses. • Contribute to the Climate Change Policy targets (2015 – 2030) <ul style="list-style-type: none"> ○ Target 2 – Redesigned and resilient roads, coastal areas, buildings and other infrastructure ○ Target 3 - Resilient homes, schools, and community halls (i.e incorporating design for Category 5 cyclones, a minimum of 30,000l water storage capacity for homes, solar power and hot water, bio-digesters for biogas production, organic gardens, food preservation ○ Target 4 – transport system that is not reliant on fossil fuels ○ Target 5 – 100% renewable energy ○ Target 14 – Resilience measures are mainstreamed into applicable laws and are integral to all public and private sector policies, plans and development programme and projects ○ Target 15 – Resilient agriculture with enhanced crop production and food security ○ Target 18 – An innovative and proactive sector that is a model for resilience ○ Target 19 – An economy that works harmoniously with the need for a resilient environment and society ○ Target 20 – Sustainable funding for climate change and resilience building needs
<p>2.3 Stakeholder consultations conducted with equal representation of women</p>	<p><input type="checkbox"/>0 <input checked="" type="checkbox"/>1 <input type="checkbox"/>2</p>	<p><input type="checkbox"/>0 <input type="checkbox"/>1 <input checked="" type="checkbox"/>2</p>	<ul style="list-style-type: none"> • It will be ensured that the assistance and its benefits are accessible for both men and women and any other vulnerable group. Special efforts will be made to involve mixed gender groups in all relevant activities of the technical assistance; e.g. capacity building, webinars, trainings, consultations, etc.
<p>2.4 Annual participatory review of GCF portfolio in the country organized</p>	<p><input checked="" type="checkbox"/>0 <input type="checkbox"/>1 <input type="checkbox"/>2</p>	<p><input checked="" type="checkbox"/>0 <input type="checkbox"/>1 <input type="checkbox"/>2</p>	
<p>3. Direct access realized</p>	<p>0-8</p>	<p>0-8</p>	

2016

3.1 Candidate entities identified and nominated for accreditation	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	
3.2 Direct access entity accredited	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	
3.3 Entity/ies annual/multi-annual work programme developed	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	
3.4 Funding proposals through enhanced direct access modality approved	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	
4. Access to finance	0-8	0-8	
4.1 Structured dialogue between the NDA/Accredited Entities and the GCF Secretariat organized	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	
4.2 Country programmes, concept notes, including on adaptation, developed that implement high-impact priorities identified in INDCs and other national strategies or plans	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input type="checkbox"/> 1 <input checked="" type="checkbox"/> 2	<p><u>Tonga Energy Efficiency Master Plan Proposal</u></p> <p>Activity 1 – Conduct data collection, benchmarking, and baseline study (refer to section 5 for more information) Data collected from all key stakeholder to inform the Energy Efficiency policy and GHG target for Tonga (Activity 2 & 3) and the development of a baseline through benchmarking energy use, energy intensity, energy cost, and GHG emissions. The consultant will conduct gender focused baseline studies for the EE sector.</p> <p><u>Key Deliverables:</u></p> <ul style="list-style-type: none"> - EE baseline for Tonga identified. - Gender mainstreaming in EE initiatives baseline studies - Benchmarking energy use, energy intensity, energy cost, and GHG emissions identified. - Activity Report for baseline and benchmarking exercise submitted to MEIDECC <p>Activity 2 - Identify potential least cost EE options with supporting enabling environment options for Energy Sector (refer to section 5 for more information) Technical, Policy, fiscal, institutional, political, informational, gender, social, cultural investigation, extensive stakeholder consultations, needs assessment study and analysis conducted to identify the best least cost EE saving programs/options with supporting innovative and appropriate enabling environment options for Tonga. The enabling environment options identified will ensure gender</p>



2016

		<p>sensitive and responsive initiatives are well reflected to ensure women are not disadvantage within this EE sector.</p> <p><u>Key Deliverables:</u></p> <ul style="list-style-type: none"> - Least cost EE options with supporting enabling environment options identified. - Gender responsive and sensitive activities proposed for the EE initiatives identified - Activity Report for least cost options and supporting enabling environment options identified for Tonga. <p>Activity 3 – Development of EE Master Plan with GHG and EE targets (<i>refer to section 5 for more information</i>) Analyse data collected from Activity 1 & 2 and develop energy intensity, EE and GHG targets for Tonga for two time horizons (2020 and 2030). This includes the development of the key document of this proposal, the EE Master Plan</p> <p><u>Key Deliverables</u></p> <ul style="list-style-type: none"> - Identification of the EE and GHG targets for 2020 and 2030 - EE Master Plan submitted to MEIDECC (80% completed) <p>Activity 4 – Identify EE programmatic programme and projects under the TEEMP with progressing tools and a software to monitor the TEEMP progress (<i>refer to section 5 for more information</i>)</p> <p>In parallel with Activity 3, the consultants will identify EE programmes and projects within the TEEMP to ensure TEEMP target is achieved within the timeframe. The consultant will develop tools (spreadsheet) and/or software to assist the Energy Department in tracking and monitoring the progress of the TEEMP.</p> <p><u>Key Deliverables:</u></p> <ul style="list-style-type: none"> - Identify EE programmes and projects for the TEEMP - Develop monitoring tools and software for tracking the progress of the TEEMP - Final EE Master Plan submitted to MEIDECC <p>Activity 5 – Develop and Conduct Capacity Development and Training for Energy Department Staff (<i>refer to section 5 for more information</i>) Develop Capacity Development programme for the TEEMP and conduct training for the staff of the</p>
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			<p>Energy Department and key stakeholders on how they will enforce the EE Master Plan, and how to monitor and evaluate policy and project success towards meeting EE and GHG targets.</p> <p><u>Key Deliverables:</u></p> <ul style="list-style-type: none"> - Capacity Development Need Assessment Identified - Long Term Training programme developed - National Trainings for the staff of the Energy Department and key stakeholders conducted - International attachment for 2 x energy staff on EE Master Plan enforcement and monitoring course/workshops
4.3 Project/programme preparation support, including for adaptation, to develop funding proposals provided	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	
4.4 Funding proposals, including for adaptation, that are aligned with country priorities approved	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	
5. Private sector mobilization	0-8	0-8	
5.1 Private sector engaged in country consultative processes	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<ul style="list-style-type: none"> • Encourage rate of participation from energy focussed private sectors: Hotel and resorts owners, Electrical suppliers, small second hand electrical supplier's importers, electrical contractors, vehicle services company, car dealers, community growers, community fishermen, building contractors, supermarkets and retail shops, restaurants and industries to involve in the consultations and trainings
5.2 Enabling environment for crowding-in private sector investments at national, regional and international levels exists	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<input type="checkbox"/> 0 <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2	<ul style="list-style-type: none"> • Encourage and support Public-Private Partnerships increased the Private sector investment toward implementation of national climate change programmes and activities. • Identify appropriate incentives and interventions to enhance investment in EE technologies in Tonga. • Encourage local investment to investment in EE market and technologies to reduce • Alleviate investment risk in EE technology
5.3 Funding proposals for private sector projects/programmes, including for adaptation, approved	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	<input checked="" type="checkbox"/> 0 <input type="checkbox"/> 1 <input type="checkbox"/> 2	



2016

**READINESS AND PREPARATORY SUPPORT
PROPOSAL TEMPLATE**

PAGE 9 OF 18 | ver. 13 October

<p>5.4 Funding proposals under the Private Sector Facility programmes (small- and medium-sized enterprises and mobilizing funds at scale) submitted and approved</p>	<p><input checked="" type="checkbox"/>0 <input type="checkbox"/>1 <input type="checkbox"/>2</p>	<p><input checked="" type="checkbox"/>0 <input type="checkbox"/>1 <input type="checkbox"/>2</p>	
<p>TOTAL</p>	<p>0-40</p>	<p>0-40</p>	

SECTION 3: ADDITIONAL INFORMATION

Please explain how this grant will help deliver on the country's readiness needs as identified above and build on institutions, processes or existing work already underway in the country (*maximum 500 words*)

Background:

Tonga depends entirely on imported fossil fuel for creating its energy services. 30% of imported are used by the power sector while 70% on transport, building and agriculture. In 2010, the Tongan Government developed the Tonga Energy Road Map (TERM) 2010-2020 with target of 50% renewable energy generation for the power sector. Tonga has been heavily focussed on dealing with the 30% imported fuel and little effort to reduce the consumption by the 70% used by other sectors.

Tonga has realised that Energy Efficiency initiatives should encouraged to tackle not only the neglected 70% and its sector but also improve the power sector's efficiency as well. Hence, Tonga Energy Efficiency Master Plan were identified as the appropriate document to drive Tonga's energy sector towards an efficiency future while reducing carbon emissions through existing and future developments and initiative.

Readiness Assistance Justification:

The technical assistance request emerged from a collaboration of the CTCN, PCREEE/SPC and MEIDECC/Energy Department to develop Tonga's Energy Efficiency Master Plan (TEEMP) with achievable energy efficiency (EE) and greenhouse (GHG) targets to ensure the transition to an energy efficient future for Tonga. The readiness will support the development of the TEEMP while build upon the following:

a) **Existing EE Programme in Tonga:**

- o **Pacific Appliance Labelling and Standards project:** Assistance will build on the established Minimum Energy Performance Labelling Standards (MEPSL) by providing applicable incentives to promote investment in MEPSL product. It will also clear pathways to how to review and update MEPSL standards enforced in Tonga
- o **Tongatapu Grid Network Upgrade project:** Provide clear path and approaches to improving the grid over certain period and how to ensure grid is capable on integrating renewable energy penetration without affecting the capacity and efficiency of the grid
- o **Energy Institutional Reform:** Contribute to consolidating fragmented EE services to ensure MEIDECC is the sole body for EE development, and to avoid duplications while enhancing private sector investment in EE services and technologies

b) **Link to GCF County Programme:**

- o **Pacific Island Renewable Energy Investment Program (PIREP):** The development of the TEEMP will be the stepping stone to ensure that the interventions and investments within the PIREP are the appropriate cost-effective interventions for Tonga. It will not only assist PIREP in achieving its outcome through more energy efficient but but also provide pathways for future extension/replication of the project.
- o **Promoting Energy Efficiency appliances, lighting and equipment in the Pacific Islands (PEALEP):** The TEEMP sets out as the stepping stones to this regional project. The TEEMP will provides the best least cost options for Tonga, building upon exiting and appropriate intervention. Unlike the PIREP (power sector focussed), the PEALEP and TEEMP is taking holistic approach to include transport and other energy-related sector in this programme.

c) **Link to the NDA:**

- o The project will work closely with the NDA to ensure that the TEEMP is inline and transparent to the work of the NDA and Tonga's Country Programme. The establishment of the NDA will contribute and assist with the consultations proposed in this project. It will not duplicate the work of the NDA but will both compliment, acknowledge and share resources whenever is possible and deem practical. The proposal solely focussed on the energy sector, however, it will cut cross some of the climate adaptation measures which will involve the work of the NDA, Climate Change division and other relevant players. It is important to note that one of the key outcome of TEEMP is developing EE programmatic programme and projects that will feed into Tonga's Country programme as potential GCF projects.

SECTION 4: BUDGET, PROCUREMENT, IMPLEMENTATION AND DISBURSEMENT

OUTCOMES (same as in section 2)	ACTIVITIES (same as in section 2)	TOTAL COST (per activity, in USD)	COST CATEGORIES				EXPENDITURE AND IMPLEMENTATION SCHEDULE (add columns if >24 months)			
			Consultants	Travel	Workshops/ Trainings	Others	6m	12m	18m	24m
4. Access to finance <i>4.2 Country programmes, concept notes, including on adaptation, developed that implement high-impact priorities identified in INDCs and other national strategies or plans</i>	Activity 1 – Conduct data collection, benchmarking, and baseline study	55,000	47,000	6,000	2,000	0	55,000			
	Activity 2 - Identify potential least cost EE options with supporting enabling environment options for Energy Sector	45,000	37,000	6,000	2,000	0	45,000			
	Activity 3 – Development of EE Master Plan with GHG and EE targets	40,000	40,000	0	0	0	40,000			
	Activity 4 – Identify EE programmatic programme and projects under the TEEMP with progressing tools and a software to monitor the TEEMP progress	15,000	15,000	0	0	0	15,000			
	Activity 5 – Develop and Conduct Capacity Development and Training for Energy Department Staff	36,000	23,000	6,000	7,000	0	36,000			
CONTINGENCY (UP TO)		2,000				2,000	2,000			



**READINESS AND PREPARATORY SUPPORT
PROPOSAL TEMPLATE**

OUTCOMES (same as in section 2)	ACTIVITIES (same as in section 2)	TOTAL COST (per activity, in USD)	COST CATEGORIES				EXPENDITURE AND IMPLEMENTATION SCHEDULE (add columns if >24 months)			
			Consultants	Travel	Workshops/ Trainings	Others	6m	12m	18m	24m
5%)										
PROJECT MANAGEMENT COSTS (UP TO 10%)		7,000				7,000	7,000			
TOTAL		200,000	162,000	18,000	11,000	9,000	200,000			

Procurement plan

For requests that are eligible and prioritized, the Climate Technology Managers in charge of the respective requests select one or several organizations from the CTCN Consortium to develop the Terms of Reference of the assistance (called 'Response Plan' as per CTCN procedures). The response plan provides specific information on the assistance to be conducted, including activities, outputs, expected outcomes and impacts, timeline, indicators or measuring assistance progress and success, stakeholders to be involved, etc.

The response plan, once finalized, is signed by the national focal point of the CTCN in the concerned country (National Designated Entity), the requesting organization and the CTCN Director, and constitutes the basis of the assistance to be implemented and monitored. Based on the needs and expertise required in the response plan, the Climate Technology Manager selects the organization that will implement the assistance, depending on their experience and expertise related to the assistance requested and on their cost-effectiveness in conducting the assistance. The assistance can be either implemented by an organization from the CTCN Consortium, or by an organization member of the Network. The selection of organizations from the Network is conducted through a procurement process, as per UN rules and regulations, in order to select the best proposals, based on expertise, experience and cost-effectiveness. The selection of organizations from the Consortium is based on a justification for selection of a Consortium Partner as implementer also based on expertise, experience and cost-effectiveness.

For this technical assistance, NREL – National Renewable Energy Laboratory (www.nrel.gov/), a CTCN Consortium Partner, has been selected based on their knowledge, expertise and experience, as the lead planner to implement the activities according to CTCN, as per the procedure described above. The National Renewable Energy Laboratory (NREL) is the United States' primary laboratory for renewable energy and energy efficiency research and development. NREL is a government-owned, contractor-operated facility and is funded through the U.S. Department of Energy. At the same time, UNEP-DTU Partnership (<http://www.unepdtu.org/>) has been selected to provide support to NREL on implementing the activities of this proposal. This Partnership is a UNEP collaborating centre operating under a tripartite agreement between the Ministry of Foreign Affairs of Denmark, UNEP and the Technical University of Denmark (DTU), and is a leading international research and advisory institution on climate, energy and sustainable development.

For this technical assistance, the procurement is single sourced as NREL will be the service provider. They will carry out the activities and produce the deliverables against the budget and timeline described in section 4 and in the legal agreement between CTCN and NREL. [PCREEE/SPC will provide support implementing the activities.](#)

In this agreement, NREL has to procure services, the procurement clause stipulates:

"In its procedures for procurement of any goods, services or other requirements with funds made available by CTCN under this PCA, NREL shall ensure that, when awarding contracts, it shall safeguard the principles established by the UN Secretariat for procurement, unless otherwise agreed in writing by CTCN. The principles established by the UN Secretariat for procurement are as follows:

- a) Allowable procurement methods are established unambiguously at an appropriate hierarchical level along with the associated conditions under which each method may be used, including a requirement for approval by an official that is held accountable;
- b) Competitive procurement is the default method of procurement;
- c) Fractioning of contracts to limit competition is prohibited;
- d) Appropriate standards for international competitive tendering are specified and are consistent with international standards;
- e) The responsibilities are distinct and provide for segregation of duties so as to avoid conflict of interest and external interference in procurement transactions; and
- f) Principles of best value for the money and fairness, integrity, and transparency shall be given due consideration in the exercise of procurement functions."

Disbursement schedule

- 1) USD 120,000 corresponding to estimated cost for the first 3 months tranche upon signing of agreement;
- 2) USD 80,000 upon execution and validation of the trainings to the Energy Department staff and hold of the final meeting for training debrief and project wrap-up, together with Progress tools and software developed to track the progress of the TEEMP targets and objectives, marking the end of activities 4 and 5 (final activity/outputs).

	Month					
	1	2	3	4	5	6
Outcome: The Tonga Energy Department will implement the TEEMP in coordination with other local stakeholders, and given available resources, for the purpose of lowering energy use and GHG emissions while providing high quality, reliable electricity and in line with Tonga's climate development goals.						
Activity 1 – Conduct data collection, benchmarking, and baseline study	X	X	X			
Milestone 1: Gather available data for baseline and benchmarking analysis	X					
Milestone 2: Review and begin data analysis	X	X				
Deliverable 1: Webinar to discuss baseline and benchmarking analysis methodology, etc.		X				
Milestone 3: Continue to collect and analyze data		X				
Milestone 4: Two weeks site visit		X				
Deliverable 2: Gender focused baseline studies		X	X			
Deliverable 3: Development of final baseline and benchmarking		X	X			
Deliverable 4: Activity Report for baseline and benchmarking submitted to MEIDECC/NDA. Follow presentation of baseline via webinar (Done in coordination with Activity 2, Deliverable 2)			X			
Activity 2 - Identify potential least cost EE options with supporting enabling environment options for Energy Sector		X	X			
Milestone 1: Visit Tonga for two-week meeting (Same as Activity 1, Milestone 4)		X				
Deliverable 1: Summary document of least cost EE options with supporting enabling environment submitted to MEIDECC/NDA			X			
Deliverable 2: Gender responsive and sensitive studies and initiatives identified		X	X			
Deliverable 3: Webinar to present least cost options with supporting enabling environment (Done in coordination with Activity 1, Deliverable 3)			X			
Activity 3 – Development of EE Master Plan with GHG and EE targets			X	X	X	X
Milestone 1: Conduct analysis to determine suggested EE and GHG reduction targets (for 2020 and 2030)			X			
Deliverable 1: Presentation of draft reduction targets via webinar to Energy Department staff				X		
Milestone 2: Finalize EE and GHG reduction targets and draft Master Plan				X		
Milestone 3: Reviews and comments on the Master Plan by the Energy Department					X	
Milestone 4: Series of webinar and teleconference to discuss Master Plan (coincides with Activity 4, below)					X	
Deliverable 2: EE Master Plan (80% completion)					X	X
Activity 4 – Identify EE programmatic programme and projects under the TEEMP with progressing tools and a software to monitor the TEEMP progress			X	X	X	X
Deliverable 1: EE programmatic programme and projects identified under the TEEMP			X	X	X	
Deliverable 2: Final Draft for the TEEMP (100% completed) submitted to MEIDECC/NDA						
Milestone 1: Develop progressing tools and software					X	
Deliverable 3: Progressing and Tracking tools for TEEMP developed						X
Milestone 2: Hold teleconference debrief						X
Activity 5 – Develop and Conduct Capacity Development and Training for Energy Department Staff and key stakeholders				X	X	X
Deliverable 1: Capacity Development Programme developed for MEIDECC				X	X	
Milestone 1: Develop training				X	X	
Deliverable 2: In-person training to the Energy Department and key stakeholders						X
Deliverable 3: International attachment for 2 energy staffs overseas to train on EE Master Plan monitoring						X
Deliverable 4: Summary document of capacity building needs						X

Additional information

SECTION 5: IMPLEMENTATION ARRANGEMENTS AND OTHER INFORMATION

Please attach an "implementation map" or describe how funds will be managed by the NDA/FP or delivery partner

Overall project management for Readiness project will be the responsibility of the Climate Technology Centre and Network (CTCN). The CTCN includes a Centre, hosted by UNEP and UNIDO and supported by the Consortium of 12 organizations, and a Network, composed of a wide array of regional and national institutions that have expertise on climate technologies (growing network, composed at the time of submission of 200 organizations). UNEP will be managing the funds as per UN regulations, rules, and procedures. CTCN will be providing Project Management functions with the CTCN Director being the responsible official for such activities. According to CTCN process, the Climate Technology Manager assigned by the CTCN Director will provide the day to day management of the assistance provided, and will ensure that the project is progressing as per the planned activity and budget.

For this technical assistance, NREL which is a CTCN Consortium Partner, has been selected as lead to implement the activities according to CTCN procedure (see Section 5 for more information about the selection procedure); DTU has been selected as support of the development for the implementation of the activities. NREL and DTU will therefore receive the funds allocated from the CTCN for conducting the technical assistance activities in the country, and will then distribute the funds to pay staff, consultants, procure flight tickets, etc as needed, and according to what was agreed in the CTCN Response Plan. This delivery of the technical assistance is executed under the framework of a legal agreement between the CTCN and NREL and DTU, which stipulates the specific budget, activities, timeline and deliverables to be produced.

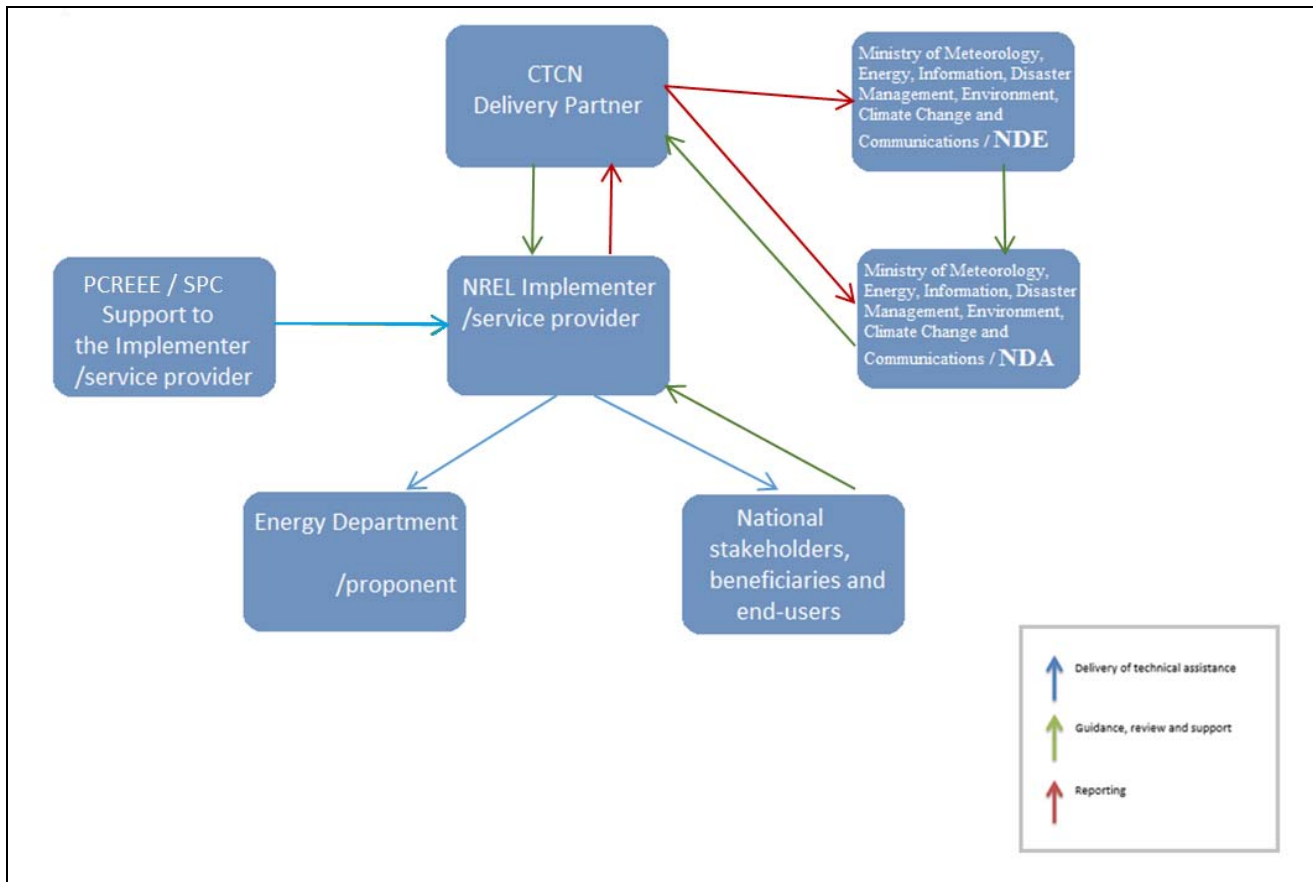
NREL and DTU will report to CTCN as per their contractual arrangement and in line with UN rules and regulations. NREL and DTU will produce regular progress and financial reports and will submit deliverables to CTCN, and funds will only be released if and when the deliverables are satisfactory and cleared by CTCN. NREL and DTU will return any unspent funds within ninety days of expiry or notice of termination of the CTCN– NREL/DTU legal agreement or the completion of the response plan and related budget.

The UNFCCC country focal points for technology (NDE) and finance (NDA) will provide active support to NREL and DTU in the execution of this technical assistance. Their roles as country focal points will include, but not be limited to: Ensuring the activities associated with the implementation of this technical assistance are aligned with national climate priorities; promote and engage with key stakeholders as identified by NREL and DTU; promote and present this technical assistance in climate change-related events; and participate in CTCN events and in national workshops affiliated with this technical assistance, if required. They will also be expected to provide guidance and review any relevant documents produced, and will be kept apprised of the progress of the technical assistance. All suggested changes to the activities, processes and/or approaches as outlined in the response plan and laid out in section 4 must be accepted by the CTCN, the NDE and the NDA before they can be applied.

The Energy Department/MEIDECC as request proponent to this technical assistance, and SPC's Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE) as participating regional partner, will provide active technical and logistical support to NREL in the execution of the technical assistance, specifically in:

1. Identifying the requirements for needs assessment
2. Quality assurance and review of the proposed technologies
3. Review of the final report and targets proposed
4. Host for the national trainings for the Energy Department staff

The implementation map below summarizes the different interactions between the different parties involved in this technical assistance:



Other relevant information

1. CTCN processes before the selection of the implementer (described in the implementation map)

The CTCN process for managing technical assistance is the following: Requests for technical assistance can be prepared by any applicant organization from a developing country, but all requests must be submitted by the CTCN focal point in the concerned country, called National Designated Entity (NDE). Once submitted, all requests submitted by developing countries are assessed as per eligibility, balancing and prioritization criteria approved by the CTCN Advisory Board. The three eligibility criteria are the following: 1) The support provided will contribute to increased resilience and/or mitigate emissions, and is aligned with national plans; 2) The support will enhance endogenous capacities; and; 3) Processes are in place in the requesting country to monitor and evaluate any support provided (that is, project accountability is ensured). Balancing criteria are looking at inter and intra-regional an geographical balance (with a preference for requests submitted by LDCs and other highly vulnerable and low capacity countries; balance between adaptation and mitigation objectives, and balance between various types of support spanning the technology cycle. Prioritization criteria consider a number of elements that demonstrate project strengthen and potential for success, including the promotion of endogenous capacities and appropriate technologies, potential for scale up, for South-South cooperation, for leveraging public and private financing, for creating social, economic and social benefits, promoting gender equality etc.

Once a request is deemed eligible and prioritised, the CTCN selects the best expertise among its consortium partners to develop a response plan. The criteria for selection are: Relevant technical expertise, Experience and network in national context, Relevant language capacity, Response Planning track record, Representative use of the consortium partners in Response Planning and Feedback/ preference from the NDE.

Based on the discussion with the NDE and request proponent and feedback from the CTCN, the consortium partner develops the response plan. Once an advanced version is prepared, it is presented to CTCN’s director and the NDE for signature. Once the response plan is signed, the contracting of the implementer starts.

2. Key Activities of the Projects

Activity 1 – Conduct data collection, benchmarking, and baseline study

The data collected by CTCN will be used to inform the Energy Efficiency policy and GHG target for Tonga (Activity 2) and the development of a baseline through benchmarking energy use, energy intensity, energy cost, gender focussed, and GHG emissions. This activity will include reviewing the Tonga Energy Road Map (TERM) for power sector GHG and energy intensity benchmarks and will result in recommendations of 4-6 priority sectors based on energy usage, energy intensity, and opportunities for GHG emissions reductions that will be the focus for activities 2-4. The success of data collections and benchmarking effort will be depending upon available local data or proxy data for equivalent economies; insufficient data may inform which sectors can be analysed within activities 1-3.

This activity will be coordinated with the Pacific Centre for Renewable Energy and Energy Efficiency (PCREEE) effort to conduct baseline consumption for 1-2 commercial buildings. This activity will also be coordinated with a baseline and market analysis for transport, power, infrastructure, agriculture and other key sectors such as tourism sector on appliances use that is being conducted by the Tonga Energy Department. **The consultant will also conduct gender focused baseline studies for the EE sector.** There will be webinars and it will include a gender component, aiming at a rate of 30% of the participants being women, youth or belonging to any other vulnerable group

Key Deliverables:

- EE baseline for Tonga identified.
- **Gender Mainstreaming in EE activities baseline studies**
- Benchmarking energy use, energy intensity, energy cost, and GHG emissions identified.
- Activity Report for baseline and benchmarking exercise submitted to MEI DECC
 - o Webinar with Energy Department staff to discuss baseline analysis methodology, as a capacity building effort and to seek input; discuss questions associated with data and to list missing data; develop strategy for handling missing data; and prepare for site visit
 - o Webinar to present baseline (Done in coordination with Activity 2, Deliverable 2)

Activity 2 - Identify potential least cost EE options with supporting enabling environment options for Energy Sector

The consultant will conduct technical, Policy, fiscal, institutional, political, informational, gender, social and cultural investigation, extensive stakeholder consultations, and a needs assessment study and analysis conducted. The TEEMP will not be limited to the Power Sector but it will have intensive focussed on key energy related sectors (but not limited) such as Transport, Buildings/Infrastructure, Tourism, Education, Fisheries and Agriculture.

Further based on the identified least cost EE options above, the consultants will determine and identify supporting innovative and appropriate enabling environment options for Tonga. The consultants will conduct a technical investigation, extensive stakeholder consultations and **gender responsive and sensitive studies** to determine the appropriate pathway and line of policies, initiatives, and activities for Tonga to achieve the EE and GHG targets and contribute to the national energy target. It will include an assessment of existing policies, roadmaps, plans, gender policy and programs that are currently in place.

Key Deliverables:

- Least cost EE options with supporting enabling environment options identified
- **Gender responsive and sensitive activities proposed for the EE initiatives identified**
- Activity Report for least cost options and supporting enabling environment options identified for Tonga.
 - o Webinar to present EE and GHG reduction opportunity findings (Done in coordination with Activity 1, Deliverable 3). Inclusiveness will be strongly promoted by having participants both men and women and from any vulnerable group, represented.

Activity 3 – Development of EE Master Plan with GHG and EE targets

Analyse data collected from Activity 1 & 2 and develop energy intensity, EE and GHG targets for Tonga for two time horizons (2020 and 2030). For the 2020 time horizon, these targets will include the sectors not included in the Tonga Energy Roadmap (TERM) (buildings, appliances, transport, commercial and industries, agriculture, fisheries and potentially education and tourism). This activity will support the development of the EE Master Plan for priority sectors that for which energy efficiency improvements are key to ensuring Tonga's energy security, accessibility, affordability and sustainability. The master plan will include the outcomes in Activity 1 & 2, and assessment of possible barriers to the proposed actions.

The consultants will be conducting series of webinar with MEIDECC to discuss targets, developing and finalising of the TEEMP. This series of webinar will also act as training sessions for MEIDECC.

Key Deliverables

- Identification and development of the EE and GHG targets for 2020 and 2030
- Report and Final draft of EE Master Plan submitted to MEIDECC
- Presentation of draft reduction targets and EE Master Plan via webinar to Energy Department staff

Activity 4 – Identify EE programmatic programme and projects in the TEEMP with progressing tools and a software to monitor the TEEMP progress:

The consultant, in parallel with the activities mentioned above, the consultants will identify EE programmatic programme and projects to achieve articulated objectives of the TEEMP. The consultants together with PCREEE will develop a Country Programme on EE for all sectors will be used as potential projects to seek donors and/or the GCF for potential financing in order to contribute to achieving the target anticipated within the TEEMP.

Further, to ensure that the MEIDECC will implement the Master Plan effectively and efficiently, the consultants will develop tools (spreadsheet) or recommended software to assist MEIDECC in tracking and monitoring the progress of the TEEMP. This will be a joint work with the team from the PCREEE. Activity 4 will be implemented in parallel with Activity 3.

Key Deliverables:

- Identification of EE programmes and projects for the TEEMP incorporated into the Master Plan
- Develop monitoring tools and software for tracking the progress of the TEEMP
- The results obtained from the monitoring will feed into the annual review of the GCF Country Programme.

Activity 5 – Develop and Conduct Capacity Development and Training for Energy Department Staff and stakeholders

The consultant will conduct capacity development need assessment of what is required by MEIDECC to effectively enforced the TEEMP. The consultant will identify urgent capacity development need and determine the best training to enhance the capacity of MEIDECC. This activity includes a preliminary summary (2-3 pages) of the Energy Department's needs for capacity development, modes of training, options for institutionalizing capacity building, and estimates of costs for said program, the purpose of which is to identify opportunities for long-term capacity building of the Department for implementation of the TEEMP

The consultant will then conduct training for the staff of the Energy Department and key stakeholders on how they will enforce the EE Master Plan, and how to monitor and evaluate policy and project success towards meeting EE and GHG targets. There will be 1 - 2 weeks training to the Energy Department and key stakeholders, with the primary audience being government staff with additional private sector and vocational institutions invited as secondary audiences. The training will include a review of activities 1-3 within this response plan, our methodology for conducting this analysis, review of challenges faced and recommendations for improving the data and the process going forward, a review of the key recommendations included with the Tonga Energy Efficiency Master Plan (TEEMP), and question-and-answer sessions with the participants.

The projects will also cover the full cost (Roundtrip tickets, DSA, accommodations, incidental cost/insurances) overseas training/attachment for 2 energy staff from MEIDECC. This is to assist with experience first-hand and working in an environment where EE master plan is effectively enforced.

Key Deliverables:

- Capacity Development Need Assessment Identified
- Long Term Training programme developed
- National Trainings for the staff of the Energy Department and key stakeholders conducted
- International attachment for 2 x energy staff on EE Master Plan enforcement and monitoring course/workshops