

United Nations Development Programme
Country: Tokelau
Project Document

Project Title Tokelau Energy Sector Support (TESS)

UNDAF Outcome(s): By 2017 the most vulnerable communities across the PICTs are more resilient and select government agencies, civil society organizations and communities have enhanced capacity to apply integrated approaches to environmental management, climate change adaptation/mitigation, and disaster risk management.

Expected CP Outcome(s): Improved resilience of PICTs, with a particular focus on communities, through the integrated implementation of sustainable environmental management, climate change adaptation and/or mitigation and disaster risk management.

Expected Output(s): An updated national energy policy framework; enhanced capacity to operate and maintain Tokelau's solar PV system and reduced energy consumption as a result of improved energy efficiency

Implementing partner: United Nations Development Programme

Responsible party: Department of Energy, On-going Government of Tokelau

Brief Description

In 2012 Tokelau converted its power sector from being 100% diesel to 90% solar energy based. The installation of some of the largest solar photovoltaic (PV) mini-grids in the world made headlines in the Pacific region as well as globally. Recently the International Renewable Energy Agency (IRENA) identified the process used by Tokelau as a model for similar efforts in the Pacific Islands region. To ensure that the solar PV system that provides large parts of Tokelau with clean, affordable energy can function efficiently as long as possible, this project will build local technical capacity for operation and maintenance of the new solar based power systems and implement a Household Energy Efficiency Programme to reduce energy consumption.

Programme Period: 2014-2015

Key Result Area (Strategic Plan): Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy)

Atlas Award ID: 00081102 | **Project Id:** 00090547

Start date: 15 May 2014

End Date: 31 December 2015

LPAC Meeting Date: 28.03.2014

Management Arrangements: DIM

Total resources required: US\$307,000

Total allocated resources: US\$307,000

• **Regular** US\$307,000

Unfunded budget: US\$0

Agreed by the Office of the Council for the Ongoing Government (COGO) 

Agreed by Responsible Party, Department of Energy, COGO 

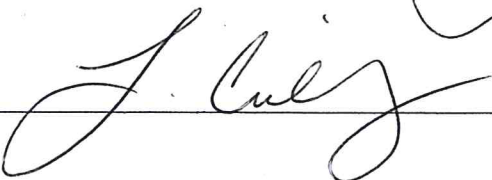
Agreed by UNDP 

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I. SITUATION ANALYSIS

In the Tokelau Millennium Development Report from 2012 is written:

'As one of the smallest nations with the smallest population in the world, Tokelau faces unique challenges in terms of remoteness, market access, production capacity and the lack of economies of scale and infrastructure development. However, given the size of Tokelau and the close proximity of its islands, this also presents the opportunity to easily identify economic and social issues and to address these in a uniform and comprehensive manner. The National Strategic Plan and the MDG report recognizes that the biggest challenge on Tokelau's development agenda are (i) its environment sustainability and; (ii) sustaining its global partnership with its development partners. These would need sound strategies with planned activities over a longer timeframe...'

The United Nations Development Assistance Framework (UNDAF) for the Pacific Sub-Region 2013-2017 states that despite their diversity, Pacific Island Countries and Territories (PICTs) including Tokelau face a number of common challenges. These include developing and maintaining cost effective infrastructure, creating employment opportunities for young men and women in particular and securing affordable, adequate and safe energy.¹ In the UNDP Sub-regional Programme Document for the Pacific Island Countries and Territories 2013-2017 is mentioned that PICTs face severe development challenges among others due to their high energy costs.² It is also stated that geographical distances make the region susceptible to energy, food and commodity price fluctuations.

National Energy Policy Framework

The first Tokelau National Energy Policy and Strategic Action Plan (NEPSAP) was prepared and endorsed by the Government of Tokelau in 2004. The goals specified for energy development are two-fold: i) achievement of energy independence through the development of indigenous energy resources; and ii) provision of affordable, high quality electrical power to all residents. The policy has the following eight (8) focus areas: 1) Energy Planning and Regulation; 2) Electrical Power; 3) Energy Efficiency in Electricity Use; 4) Energy Independence; 5) Transport Energy Efficiency; 6) Petroleum; 7) Energy and the Environment; and 8) Local Capacity Development for Energy. For each of these areas several strategies are outlined and associated roles and responsibilities specified (National Government and Taupulega respectively). The NEPSAP has been instrumental in the conversion of the Tokelau power sector in 2012 from fossil fuel to renewable energy based. Overall significant progress has been made in achieving the two main goals of the policy including via implementation of some of the strategies. However the national energy policy framework now is 10-years old and a current energy policy and associated plan is needed.

Renewable Energy

The NEPSAP led to the development and implementation of the Tokelau Renewable Energy Project (TREP). As part of TREP by the end of 2012 solar photovoltaic (PV) mini-grids systems with battery storage and diesel back-up were installed on each of the three atolls. In total 4,032 solar photovoltaic (PV) panels and 1,344 batteries were installed, making the solar power plants some of the largest standalone solar systems in the world. The power plants provide 24-hour high quality electricity supply for all islanders and Tokelau now produces around 90% of its electricity from solar energy. This major achievement has received regional and global attention and recognition. For instance a report from August 2013 by the International Renewable Energy Agency (IRENA) concludes: 'The process used by Tokelau to reach the goal of 100% renewable generation is a model for similar efforts in the Pacific Islands region'.

The New Zealand based company PowerSmart won the international tender for the supply, transport, installation, and commissioning of the grid connected PV generation units for each of the

¹ http://pacific.one.un.org/images/stories/2013/UNDAF_Summary_Report.pdf

² <http://www.undp.org/content/dam/rbap/docs/programme-documents/FJ-SRP-2013-2017.pdf>

three atolls including battery storage, battery control, spares, and tools as well as required training. A 52-weeks Defects Liability Period (DLP) post commissioning was part of the contractual obligations including power system performance monthly monitoring and reporting to the Department of Energy and remote (via Internet, telephone and email) technical troubleshooting assistance to the village power system operators and the Department of Energy staff.

A recent report by the International Renewable Energy Agency (IRENA) identifies a need for substantial capacity building to assure sufficient management and technical capacity for management, maintenance and repair of renewable energy systems in Tokelau and the need to maintain technical capacity for operation and maintenance on each island;

Energy Efficiency

The 2005 country report prepared as part of the Pacific Islands Renewable Energy Project (PIREP) estimated that 25% of the projected business-as-usual demand for petroleum fuel required in Tokelau could come from improvements in energy efficiency. It was concluded that energy conservation for both use and electricity energy efficiency improvements offers the greatest opportunity for immediate greenhouse gas (GHG) reduction.

In Tokelau the domestic sector is the largest user of electrical energy. Demand side energy efficiency improvements in residences can contribute to reduce fuel imports. The 2005 Tokelau PIREP report recommended that improving the efficiency of refrigerators and freezers in particular should be examined. Over the years the Department of Energy has undertaken various supply and demand side management (DSM) activities. On the supply side upgrading and reconditioning of the electric power system on each atoll was completed in 2005, which improved the efficiency and reliability of services. Currently it is considered to replace several of the diesel generators. On the demand side pre-paid meters have been installed in all households and installation of such is underway for non-residential customers. Electric ovens have been banned and approval for the importation of air conditioners is considered on a case-by-basis.

In 2013, the Department of Energy undertook a household survey covering ownership (quantities) of electrical appliances on the three atolls (the survey did not include lights). While data on quantities of various electrical appliances is a good starting point, other critical information about size, type, age or usage patterns is not available. Comprehensive information is needed to understand the options available for improving the energy efficiency of electrical appliances. This would enable the development of a Household Energy Efficiency Program (HEEP) that can reveal potential for energy efficiency improvements. A Fridge and Freezer Replacement Program (FFRP) was launched in the Cook Islands in 2013, where rebates between NZ\$150-500 are offered when purchasing selected high efficient models in exchange for old (five year or older) fridge/freezer of similar capacity. It has also been confirmed by PowerSmart, the installer of the existing solar PV-system in Tokelau, that it is necessary to increase energy efficiency in Tokelau to ensure maximum lifespan of the solar system.

Other possible solutions are energy rating labels and building codes for new and existing buildings. Currently Fiji has minimum energy performance standard (MEPS) and energy rating label requirements for residential refrigerators and several other PICs are in the process of establishing MEPS and energy rating labels for major electricity consuming appliances such as refrigerators, freezers, air conditioners and lights. Tokelau gets the majority of its products from either Samoa or New Zealand. Extensive MEPS and energy rating label requirements are in place for products and appliances sold in New Zealand. Samoa is in the process of introducing it for a few selected residential electrical appliances also using Australia/New Zealand efficiency labels.

II. STRATEGY

The UNDP Sub-regional Programme Document that is linked to the UNDAF has four focus areas. One of these are 'Environmental management, climate change and disaster risk management' with the following outcome: *"Improved resilience of PICTs, with a particular focus on communities, through the integrated implementation of sustainable environmental management, climate change adaptation and/or mitigation and disaster risk management"*.

Activities

This project will contribute to improved sustainability and life span of the solar PV system installed in the three atolls of Tokelau in 2012 through increased technical capacity with local operators and monitors of the solar system, and through improved energy efficiency on the islands. It will also undertake an external review of the 2004 Tokelau National Energy Policy and Strategic Action Plan to update this in line with requirements for Tokelau's needs in the medium and long term.

1 National Energy Policy Framework

The first Tokelau National Energy Policy and Strategic Action Plan (NEPSAP) was prepared and endorsed by the Government of Tokelau in 2004.³ The goals in the policy are: i) achievement of energy independence through the development of indigenous energy resources; and ii) provision of affordable, high quality electrical power to all residents.

The policy has eight focus areas:

- 1) Energy Planning and Regulation
- 2) Electrical Power;
- 3) Energy Efficiency in Electricity Use;
- 4) Energy Independence;
- 5) Transport Energy Efficiency;
- 6) Petroleum;
- 7) Energy and the Environment; and
- 8) Local Capacity Development for Energy.

For each of these areas several strategies are outlined and associated roles and responsibilities specified (National Government and Taupulega respectively). The NEPSAP has been instrumental in the conversion of the Tokelau power sector in 2012 from fossil fuel to renewable energy based. Overall significant progress has been made in achieving the two main goals of the policy including via implementation of some of the strategies. However the national energy policy framework now is 10-years old and a current energy policy and associated plan is needed.

The existing Tokelau National Energy Policy and Strategic Action Plan was is still relevant in many areas, however progress on the 2004 goals should be assessed to measure progress, and then goals should be updated accordingly. Updating the Energy Policy with clear goals for how maintained/increased use of renewable energy as the main source of energy for Tokelauans is a priority, how energy efficiency is an important task to ensure sustainable energy consumption in Tokelau and how Tokelau sees equal participation of men, women, young and old in Tokelau's energy future will ensure the sustainability of this project. The activities planned are:

1.1 Recruitment of consultant to

- Undertake an external review of the 2004 Tokelau National Energy Policy and Strategic Action Plan including an assessment of the status of implementation; and
- Prepare an updated National Energy Policy and Strategic Action Plan
- Include gender targets to increase gender equal participation in Tokelau's energy sector

³ <http://www.tokelau.org.nz/site/tokelau/files/NEPSAP%20Main%20Text.pdf>

2 Sustainable operation and maintenance of the 1MW solar PV-system

Proper maintenance ensures that solar system life is preserved for as long as possible and the original conditions of the system are sustained, while compensating for normal wear and tear. Solar systems require little maintenance as compared to other electric systems such as diesel generators; however, they are not maintenance free. The solar PV system installed in Tokelau in 2012 by PowerSmart, is designed to last for 25 years. The system is spread over Tokelau's three atolls, and consists of 4032 solar panels, 392 inverters and 1344 batteries. To ensure that the systems' lifetime, proper operation and maintenance of the system is necessary. PowerSmart did provide some training in operation and maintenance during the installation phase, mainly to Tokelauans who assisted with the installation and were members of the Power Authority, and thus already operated and maintained the diesel generators and the distribution grid.

However, there is a need for updated training of nationals, as well as complete local capacity gaps relating to operation/maintenance of the system. Specifically, it is expected that the following steps are taken to ensure suitable training of local personnel:

- 2.1 Selection of candidates for training in operation and maintenance of solar PV systems
 - Conduct an assessment of technical capacity needed on the ground in Tokelau and identify gaps.
 - Develop a training plan that is coherent with the current solar systems maintenance & monitoring contract, which requires training of new operator staff and operator refreshers in the following areas:
 - Battery maintenance, including safe inspection and cleaning
 - Fortnightly, quarterly and 6 monthly checking of electrolyte levels, checking battery voltage
 - Solar panel maintenance, including regular inspections to keep surfaces clean and secure.
 - Maintenance of inverter, battery charger and charge controller
 - Inspections of wiring and connections
 - Grid maintenance
 - Battery charging & equalizing procedures
 - Develop selection criteria and tests for candidates that can benefit from the solar PV operation and general electrical training programme (maximum 11 candidates)
- 2.2 Select a training programme with officially recognized certificates
 - An online training program online in Rarotonga organized by Open Polytechnic, NZ has been identified and adapted to meet Tokelau requirements
 - The programme will offer a minimum 32 modules of online electrical training and cover:
 - Basics level 1; Theory of understanding electricity, elements of electricity, basic mathematics in electricity.
 - Level 2: Theory in electrical wiring, wiring regulations to Aus/NZ 3000 standard, wiring codes of practice, methods of wiring installations, testing of installations.
 - All electrical workers will be required to hold a current CPR/ 1st aid certificate with refreshers every 6 months to keep the certificate current..
- 2.3 Practical training at AUT, Auckland, New Zealand
 - Candidates who complete all 32 assignments to assessor satisfaction will then participate in one week practical training in New Zealand. This practical training shall include
 - Practical household wiring demonstration, testing procedures, basics in PLC programming, codes of practice, wiring regulation refresher, safety practice in the workplace.
 - Candidates that complete the online course and the practical training with satisfactory results will be awarded an NZQA certificate in Electrotechnology Level 2
- 2.4 Develop a sustainability plan with focus on gender parity

- A sustainability plan for further recruitment of staff should be developed, with special focus on the atolls Atafu & Nukunonu and equal opportunities in recruitment. Special emphasis on improving gender balance in the sector should be given.
- Candidates selected for training are preferred to have completed electrical level one at school, which allows them to begin the correspondence course immediately. Alternatively, 2 years of workplace experience to reach electrical theory training level is required. The plan should include specific suggestions for how women can be considered eligible candidates for the training programme.

3 Household Energy Efficiency Program (HEEP)

Small Island Developing States (SIDS) are to a great extent dependent on expensive fossil fuel to serve their energy needs. It is estimated that around 40% of household electricity costs are for refrigeration. According to an IRENA report from 2013, citing a 2011 census, over 95% of households in Tokelau owns a refrigerator or freezer, 67% own a video system and 63% a shared washing machine. Total electricity use in 2008 was about 677 MWh with strong load peaks in the evening. Government is banned from using air conditions. Teletok, a company providing commercial-scale freezers for fish, is the largest single electricity user in the commercial sector. However, the TeleTok freezers are currently not in use.

In a business as usual scenario, energy demand growth is expected. Since the solar PV-system has been in operation in Tokelau, the average consumption has climbed 27-30% above anticipated level of consumption. Using more energy efficient appliances can reduce demand on the solar power system thus increasing it's life span, reduce demand for fossil fuel for power generation and reduce household energy bills. Energy in Tokelau is already quite costly, with a price of 50NZc per (unit) kWh. Although this does not reflect the true cost at approximately NZ\$1.27/kWh it is the price agreed by the Taupulegas (island council leaders).

3.1 Assessment of current energy household consumption

- Prepare an assessment of current household energy consumption;
 - a. Collecting data on energy consumption of fridges, freezers, air conditions, TV, lighting and other household appliances
 - b. Assess household attitudes towards exchanging current appliances with more energy efficient ones
- The assessment will be done by local researchers and produce an overview of
 - a. Main household appliances in Tokelau and their energy consumption
 - b. Qualitative assessment of households' attitude to a program where they can purchase more energy-efficient appliances at a rebate in exchange for their old ones
 - c. Estimated number of households that are likely to take advantage of HEEP and quantitative calculations of estimated energy savings if program goals are reached (in kWh)

3.2 Development of HEEP

- Based on the information gathered from the household assessment, develop ToR for a contractor/company that can design a program providing incentives for people to trade old, energy inefficient household appliances with newer models, and a provide a solution for environmentally safe disposal of old appliances
- The program should use experience and lessons learned from similar programs in the Pacific, such as ideas adopted from the Fijian Energy Labeling and Minimum Energy performance standards (MEPS) and the Fridge and Freezers Replacement Programme (FFRP) in the Cook Islands. The Energy Department of Tokelau will contribute to the project by providing LED or ecosaver lamps (fluro) in exchange for incandescent and halogen lamps, free of charge.
- To encourage households in Tokelau to take advantage of HEEP, awareness of energy use in households is a priority. A workshop to demonstrate power saving and energy efficient practices will be held on each of the three atolls. Information posters capturing the key messages for energy saving will be posted in strategic places in the local language.

3.3 Implementation of HEEP

- The Household Energy Efficiency programme should lead to a minimum 30% reduction in household energy consumption, equivalent of the increase since the solar PV system was installed in 2012.
- A monitoring and evaluation plan for sustained energy efficient consumption in households should be developed and submitted to the Department of Energy.

4 Itemized budget

The estimated budget for the implementation and management of this proposed TESS project is US\$ 307,000.

Activities	Unit	Quantity	Rate, US\$	Total Cost, US\$
Updating the energy policy and action plan				
Update the 2004 Tokelau NEPSAP with specific emphasis on gender	Days	20	1000 ^a	20,000
<i>Subtotal:</i>				20,000
Training in operation and maintenance of Tokelau solar PV system				
12 module training program on operation and maintenance of solar PV system	Packages	12	921	11,052
On the ground practical training on operation and maintenance (Auckland University of Technology)	Person	12	1,279	15,348
Travel costs Samoa/NZ/Samoa including accommodation	Person	12	2,800	22,600
<i>Sub-total</i>				60,000
Development and implementation of the Household Energy Efficiency Program (HEEP)				
Assessment of current household energy consumption and appliances,	Days	4	1000 ^a	4,000
Development of a suitable replacement programmed for more energy efficient household appliances	Days	30	1000 ^a	30,000
Public trainings in household awareness of energy efficiency (1 day per atoll)	Days	3	1000	3,000
Publicity for the program (posters, radio announcements, brochures)	Package	1	2750	2,750
Rebates for replacing no star with 2.5 stars 200-250 liter fridges ^d	Rebates	75	250	18,750
Rebates for replacing no star with 2.5 stars 300-400 liter fridges ^d	Rebates	75	400	30,000
Rebates for replacing no star with 4 stars 400-500 liter fridges ^d	Rebates	25	500	12,500
Cost of shipping, handling of old fridges,	Package	1	20,000	20,000
<i>Subtotal</i>				121,000
Effective project management (for the entire project duration)				
Provide AWP, quarterly reports, support evaluations and audits, monitor the solar training, ensure that gender is considered, support the implementation of HEEP ^b	Package	1	75,500	75,500
Trips to Tokelau IUNV (return trip, visa/DSA included), each trip minimum 5 working days ^c	Trips	7	1,500	10,500
Audit (once during the project duration)	Package	1	5,000	5,000
Final evaluation	Package	1	15,000	15,000
UNDP project monitoring – visit to project site	Trip	1	1,500	1,500
Preparation of Sustainable Follow-up Plan	Days	2	500	1000
<i>Subtotal</i>				106,000
TOTAL				307,000

- a. Consultant/Expert rate is average consolidated to cover air fare and other overhead costs
- b. The cost of an international UNV for 2 years is included in the budget. The cost of an IUNV is 60,000 per year, in total 120,000USD for 2 years. 50% of this will be covered by UNDP; and the GEF Small Grants Programme (SGP) will cover 50%. It is intended that the IUNV will spend 50% of his/her time working for GEF-SGP, 25% working for TESS and 25% working on governance and capacity building. Hence, there should be an opening to refund the governance part of the IUNV's time that is currently charged to this project (30,000USD), if budgetary flexibility if necessary.
- c. Cost based on estimates from Tokelau office in Samoa, one return ticket boat=NZ\$528/US\$460, Visa NZ\$20, DSA rate Tokelau 60USD (per April 1st 2014), + potential costs of travelling between the 3 islands.
- d. Based on the high impact scenario page 21

III. RESULTS AND RESOURCES FRAMEWORK

Intended Outcome as stated in the Country Programme Results and Resource Framework:

Country outcome 1: Environmental sustainability and adaptation to climate change mainstreamed into planning processes.

Outcome indicators as stated in the Country Programme Results and Resources Framework, including baseline and targets:

Applicable Key Result Area (from 20013-17 Strategic Plan): Outcome 5: Countries are able to reduce the likelihood of conflict, and lower the risk of natural disasters, including from climate change.

Partnership Strategy: i) Build on the work of others through regional corporation including at the beginning of the project assess opportunities for collaboration including with the Government of New Zealand, SPC, SPREP and USP; and ii) Share reports, studies with all concerned parties

Project title and ID (ATLAS Award ID): Tokelau Energy Sector Support (TESS)

INTENDED OUTPUTS	OUTPUT TARGETS FOR (YEARS)	Means of verification	INDICATIVE ACTIVITIES	RESPONSIBLE PARTIES	INPUTS
<p>Output 1: New national energy policy framework</p> <p><i>Baseline:</i> National Energy Policy and Strategic Action Plan for Tokelau from 2004 outdated</p> <p><i>Indicators:</i> Up-to-date national energy policy framework</p>	<p>Output Targets for Year 1</p> <ul style="list-style-type: none"> • 2004 National Energy Policy and Strategic Action Plan reviewed and updated 	<p>Year 1:</p> <p>1 updated national energy policy and action plan is available</p>	<p>Key Activities For Year 1</p> <ol style="list-style-type: none"> 1. Review, assess status and update the 2004 Tokelau National Energy Policy and Strategic Action Plan 2. In cooperation with national authorities, set targets for increased female participation in the energy sector by including targets on this in the energy strategy and analysing possibilities for female participation in the energy sector in Tokelau 	<p>Department of Energy (DoE)</p>	<p>International Consultants</p> <p>US\$20,000</p> <p>Sub-total = US\$20,000</p>
<p>Output 2: Sustainable operation and maintenance of the 1MW solar PV system</p> <p><i>Baseline:</i> 0 people with above level 2 NCEA electrical competence⁴</p> <p><i>Indicators:</i> Number of people certified with level 2 NCEA electrical</p>	<p>Output Targets for Year 1</p> <ul style="list-style-type: none"> • 12 Tokelau nationals Level 2 NCEA certified from Open Polytechnic New Zealand • 12 Tokelau nationals have participated in 1-week practical training at Auckland University of Technology 	<p>Year 1:</p> <p>12 certificates of completed solar panel operation and monitoring</p> <p>12 certificates of on the ground training (1 week training in Australia) is available</p>	<p>Training in operation and maintenance</p> <ol style="list-style-type: none"> 1. Selection of candidates for training in operation and maintenance of solar PV systems 2. Candidates complete 32 module online training provided by Open Polytechnic New Zealand 3. Candidates participate in one week practical training organized by AUT in New Zealand 	<p>Department of Energy (DoE)</p>	<p>32 modules online training at Open Polytec + 1 week practical training at AUT: US\$60,000</p>

⁴ New Zealand's National Certificates of Educational Achievement (NCEA) are national qualifications for senior secondary school students

<p>competence</p> <p>Number of people participating in 1 week practical training related to the NCEA course</p>				<p>Department of Energy (DoE)</p>	<p>Sub-total = US\$60,000</p> <p>Consultant/company to perform survey, develop HEEP and implement programme: US\$50,000</p>
<p>Output 3: Household energy efficiency (HEEP)</p> <p>Baseline:</p> <p>Average household energy consumption= 4,168kWh⁵</p> <p>Total energy consumption Tokelau = 1,092,080kWh/year</p> <p><i>Indicators:</i> kWh, rebates</p>	<p>Output Targets for Year 1</p> <ul style="list-style-type: none"> - Minimum 20 households⁶ have made use of the rebate to trade an old household appliance⁷ with a more energy efficient one <p>Output Targets for Year 1</p> <ul style="list-style-type: none"> - Minimum 67 households have made use of the rebate to trade an old household appliance with a more energy efficient one - Total annual energy consumption in Tokelau is reduced by 5% by end 2015 	<p>Year 1:</p> <ul style="list-style-type: none"> • Number of rebates for household efficient energy appliances given <p>Year 2:</p> <ul style="list-style-type: none"> • Number of rebates for household efficient energy appliances given (total year 1 and 2) 	<p>Key Activities For Year 1</p> <ul style="list-style-type: none"> - Assessment of household appliances energy use, fridges/freezers/aircons - Development of Household Energy Efficiency Programme (HEEP), an incentives programme for replacing low energy efficient household appliances with more efficient ones <p>Key Activities For Year 2</p> <ul style="list-style-type: none"> ▪ Implementation of HEEP 	<p>UNDP and DoE</p>	<p>Sub-total: 121,000</p> <p>50% 1 International UN Volunteer (UNV) position for two years = US\$60,000</p> <p>Technical support from UNDP: US\$31,000</p> <p>Final Evaluation: US\$15,000</p> <p>Sub-total = US\$106,000</p>
<p>Output 4: Effective project management</p> <p>The project management will ensure the achievement of output 1-3, with related baselines, indicators and targets.</p> <p>The project management must develop and use the document listed under "Means of verification" in this row.</p>	<p>Output Targets for Year 1</p> <ul style="list-style-type: none"> - Analysis on the future of women of Tokelau in environment and renewable energy is available - Training of local solar PV 	<p>Key Activities Year 1:</p> <ul style="list-style-type: none"> - Annual Work Plan - Quarterly reporting - Minimum 2 news stories on TESS published on UNDP Samoa webpages <p>Key Activities Year 1:</p> <ul style="list-style-type: none"> - Annual Work Plan - Quarterly reporting - Minimum 2 news stories on TESS published on UNDP Samoa webpages - Final evaluation (internal) 	<p>Key Activities Year 1:</p> <ul style="list-style-type: none"> • Support completion of solar PV system operation and maintenance for Tokelau nationals • Propose solutions/ projects to involve women in the energy sector, in line with targets in the updated energy policy • Prepare ToR for company that will design and implement HEEP <p>Key activities year 2:</p> <ul style="list-style-type: none"> • Secure funding for gender mainstreaming proposals developed in year one • Ensure efficient management of HEEP 	<p>UNDP and DoE</p>	<p>50% 1 International UN Volunteer (UNV) position for two years = US\$60,000</p> <p>Technical support from UNDP: US\$31,000</p> <p>Final Evaluation: US\$15,000</p> <p>Sub-total = US\$106,000</p>

⁵ Figures from Department of Energy, Tokelau

⁶ Based on a low impact scenario, see page 19.

⁷ 5 years or older

IV. ANNUAL WORK PLAN

Year: 2014

EXPECTED OUTPUTS	PLANNED ACTIVITIES	TIMEFRAME				RESPONSIBLE PARTY	PLANNED BUDGET		
		Q1	Q2	Q3	Q4		Funding Source	Budget Description	Amount
Output 1: New national energy policy framework Targets (2014): 2004 National Energy Policy and Strategic Action Plan reviewed and revised prepared for approval	Undertake an external review of the 2004 Tokelau National Energy Policy and Strategic Action Plan		X			DoE	UNDP	International Consultant	20,000
Output 2: Sustainable operation and maintenance of the 1MW solar PV system Baseline: 0 people with above level 2 NCEA electrical competence ⁸ Indicators: 1) Number of people certified with level 2 NCEA electrical competence 2) Number of people participating in 1 week practical training related to the NCEA course Target: 1) 12 Tokelau nationals Level 2 NCEA certified from Open Polytechnic New Zealand 2) 12 Tokelau nationals have participated in 1-week practical training at Auckland University of Technology	1: Selection of candidates for training in operation and maintenance of solar PV systems 2: Candidates complete 32 module online training provided by Open Polytechnic New Zealand 3: Candidates participate in one week practical training organized by AUT in New Zealand		X			DoE	UNDP	International Consultants	0
				X		DoE	UNDP	Contractual Service-Companies	20,000
					X	DoE	UNDP	International Consultants	40,000

⁸ New Zealand's National Certificates of Educational Achievement (NCEA) are national qualifications for senior secondary school students

<p>Output 3: Household energy efficiency programme (HEEP)</p> <p>Baseline: Average household energy consumption= 4,168KWh⁹ Total energy consumption Tokelau = 1,092,080KWh/year</p> <p>Indicators: kWh, rebates</p> <p>Targets: - Minimum 20 households¹⁰ have made use of the rebate to trade an old household appliance¹¹ with a more energy efficient one</p>	<p>Assessment of current household energy consumption and appliances</p>			X	X	DoE	UNDP	External consultant	4,000
<p>Output 4: Effective project management Support from</p>	<p>Analysing possibilities for increased female participation in renewable energy and energy efficiency activities in Tokelau, prepare project proposal</p>	X	X	X	X	DoE	UNDP	IUNV+ support from UNDP	10,000
<p>TOTAL (2014)</p>						DoE	UNDP	Project development support from UNDP	40,000
									144,000

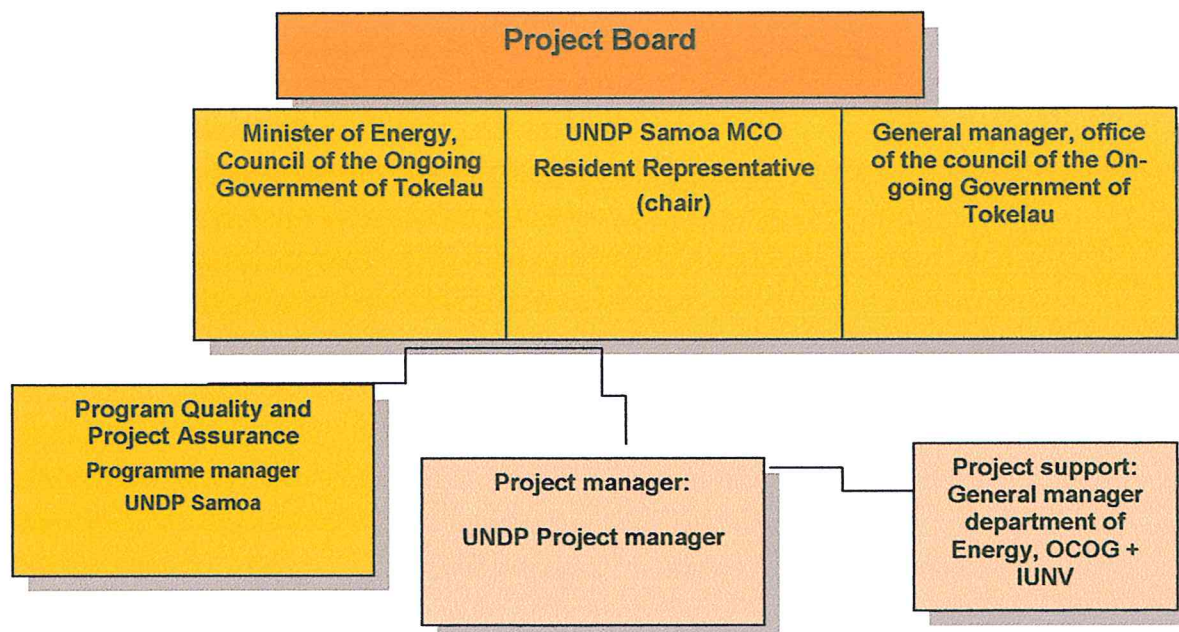
⁹ Figures from Department of Energy, Tokelau

¹⁰ Based on a low impact scenario, see page 19.

¹¹ 5 years or older

V. MANAGEMENT ARRANGEMENTS

The management arrangements are summarized in the diagram and detailed in the text below.



Direct implementation Modality (DIM)

The responsibility for the execution of the DIM projects is with UNDP, who had the role as **the implementing partner**.

The Responsible Party, which in this project is the Department of Energy, OCOG, is defined as the entity selected to act on behalf of the UNDP on the basis of a written agreement (Letter of Agreement) to purchase goods or provide services using the project budget. In addition, the Responsible Party may manage the use of these goods and services to carry out project activities and produce outputs. All Responsible Parties are directly accountable to UNDP in accordance with the terms of their agreement or contract with UNDP.

Project Board

The project board is responsible for management decisions when the project manager requires guidance, in matters such as modifications of project plans and activities, budget revisions and approvals, project delays and implementation difficulties. Project board decisions should be made according to standards ensuring best value for money, fairness, integrity, transparency and effective international competition. In case a consensus cannot be reached in the Project Board, final decision shall rest with the UNDP Resident Representative, who is also chair of the board.

The board should always be informed if project budget is exceeded or there are deviations from project budget, and if the project is delayed. The project board shall review and approve annual work (AWP) plans and eventual quarterly work plans. The annual work plan also functions as the budget for the project. The board shall authorize annual work plans. The board shall ensure that necessary resources are committed. The board shall mediate any conflicts in project and negotiates a solution with external parties. The board approves the appointment and responsibilities of the project manager. Refer to Annex 2 for information on the specific responsibilities of the Project Board.

Project Manager

The project manager is responsible for running the project on a day-to-day basis in line with the details and objectives set out in this project document, on behalf of the project board. The project manager's primary responsibility is to ensure the achievement of the project objectives outlined in this project document within the budgetary limits and timeframe described in this document. Refer to Annex 3 for information on the specific responsibilities of the project manager.

Project Assurance

UNDP will have the role as project assurance, and will provide project oversight, monitoring and technical support to the project and project manager when required. Refer to Annex 5 for information on the specific responsibilities of the Project Assurance role.

Project Support

The project support function provides project administration, management and technical support to the project manager as outlined in this project document and as required. Refer to Annex 4 for information on the specific responsibilities of the Project Support role.

International UN Volunteer (IUNV)

An International UN Volunteer (IUNV) will be providing support for the TESS project. This cost of the IUNV will be shared 50/50 between the UNDP/GEF Small Grants Programme (SGP) and UNDP. It is expected that the IUNV will spend 50 of his/her time working as Tokelau UNDP/GEF SGP National Coordinator. The SGP National Coordinator will be responsible for management of the SGP programme and its portfolio (from programme strategy to individual project concept and design to technical support to SGP grantees, monitoring and evaluation). The rest of his/her time will be spent supporting the TESS project and other capacity building activities in Tokelau.

VI. MONITORING FRAMEWORK AND EVALUATION

In accordance with UNDP programming policies and procedures, the project will be monitored through the following:

Annually

- An **Annual Review Report** shall be prepared by the project manager and approved by the project board. As minimum requirement, this report shall consist of the Atlas standard format for the quarterly progress report covering the whole year with a summary of results achieved against pre-defined annual targets at the output level (see results and resources framework page 7).
- Based on the **Annual Review Report**, an **annual project review** (meting) shall be conducted during the fourth quarter after project inception or soon after, to assess the performance of the project and approve the Annual Work Plan (AWP) for the following year. In the final project year, this review will be a final assessment. This review is chaired by the Project Board and may involve other stakeholders as required. It shall focus on the extent to which progress is being made according to project targets, and that these are in line with the outcomes described in this project document.

Quarterly

- A quarterly progress report reflecting the targets in the results and resources framework, detailing the status of the project outputs and the extent to which they have reach their target, shall be developed for every quarter, shared with UNDP for input and shared with the project board for information not later than 20 days after the end of each quarter.
- Based on the risk analysis in this document (see Annex 1), the quarterly report shall also include any reporting of changes in the risk analysis

Financial reporting:

- The Responsible Party may follow its own procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP.
- The Samoa country office will be responsible for the financial management through the ATLAS management information system, to ensure accuracy and transparency of financial information. Through ATLAS, the Samoa MCO will track the financial status of the project at all times, control expenses, make payments and monitor performance of contractors.
- ATLAS shall be used for both financial management and monitoring to enable the production of reports that are part of UNDP country office central oversight and monitoring, such as Project Progress Report and Project Budget Balance in the Executive Snapshot.
- Annual Work Plans shall be recorded in Atlas with activities and inputs. It is important to remember that the term "Project" in UNDP policy represents an "Award" in Atlas. And the term "Output" is represented by a "Project" in Atlas (the budget is at the level of the Output). Therefore, there may exist one Project ("Award" in Atlas) with different Outputs ("Projects" in Atlas). This must be taken into account when creating the project in Atlas, since the financial control on budgets in Atlas is at the project level and NOT at the Award level. Therefore, income, expenses, advances, etc. will be controlled at the "Project" level in Atlas.
- The financial reporting and control mechanisms used to monitor DIM are;
 - Combined Delivery Report (CDR).
 - Project Budget Balance
 - Project Transactions detail report

The Combined Delivery Report (CDR)

- Based on expense reports received from the project executing entities and recorded in ATLAS (the UNDP corporate management system), UNDP prepares Combined Delivery Report (CDR) at the end of each quarter and at the end of the year. The Combined Delivery Report is a mandatory official report which reflects the expenses and funds utilized on a project.

- The report presents two pages, expense and funds utilization. The expense page reflects the total expenses (recorded in Atlas) of a project during a period.
- As this is a DIM project, the Resident Representative is responsible for certifying the final Combined Delivery Report at the end of each quarter or the year

The Project Budget Balance

- The Project Budget Balance is a report used to monitor and manage budgetary availability for a particular project (and its associated outputs) for a single year.
- The report shows approved budgets, commitments, and expense plus the full asset cost for a particular project. It shows budget balances and budget utilization rate of the project. Any user can use this report when monitoring the financial movements of all projects. It is important to note that:
- The report is available in summary level (project, output, activity, responsible party) and detail level (project, output, activity, responsible party, budgetary department, fund, donor, account).

The Project Transaction Detail

- The Project Transaction Detail report is used to provide the lowest level of transactional details supporting commitments, expense, and full cost of asset amounts shown on the project budget balance report.

Audit

- UNDP's Office of Audit and Investigation (OAI) may audit this project on a sample basis, following the schedule of the periodic internal audits of country offices that are conducted by OAI.
- UNDP aims at auditing annually a selected number of high risk and/or high value DIM projects, which cumulatively account for 40 per cent of UNDP's annual DIM expenditure.
- Resident Representatives may request OAI to undertake audits of DIM projects as an exception.

Evaluation

- It is not a requirement to do external evaluations of individual UNDP projects, however we recommend that an internal evaluation report is compiled with input from Tokelau Department of Energy, the UNV project officer supporting this TESS project and UNDP Samoa.

VII. LEGAL CONTEXT

UNDP Samoa MCO as the Implementing Partner shall comply with the policies, procedures and practices of the United Nations safety and security management system.

UNDP Samoa MCO agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

The Project Document shall be the instrument envisaged and defined in the [Supplemental Provisions](#) to the Project Document, attached hereto and forming an integral part hereof, as "the Project Document".

VIII. ANNEXES

ANNEX 1 – Risk Log

#	Description	Date Identified	Type	Impact & Probability	Countermeasures / Mngt response	Owner	Submitted, updated by	Last Update	Status
1	Insufficient resources for project management. The capacity of the Department of Energy to manage and implement projects is limited.	April 1 st , 2014 by Mina Weydahl	Operational	Probability on a scale from 1 (low) to 5 (high) =2 Impact on a scale from 1 (low) to 5 (high) =4	A part-time International UN Volunteer (UNV) will provide Project Support including on project administration, management and technical aspects. In addition UNDP will provide support services with regard to identification and recruitment of project personnel and procurement of services funded via the UNDP contribution	UNDP	April 1 st , 2014 by Mina Weydahl		
2	Political change.	April 1 st , 2014 by Mina Weydahl	Political	Elections were held in February, thus no government changes are scheduled during the project duration. Probability on a scale from 1 (low) to 5 (high) =1 Impact on a scale from 1 (low) to 5 (high) = 4	Past and current political leadership at island as well as national levels have been supportive of the promotion and utilisation of renewable energy in Tokelau. To ensure continued political support, the following should be done i) raise awareness of the project's benefits right from the outset; ii) involve key national and local stakeholders including update on progress regularly; and iii) engage key national and policy stakeholders in activities. In addition the fact that development partners such as UNDP support the project financially will mitigate this risk.	UNDP	April 1 st , 2014 by Mina Weydahl		

ANNEX 2 – Estimate costs of HEEP

Key assumptions:

- Estimated number of households electricity users in Tokelau: 262 (based on info from the Tokeau Department of Energy).
- Estimated household energy consumption/year per year: 4,168kWh
- According to US EPA Energy star information, energy efficient refrigerators of 220 liters or more will be 20% more energy efficient than the minimum of US federal government standard (NAECA)
- Assuming that unrated fridges older than 5 years use 1000kWh/year

Example with 87 households low with 20% improved energy efficiency:

- 87 households with annual fridge power consumption of 1000kWh will save 200kWh/year
- With a price per kWh of 0.50\$NZ, annual savings per household will be 100 \$NZ/year
- Total savings will be 17,400kWh/year, 8700NZD/year

Example with 87 households low with 50% improved energy efficiency:

- 87 households with annual fridge power consumption of 1000kWh will save 500kWh/year
- With a price per kWh of 0.50\$NZ, annual savings per household will be 250 \$NZ/year
- Total savings will be 43,500kWh/year, 21,750NZD/year

	Low 34% of households use the rebate (88 households)		Medium 53% of households use the rebate (140 households)		High 67% of households use the rebate (187 households)	
	impact	scenario:	impact	scenario:	impact	scenario:
Type of fridges/freezers	2-250 litres 2.5 stars	300 -400 litres 2.5 stars	400 litres 4 stars	400 -500 litres 4 stars	2-250 litres 2.5 stars	300 -400 litres 2.5 stars
Rebate offered (USD)	250	400	500	500	250	400
Assumed distribution of different models in Tokelauan households	100	100	62	62	100	100
Number of HH (assuming 1 appliance is exchanged per HH)	37.5	37.5	12.5	12.5	60	60
Sub total cost	9,375	15,000	6,250	15,000	24,000	10,000
Total cost different scenarios (USD)	30,625		49,000		61,250	

ANNEX 3 – Responsibilities of the Project Board

Defining the Project

- Make themselves familiar with the outputs and activities of the project

Initiating the Project

- Agree on Project Manager's responsibilities, as well as the responsibilities of the other members of the Project Management team;
- Delegate any Project Assurance function as appropriate;
- Review and appraise detailed Project Plan and AWP, including Atlas reports covering activity definition, quality criteria, issue log, updated risk log and the monitoring and communication plan.

Running the Project

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the Project Manager;
- Provide guidance and agree on possible countermeasures/management actions to address specific risks;
- Agree on Project Manager's tolerances in the Annual Work Plan and quarterly plans when required;
- Conduct regular meetings to review the Project Quarterly Progress Report and provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Review Combined Delivery Reports (CDR) prior to certification by the Implementing Partner;
- Appraise the Project Annual Review Report, make recommendations for the next AWP, and inform the Outcome Board about the results of the review.
- Review and approve end project report, make recommendations for follow-on actions;
- Provide ad-hoc direction and advice for exception situations when project manager's tolerances are exceeded;
- Assess and decide on project changes through revisions;

Closing a Project

- Assure that all Project deliverables have been produced satisfactorily;
- Review and approve the Final Project Review Report, including Lessons-learned;
- Make recommendations for follow-on actions to be submitted to the Outcome Board;
- Commission project evaluation (only when required by partnership agreement)
- Notify operational completion of the project to the Outcome Board.

ANNEX 4 – Responsibilities of the Project Manager

Overall Project Management

- Manage the realization of project outputs through activities;
- Provide direction and guidance to project team(s)/ responsible party (ies);
- Liaise with the Project Board or its appointed Project Assurance roles to assure the overall direction and integrity of the project;
- Identify and obtain any support and advice required for the management, planning and control of the project;
- Responsible for project administration; and,
- Liaise with any suppliers.

Running the Project

- Plan the activities of the project and monitor progress against the initial quality criteria;
- Mobilize goods and services to initiative activities, including drafting TORs and work specifications;
- Monitor events as determined in the Monitoring & Communication Plan, and update the plan as required;
- Manage requests for the provision of financial resources by UNDP, using advance of funds, direct payments, or reimbursement using the FACE (Fund Authorization and Certificate of Expenditures);
- Monitor financial resources and accounting to ensure accuracy and reliability of financial reports;
- Manage and monitor the project risks as initially identified in the Project Brief appraised by the Local Project Appraisal Committee (LPAC), submit new risks to the Project Board for consideration and decision on possible actions if required; update the status of these risks by maintaining the Project Risks Log;
- Be responsible for managing issues and requests for change by maintaining an Issues Log;
- Prepare the Project Quarterly Progress Report (progress against planned activities, update on Risks and Issues, expenditures) and submit the report to the Project Board and Project Assurance;
- Prepare the Annual review Report, and submit the report to the Project Board and the Outcome Board; and,
- Based on the review, prepare the AWP for the following year, as well as Quarterly Plans if required.

Closing the Project

- Prepare Final Project Review Reports to be submitted to the Project Board and the Outcome Board;
- Identify follow-on actions and submit them for consideration to the Project Board;
- Manage the transfer of project deliverables, documents, files, equipment and materials to national beneficiaries; and,
- Prepare final CDR/FACE for signature by UNDP and the Implementing Partner.

ANNEX 5 – Responsibilities of the Project Support Role

Some specific tasks of the Project Support would include:

Provision of Administrative Services

- Set up and maintain project files;
- Collect project related information data;
- Update plans;
- Administer the quality review process; and,
- Administer Project Board meetings.

Project Documentation Management

- Administer project revision control;
- Establish document control procedures; and,
- Compile, copy and distribute all project reports.

Financial Management, Monitoring and reporting

- Assist in the financial management tasks under the responsibility of the Project Manager; and,
- Provide support in the use of Atlas for monitoring and reporting.

Provision of Technical Support Services

- Provide technical advices;
- Review technical reports; and,
- Monitor technical activities carried out by responsible parties.

ANNEX 6 – Responsibilities of the Project Assurance Role

UNDP will provide project assurance throughout the project to ensure that it remains relevant, follows the approved plans and continues to meet the planned targets with quality:

- Ensure open and frequent communication between the members of the Project Board;
- Beneficiary needs and expectations are being met or managed;
- Risks are being controlled;
- Adherence to the Project Justification
- The right people are being involved;
- An acceptable solution is being developed;
- The project remains viable;
- The scope of the project is not “creeping upwards” unnoticed;
- Internal and external communications are working;
- Applicable UNDP rules and regulations are being observed;
- Any legislative constraints are being observed;
- Adherence to monitoring and reporting requirements and standards;
- Quality management procedures are properly followed; and,
- Project Board’s decisions are followed and revisions are managed in line with the required procedures.

Specific responsibilities would include:

Initiating the Project

- Ensure that project outputs definitions and activity definition including description and quality criteria have been properly recorded in the Atlas Project Management module to facilitate monitoring and reporting;
- Ensure that people concerned are fully informed about the project; and,
- Ensure that all preparatory activities, including training for project staff, logistic supports are timely carried out.

Running the Project

- Ensure that funds are made available to the project;
- Ensure that risks and issues are properly managed, and that the logs in Atlas are regularly updated;
- Ensure that critical project information is monitored and updated in Atlas, using the Activity Quality log in particular;
- Ensure that Project Quarterly Progress Reports are prepared and submitted on time, and according to standards in terms of format and content quality;
- Ensure that CDRs and FACE are prepared and submitted to the Project Board and Outcome Board;
- Perform oversight activities, such as periodic monitoring visits and “spot checks”; and,
- Ensure that the Project Data Quality Dashboard remains “green”.

Closing the Project

- Ensure that the project is operationally closed in Atlas;
- Ensure that all financial transactions are in Atlas based on final accounting of expenditures; and,
- Ensure that project accounts are closed and status set in Atlas accordingly.

ANNEX 7 – Description of UNDP country office support services

1. Reference is made to consultations between the Department of Energy, the institution designated by the Government of Tokelau and officials of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed Tokelau Energy Sector Support (TESS) project, “the Project”.

2. In accordance with the provisions of the letter of agreement signed on **XXX** and the project document, the UNDP country office shall provide support services for the Project as described below:

Support services	Schedule for the provision of the support services	Cost to UNDP of providing such support services	Amount and method of reimbursement of UNDP
1. Recruitment of International UN Volunteer (IUNV)	Refer to Results and Resources Framework	As per Universal Price List	As per Universal Price List, direct payment
2. External service contract	Refer to Results and Resources Framework	As per Universal Price List	As per Universal Price List, direct payment
4. Training of operators in electrical and/mechanical aspects via open and distance learning	Refer to Results and Resources Framework	As per Universal Price List	As per Universal Price List, direct payment
6. Consultancy to prepare Household Energy Efficiency Programme (HEEP)	Refer to Results and Resources Framework	As per Universal Price List	As per Universal Price List, direct payment

3. Description of key functions and responsibilities of the parties involved:

- *UNDP*
 - Prepare draft Terms of References, job descriptions, advertisements, contracts, etc.
 - Advertise assignments/consultancies;
 - Organize evaluation process including short-list and make final selection of the successful contractor;
 - Issue contracts; and,
 - Manage contracts including undertake payments.
- *Department of Energy, Government of Tokelau*
 - Provide input to draft Terms of References, job descriptions, contracts, etc. and endorse final versions;
 - Participate in evaluation processes including in Evaluation Committees; and,
 - Provide input to draft deliverables prepared by consultants/service providers and endorse final deliverables.

ANNEX 8 –Review of 2004 Tokelau National Energy Policy

1. Objectives

The objectives of the assignment are as follows:

- a) To assess implementation progress of the Tokelau National Energy Policy and Plan (NEPSAP) from 2004;
- b) To propose a revised energy policy;
- c) To prepare a revised strategic action plan component, formulated to align with existing Government of Tokelau planning and monitoring frameworks; and,
- d) To review the existing legislative framework including identification of necessary changes or additional legislation(s) needed to implement the revised or new energy policy.

2. Deliverables

The following key deliverables are to be prepared as part of the assignment:

- a) A revised energy policy document; including
 - a. updated and realistic targets of the policy and strategies to reach these
 - b. a chapter on implementation progress of the NEPSAP from 2004 and it's integration into government planning and budget processes;
 - c. an analysis of existing legislation and suggestions of energy related legislation required to facilitate increased renewable energy production and energy efficiency
- b) A revised strategic action plan including a list of key activities to realize, in line with the national policy and planning and monitoring frameworks of the Government of Tokelau

3. Activities

The scope of work for the consultancy will include, but not necessarily be limited to, the following key activities:

REVIEW OF IMPLEMENTATION PROGRESS OF THE NEPSAP FROM 2004

- a) Assess integration/mainstreaming of NEPSAP government planning and budgetary processes, such as in planning, resource allocation, and implementation of activities
- b) Assess mainstreaming of the 2004 energy policy outside of Government
- c) Assess gaps between existing energy policy and strategic action plan
- d) Provide recommendations on how identified gaps can be addressed

A REVISED ENERGY POLICY DOCUMENT

- a) Revise all relevant aspects of energy supply, distribution and use;
- b) The focus areas in the existing (2004) energy policy are: 1) Energy Planning and Regulation; 2) Electrical Power; 3) Energy Efficiency in Electricity Use; 4) Energy Independence; 5) Transport Energy Efficiency; 6) Petroleum; 7) Energy and the Environment; and 8) Local Capacity Development for Energy. Assess and revise on maintaining/amending focus areas in the revised policy;
- c) Provide clear priorities in each focus area
- d) Provide expected outcomes of the revised energy policy;
- e) Coordinate with existing national development strategies and sector policies.

STRATEGIC ACTION PLAN

- a) Define actions to meet the objectives of the revised energy policy;
- b) Define/estimate cost, priority, timeline, performance indicators and responsible agencies of the activities. Where possible, specify (suggested) source of funding.

GAP ANALYSIS OF EXISTING LEGISLATION AND IDENTIFICATION OF PROPOSED CHANGES

- a) Analyse existing energy legislation and identify needs for revisions

4. Methodology

The policy revision and its' related processes should be

- Transparent;
- Allow for broad and diverse stakeholder consultation such as public consultation meetings and one-on-one meetings with stakeholders;

- a) Feedback received should be incorporated into the policy and strategic action plan where appropriate.

The consultant is expected to work with relevant government parties, civil society and the private sector. The Consultant should also take into account other major related on-going or planned activities related to energy policy and planning.

5. Deliverables and Deadlines

The consultant should provide a timeline for the completion of the policy and action plan revisions.

ANNEX 9 – Training in operation and maintenance of Tokelau’s Solar PV system

Draft

1. Objectives

The objectives are as follows:

- a) To train/re-train village power system operators

2. Outputs

- a) Comprehensive training/re-training of village power system operators
- b) If required updated TREP Operation, Maintenance and Training Manuals.

3. Activities

The scope of work for the consultancy will include, but not necessarily be limited to, the following key activities with regard to:

MONITORING REPORT

TRAINING REPORT

- a) Assess capabilities of individual village operators and Department of Energy staff to effectively undertake required operation, monitoring, preventive maintenance, troubleshooting and repair of the three PV solar systems;
- b) Provide re-training to village power system operators that received initial training as part of the preparation and installation of the PV solar systems in 2012 and provide training to any new staff including as per the TREP Training Manual;
- c) Report on the training provided including:
 - a. Background for the training including context, why that particular training, and expected results;
 - b. Agenda including a brief description of each session, the dates and venue;
 - c. List of participants with contact information and affiliation (company or agency) if any;
 - d. General discussion of the training including specific problems, good and bad results, recommendations for future trainings, etc.;
 - e. Appendixes including:
 - i. Sample evaluation sheet and a summary of the evaluation carried out by the participants;
 - ii. Photos showing participants both in classroom setting and doing hands-on training where applicable;
 - iii. Certificate (if any) provided to participants; and,
 - iv. Daily quizzes and the answers to the questions in red font.

OPERATION, MAINTENANCE AND TRAINING MANUALS

- a) Based on the above mentioned activities and deliverables towards the end of the consultancy assess if updating of the TREP Operation, Maintenance and/or Training Manuals are required; and,
- b) If required and agreed to by the Department of Energy, The Ongoing Government of Tokelau, update the TREP Operation, Maintenance and/or Training Manuals.

4. Reporting Requirements

- The online training and the practical training in New Zealand should be completed by a report on key competencies acquired and existing gaps (if any) in operation/monitoring of the PV system after this training.

ANNEX 10 – Household Energy Efficiency Programme

Draft

These ToRs needs to be revised and more detailed by the project manager/project support officer

1. Objective

The objective of the assignment is as follows:

- a) To prepare a residential **Household Energy Efficiency Programme** for Tokelau

2. Output

The output of the assignment is as follows:

- o A Household Energy Efficiency Programme exists

3. Activities

LESSONS LEARNED FROM RESIDENTIAL DEMAND SIDE MANAGEMENT PROGRAMS OR SPECIFIC INTERVENTIONS IMPLEMENTED IN OTHER PICs

- a) Review experiences and lessons learned from similar household energy efficiency programs implemented in other PICs as a basis for the programme in Tokelau

RESIDENTIAL DEMAND SIDE MANAGEMENT PROGRAMME DOCUMENT

- a) Assess regulatory/control measures; incentive-based measures; voluntary agreements and partnerships; and information and capacity-building;
- b) Specifically consider the following regulatory/control measures for Tokelau: i) Minimum Energy Performance Standards (MEPS) and energy rating labels; ii) building codes for both new and existing buildings; and iii) mandatory audits;
- c) Specifically consider the following financial and incentive-based measure for Tokelau: i) a replacement program for key electrical appliances and/or light. Prepare such on the findings from the international market survey of suitable (considering atoll environment with high ambient temperature, humidity and salt laden air) key electrical appliances and lights (e.g. freezers and/or refrigerators) as well as the Tokelau household electrical appliance and lights survey covering ownership, their characteristics and actual energy use patterns. In addition consider the experiences including lessons learned from the Cook Islands Fridge and Freezer Replacement Program (FFRP);
- d) Specifically consider the information and capacity-building measures for Tokelau: i) education and public outreach campaigns/awareness raising campaigns; ii) training programmes; iii) utility DSM/DR programmes (counselling and general information); and,
- e) Based on the above mentioned prepare a residential Demand Side Management Programme document including financing strategy.

4. Deliverables and Deadlines

The consultant shall provide a timeline for the completion of activities in his/her offer

Annex 11 – Terms of reference IUNV

- 1. UNV Assignment Title:** Programme Officer and SGP National Focal Person (NFP)
- 2. Type of Assignment:** International UN Volunteer
- 3. UNV Programme Strategy:** UNV partnership strengthening
- 4. Project Title:** This person will support to (and be afforded by) the following projects:
 - Tokelau Energy Sector Support project
 - Support to Governance in Tokelau (project document still to be formulated)
 - Small Grants Programme in Tokelau
- 5. Duration:** 12 months
- 6. Location, Country:** Tokelau
- 7. Expected Starting Date:** May 2014
- 8. Brief Project Description:**

The United Nations Development Assistance Framework (UNDAF 2013-17) defines the support that the UN is expected to provide in each Pacific country. The Government of Tokelau, in particular, has requested to UNDP specific support on the two following areas: (1) National capacity building and (2) environmental management and climate change mitigation. Tokelau has asked for an International United Nations Volunteer (IUNV) to provide overall support for the implementation of UNDP country programme and projects (related to energy and governance). The selected candidate will be also the National Focal Person (NFP) of the Small Grants Programme (SGP) in Tokelau.

Established in 1992, the year of the Rio Earth Summit, the GEF Small Grants Programme embodies the very essence of sustainable development by "thinking globally acting locally". By providing financial and technical support to projects that conserve and restore the environment while enhancing people's well-being and livelihoods, SGP demonstrates that community action can maintain the fine balance between human needs and environmental imperatives.

9. Host Agency/Host Institution: UNDP Multi Country Office in Samoa

The UNDP Multi-Country Office (MCO) based in Samoa covers 4 Pacific island countries (Cook Islands, Niue, Samoa & Tokelau), and manages regional programmes for 10 additional countries. In 2013 the MCO started a new programme cycle (2013-17) that has been designed, first time ever, in joint coordination between 3 country offices in the Pacific (Samoa, Fiji & the Pacific Centre), resulting in a common Sub-Regional Programme Document for Pacific Island Countries, and strategic alignment of programmes for increased impact. The UNDP country programme in Tokelau is guided by the UNDAF Country Results Matrix, and comprises individual projects with a total estimated budget of around US\$ 1 million for the current cycle. The Small Grant Programme (SGP) has a sub-regional office based in Samoa. The UNDP MCO provides coordination and support services to SGP.

10. Organizational Context:

The United Nations Volunteers is the UN Organization that supports sustainable human development globally through the promotion of volunteerism and mobilization of volunteers. It serves the causes of peace and development through enhancing opportunities for participation by all peoples. It is universal, inclusive and embraces volunteer actions in all its diversity.

The IUNV will fill the function of Programme Officer and SGP National Focal Person. In addition, the IUNV will provide support to the rollout of the UNDAF and other UN activities. This post will be physically located in Apia, Samoa, at the office of the government of Tokelau and the office of SGP/UNDP. Since the post is not stationed in Tokelau, occasional trips to Tokelau are expected. He/she will be reporting to the General Manager of the Tokelau Apia Liaison Office, the SGP Sub-Regional Coordinator and the UNDP Focal Point for Tokelau in Apia.

11. Type of Assignment Place: Assignment with family

12. Description of tasks:

Under the supervision of the General Manager of the Tokelau Apia Liaison Office, the SGP Sub-Regional Coordinator and the UNDP Focal Point for Tokelau in Apia, the IUNV will provide support in the areas of environment and development, carrying out the following tasks:

- Support the Government of Tokelau in the implementation of the Tokelau Energy Sector Support Project (TESS) and the governance support project, mainly by cooperating and providing technical support to the national project managers on delivering the project outputs, monitoring and evaluation, and capacity building;
- Facilitate donor coordination and support resource mobilization for Tokelau, in particular identifying suitable partners for Tokelau and establishing/developing relations with these;
- Identify and address challenges in the areas of planning and policy within the Government, in particular related to renewable energy and governance;
- Facilitate efficient and fruitful cooperation between UNDP (SGP) and the Government of Tokelau on national development priorities and programme implementation matters relating to renewable energy and environment, in line with the UNDAF Country Results Matrix;
- Provide strategic inputs to UNDP and SGP management on substantive issues related to programme/project design, implementation and evaluation;
- Ensure regular updates/analysis to UNDP/SGP regarding national environmental concerns and priorities, socio-economic conditions and trends as they relate to SGP and its focal areas;
- Work closely with NGOs and Community Based Organizations (CBOs) in preparation of project concepts and proposals to ensure that individual projects fit the GEF-SGP Strategic Framework and are gender-sensitive;
- Organize periodic stakeholder and/or regional workshops and project development sessions for NGOs, CBOs, local communities and other stakeholders to explain SGP's objectives, policies and procedures, to support the review of the SGP National Strategy and to assist potential applicants in making the link between local environmental problems and the global concerns of the GEF focal areas and relevant partners;
- Conduct periodic programme monitoring field/regional visits and provide technical and operational support and guidance to SGP grantees as required;
- Work closely and support the National Focal Group (NFG) during the process of SGP project proposal selection and approval, especially the initial appraisal of proposals and assessment of eligibility;
- Assist in the management of the annual SGP allocations (administration and grants) respectively, maintain the financial integrity of the programme and ensure the most effective use of SGP resources; and
- Support other related activities, as per request from the SGP Sub-regional Coordinator, the UNDP Focal Point for Tokelau and the General Manager of the Tokelau Apia Liaison Office.

In addition, the IUNV is expected to:

- Strengthen their knowledge and understanding of the concept of volunteerism by familiarizing him/herself with relevant UNV and external publications and taking active part in UNV activities (for instance, in events that mark IVD);
- Be acquainted with and build on traditional and/or local forms of volunteerism in the host country;
- Reflect on the type and quality of voluntary action that they are undertaking, including participation in on-going reflection activities;
- Contribute articles/write-ups on field experiences and submit them for UNV publications, websites, newsletters, press releases, etc.;
- Assist with the UNV Buddy Programme for newly-arrived UN Volunteers; and
- Promote or advise local groups in the use of online volunteering, or encourage relevant local individuals and organizations to use the UNV Online Volunteering service whenever technically possible.

13. Results/Expected Output:

- Implementation of the support projects on energy and governance is achieved according to project document calendars and outputs/outcomes;
- UN support to Tokelau is well-perceived by national counterparts;
- National development priorities and programme implementation in Tokelau are regularly reported to UNDP and SGP, including progress updates on UNDAF Country Results Matrix, SGP and UNDP projects;
- Donor coordination is improved, cooperation between existing and new donors is well-functioning and leading to mobilization of resources to address the priorities included in the UNDAF Country Results Matrix;
- Efficient and useful dialogue with Sub-Regional Coordinator of SGP and the national counterparts is established, and SGP performance is positively evaluated by the government of Tokelau;
- Credible project concepts and proposals are received from NGOs and CBOs in Tokelau and aligned with the GEF SGP Strategic Framework;
- Effective meetings on how local actions link to global impacts in GEF-SGP funding are organized; and
- Lessons learnt from projects and site visits are communicated to national counterparts in order to build capacity in relevant areas.

14. Qualifications/Requirements:

Education

- Master's degree in development studies, business management, energy, governance, environment or a related discipline.
- Bachelor levels only can be accepted if the candidate has substantial relevant experience
- Excellent command of English required, knowledge of another UN language is an asset

Experience

- At least 5 years of experience in project management related to either energy, environment, governance and/or human/economic development
- Working experience with UNDP, UN or other development agencies and cooperation is considered a strong asset
- Working experience in communities and/or managing small grants would be a strong asset
- Working experience in the Pacific and understanding of the regional context would be an asset
- Demonstrated ability, knowledge and experience in capacity development across different sectors would be an asset

Additional selection criteria are:

- Excellent oral and written communication skills and ability to positively influence others
- Knowledge and appreciation of the regional and international issues affecting the interests and realities of Tokelau and the Pacific Islands
- Understanding and responsiveness to the needs of all stakeholders
- Demonstrated initiative with the ability to think outside the box and identify practical and innovative solutions
- Strong interpersonal skills, cultural sensitivity and patience and ability to work under highly pressured circumstances
- Excellent organisational skills and ability to meet deadlines
- Ability to work in a small context

15. Living Conditions:

The position will be based in Samoa. Samoa is a middle-income country with moderate housing prices and regular food/household articles easily available in local supermarkets. Healthcare facilities are of good standard. Water/electricity is stable, shortages/blackouts can occur in the rainy season. Internet/3G is available in most parts of the country.