United Nations Development Programme

Project Title: Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)		
Country(ies): Nauru	**Implementing Partner (GEF Executing Entity)**: In Nauru – Department of Commerce, Industry and Environment (DCIE)	**Execution Modality**: National Implementation Modality (NIM)
Contributing Outcome (UNDAF/CPD, RPD, GPD): UNDAF/Country Programme Outcome: *UN Pacific Strategy 2018-2022*: Outcome 1 – Climate Change, Disaster Resilience and Environmental Protection. *UNDP Sub-Regional Programme Document 2018-2022*: Outcome 1 – By year 2022, people and ecosystems in the Pacific are more resilient to the impacts of climate change, climate variability and disasters; and environmental protection is strengthened. **UNDP Strategic Plan Output**: *Output 1.4*: Scaled up action on climate change adaptation and mitigation across sectors which is funded and implemented. *Output 1.5*. Inclusive and sustainable solutions adopted to achieve increased energy efficiency and universal modern energy access (especially off-grid sources of renewable energy)		
UNDP Social and Environmental Screening Category: Moderate	**UNDP Gender Marker: GEN2**	
Atlas Proposal ID: 00112930	**Atlas Output ID: 00111222**	
UNDP-GEF PIMS ID number: PIMS 6188	**GEF Project ID number: 9974**	
LPAC meeting date: 28th November 2019		
Latest possible date to submit to GEF: 13th December, 2019		
Latest possible CEO endorsement date: 30th January 2020		
Planned start date: 1st August 2020	**Planned end date: 31st July 2024**	
Expected date of posting of Mid-Term Review to ERC: 31st March 2022	**Expected date of posting Terminal evaluation report to ERC: 30th December 2023**	
Brief project description: The stated objective of this proposed SMARTEN project is to enable the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets. The Government of Nauru (GoN) has set three ambitious energy targets in the Nauru Energy Road Map (NERM) 2014-2020, and following updates, respectively: (1) 24/7 grid electricity supply with minimal interruptions; (2) 50% of grid electricity supplied from Renewable Energy (RE) sources; and (3) 30% improvement in Energy Efficiency (EE) in the residential, commercial and government sectors. So far, the efforts have been focused primarily on achieving the first target, which based largely on technical expertise of the national utility management team requiring very limited financial resources. Currently available		

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technical and financial resources are insufficient to fully achieve all three targets, unless additional support from international donors is made available. SMARTEN will provide the required technical assistance and financial resources and the project design will follow a strategy based on removing all the barriers identified during the Project Information Form (PIF) preparation and successively confirmed during the SMARTEN project proposal preparation. The project is structured into four interrelating Components, respectively: (1) Energy Policy & Regulatory Framework Strengthening; (2) Supporting RE & EE Initiatives; (3) Promotion of RE & EE Technologies Applications; and (4) Improvement of Energy Sector Capacity. All the activities that make these 4 components will be implemented over a 4-year period from 2020 to 2024. The expected duration on several RE & EE technologies installed under SMARTEN will have a lifespan of approximately 25 year, and at the end of this period the cumulative greenhouse gas emission reductions, including expected replication and scale-up projects, is estimated to reach 1.049 million-ton CO_{2eq}.

(1) FINANCING PLAN	
GEF Trust Fund	USD 3,302,968
UNDP TRAC resources	USD 0
Confirmed cash co-financing to be administered by UNDP	USD 0
(1) Total Budget administered by UNDP	**USD 3,302,968**
(2) CONFIRMED CO-FINANCING	
UNDP	USD 100,000
Co-financing: *Government of Nauru* (*Grants*)	USD 22,665,000
Co-financing: *Government of Nauru* (*In-Kind*)	USD
(2) Total confirmed co-financing	**USD 22,765,000**
(3) Grand-Total Project Financing (1)+(2)	**USD 26,067,968**

SIGNATURES		
Signature: Secretary	**Agreed by Government Development Coordination Authority**	**Date/Month/Year:** 18/9/20
Signature: Ms. Berilyn Jeremiah Secretary	**Agreed by Implementing Partner, DCIE**	**Date/Month/Year:** 14/9/20
Signature: Mr. Levan Bouadze Resident Representative	**Agreed by UNDP**	**Date/Month/Year:** 28-Sep-2020

Key GEF Project Cycle Milestones:

Project document signature: within 25 days of GEF CEO endorsement
First disbursement date: within 40 days of GEF CEO endorsement
Inception workshop date: within 60 days of GEF CEO endorsement
Operational closure: within 3 months of posting of TE to UNDP ERC
Financial closure: within 6 months of operational closure

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List of Abbreviations & Acronyms

ADB	Asian Development Bank
AUD	Australian Dollar
BAU	Business-As-Usual
BESS	Battery Energy Storage System
CCM	Climate Change Mitigation
CO_2	Carbon Dioxide
DCIE	Department of Commerce, Industry and Environment
DSM	Demand Side Management
DoT	Department of Transport
EC	Energy Conservation
EE	Energy Efficiency
EMRS	Energy Monitoring and Reporting System
EPA	Environmental Protection Agency
ESMP	Environmental and Social Management Plan
EEZ	Exclusive Economic Zone
EU	European Union
FY	Fiscal Year
GDP	Gross Domestic Product
GEF	Global Environmental Facility
GHG	Green House Gas
GoN	Government of Nauru
GoNZ	Government of New Zealand
GWh	Giga Watt hour
INDC	Intended Nationally Determined Contribution
IRR	Implementing Rules and Regulations
IUCN	International Union for Conservation of Nature
kg	kilogram
km	kilometer
km^2	Square kilometer
ktoe	kiloton oil equivalent
kW	kilo Watt
kWh	kilo Watt hour
kWp	kilo Watt peak
LC	Low Carbon
LCF	Low Carbon Fund
LCD	Low Carbon Development
LFA	Log Frame Analyses
LPG	Liquefied Petrol Gas
MFAT	Ministry of Foreign Affairs and Trade
MoF-PAD	Ministry of Finance – Planning and Aid Division
MRV	Monitoring Reporting and Evaluation
MW	Mega Watt
MWac	Mega Watt alternative current
MWdc	Mega Watt direct current
MWh	Mega Watt hour
MWp	Mega Watt peak

M&E	Monitoring and Evaluation
NBoS	Nauru Bureau of Statistics
NCBO	Nauru Community Based Organization
NDC	Nationally Determined Contribution
NEPF	Nauru Energy Policy Framework
NERM	Nauru Energy Road Map
NPC	Nauru Phosphate Corporation
NSDS	Nauru Sustainable Development Strategy
NUC	Nauru Utilities Corporation
OTEC	Ocean Thermal Energy Conversion
O&M	Operation and Maintenance
PB	Project Board
PIC	Pacific Island Country
PIF	Project Information Form
PIR	Project Implementation Review
PV	Photo Voltaic
RE	Renewable Energy
RONPHOS	Republic Of Nauru Phosphate
RPC	Regional Processing Centre
SAIDI	System Average Interruption Duration index
SAIFI	System Average Interruption Frequency index
SCADA	Supervisory Control And Data Acquisition
SDG	Sustainable Development Goal
SIDS	Small Islands Developing States
SMARTEN	Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru
SOE	State Owned Enterprise
SPREP	Secretariat of the Pacific Regional Environment Programme
TA	Technical Assistance
$tCO_{2\text{-}eq}$	ton Carbon dioxide equivalent
ToC	Theory of Change
UNDP	United Nation Development Program
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States Dollar

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II. DEVELOPMENT CHALLENGE

Development Challenge and Relevance to National Development Priorities, Global Environment and Sustainable Development Goals (SDGs)

The Republic of Nauru is a Micronesian country island lying less than 60 km south of the equator. With a total land area of 21 km^2 and a population standing at approximately 12,700 in 2018[1], Nauru is the third smallest[2] and second least populated[3] independent country in the world. Because of the small size and population, Nauru has limited indigenous human and natural resources, which are largely outsources from abroad. The climate of the island is warm and humid year around, with heavier rainfalls occurring between November and February; however, owing it to its vicinity to the equator, the country is practically immune from severe natural events, such as cyclones.

Nauru had some of the largest phosphate resources in the world, which were exploited by foreign countries since the early 1900s. Nauru became independent in 1968, and with its independence the country also gained control over its phosphate mining operations, which were conducted by the newly established Nauru Phosphate Corporation (NPC). For a couple of decades, phosphate mining made the island one of the richest countries per capita in the world. Regrettably, the 2002 downfall of the phosphate mining industry, due to exhaustion of reserves, coupled with years of poor financial management caused the economy of Nauru to collapse. The country was left with no sustainable source of income and in addition, most of its inland territory had been severely deteriorated by uncontrolled mining, which rendered the land infertile and inhospitable, with virtually the entire population living along the coast, the only exception being in the Buada district, which is built around the homonym lagoon. Land remediation is extremely expensive, due to the presence of countless limestone pinnacles spread throughout the island, and currently is not proceeding at any significant speed.

After falling to a mere USD 20.4 million in 2007, the GDP has increased to USD 114.7 million in 2018[4], or about USD 9,000/capita. Currently, Nauru generates income from selling fishing licenses, a business somehow hampered by a relatively small Exclusive Economic Zone (EEZ) of 320 000 km^2 and an estimated loss of 40% of its marine life because of phosphate runoffs[5]. Another significant portion of income is generated through the three Nauru Refugee Processing Centres (RPCs), a detention facility for asylum-seekers in Australia built in Nauru in 2001 in exchange for financial aid. The centers have been closed and re-opened, and their future operation is uncertain due to protest raised by international activists against the detention facility. The last potential substantial source of income, which has not materialized yet, could come from secondary mining. After the collapse of the phosphate mining industry, NPC has been reorganized into the Republic of Nauru Phosphate (RONPHOS) Corporation. The company is actively testing the financial viability of secondary mining, which now does not seem feasible. Fishing is essentially carried out just for self-sustenance, while agriculture is limited to small areas around the Bauda lagoon, because of the topside pinnacles.

[1] https://data.worldbank.org/country/nauru?view=chart

[2] https://data.worldbank.org/indicator/ag.lnd.totl.k2?most_recent_value_desc=false

[3] https://data.worldbank.org/indicator/SP.POP.TOTL?most_recent_value_desc=false

[4] https://data.worldbank.org/country/nauru?view=chart

[5] 1st National Communication under the United Nations Framework Convention on Climate Change (UNFCCC), Republic of Nauru – October 1999

Similarly to most Small Island Developing States (SIDS) in the Pacific region, Nauru has scarce local energy resources, limited to solar energy and biomass, and therefore imports from abroad most of the energy consumed in the country. Management of energy imports, storage, generation and distribution has been heavily reorganized over the past few years and currently the sector has the following structure:

1. Nauru Utilities Corporation (NUC), a State-Owned Enterprise (SOE) established in 2011, oversees the electric power generation and distribution systems. The same utility is also responsible for the production, storage and distribution of desalinated water.
2. Vital Energy Inc., a Federal States of Micronesia based company, procures diesel, petrol and aviation fuel to Nauru and manages the fuel tank farm since 2015. The contract between Vital and the Government of Nauru (GoN) is managed by the Ministry of Finance (MoF).
3. Capelle and Partner, a Nauruan private company, manages the import and sales of 13-kg and 45-kg Liquefied Petroleum Gas (LPG) cylinders, which are used for cooking.

In 2015, the GoN has submitted to the United Nations Framework Convention on Climate Change (UNFCCC) its latest Intended Nationally Determined Contributions (INDC), which later was ratified and essentially turned into an NDC. The focus of the NDC was posed on adaptation measures; however the document also reported needs to invest in order to strengthen the energy sector which will also contribute to global Climate Change Mitigation (CCM) and reduce greenhouse gases (GHG) emissions. What is very important to underline is that the NDC clearly states that many of the initiatives proposed in Nauru's portfolio of energy strategies and policies will remain on paper, since the country needs to be supported to accomplish their implementation through finance, capacity building and technology development and transfer.

The GoN has set three targets for the energy sector in its Nauru Energy Road Map (NERM) 2014-2020[6], which has been reviewed and updated in 2018[7-8], namely:

a. 24/7 grid electricity supply with minimal interruptions
b. 50% of grid electricity supplied from Renewable Energy (RE) sources
c. 30% improvement in Energy Efficiency (EE) in the residential, commercial and government sectors

The NERM builds upon the energy development agenda laid out in the National Sustainable Development Strategy (NSDS) 2005-2025 [9], which was updated in 2009, and the 2009 National Energy Policy Framework[10] (NEPF).

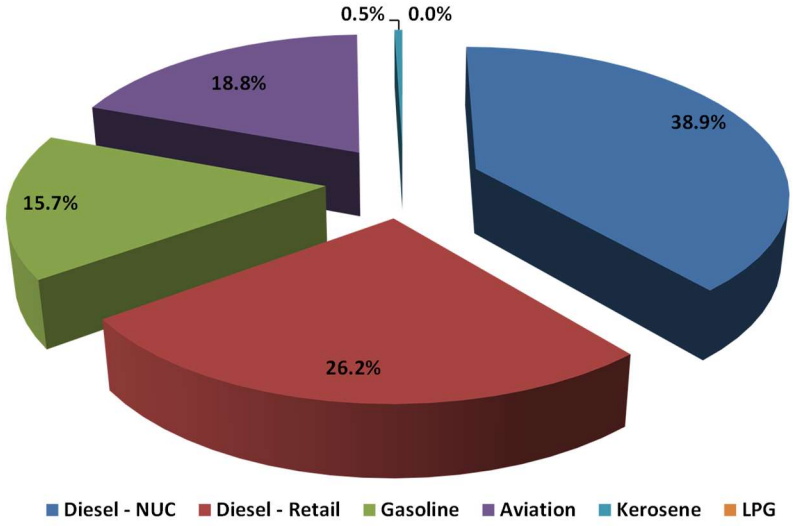
Under the new NUC management, the reliability of the electric grid has considerably improved both in terms of number and duration of power outages. The System Average Interruption Duration Index (SAIDI), which measures the average time each customer is left without electricity in a year, went down from 67,476 minutes in Fiscal Year (FY) 2015 to 3,948 minutes in FY 2018[11], a 94% reduction. Similarly, the System Average Interruption Frequency Index (SAIFI), which measures how many power outages occur in a year, went down from 490 episodes in FY 2015 to 46 episodes in FY 2018, a 91% reduction[12]. The focus of the GoN is therefore on the achievement of the other two targets, the 50% electricity from renewable

[6] "Nauru Energy Road Map (NERM) – 2014-2020; An Implementation Plan for the Energy Sector", January 2014
[7] *"Review of the Nauru Energy Road Map 2014-2020"*, IT Power Australia, January 2018.
[8] "Nauru Energy Road Map (NERM) – 2018-2020", January 2018
[9] "National Sustainable Development Strategy (NSDS) – 2005-2025"
[10] "Nauru Energy Policy Framework (NEPF)", May 2019
[11] NUC has a Fiscal Year starting on July 1st and ending on June 30th.
[12] NUC 2018 Annual Report

sources, and the 30% improvement in energy efficiency consumption in residential, commercial and government sector, and therefore basically an improvement in electricity usage, targets that are also the focus of this SMARTEN project. It is worthwhile to be noted that Nauru has practically achieved 100% electrification in all 14 districts plus "The Location"[13] community.

In 2017, Nauru imported 27.8 million liters of fossil fuels (Figure 1 gives a breakdown by fuel type and end-use sector). Nearly 2/3 of the imported fuel is diesel, which is used for power generation, about 39% of the total fossil fuels use, and for transports, about 26% of the total fossil fuels use. In terms of end-use sector, a bit over 60% of the imported fossil fuels are used in the transport sector and nearly 39% for power generation. Small quantity of LPG and kerosene are used for cooking. The GoN has a pretty cautious approach to fuel supply security; in fact at any time Vital stores fossil fuels reserves estimated to last 73 days[14].

Figure 1. 2017 Fossil Fuels Consumption in Nauru, by Fuel Type and End-User Sector[15]



The only significant indigenous energy source is solar, which is harvested with Photo Voltaic (PV) panels to generate electricity. In 2018, the 0.92 MWp solar PV systems installed contributed about 3.5% of the total 37.5 GWh power demand[16]. Some biomass is used for home cooking, but it is a negligible amount compared to total energy use, and data is not collected. As determined in a study conducted in 2010[17], due to its vicinity to the equator, Nauru does not have wind speed fast enough to viably generate power with wind turbines. Lastly, although optimal conditions are available just outside the coral reef surrounding Nauru, both in terms of water temperature and depth, Ocean Thermal Energy Conversion (OTEC) is still a technology too expensive to be implemented commercially, especially in small developing countries.

[13] "The Location" is a housing compound built in the Denigomodu district to house the expatriate, mostly from Tuvalu and Kiribati, who worked for NPC. After the 2002 collapse of the phosphate mining industry, the expatriates moved out and Nauruans have occupied the houses.
[14] "Nauru Energy Road Map (NERM) – 2018-2020", January 2018
[15] Data from the Ministry of Finance (MoF)
[16] NUC 2018 Annual Report and additional data from NUC
[17] *"Nauru Wind Power Feasibility Study"*, Secretariat of the Pacific Regional Environment Programme (SPREP), September 2010

In 2014, the total GHG emissions in Nauru only amounted to 57,000 tons of CO_2, which is equivalent to 0.0002% of the world total emissions. Therefore, important drivers for implementing RE and EE technologies and measures in Nauru are to strengthen the country's resilience in terms of fuel security and energy independence, as well as lowering the cost of energy, which is significantly aggravated by the high freight costs.

SMARTEN is relevant to the achievement of several Sustainable Development Goals (SDGs) as set by the United Nations Development Programme (UNDP). Primarily to Goal 7: "Ensure access to affordable, reliable, sustainable and modern energy for all", but also to Goal 6: "Ensure availability and sustainable management of water and sanitation for all", Goal 8: "Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all", Goal 13: "Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy", and to a lesser extent to Goal 9: "Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation".

Barrier Analysis

The approach taken for the design of the SMARTEN project is barrier removal. The barriers hindering the achievement of the Renewable Energy and Energy Efficiency targets set in the NERM have been identified in the SMARTEN Project Information Form (PIF). During the Logical Framework Analysis (LFA) Workshop, held in Yaren, Nauru on August 14-16, 2018, the participant stakeholders have analyzed them and identified the immediate, intermediate and root causes of the core problem of RE and EE targets of Nauru not being fully achieved. The identified immediate causes of the core problem are:

1. Limited enforcement of policies, rules and regulations on the application of cost-effective RE & EE technologies for energy production and use.
2. Limited institutional mechanisms for the integrated planning and implementation of RE & EE technologies.
3. Limited financial resources to enable the application of suitable RE & EE initiatives.
4. Low level of confidence in the application of RE and EE technologies by the government, private sector, and the public.
5. Low level of awareness and capacity of the GoN, private sector and communities about cost effective application of RE & EE technologies and practices.

The major barriers include:

- Policy/Regulatory and Institutional Barriers: Nauru's national energy development and utilization plan is practically the NERM. As it is envisioned, it is to support the country's sustainable economic development and to achieve its climate change mitigation targets. For now, the aspirations set out in the NERM may not be realized in a timely manner due to the inadequate and not updated energy policies and implementing rules and regulations (IRRs) on the various aspects of energy supply, demand and utilization. This is based on the rather limited policies and regulations (e.g., no policies and regulations concerning the quality and energy performance of imported electrical appliances and transport vehicles, no promotion and implementation of demand side management in the end-use sectors), let alone the noticeably unclear delineation of mandates and responsibilities concerning energy matters. Apart from the limited policies and regulations, the other causes of the main policy/regulatory and institutional barriers are: (a) Inadequate enforcement of the NEPF mainly

because of lack of specific energy policies and IRRs; (b) Lack of appropriate legislation to enable alternative financing and implementation of RE and EE initiatives by the general public, considering the fact that there is limited banking facilities in the country; (c) Lack of policies on the increased role of the private sector (local and/or foreign) in sustainable energy projects in the country, and how is this facilitated; and (d) No policy on how the country will be less dependent on donor funding and technical assistance to implement sustainable energy programs in the future.

Closely related to the policy/regulatory barriers, is the rather weak institutional framework for energy policy-making, planning and regulation within the GoN. There have been very limited resources dedicated to the energy sector to date with energy placed as one of the portfolios of the Environment Division of the DCIE. An Energy Unit at DCIE was formally established in July 2017 and is comprised of the Director for Climate Change and Energy and an Energy Officer (currently a vacant position). Presently, actions on energy related matters done on an "as needed" basis. Because of this, there is limited capacity in the GoN on energy planning and analysis. The NUC has some capacity in electricity sector planning. There is also limited energy monitoring, reporting, data processing and management to support national energy planning. Furthermore, there is limited coordination between pertinent agencies in the implementation of the NEPF and NERM. With these constraints and those pertaining to policy barriers, the NERM targets would not be realized and sustained unless these are adequately addressed and removed.

- Financial Barriers: The GoN and donor agencies are the main sources of funding for EE and RE initiatives. Finance is a fundamental problem of the energy sector in Nauru, and if nothing is done the NEPF's policy statement of financial sustainability of the energy sector will not be realized. Finance is essential to the implementation of any policy framework, and since the financial resources needed to implement the NEPF cannot be obtained entirely from donor agencies, the GoN endeavors to encourage the promotion of partnerships with the private sector through appropriate legal and financial mechanisms. Currently, there are very limited initiatives by the public sector (e.g., state-owned enterprises) and the private sector (e.g., Capelle & Partner) to implement RE and EE projects. The development and implementation of RE and EE projects, or even the practice of EE among the citizenry, are often hampered by their limited knowledge of planning, designing and implementing, as well as financing such initiatives. Moreover, the current limited financial and banking system in Nauru is a major challenge to enticing private sector investment.

- Technical Barriers: In general, the country lacks technical capacity that is required to enable sustainable energy development, particularly in the areas of energy supply and efficient energy utilization and environmental quality improvement. The introduction of new technologies (RE and EE) will require new skills particularly within the government and the utility, and for that matter, specialized training will be necessary. Implementing and managing large energy projects in the country will require new set of knowledge base that extends beyond traditional management and technical skills, as well as good understanding of the legal and financial systems necessary to make the project sustainable. With regards to the objective of increasing the share of renewable energy in the power generation mix of the country is the integration of more RE-based power generation into the current power grid, which is presently served by diesel power generators. The stability of the current grid will be greatly affected by the uptake of variable RE-based power generation units. The DCIE and NUC (and Vital Energy) are supposed to be sources of technical expertise in the energy sector, with the latter two on matters pertaining to electricity and petroleum, respectively. The DCIE has limited knowledge and skills in the identification, design and application of RE and EE technologies that are appropriate and feasible for meeting the country's energy needs. They also lack capacity in

carrying out energy-integrated development planning. The NUC and Vital Energy also need technical capacity building on the network and supply aspects of the electricity and petroleum sector, respectively. The private sector technical capacity is also lacking in regards the development and implementation of RE and EE technology projects.

- RE & EE Awareness Barriers: Overall, there is low level awareness and knowledge of the government, private sector and communities about the cost-effective application of RE and EE technologies and practices. This is also due to: (a) Limited understanding about RE and EE technologies and their application by decision makers, the general public and businesses; especially on the advantages, disadvantages and costs of RE and EE technologies; (b) Limited public knowledge of the country's energy plans and the NERM policies/strategies; (c) Low level of knowledge of applying feasible RE & EE technologies; (d) Limited opportunities to practice knowledge and skills from RE & EE training; and, (e) Limited reliable information about other potential RE resources.

  Previous energy projects in the country also included information dissemination and awareness raising activities. Nonetheless, the expected impact in terms of the level of knowledge and technical skills of the NUC was not fully realized because of the lack of opportunities to apply knowledge and skills learned from capacity development on RE and EE technologies applications as well as in the operation and maintenance of systems in such applications. These previous capacity building activities also resulted in limited knowledge uptake of the public, private sector entities and the government authorities. In regards knowledge and information on RE and EE technologies, there is a general lack of these. There is also low level of capacity among government institutions in data acquisition, analysis and management, as well as on the use of models for sustainable energy development and utilization.

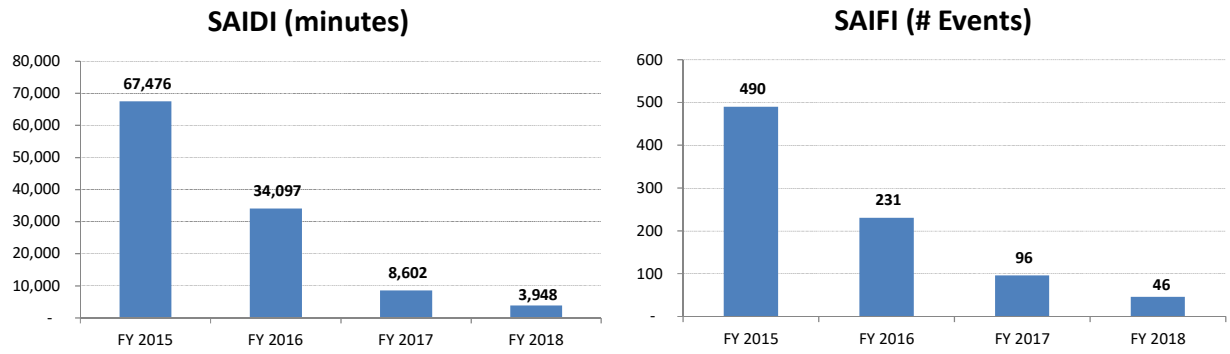
The abovementioned barriers, if not properly and adequately addressed will continue to prevent the timely and complete achievement of the specific targets in the NERM: (a) reliable grid electricity supply; (b) 50% RE electricity; and, (c) 30% EE improvement in the residential, commercial and government sectors.

Business-As-Usual (BAU) Scenario

The objective of this proposed SMARTEN project is **enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets**. The first target proposed in the roadmap, for the period 2014-2020, was to "*provide 24/7 grid electricity supply with minimal interruptions*". Thanks to the efforts and expertise of the NUC management presently in charge, most of the activities designed in the NERM for this purpose have been implemented and the goal has been largely achieved, as shown in Figure 2 below. Part of the reason why this target could have been achieved basically relying solely on GoN funds is because the activities involved did not require large financial disbursement as much as they required good management. In 2018 a review of the NERM was made to remove all the activities that were either achieved or not relevant any longer and an updated roadmap, spanning over the period 2018-2020, was prepared. In the updated NERM, the efforts are focused on the achievement of the other two targets, which are: "*50% of grid electricity supplied from Renewable Energy* (*RE*) *sources*"; and "*30% improvement in Energy Efficiency* (*EE*) *in the residential, commercial and government sectors*". The projects that have been recently completed or initiated are: (a) the establishment, in early 2017, of a USD 80,000 high energy efficiency household appliances rebate scheme (which includes freezers, refrigerators and washing machines). To date the scheme has not disbursed all its available budget yet; b) a 1.1 MWp ground-

mounted solar PV plant financed by the European Union (EU) and the Ministry of Foreign Affairs and Trade (MFAT) of the Government of New Zealand (GoNZ). The solar field has been already completed and is awaiting to be commissioned; c) new high voltage (11 kV) transmission lines funded by the EU that will be built to cut across the island, next to the new solar field just described; and (d) the 230 kWp rooftop solar PV system installed on the Capelle and Partner main store. This installation, together with the EU/MFAT one, will bring the total PV installations, both public and private, as well as ground-mounted and rooftop, to about 2.0 MWp.

Figure 2. Power Outage Indicators Trend[18]



It is obvious that the efforts accomplished under this BAU scenario will not be enough to allow Nauru to achieving all its energy targets, and the country will fall short unless financial and technical support is provided by international donors and development partners.

Baseline Initiatives

More recently, the GoN has also embarked in several projects and initiatives, especially for the installation of solar PV panels for power generation, which will allow to getting closer to the NERM energy targets. However, still too little is done when it comes to adopt energy efficient technologies and measures. With only a year left to complete all the outstanding activities listed in the updated NERM 2018-2020, it appears clear that the deadline will not be met and, although there has been not an official change been made yet, the government has indicated its approval to push out the deadline for the achievement of the energy targets out to 2025, which makes the efforts very doable. Table 1 summarizes the projects and programs that will be the baseline of the activities designed under this proposed SMARTEN project. These baseline projects and programs not only have been already approved and budgeted, but their execution is either ongoing or planned and they will be completed over the SMARTEN implementation period.

Table 1. Ongoing and Planned Baseline Projects and Initiatives

[18] NUC 2018 Annual Report

Baseline Project/Program	Description	Available Budget, US$
ADB 6.0 MWac Ground-Mounted Solar PV Field	The Asian Development Bank (ADB) is extending a grant to Nauru to finance a 6.0 MWac (6.9 MWdc) ground-mounted solar PV system. The solar installation is scheduled to be commissioned and grid connected in 2022, since field preparation to remove the limestone pinnacles and level up the ground where the solar panels will be installed will require considerable financial and technical efforts. Once completed, NUC will manage a total of approximately 8.0 MWac of PV generation capacity, which will bring Nauru close to its 50% electricity generated from RE target. ADB sized the solar-PV/diesel-power generation mix in order to minimize the average cost of electricity. However, since the addition on the grid of such a large percentage of intermittent source of energy will introduce stability issues, ADB will at least alleviate these grid instability issues by providing a 2.5 MWh/5.0 MW battery energy storage system (BESS) that, based on the forecasted demand peak load, will provide about half an hour of buffer, in case of sudden bad weather, which is sufficient to turn on the diesel generators. Lastly, the grant will also support institutional capacity building programs.	22,000,000[19]
CTCN Sustainable Land Transport for Nauru – Feasibility Study	The Climate Technology Centre & Network (CTCN) has taken up the request from Nauru for a Technical Assistance (TA) project to help with a Feasibility Study for Sustainable Land Transport for Nauru[20]. The objectives of this TA are to: 1) provide a background analysis on the road transport sector in Nauru; 2) provide Nauru with a policy action plan for low-emissions mobility in Nauru; and 3) build capacity of key stakeholders from the GoN (e.g., DoT and DCIE) on low-emissions mobility. To reduce heavy dependence on fossil fuel imports within the transport sector and to shift to a cleaner and more efficient transport, this TA will implement activities to develop a baseline analysis on Nauru's transport sector, development of roadmap for technology solutions for sustainable transport, and capacity building.	15,000
Water and Sanitation Initiatives, DCIE	Since Nauru does not have relevant freshwater sources, and potable water is largely obtained from desalinated water or purified rainwater, the NSDS has highlighted the priority and importance of achieving water security in the country. This initiative is to distribute Water Tanks to the communities throughout the island in order to strengthen water security. The project simply aims to procure and install water tanks, which will also be connected to the rainwater collection pipes on the household rooftop.	250,000
High EE Household Appliances Financing Scheme	This is part of the ongoing Low Carbon Fund (LCF) project executed by the International Union for Conservation of Nature (IUCN) and administered in Nauru by NUC. The program, which was launched in 2017, provides a fixed 30% rebate for purchasing high energy efficient refrigerators, freezers and washing machine. To date, the program has had little success with most of the budget still available.	80,000

[19] https://www.adb.org/projects/49450-009/main#project-pds

[20] https://www.ctc-n.org/technical-assistance/projects/feasibility-study-sustainable-land-transport-nauru

Baseline Project/Program	Description	Available Budget, US$
Nauru Energy Efficiency on the Demand Side (***NEEDS***) ***initiative***	The Ministry of Foreign Affairs and Trade (MFAT) of the Government of New Zealand (GoNZ) is sponsoring a project aiming to support the achievement of the 30% energy efficiency target set in the NERM. The project is a thorough feasibility analysis to select the most promising projects from an existing shortlist of potential initiatives. Depending on the outcome of this project, MFAT will support the selected initiatives up to a budget of approximately US$ 640,000 (NZD 1,000,000) a year for 5 year; the budget for this investment phase is not secured yet and therefore not included as a baseline project. The contribution of NEEDS to the 30% EE target will depend on the project chosen bases on the feasibility analysis.	320,000[21]

The successful completion of all the baseline projects and programs listed in Table 1 will bring Nauru closer to achieving its energy targets, but still they will not be enough to fully realize them. The SMARTEN project is intended to facilitate the complete achievement of the targets by implementing the proposed incremental activities that will build upon, and complement, the baseline projects. The incremental activities are designed to remove all the existing barriers that are impeding the achievement of the energy targets, providing therefore a sustainable and long-lasting solution.

[21] The budget is NZD 500,000

III. STRATEGY

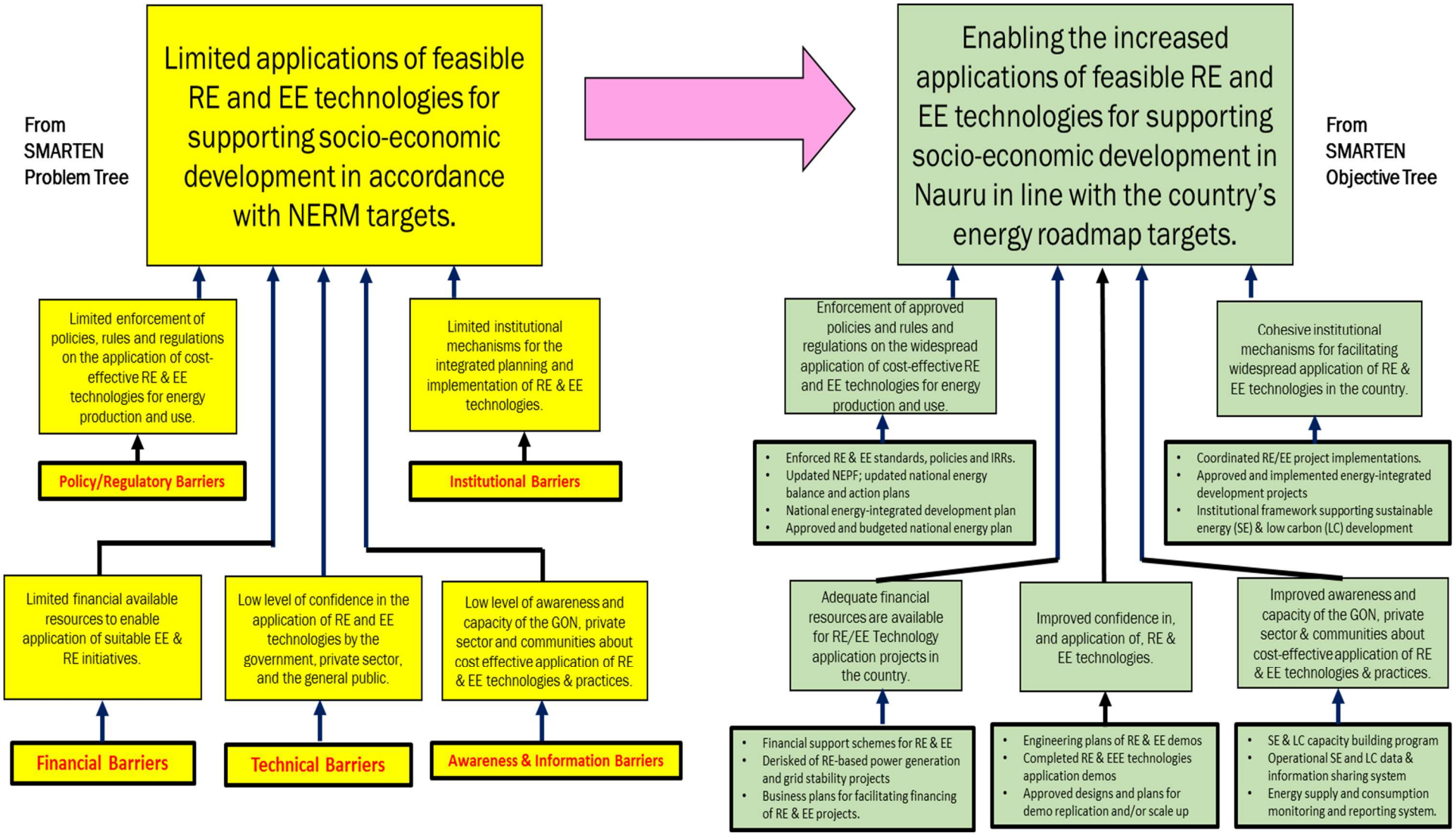
Applied Project Strategy and Incremental Activities

As mentioned above, the successful completion of all baseline activities described in Table 1 will not be enough to allow the GoN to achieve its energy targets stated in the NERM. The SMARTEN project proposes a series of Incremental Activities that will build on these baseline projects and complement them, facilitating the full achievement of the energy targets. The project Identification Form (PIF) developed for the SMARTEN project identified all existing barriers that are currently hindering the achievement of the proposed goals. During the Log Frame workshop, held in Yaren, Nauru on August 14-16, 2018, these barriers have been thoroughly analyzed and their causes were determined. The design of the SMARTEN Incremental Activities here proposed is based on a barrier removal approach, a strategy employed numerous times by UNDP and that is always proven to be effective and sustainable. In fact, as the name suggests, removing the causes of a problem will then allow the GoN to benefit from these results long after the implementation of the SMARTEN project has been completed. The barrier removal strategy is well represented by the Theory of Change[22] (ToC) schematic represented in Figure 3 below. The ToC visually show how the identified barriers lead to the main problem for Nauru (yellow section of the figure), while the implementation of the Incremental Activities will allow the removal of the barriers and the achievement of the main Project Objective: "***Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets***". The following are the expected outcomes of the project and the proposed ways in which the barrier removal approach strategy will be carried out to realize them:

Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use: this Outcome will be delivered by implementing three different sets of activities. The first set concerns the formulation, approval and enforcement of new policies and instruments that will regulate the application of RE and EE technologies and measures in the energy and energy end-user sectors; including the introduction of quality standards on appliances and equipment, as well as financial and fiscal incentives to favor and stimulate the adoption of RE and EE technologies. The second set of activities refers to the revision and the update of important national energy roadmaps, such as the NERM which is due at the end of 2020, and policy frameworks, such as the NEPF; this effort will be completed by capacity building initiatives of relevant GoN personnel (i.e., DCIE, MoF-PAD, DoT, the bureau of statistics) on preparing, monitoring and evaluating the national energy balance. Lastly, there will be activities devoted to the design and establishment of national energy plans, including the required budgets, which will involve stakeholders from all districts and the private sector; a crucial part of this process will be the design and implementation of training programs for GoN personnel in energy planning and budgeting, for the sustainability of the results past the duration of SMARTEN implementation stage.

[22] The ToC is outlined in the GEF-approved PIF and confirmed in the project planning matrix (log frame) that was developed during the LFA Workshop. A properly defined log frame embodies the theory of change that the project intends to bring about.

Figure 3. Theory of Change



Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country: a common issue shared by many Pacific Island Countries (PICs) is the lack of clearly organized and functioning institutional mechanisms capable of supporting a large-scale adoption of RE & EE technologies and measures. For the achievement of this Outcome, an institutional mechanism will be developed and established that will create proper communication channels and cooperation protocols between GoN ministries, departments and SOEs relevant for the implementation of projects in the energy sector (i.e., DCIE, DoT, MoF-PAD, NUC, Eigigu, RONPHOS, etc.). This institutional mechanism will also outreach and involve stakeholders from the private sector, as well as community and district leaders that are directly affected by the implementation of the RE and EE projects. Furthermore, a coordination mechanism will be developed and established between the GoN and international donors and development banks, to align donor funding programs and interventions with Nauru national priorities in the energy sector; this coordination mechanism will also help eliminate duplication of efforts and foster synergies between projects funded by different donors/agencies. Finally, a set of activities will be designed to assess the capacity gaps and needs of relevant GoN ministries, departments and SOEs on integrated energy planning. The results of this assessment will be used to design, organize and conduct training programs for all stakeholders, which will be periodically evaluated.

Adequate amounts of financial resources available for RE/EE Technology application projects in the country: this Outcome is linked to the previous one, and together they contribute to the same Component, which is meant to provide supporting mechanisms, institutional and financial, for RE and EE initiatives. Following the collapse of the phosphate mining industry, Nauru was left with a substantial amount of debt held by foreign creditors, which led to the bankruptcy of the entire financial sector, with the result that currently Nauru does not have any banking or financial system in place, which means that households and commercial activities cannot request a loan for any sort on investment, including for RE and EE technologies. The first set of activities, which will contribute to the attainment of this Outcome, is related to the establishment of a financing scheme for households and small business owners to purchase high energy efficiency appliances and small renewable energy powered electricity generation system (primarily PV panels). The financing scheme is submitted separately. Concomitantly, support will be provided to the GoN to select internationally accepted standards for energy efficient appliances. A second set of activities will be dedicated to capacity building through designed training programs for new and existing business operators on how to install, maintain and service RE & EE technologies and systems, which will contribute to create new jobs. The training programs will also teach how to explore investment opportunities and deal with financial aspects of the investments. Finally, there will be capacity building, and training programs will be developed and conducted for government personnel on financing and economic aspects of RE and EE technologies and measures.

Improved confidence in, and application of, RE & EE technologies: Up until recently, Nauruans did not pay for their electricity, and presently the price of electricity for the residential end-use sector is subsidized, partially by the government, through a subsidized diesel price for NUC (a subsidy that in the next financial year might be zeroed, since NUC is about to break even), and partially by other end-user sectors, such as Government, Commercial and Industrial, which pay a higher electricity price than Residential (a more detailed discussion is in the Energy Scenarios report, which is submitted separately). For these reasons, the general audience only perceives the generally higher upfront costs of RE and EE technologies and are not fully aware of the longer-term financial viability of these systems. The accomplishment of this Outcome will improve the confidence of the public in these technologies and will spur their application on a larger scale. The Outcome is delivered by implementing four different sets of activities: (1) assessment of technically and financially feasible RE and EE demonstration projects and preparation of their engineering designs and implementation plans. Since connecting to the grid large shares of renewable

energy power generation systems might introduce instability issues, implementation of grid instability measures is also evaluated. Following the installation of the demos (see part 4 below), evaluation reports on the performance of the demos will be prepared; (2) based on the evaluation reports on the demos, designs and plans for the replication and scale-up of the demo projects will be prepared, which can continue also past the completion of the SMARTEN implementation stage. A pivotal part of this step is the design and organization of training programs for local technical experts on the design, engineering and installation of RE & EE technologies, as well as for relevant GoN personnel on how to prepare a bankable project proposal; (3) further capacity building will be provided in the form of training programs for GoN personnel on how to conduct an energy audit of large government, commercial and industrial buildings, and after the training is completed the actual energy auditing will be performed; and (4) lastly the RE & EE demos prepared in part 1 will be implemented (for a detailed description, see the supplemental annex on Description of Investment Type Activities and Demonstrations), these will include:

a) *Storage of Excess Solar PV Generated Electricity in Desalinated Water*

b) *Mini Solar Powered Treated Water Production and Distribution System*

c) *Hybrid Diesel-Electric bus for Public Transportation*

In addition to these demonstrations, there are also two Investment Type Activities designed under SMARTEN (Supplemental Annex B: Description of Investment Type Activities and Demonstrations), namely:

a) *Enhanced Solar PV Power Generation and Distribution System*

b) *RE/EE Financing Scheme*

Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices: the activities that collectively will bring about this last Outcome are mostly related with capacity building, training programs and awareness raising. The methodology here proposed is a holistic approach, which includes: (a) training programs on RE and EE technologies and measures designed for all stakeholders, both from the government of the private sector; and (b) awareness raising activities and promotional campaigns to increase people participation in demos and replication installations, as well as improve demand side management. Lastly, an energy sharing platform and an energy data banking system will be established in Nauru, since currently historical data is not reliable and very fragmented, and training programs on how to maintain both systems will be designed and conducted. The energy sharing platform will be used by the general public to make decisions on purchasing and installing RE & EE technologies; while the energy database will be accessible to stakeholders to draft policies and regulations, and by donors and international consultants to design and implement energy related projects.

Once successfully completed, SMARTEN will allow Nauru to achieve all three energy targets, which will provide benefits to the entire populations in three different aspects: (1) environmentally, since burning less fossil fuels will allow to reduce the emissions of GHG and particulate matter; (2) financially, because the large solar PV systems and the improved EE will lower the costs of energy; and (3) security, with more indigenous energy generation, the country will be less exposed to delayed deliveries and sudden fossil fuels prices increase. The financing scheme for energy efficient appliances and rooftop solar PV systems will be accessible to households and small businesses, allowing them to receive a significant rebate on the purchase of these technologies. Similarly, the electricity storage system in desalinated water and the

hybrid bus for public transportation will provide more reliable clean water resource while reducing electricity prices and an alternative to private vehicles, especially useful for those who do not own one. Lastly, the *Mini solar powered treated water production and distribution system* demo will directly benefit the community in which it will be installed is. However, indirectly this demo will benefit the entire population, by paving the road to scale-up and replication projects, for which there is large potential, since Nauru does not have a water reticulation system in place.

The biggest innovation that SMARTEN will introduce in Nauru, and potentially to other PICs, is a novel electricity storage mean. Other available electricity storage technologies have all been discarded during the design development of the baseline ADB funded 6.0 MWac solar PV projects because considered either too expensive (battery storage) or unproven (pumped water storage) or too complex for Nauru (flywheels), and rather than opt for any of this technologies it has been preferred curtailing the excess power capacity (see the Energy Scenarios report, submitted separately, for a detailed explanation and calculations). This proposed demo will actually serve two of the most important needs for Nauru, provide a viable electricity storage system and strengthen the water desalination capacity, since Nauru has very limited potable groundwater lens (contamination due to leaking from the landfill is becoming a major issue); furthermore this demo can be scaled-up as penetration of electricity from renewable sources increases and consequentially also daytime excess electricity increases. The adoption of a hybrid bus for public transportation is also new for the Pacific region, with few other islands presently exploring electric and hybrid vehicles, but for cars. Lastly, the financing scheme and the solar water pump reticulation system, although have been already implemented in other PICs, they are innovation for Nauru, and both have potential for scale up and for supporting the socio-economic growth of the country. Once completed, all these demos and the investment type activity can be used to draw lessons that can be exported to, and used by, other countries that share similar issues and needs.

IV. RESULTS AND PARTNERSHIPS

Expected Results

Goal: Improved energy use index and reduced annual growth rate of GHG emissions in the country's energy and energy end-use sectors

Project Objective: Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets

Component 1: Energy Policy & Regulatory Framework Strengthening

Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use

Output 1.1: Formulated, approved and enforced policy and regulatory instruments (standards, policies and implementing rules and regulations) on the application of RE & EE technologies in the energy and energy end use sectors

Activity	Description
Activity 1.1.1: Development and implementation of rules and regulations to control and enforce the quality and standards of imported energy equipment	This activity involves the development of a set of rules and regulations on the standards for renewable energy equipment (such as IEC[23] standards and applicable type certification requirements for renewable energy will be specified to limit imports of energy generation equipment. Simple and practical guidance to customs officials in Nauru on verification of authenticity of the labels and certification against IEC standards will be developed and simplified testing and certification requirements specified similar to other Pacific Islands.
Activity 1.1.2: Formulation, approval and enforcement of implementing rules and regulations relating to RE and EE initiatives to support the achievement of the NEPF targets	This activity entails the development of several Implementing Rules and Regulations to support the achievement of NEPF objectives and NERM targets. These include developing and building energy regulations that will apply to new buildings and retrofitting and upgrades of old buildings. The energy performance building codes to be used by NPT for the new port facilities can also be referred to. The building regulation will deal with energy performance of the buildings in Nauru and will target energy performance in commercial, government, households and industrial buildings. The building regulations will aim to reduce the EUI and encourage energy efficiency of electric appliances and use of renewable energy in buildings. Also, to be developed will be a green energy procurement roadmap for government aimed at making energy use by government more efficient. This green energy roadmap will ensure that the office productivity equipment, vehicles and other energy consuming systems that government procures will be of higher energy efficiency resulting in lower total cost of

[23] International Electrotechnical Commission

	ownership for the government while supporting NEPF and NERM from core budgets.
Activity 1.1.3: Development of an incentive framework for encouraging widespread RE/EE technology applications in the energy and end-use sectors	Under this activity, a study will be carried out to identify and develop an incentive framework for encouraging investments from the private sector in the energy and end-use sectors. Incentives such as business tax exemptions/deductions for the investment, tax holidays, etc. will be examined for businesses making investments in energy efficiency or rooftop solar. Also, incentives such as personal income tax exemptions/deductions for households making investments in energy efficient housing, efficient appliances or rooftop solar will also be considered. Also considered will be incentives for private sector IPPs planning to invest in the energy sector including simplification of land lease/rentals. An incentive framework for encouraging widespread renewable energy and energy efficiency technology applications in the energy and end-use sectors will be developed and approved based on the results and recommendations of the study.
Activity 1.1.4: Establishment of a conducive legal regime with independent regulation as well as financing and risk management frameworks for the increased role of the private sector in the implementation of sustainable energy projects in Nauru	This activity involves the examination of the legal, regulatory, off-taker and financing risks associated with renewable energy IPP investments in Nauru by the private sector and propose management and guarantee mechanisms. The various options for an efficient and cost-effective energy regulation in Nauru will be analyzed including consideration of learnings from other Pacific islands on infrastructure regulation. It will also include the development and approval of regulation, policy and institutionalizing plan to establish an independent energy/infrastructure regulatory body as well as establishing mechanisms for managing various risks that are discouraging investments in renewable energy IPPs by the private sector.

GEF support is required for the incremental technical assistance in the formulation of energy policies and regulatory instruments, and for the development of an incentive framework.

Output 1.2: Revised and updated energy policy framework (NEPF), National Energy balance (NEB) and roadmap (NERM) and policies and regulations to achieve NERM targets

Activity	Description
Activity 1.2.1: Review of the progress under NEPF and development of an updated NEPF that is aligned with National Sustainable Development Strategy (NSDS) and SDGs	Under this activity, a review of the NEPF will be carried out based on the updated NSDS and the alignment of NSDS with SDGs in 2019. As part of this, other items that are relevant to the NEPF will be reviewed. This includes the planned set of activities of, and the current level of achievements under, the NERM as well as the various policy and regulatory initiatives and programs that are underway in the energy and end-use sectors in Nauru. The NEPF will be updated based on the NERM achievements to focus on the activities that have not yet been implemented/completed and the targets that have not been achieved. The

	NEPF will also be updated to reflect the energy policy and regulatory efforts under SMARTEN and other donor supported initiatives. Under this activity, a revised NEPF will be made more strategic and involve more stakeholders, especially the private sector and financial sector. The revised NEPF will then be finalized after national consultations, then approved and communicated widely.
Activity 1.2.2: Review of achievements under NERM in 2021 and development of an updated roadmap ensuring adequate resource allocation from public and private sources	In this activity, a review of the achievements under the NERM will be carried out after the completion of the roadmap period in 2021. Based on the status of achievements, an updated set of actions will be developed either to increase the level of ambition on renewable energy and energy efficiency or with a timetable for achievement of any shortfalls. The updated NERM will also place clear emphasis on resource mobilization plans and commitments as well as an emphasis on partnership with the private sector. The updated NERM will also have a component identifying risks to NERM implementation covering at a minimum policy, financial and operational risks with associated mitigation/management strategies.
Activity 1.2.3: Development of energy indicators for NERM and tracking/measuring and M&E of NERM indicators and associated capacity building of GoN (DCIE)	Indicators will be developed for NERM on the energy efficiency for GJ/A$ of GDP and EUI target in terms of GJ/m^2 and this will involve measurement and estimation of total built up area in Nauru and benchmarking against comparable EUI targets and energy intensity of GDP targets. A mechanism and process for tracking the progress of achievements of NERM indicators will be established and periodic updates will be published. Capacity building of 10-12 trainees from DCIE, PAD and NBoS staff will also be carried out on M&E of NERM renewable energy and energy efficiency targets.
Activity 1.2.4: Development, approval and enforcement of effective policies and regulatory framework to support the implementation of RE and EE projects in the energy and end-use sectors	This activity involves the development of specific policy and regulatory instruments to promote renewable energy and energy efficiency projects. This will involve development of a Reverse Auction Mechanism (RAM) that will allow interested private sector IPPs to competitively find a market-based FiT for development of IPP renewable energy projects selling electricity to NUC. A time-of-use tariff would also be introduced for shifting demand during evening peak load to daylight hours when solar energy generation will be available. There will also be regulatory instruments developed to regulate aspects of renewable energy IPPs such as priority dispatch, power quality regulations, guarantees payment for electricity supplied, wheeling of generation, third-party sales of renewable energy generation, banking of electricity generation etc. The RAM and the renewable energy IPP regulation will be developed, consulted, approved and implemented.

GEF support is required for the incremental technical assistance in the conduct of the review of the background documents, the revision and updating of national energy strategies and plans, training programs, and the formulation of policies and regulatory instruments.

Output 1.3: Approved and implemented fully budgeted national energy plan

Activity	Description
Activity 1.3.1: Design and establishment of an improved national energy planning and budgeting involving districts and key stakeholders with regular periodic reviews and reporting	This activity involves the establishment of a national energy planning process that is driven through a bottom-up process and one that engages all key stakeholders. A process for periodic annual energy planning under the NSDS and NEPF and against NERM targets will be established with broad-based stakeholder participation involving private sector and communities at the district level. The planning exercise will also integrate budgeting to implement the plan indicating the sources of finance and a quantitative estimation of the probability of financing. The planning process will also include periodic reviews of achievements as well budget utilization and revisions to the plan in the event of shortcomings or delays in terms of actions or budget availability/utilization. This effort would result in an energy planning process which would be broad-based and realistic and would attempt to optimize usage of external development support. This would also result in energy and end-use sector objectives and targets being achieved in a time-bound manner.
Activity 1.3.2: Design and implementation of a training program for GoN personnel at managerial and operational levels in energy planning and budgeting and analysis covering the energy planning, financing in the supply and demand sectors	This activity entails the design, conduct and evaluation of a training program on energy planning analysis and budgeting. The improved energy planning process that will be established will require training of staff from GoN and SOEs and particularly staff from DCIE, PAD, NBoS, NUC, RONPHOS etc., as well as members of district communities and private enterprises, for a total of 18-20 trainees. The training will involve national and sub-national energy planning, organizational-level energy planning and analyses involving energy consumption projections and planning the use of renewable energy and energy efficiency technologies both on the supply side and demand side. The training program will also involve financial planning and budgeting for energy and end-use investments and operation and maintenance of energy assets. An evaluation of the training program and the resulting impacts will be carried out within 12 months of completion of the initial training programs and any recommended improvements to be incorporated into the next training cycle. It is also recommended that training be held in partnership with national education and training institutions such as TVET Nauru and include a training of trainers' component to ensure long-term sustainability of efforts.

GEF support is required for the incremental technical assistance in the establishment of national energy plans, periodic review of achievements, and training programs.

Component 2: Supporting RE & EE Initiatives

Outcome 2.1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country

Output 2.1.1: Well-coordinated planned and implemented RE/EE Projects of the GoN, private sector and communities

Activity	Description
Activity 2.1.1.1: Development and establishment of an improved and effective coordination mechanism between the relevant GoN agencies in the energy sector particularly in implementation of the NEPF and NERM	This activity involves the development of a coordination mechanism at the head of department/ministry – Secretary level or CEO level for SOEs actively involved in the energy sector such as DCIE, PAD/MoF, NUC, DoT, NBoS, RONPHOS, NPT. A detailed term of reference for this empowered committee chaired by Secretary DCIE will be developed and a meeting schedule with a minimum of 1 meeting/quarter will be published, The Director – Energy of DCIE will act as the secretary to this empowered committee. Agenda items will relate to energy sector issues – particularly dealing with coordination and collaboration matters in the energy sector – particularly on NEPF and NERM. Minutes of each meeting will be prepared and circulated with clearly articulated actions and delineation of responsibilities. A report on actions taken will also be presented to the subsequent meetings.
Activity 2.1.1.2: Establishment of a consultation and coordination mechanism for different RE & EE trainings/projects between government, private sector, key stakeholders and district communities	This activity involves the establishment of a consultative mechanism that involves relevant government agencies, private sector and local communities that are impacted by energy sector investments. Such a mechanism will ensure that information about plans for projects and capacity building and training programs that are relevant to districts are shared at an early stage with all community level stakeholders through district councils and feedback invited. Consultative meetings will also be held where relevant by the lead agency implementing the projects involving district level stakeholders including private enterprises operating in the district. Project plans and/or training designs shall reflect such district level consultations and feedback. Local communities and private enterprises will be actively involved in the implementation and expected to benefit from the project/training. Records of district level consultations and lists of agreed actions will be maintained by the projects and initiatives.
Activity 2.1.1.3: Development and establishment of a strengthened funding coordination in the energy sector between GoN agencies and multi-lateral/bilateral donors and development banks	Under this activity, an energy sectoral coordination mechanism will be established between the GoN and multi-lateral/bilateral donors and development banks (UNDP, ADB, Australian government, NZ MFAT, UNEP etc.) actively supporting the energy sector in Nauru. The objective of the group will be to align at an early stage, energy sector multi-lateral/bilateral donor and development bank interventions with national priorities and ensure synergy of actions and eliminate possible duplication between development agencies. The membership of this coordination group will consist of the energy sector leads or resident representatives of multi-lateral/bilateral donors and development banks supporting energy sector and GoN departments (DCIE, DoT, PAD/MoF) and SOEs (NUC, RONPHOS etc.) will be chaired by Secretary DCIE with Director DCIE as the secretary. An annual calendar of meetings will be published by DCIE allowing mission planning and meetings of this energy development assistance coordination will be held once every quarter and minutes of meetings and agreed action plans will be shared with all government and donor agencies. Regular

	updates on progress with agreed coordination and optimization action will also be reported to the group.

GEF support is required for the incremental technical assistance in the development of inter-ministerial/departmental/agency mechanisms, report preparation, and establishment of a consultative mechanism.

Output 2.1.2: Approved and implemented energy-integrated development projects in the end-use sectors including the mining industry and the regional processing centers

Activity	Description
Activity 2.1.2.1: Assessment of barriers to integrated energy planning and investments at GoN, SOEs, RONPHOS, RPC, NPT etc., identify gaps in capacity and identify training needs	This activity involves the conduct of assessments of capacity gaps to energy planning at GON departments – DCIE, MOF, DOT, NUC, NBoS and SOEs, RONPHOS, Eigigu, NPT and RPCs. The assessments will be done through interviews with relevant staff and an assessment of the skillsets required to support the energy sector objectives in Nauru. The gaps in capacity relating to integrated energy planning will be used to identify training needs for these key energy sector institutions.
Activity 2.1.2.2: Development and conduct of regular capacity building activities for pertinent GoN personnel including RONPHOS, RPC and SOEs on energy integrated development planning & RE/EE technologies	This activity involves the organization of regular training programs on energy planning for up to 18-20 staff members from key GON departments such as DCIE, MoF, DOT, NBoS and SOEs such as RONPHOS, Eigigu, NPT and the RPCs. The training programs will be developed based on the capacity gap and training needs assessments carried out. The training programs will focus on energy planning with an emphasis on technologies that are relevant to NERM – Renewable energy, energy efficiency and grid stabilization. An evaluation of the training programs impacts will be carried out 12 months after the completion of initial training programs and the content and delivery of the training programs may be updated based on the evaluation.
Activity 2.1.2.3: Establishment and implementation of a coordination mechanism with GoN entities, SOEs, RONPHOS, RPC for implementation of EE and RE projects	This activity involves the establishment of a mechanism for coordination between GoN entities such as NUC, RONPHOS, Eigigu and RPCs to focus on NERM implementation, like the government and development assistance coordination mechanisms. The objective of such a mechanism is to collaborate and coordinate regarding renewable energy and energy efficiency activities and encourage sharing of lessons. This coordination mechanism will be facilitated by DCIE with the Secretary, DCIE chairing coordination meetings with representatives from the SOEs and RPCs. Director, Energy for DCIE will be the secretary to this mechanism and will develop and issue the minutes and follow-up on actions to be taken. Meetings of this coordination mechanism are expected to be held at least once every quarter and an annual meeting schedule will be published every year.

GEF support is required for the incremental technical assistance in the assessment of capacity gaps and needs, training programs, and establishment of inter-departmental coordination mechanism.

Output 2.1.3: Established and operational institutional framework that supports the implementation of low carbon (EE & RE) development policies, standards and IRRs

Activity	Description
Activity 2.1.3.1: Review of the existing institutional responsibilities in the energy sector including independent energy regulation; identification of institutional gaps; and recommendation of proper alignment of responsibilities	This activity involves the conduct of a review of institutional responsibilities within the energy sector and identify gaps in institutional responsibilities. This assessment will review distribution of roles and responsibilities of organizations and will also consider best practices from Pacific Island nations. Consideration will be given to alignment of responsibilities and aspects such as independence of policy, regulation and energy service delivery. Particular attention will be paid to the role of independent energy regulation in the context of attracting private investments into the sector and progressively reducing dependence on development assistance.
Activity 2.1.3.2: Definition and implementation of clear mandates and responsibilities of relevant government agencies in the energy sector, based on the institutional and capacity gap assessment	This activity involves the clear delineation and alignment of institutional responsibilities between relevant GON departments and SOEs, based on the review of institutional responsibility gap assessments. The objective would be to improve strategic and operational efficiency while keeping costs within available budgets. Recommendations will also be made regarding institutional gaps such as energy regulation and the possibilities for addressing the gaps through new or reformed institutions. Consideration of experience from other small islands in the Pacific and Caribbean regions may be made while carrying out the assessments and developing the recommendations to ensure learning from similar energy sector institutions in similar contexts.

GEF support is required for the incremental technical assistance in the review of institutional arrangements, roles and responsibilities, assessment of gaps and needs, clear definition of institutional mandates and responsibilities.

Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country

Output 2.2.1: Feasible financial support schemes for RE & EE technologies application projects in the energy end-use sectors, inclusive of the implementation arrangements, and procedures for financial assistance application process

Activity	Description
Activity 2.2.1.1: Development of sustainable financial support schemes	This activity involves the design, development and implementation of a financing scheme targeting households and small businesses (Supplemental Annexes B: Description of Investment Type Activities and Demonstrations, and D: Financing Scheme). The scheme will be developed with associated

including implementation modalities and processes for RE & EE technologies application projects and criteria to support women and youth led businesses	procedures, modalities, criteria and will be managed by a national agency and offered as a hire-purchase or progressive purchase scheme. The scheme will support purchases of energy efficient appliances and rooftop solar systems. Preference will be given to small businesses owned by women and youth as well as women headed households. The scheme will build on the lessons learned from operation of the LCF by NUC financing only a limited number of electric appliances during the operational period of the scheme. The range of efficient appliances to be financed will be expanded and small renewable energy systems will also be financed. The scheme will also be expanded to include financing for businesses, bringing into the scheme, the second-largest end-user group apart from households;
Activity 2.2.1.2: Establishment of a process for determination and publication of benchmark costs for RE systems and EE appliances by GoN	This activity involves the establishment of a process to determine the fair benchmarked price of a specific number of efficient appliances such as air conditioners, refrigerators, chest freezers, washing machines, fans, lighting systems, small rooftop solar systems etc. The benchmark prices will be established for systems that meet the prescribed energy efficiency label requirements and renewable energy generation technical standards. The benchmark price will be determined based on price lists of appliance and solar equipment suppliers in Nauru and with reference to international prices and prevailing prices in countries of origin of such imported equipment. The benchmark prices will be published periodically and will form the basis for the operation of the financing scheme and will help with budgeting and financing energy efficiency and renewable energy projects by GoN and development assistance support programs.
Activity 2.2.1.3: Development of a business and institutional framework for private sector investment and financing for RE and EE projects in the country	This activity involves the conduct of a study of the various measures including policies, incentives and other support structures that have been used in similar countries, especially Pacific Island Countries to encourage private sector investments in renewable energy and energy efficiency in the respective countries. Based on the recommendations of the study, a package of measures to promote investments in renewable energy and energy efficiency in enterprises and projects by both domestic and international private sector will be developed, consulted and approved. The proposed framework may cover private investments in all aspects of the renewable energy and energy efficiency value chain including sourcing, assembly, installation, operation, maintenance and repair as well as IPP investments.
Activity 2.2.1.4: Development and implementation of training and capacity building programs for women led/owned and youth group operated businesses on RE&EE business and investment	This activity involves the development of training programs targeting women and youth-led and operated small businesses on improving the energy efficiency and reducing operating expenses as well as installing rooftop solar energy systems to generate and sell electricity to NUC. Training will also be provided where relevant to businesses to expand existing operations to install, maintain and service renewable energy and energy efficiency systems. The training program aims to train over 20 participants and will also cover investment opportunities and financing aspects of renewable energy and energy efficiency. The training activities will be conducted in association with local education and training institutions including TVET and will also train local trainers with a view to

opportunities and financing	sustaining the training capacity nationally. 12 months after the first set of trainings, an evaluation will be carried out and additional training program content and delivery will be updated to incorporate the evaluation findings.

GEF support is required for the incremental technical assistance in the development of a financial support scheme, establishment of benchmark prices for RE/EE technologies, development of institutional framework, and training programs.

Output 2.2.2: Derisked RE-based power generation and grid stability projects, grid-connected or decentralized RE-based energy generation at the district level, inclusive of business plans for the GoN and private sector to facilitate financing and implementation

Activity	Description
Activity 2.2.2.1: Formulation, approval and enforcement of strategy and associated policies to diversify financing sources for energy sector activities	This activity entails the development of a strategy to diversify the financing sources for energy sector activities and to optimize support through development assistance. The strategy will hinge on attracting private investments in renewable energy and energy efficiency systems from small individual/household level investors as well as large-scale investments in IPPs from international private sector. The strategy will also cover financing of operating and replacement costs in addition to investment costs. The strategy so developed will be implemented through a set of actions coordinated by GoN departments and SOEs in partnership with relevant development agencies and development banks.
Activity 2.2.2.2: Development and implementation of strategies to increase the level of core budget allocation from GoN to support the implementation of the NERM	This activity entails the development of a strategy for examining various financial expenditures on energy consuming equipment and energy generation systems by GoN. Once such expenditures have been identified, consideration will be made on how these could be aligned with NERM by making incremental investments and benefit from reduction in operating expenditure on account of energy efficiency gains and associated monetary savings. The green energy procurement roadmap referred earlier can also be a potent instrument to redirect core budgets towards NERM. In addition, DCIE and other government departments and SOEs active in the energy sector should also consult with MoF to explore availability of additional government budgetary resources from national budget to invest in renewable energy and energy efficiency and support implementation of NERM. This strategy once agreed and approved will be implemented with oversight of the government coordination mechanism that will be developed;
Activity 2.2.2.3: Conduct of capacity building and provision of advisory services for enhanced quantity and quality of appointed government personnel working on energy issues	Under this activity, training programs will be developed and conducted aimed at 12-15 staff members from GoN departments and SOEs on financing and economic aspects of renewable energy and energy efficiency. The training will cover project and enterprise financing, financial instruments, risks and de-risking options relevant to renewable energy, energy efficiency and grid stabilization technologies. 12 months after the initial set of trainings have been carried out, an evaluation will be conducted, and modifications will be made to the content of the courses

	based on feedback from the evaluation. The training programs will be carried out involving trainers from local training and educational establishments including TVET to sustain the efforts nationally. In addition to the training programs, handholding and advisory support be provided for an extended period to GoN and SOE staff on financing issues by the training service providers.

GEF support is required for the incremental technical assistance in the formulation of strategies and policies, evaluation of government budget allocation, and training programs.

Component 3: Promotion of RE & EE Technologies Applications

Outcome 3**:** Improved confidence in, and application of, RE & EE technologies

Output 3.1: Documented and disseminated reports about the energy performance and impact assessments of implemented demonstrations.

Activity	Description
Activity 3.1.1: Evaluation of the performance of the demos and preparation of the demo project profiles as case studies	This activity involves a comprehensive analysis of the results from each demonstration, implemented under Activity 3.5.1. The analysis will be on the energy performance, as well as the economic feasibility performance of each demo. The results of the analysis and pertinent conclusions and recommendations will be compared to the results of similar RE/EE technology application projects that were implemented in other countries. For each demo project, the results obtained will be summarized into project profiles (or case studies) following an agreed presentation format. The case studies will be organized and kept in an inventory, which will then allow to disseminating the case studies to other countries that want to implement similar projects.

GEF support is required for the incremental technical assistance for the preparation of case studies.

Output 3.2: Approved implementation designs and plans for the replication and/or scale up of demonstrated RE & EE technologies applications

Activity	Description
Activity 3.2.1: Assessment of feasible RE/EE technologies, both for power generation and power storage, to support the achievement of the NERM targets and preparation of assessment report	This activity involves the conduct of an assessment of potential replication and/or scale-up of RE and EE technologies, both for power generation and power storage, for the country to determine their individual techno-economic feasibility, including the energy and GHG emission abatement performance. A feasibility assessment report will be prepared. Furthermore, the report will define the power capacity that must be installed and the timeline of these replication and/or scale-up RE and EE developments necessary to allow Nauru to achieve its energy targets as defined in the NERM or possibly to go beyond those goals if new targets are set.

Activity 3.2.2: Design and conduct of training programs for a pool of local technical experts on how to design, engineer and install RE & EE technologies in the energy and energy end-use sectors	This activity entails the design, organization and conduct of a training program to educate local technical expert on renewable energy and energy efficiency technologies and measures, focusing on those that have been and will be demonstrated and installed in Nauru, as well as on the utilization of those RE and EE technologies. The program involves training of 15-18 people from relevant GoN offices, NUC, DCIE, DoT, Eigigu and service providers. To guarantee the sustainability and replicability of the RE and EE technology systems installed, a mid- to long-term plan will be developed in cooperation with the GoN to periodically organize (i.e., every three years) similar and follow-up training programs to educate new local experts as well as to update and strengthen the capabilities of previously trained experts.
Activity 3.2.3: Design and implementation of training programs for relevant GoN personnel and stakeholders in RE & EE financing to develop and prepare bankable project proposals	This activity involves the conduct of a capacity assessment of relevant GoN personnel to determine the needs and gaps to fill in developing and preparing bankable sustainable energy and low carbon technology application project proposals. Based on the assessment, a training program on project development, design and preparation will be designed, organized and conducted for 12-15 stakeholders from GoN departments, SOEs and other organizations related to project proposal preparation. Participants will be selected from NUC, Eigigu, DCIE, MoF-PAD, DoT, NBoS, etc.
Activity 3.2.4: Development of the design and implementation plans for the replication and/or scale up of RE & EE technology application projects involving both GoN and the private sector	The assessment report prepared in Activity 3.2.1 is the basis for the work to be done under this activity to design the feasible replication and/or scale-up RE and EE projects, as well as for the formulation of a thorough implementation plan. For this task, relevant GoN personnel and stakeholders from the private sector will be engaged together with international consultants supported by local professionals, which will also contribute to capacity building. The plan could include, but not be limited to, the extension of high EE household appliances financing schemes, introduction of more high energy efficiency vehicles, expansion and/or replication of the solar water pump reticulation system, additional power generation and electricity storage systems, etc.

GEF support is required for the incremental technical assistance in the assessment of feasible replication and/or scale-up projects, report preparation, training programs, and development of replication and/or scale-up project designs and implementation plans.

Output 3.3: Established and operational energy audit system covering all energy end-use sectors

Activity	Description
Activity 3.3.1: Design and establishment of an energy audit system	This activity involves the design of an energy auditing system for end-use sectors in Nauru at the early stage of the SMARTEN Project implementation period. The system will be used to check the energy performance and energy utilization efficiency of government, industrial and commercial buildings, as well as large public energy consumers (i.e., RONPHOS, the port, the new prison, etc.) to determine potential areas of energy

	conservation (EC) and EE improvement. The energy audits will be based on procedures enforced in the Pacific region, preferably Australia or another PIC. Intervals to conduct the auditing will also be determined at this stage. The designed energy audit system (inclusive of procedures) will be presented and promoted to the relevant GoN entity for approval and application. The energy audit system will be evaluated a year after it has been finalized and, if required, appropriate modifications will be made.
Activity 3.3.2: Design and implementation of a training program for relevant GoN personnel and stakeholders in conducting energy audits.	This activity involves the design, organization and conduct of training programs for 6-8 relevant GoN personnel and other key stakeholders on how to conduct energy audits. An energy audit unit within the DCIE will be formed and mandated to carry out energy audits of energy consuming entities in the country. Training programs will be re-organized periodically (i.e., every 3 years), to guarantee the ability of the GoN to conduct energy audits past the implementation period of SMARTEN.
Activity 3.3.3: Performance of energy auditing of GoN, industrial and commercial buildings, which will provide date for follow up RE & EE projects, including scale-ups and replications of demos	Under this activity, the trained energy audit unit will conduct energy audits in identified energy end-users at established schedules. To guarantee impartiality of the process, the energy auditing unit will be headed by an independent body, such as the independent regulator that will be established under Activity 1.1.4. The results of the energy auditing will be used for the design and implementation of the replication and/or scale-up RE and EE projects as described under Output 3.2.

GEF support is required for the incremental technical assistance in the design of an energy audit system, for conducting energy audits, and for training programs.

Output 3.4: Completed engineering designs and implementation plans of the identified demonstrations of RE & EE technologies applications in the energy generation and end-use sectors.

Activity	Description
Activity 3.4.1: Evaluation of the techno-economic feasibility of RE & EE technology application demos and preparation of assessment reports	Based on the recommendations for the demonstrations, as summarized in the Descriptions of Demos report submitted separately, and building on the baseline projects described in Chapter II, detailed assessments will be carried out on the techno-economic feasibility of the RE & EE technology application demos. The assessment will determine the actual number and capacity of units that will be installed under each demo; for the solar water pump system, capacity of the water purification/treatment systems, number of solar PV panels, electricity storage system capacity, and installed pumping power capacity will be evaluated. For the energy storage system in desalinated water, the installed capacity of the reverse osmosis (RO) plant will be assessed. For the demo in the transport sector, the optimal size and the use of a hybrid vehicle, as well as the location and capacity of the charging station(s) will be confirmed before proceeding with the implementation. The findings,

	results and recommendations of the feasibility assessments will be presented and discussed in detail in the assessment reports.
Activity 3.4.2: Preparation of the engineering design and implementation plans for the implementation of the selected RE & EE technology application demos	Based on the recommendations provided in the Descriptions of Demos report, submitted separately, and on the assessment, reports produced under Activity 3.4.1, the agreed demos will be designed in detail. Subsequently, implementation plans will be prepared to assure the completion of all the selected RE & EE technology application demos within the timeframe established by SMARTEN.
Activity 3.4.3: Conduct of a dynamic grid stability study to evaluate the impact of 50% Solar PV penetration and beyond on the entire grid system	In this activity, a dynamic grid stability study is carried out to evaluate the impact of the Solar PV Integration in the entire grid system for stability responses, power quality issues, protection schemes and reactive power capabilities with the diesel generators and BESS systems. The study will ensure the reliability and stability of the entire NUC grid system with the integration of new RE-based power generation systems. Activity 3.5.2 will be the implementation of the recommendations from the grid stability study.
Activity 3.4.4: Conduct of an assessment to determine the required electrical HV component upgrades and communication/electrical infrastructure upgrades in the grid system in order to monitor and operate them from a new proposed SCADA system	In this activity, a study is conducted to assess which HV electrical components and communication/electrical infrastructure are required to be upgraded for them to be monitored and operated from a new proposed SCADA system. The existing SCADA system does not monitor the entire grid system and there is no remote monitoring of the electrical components. The reliability, safety and availability of electricity in the grid system is weak with no overview or operational support to isolate faults in the grid system from the SCADA System. The existing SCADA system requires to be upgraded in order to control the entire grid system and provide the system operation requirements to facilitate 50 % RE and beyond.
Activity 3.4.5: Conduct of a protection study to establish the detailed protection scheme and equipment protection settings of the entire grid system with Battery Energy Storage Systems and the new planned RE-based power generation systems.	In this activity, a detailed protection scheme is established for the entire grid system with the BESS and the new planned RE-based power generation systems for NUC to have safe control of all critical components in the system. The BESS will be one of the critical components to maintain an acceptable level of grid stability in the grid system. Thus, the electrical configuration and protection scheme for the new RE-based power generation systems and BESS must be aligned with an entire new grid system protection scheme.
Activity 3.4.6: Formulation and establishment of RE-grid code requirements for grid integration of RE-based power generation	This activity involves the design of the RE-grid code requirements to support the grid system during normal operation and during grid failures. Especially with the establishment of the BESS system in the grid system. The grid codes will be established for safe control and operation of the electric grid and optimal load dispatch strategies include: RE system installation and grid-connection procedures; RE protection equipment

units for connection procedure, grid compliance testing, frequency/voltage control, power quality, protection, SCADA communication and load dispatch/regulation	requirements (i.e., solar PV panels, battery storage systems, PV panels and battery inverters, etc.); voltage regulations; active and reactive power control; grid compliance testing; grid control systems; voltage and frequency control systems; power quality and power factor; grid stabilization procedures; SCADA communication and optimal load dispatch/regulation strategies; safety and protection procedures; and all other aspects deemed necessary to guarantee stability and reliability of the electric grid. The established codes and regulations will be afterwards approved and enforced. The established codes will be evaluated a year after they have been approved and, if required, appropriate modifications will be made.
Activity 3.4.7: Design and conduct of training programs for local experts to improve their skills on the operation and maintenance of battery storage systems and utility practices with RE for data collection analysis and real time control	This activity addresses the fact that the NUC operating personnel do not have the technical skills to understand the dispatch and operation procedures with a new SCADA system and BESS System**.** Capacity development shall be in the following areas: operational system control procedures, system load dispatch strategies and utility practices for data collection and real time control. The NUC technical personnel require training in operations and maintenance of the BESS system, which will become one of the most important components for the grid stability. Due to several topics to cover, the capacity building activities will be organized in stages. Around 10 trainees will be selected and organized in teams. During the first training stage, each team will be trained on a specific set of skills (in this way there will be personnel skilled on every subject). The following training stage the teams will be rotated in such a way that at the end of all training stages every participant will be trained on every topic. Participants in this training program will be NUC staff and relevant personnel.

GEF support is required for the incremental technical assistance in the assessment of feasible demo projects, report preparation, development of demo project designs and implementation plans, completion of grid stability studies, upgrade of the SCADA system, establishment of RE-grid codes, and training programs.

Output 3.5: Implemented and operational RE & EE technologies application demos

Activity	Description
Activity 3.5.1: Installation and operation of the selected RE & EE technology application demos	This activity involves the installation of all selected RE/EE demos under the direction of the project manager and the supervision of GoN and UNDP. This entails the actual installation, operation and maintenance of the systems that make up the RE/EE demonstrations. The implementation of the demos will be carried out by the demo host with the support of the SMARTEN project team to ensure that all requirements for the successful implementation of the demo are in place. Each demo project will be regularly monitored by the host and the SMARTEN project personnel using a common Monitoring and Evaluation (M&E) system that will be designed and employed for this purpose.

	Procurement of the equipment will be done internationally following a best-bidder criterion. Where appropriate, installation of the equipment, replacement/repair warranties, and proper overseas training of staff for the operation of the demos must be included, specifically 2 trainees for the operation and maintenance of the mini solar powered treated water production and desalination system, and 2 trainees for the operation and maintenance of the hybrid bus and the charging station.
Activity 3.5.2: Implementation of the required electrical HV component upgrades and communication/electrical infrastructure upgrades in the grid system	This activity involves the implementation of the recommendations from the studies conducted in Activities 3.4.3 and 3.4.4. These are the recommended upgrades in the grid system to enable monitoring and operation from a new proposed SCADA system and implementation of the recommendations from the grid stability study. The implementation will support NUC to maintain a stable and reliable grid system with the new RE-based power generation systems and to detect possible outages and communicate with the SCADA system in the control center where actions can be taken to solve or prevent major grid stability problems.
Activity 3.5.3: Implementation of the recommendations from the grid system protection study focusing on the entire grid system with the new RE-based power generation systems and the Battery Energy Storage Systems.	This activity is the implementation of the recommendations from the study conducted in Activity 3.4.5. It will be a stand-alone activity to focus on the current operation conditions and the future operation conditions with 50 % RE electricity generation in the grid system and beyond and together with the BESS in operation.
Activity 3.5.4: Demonstration of the monitoring, operation of the SCADA system with entire grid system, diesel generators, BESS system and RE-based power generation units	This activity is linked with Activities 3.5.2 and 3.5.3. The SCADA system shall show the entire grid system, separation between solar PV generation, diesel generation and the load in the system in order to cope with the planning procedures and grid integration of RE-based power generation capacity that allows at least 50% RE electricity generation and beyond.
Activity 3.5.5: Implementation of an integrated RE generation forecasting tool to the SCADA system to perform day-ahead planning of the load dispatch planning and support the reliability and operational procedures	This activity entails the installation of a state-of-the-art forecasting tool to allow the SCADA system to perform day-ahead planning of the load dispatch planning and support the reliability and operational procedures. The purpose of the RE generation forecasting system is to assist NUC to distinguish between variability and uncertainty when planning and operating the grid system with 50% solar PV and beyond. The forecasting tool will reduce the uncertainty of the solar PV generation, so that its variability can be more precisely accommodated in the grid system. The accuracy of forecasts and timely operational responses for up-ramps and down-ramps are critical for maintaining reliability and lowering the grid operation cost because of the high solar PV penetration level in the grid system.

Activity 3.5.6: Demonstration of the monitoring, operation and performance of the RE-generation forecasting tool to support with day-ahead planning	This activity involves the testing and operation of the RE-based power generation forecasting tool that is integrated to the SCADA system. NUC personnel assigned in the operation and control of the solar PV systems, will participate in trials designed to demonstrate and evaluate the performance of the RE-generation forecasting tool. Uniform standards for the preparation and delivery of RE-generation forecasts will be developed and approved. Following these standards and based on expected amount and timing of sunshine, NUC will perform dry runs on how to convert the forecasts in practical operation of the diesel gensets and the BESS to prevent grid instability and power outages. The efficiency of the forecasting tool will be tested and evaluated each time a significant amount of intermittent power generation capacity must be connected to the electric grid and appropriate modifications to the forecasting tool will be carried out.

GEF support is required for the incremental technical assistance for the installation and operation of the RE and EE demos, development of a M&E system, procurement of equipment and measurement instruments, training programs, optimization of the SCADA system and electric grid operation, and development and testing of a forecasting tool.

Component 4: Improvement of Energy Sector Capacity

Outcome 4**:** Improved awareness and capacity of the GoN, private sector and communities about cost-effective application of RE and EE technologies and practices

Output 4.1: Regularly conducted capacity development program on sustainable energy and low carbon development; continuing program on the promotion and awareness enhancement on integrated sustainable energy development

Activity	Description
Activity 4.1.1: Assessment of the current capacity of relevant GoN personnel and stakeholders and identification of gaps and needs to fill	This activity involves the conduct of an assessment of the current capacity of all relevant GoN personnel and stakeholders from the private sector and communities about cost-effective application of RE and EE technologies and measures. The assessment will cover all technologies, whether installed, to be installed or with potential to be installed in the future in Nauru, in order to determine the gaps and needs to be successively filled. Findings/results and recommendations will be documented in an assessment report. The report will be then the basis for the development and establishment of capacity building and training programs.
Activity 4.1.2: Design and implementation of training programs for all relevant GoN personnel (DCIE, NUC, MoF-PAD, community leaders) and stakeholders on	This activity follows and complements Activity 4.1.1 above. About 18-20 relevant GoN personnel, especially from the DCIE, NUC and MoF-PAD, together with community leaders and stakeholders from the private sector will undergo a training program designed *ad-hoc* to educate them about sustainable energy and low carbon development. The participants will also be trained on policies, financial/fiscal incentives available to the private sector in order to be able to provide information to the general public and

sustainable energy and low carbon development	raise awareness on all aspects of sustainable energy and low carbon technology developments.
Activity 4.1.3: Design, implementation and assessment of awareness raising programs on integrated sustainable energy development to increase people participation in the project demos, as well as scale-up and replication projects	Due to the little penetration of RE technologies and to the expensive high energy efficiency household appliances, the general public has little knowledge of the advantages and financial viability of RE/EE technologies. Under this activity, programs are designed to increase people's confidence in low carbon technologies. Information material will be prepared and made available in all public offices (Government buildings, NUC headquarter, etc.). Furthermore, once training programs on different aspects of low carbon development for relevant GoN personnel and key stakeholders have been completed (part of Activity 4.1.2), information windows will be open at DCIE where trained staff will answer questions from the general public to increase their participation into the demo as well as the replication/scale-up projects. A survey will also be prepared and performed at the beginning, mid-term, and end of SMARTEN implementation to monitor and evaluate the success of the awareness raising programs.
Activity 4.1.4: Design and implementation of promotional campaigns and implementation of demand side management in the energy end-use sector	Informative material on demand side management (DSM) will be developed and published for dissemination. These include pamphlets that illustrate to the general public the advantages, both financial and technical, of DSM. The pamphlets will illustrate how consumer behavior about energy demand can be modified through the establishment of adequate financial incentives and by educating people to change their behavior towards energy use. Especially after the addition of the ADB funded solar PV field, people will be incentivized to, and educated about the importance of, shifting demand to hours of maximum solar production, in order to minimize expensive electricity storage systems. DSM will be pursued also through the reduction of energy demand and informative material will be prepared to show the financial benefits of this EE measure. In addition, promotion of DSM will also be done through local media and in public offices.
Activity 4.1.5: Design and implementation of a promotional campaign for the adoption of an Energy Star program modeled on the program designed for the USA	This activity is like Activity 4.1.4 except that the promotional campaign under this activity will educate and stimulate the general public on the advantages of energy efficient technologies. The initiatives will be like the Energy Star program developed in the USA by the Environmental Protection Agency (EPA) and the US Department of Energy to promote energy efficiency in many product categories using standardized methods[24]. Informative material for this activity will show how to reduce energy demand and achieve costs savings by illustrating vis-à-vis comparisons between high energy efficient appliances vs. low efficiency ones (which would encourage people to partake into the financing scheme described under Activity 2.2.1.1), or the advantages of buying an energy efficient vehicle vs a conventional diesel or petrol one. Furthermore, information will be disseminated through local media and public offices also for this activity.

[24] https://www.energystar.gov/

GEF support is required for the incremental technical assistance in the assessment of capacity gaps and needs, design and conduction of training programs, preparation of reports, design and implementation of awareness raising programs, design and conduction of surveys, and preparation of informative material.

Output 4.2: Established and operational information sharing system for the promotion and dissemination of knowledge on all aspects of sustainable energy and low carbon development

Activity	Description
Activity 4.2.1: Establishment and operationalization of an information sharing system on all aspects of sustainable energy and low carbon development for the promotion and dissemination of knowledge	This activity involves the creation of an energy information sharing platform (website, information desks, etc.) where data related to all aspects of sustainable energy and low carbon development will be stored, processed and made available to the general public. This platform and its communication channels are devoted to the general public to inform them about sustainable energy and low carbon development, and for helping them making energy-related decisions, such as: the purchase of a new appliance or a transport vehicle, the installations of an independent solar PV system, the calculation of energy savings associated to RE/EE technologies, etc. The website and the information desk could be housed at and maintained by the energy unit of the DCIE. The operation of the information exchange network will be evaluated a year after it has been finalized and, if required, appropriate modifications will be made.
Activity 4.2.2: Design and implementation of training programs for the designated stakeholders who will operate and maintain the information sharing system	This activity involves the design, organization and implementation of training courses for 10-12 relevant GoN and SOEs staff members on the operation and maintenance of the information sharing system. The training will include how to gather and analyze the energy data, both energy supply and end-user sectors. Participants will become able to interpret and manage energy data and organize the information in tables, graphs and other useful forms to be used for planning, budgeting, project proposals and similar actions. Staff from the bureau of statistics will be engaged in the training program design and implementation.

GEF support is required for the incremental technical assistance in the establishment of an information sharing platform and communication channels, and training programs.

Output 4.3: Established and operational energy supply and consumption monitoring & reporting and database system.

Activity	Description
Activity 4.3.1: Establishment of an energy data banking system to collect and store all energy supply and consumption information, including monitoring and reporting activities as	This activity involves the design and establishment of an energy data banking system, which will be the official repository of data and information on all form of energy supply and demand from all end-user sectors. The database will include monitoring, reporting and verification (MRV) activities and the current status of advancements of all the outstanding NERM activities. In addition, the database will store information about the planned and implemented RE and EE technology applications in the country. The information relative to the RE/EE technology applications and that relative to all energy forms will be stored into two separate modules of

well as status of advancement of the NERM achievements	the main database. The database will be accessible to all energy stakeholders in Nauru and will be used for energy planning and for drafting policies and regulations. The database will be also shared with international donors, implementing partners and consultants when designing and implementing energy related projects. It would be advisable to house the energy database with the energy unit at DCIE. The operation of the database will be evaluated a year after it has been finalized and, if required, appropriate modifications will be made.
Activity 4.3.2: Assessment of gaps in energy data collection (all energy forms and both supply and consumption) and design an energy monitoring and reporting system	This activity involves the conduct of an assessment of the gaps existing in the data collection procedures and systems in the energy supply and energy end-use sectors. The assessment will consider all energy forms and will also include unbilled electricity (i.e., used for public illumination, NUC offices and houses, and for water production usage). Findings/results and recommendations will be documented in an assessment report. The report will be then the basis for the development and establishment of an all-encompassing energy monitoring and reporting system (EMRS). The required measuring devices for the EMRS will be procured and installed. The EMRS will be re-evaluated a year after it has been finalized and, if required, appropriate modifications will be made.
Activity 4.3.3: Design and implementation of training programs for the designated stakeholders who will operate and maintain the energy database and the monitoring and reporting system	This activity entails the design, organization and implementation of two capacity development programs for 10-12 trainees, one on the operation and maintenance of the energy data banking system developed in Activity 4.3.1, and one on the energy monitoring and reporting system that will be established under Activity 4.3.2. The training programs will cover all the features and functioning of the database, as well as the EMRS. Participants in the training program will include all relevant energy stakeholders, such as personnel from DCIE, NUC, DoT, and MoF-PAD. If modifications are made to the EMRS after its assessment, as part of Activity 4.3.2, a follow-up training program to teach the stakeholders the modifications made will be organized.

GEF support is required for the incremental technical assistance in the establishment, operation and maintenance of an energy database, report preparation, training programs and development of an EMRS.

Partnerships

The SMARTEN Project will be implemented in partnership with several stakeholders that also contribute to addressing the development challenges and support the achievement of the GoN energy targets.

Partners	Relevance to SMARTEN and Description of Initiatives
Government of Nauru (GoN)	The Government of Nauru –through all its relevant ministries, departments, and state-owned enterprises– will be the most important partner for the implementation of SMARTEN. The GoN is involved in most of the baseline projects, which will provide the GEF-required co-financing budget, either as implementer of as one of the sponsors. For example, the GoN is responsible for nearly 20% of the US$ 27 M budget for the 6.0 MWac solar PV field; specifically the GoN will cover the expenses for ground preparation and

	other ancillary activities[25]. Relevant government personnel will be involved in numerous SMARTEN activities, among which: (a) establishment, approval and implementation of policies and regulations; (b) participation in several training programs and awareness raising activities; and (c) development of design and implementing plans for replication and scale-up energy projects. Finally, the GoN buildings and offices will be the recipient of several EE measures, since government is the most inefficient electricity end-user.
Asian Development Bank (ADB)	The Asian Development Bank is currently supporting Nauru for the development of a Solar Power Expansion Plan[26] and has undertaken the feasibility study[27] for the design and implementation of a 6.0 MWac (or 6.9 MWdc) solar PV field provided with a 2.5 MWh/5.0 MW battery energy storage system (BESS). Phase 1 of the project will be the ground preparation, a pretty demanding task, considering the limestone pinnacles that cover the majority of Nauru. Phase 2 is the actual installation of the solar PV panels, which are scheduled to be commissioned in 2021. The project has a total budget of US$ 27 M, and ADB will contribute US$ 22 M, with the GoN responsible for the balance. In complying with its mission of promoting socio-economic growth of developing countries in the Asia and Pacific region, ADB normally would lend the funds at favorable conditions. However, since Nauru is not member of the World Bank and is not accredited to access international loans, the funds will be provided in form of a grant.
Climate Technology Centre & Network (CTCN) – United nations Environment Programme (UNEP)	The Climate Technology Centre & Network (CTCN), the operational arm of the United Nation Framework Convention of Climate Change (UNFCCC), is funding a technical assistance project for the transport sector in Nauru. The project aims to fill all the needs and gaps of the transport sector in Nauru, particularly the lack of reliable data as well as the lack of targets and associated action and implementation plans to achieve them. CTCN will provide a threefold assistance, which will cover: (a) provision of background analysis on the road transport sector in Nauru; (b) provision of a policy action plan for low-emissions mobility in Nauru; and (c) capacity building of key stakeholders on low-emissions mobility. The successful completion of the project will allow Nauru to reduce its dependence on imported fossil fuels, with direct financial and environmental benefits. Within the UN organization chart, CTCN is hosted by the United Nations Environment Programme (UNEP), which will act as the implementing partner for this project.
Department of Commerce, Industry and Environment (DCIE) – Ministry of Finance (MoF) – Bendigo Bank	Nauru currently has a high energy efficiency household appliances rebate/loan program under the Low Carbon Islands Project funded by GEF through the International Union for the Conservation of Nature (IUCN) and implemented by NUC. The US$ 80,000 program has had very limited success to date and SMARTEN will revamp it by designing an incremental activity based on the existing low carbon fund. The proposed financing scheme will support high efficiency appliances penetration, by adding other

[25] https://www.adb.org/projects/49450-009/main#project-pds

[26] "*Solar Expansion Plan*", prepared by GHD for ADB, **September 2018**

[27] "*Solar Power Development Project: Feasibility Study*", prepared by GHD for ADB, Draft Report **April 2019**

	appliances, upgrading the budget, refining the scheme and preparing informational and promotional materials. The program will be managed by the GoN through the DCIE and the MoF, acting as signatories, and with the funds kept is a separate account and the Nauru branch of Bendigo Bank
Government of New Zealand Ministry of Foreign Affairs and Trade (GoNZ-MFAT)	The Ministry of Foreign Affairs and Trade of the GoNZ will support Nauru's efforts to achieve perhaps the most ambitious of the three targets set in the NERM, the achievement of 30% energy efficiency in the residential, commercial, industrial and government sectors. The Nauru Energy Efficiency on the Demand Side (NEEDS) initiative will be implemented in stages. The first stage is a design phase, for which a budget of NZ$ 500,000 (US$ 320,000) has been already secured. The second stage is the implementation phase, and the budget of NZ$ 1.0 M (US$ 640,000) a year for 5 years is conditional to the results of phase one.
District and Village Leaders	Nauru is divided into 14 districts, which in turn are further divided in a total of over 150 villages. There are leaders, at both district and village level, who participate into decisions affecting their community, including energy related projects. SMARTEN will involve these community leaders in several training programs, especially for capacity building and awareness raising about RE and EE technologies. Furthermore, consultations with members of the Nauru Community Based Organizations (NCBO) have been held and will continue to be held for the selection of optimal locations for demos and their subsequent implementation. Similarly, in the future, community leaders will be involved in the planning for replication and scale-up projects.

Risks

As per standard UNDP requirements, the Project Manager will monitor risks quarterly and report on the status of risks to the UNDP Country Office. The UNDP Country Office will record progress in the UNDP ATLAS risk log. Risks will be reported as critical when the impact and probability are high (i.e. when impact is rated as 5, and when impact is rated as 4 and probability is rated at 3 or higher). Management responses to critical risks will also be reported to the GEF in the annual Project Implementation Review (PIR).

The risks that might prevent the project objectives from being achieved, during the project implementation, are listed as follows:

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
Incompatible capacity of the implementing partner, DCIE, to implement the project based on the 'significant risk rating' of the micro-HACT assessment of DCIE.	Organizational, Operational	Impact: 4 (high) Likelihood: 4 (high) Risk level: Substantial	Significant risk: This indicates an underdeveloped financial management system or control framework with a significant likelihood of negative impact on the Partner's ability to execute the program in accordance with the work plan. For Partners rated as **significant risk**, Direct Cash Transfers are not viable. Direct Payments or Reimbursement may be used only in selected specifically assessed areas where the Partner's internal controls were deemed adequate in the micro assessment. All other activities must be either through engaging a Responsible Party, such as a government entity or NGO, as a Responsible Party in implementing project	PMU, DCIE	No change

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
			activities. If the estimated cash transfers to the Responsible Party are above $300,000 per program cycle, a micro assessment and assurance activities on the Responsible Party will be required.		
The Project would potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits.	Technical, Operational	I=3 P=1 Low	The project could potentially offer a wide range of opportunities for individuals and groups for example in participating and getting trained in capacity development program activities, or to be hired as a consultant or contractor for the project implementation. Any existing discrimination in the country towards specific gender or groups could continue to come to play through the project. Special measures have been taken to ensure that any potential discrimination against any group (e.g., women) or individuals in the design of the project activities. Special efforts have been carried out to explore and facilitate the inclusion of interventions to enhance the role of women. Examples of these could be special efforts to involve women in productive use of RE activities, to involve women with strong representation at seminar-workshops, and to ensure a significant proportion of project consultants are women.	PMU, DCIE	No change
Demos installed and operated in areas owned and occupied by private entities. *The Project or portions of the Project will be located on private lands*.	Technical, Operational	I=3 P=5 Low	The demos may have to be installed in areas that are not state-owned or owned by private people/entity. In such cases, consultations with the relevant private sector entity will be carried out as a part of the site specific environmental and social impact assessments to be completed prior installation. These will include consultations with individual households and separate consultation meetings for women and men of the relevant communities. Alternatively, the demos can be limited to those that are to be installed in state-owned lands, or are owned and operated by private sector entities that are interested in partnering with the DCIE/NUC in promoting their project as demonstration of how a sustainable energy production project can be designed, financed, engineered, installed and operated as a commercial business.	PMU, DCIE, NCBO	No change
The project would potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services.	Environmental, Operational	I=2 P=3 Moderate	One potential demonstration under the project is the application of decentralized solar PV seawater desalination systems. The installed units may be sited on areas of habitat that could be adversely affected. The NUC is the main supplier of water in the country. Water production in the country is mainly by seawater desalination (electricity driven). The demonstration of decentralized solar energy-based seawater systems in selected districts will have potential environmental impacts during the installation and operation of the water desalination units. The potential environmental impacts during operation are mostly continuous, while those associated with construction activities are temporary and	PMU, DCIE, NUC	No change

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
			mostly reversible. The detailed feasibility studies to be carried out during full project implementation will clearly articulate mitigation measures for any alternation to the coastal environment in district where the desalination units will be installed. Although the installed units are relatively small size, specific mitigation measures are presently available for portable systems that are regarded as best practice with respect to environmental management of such systems, ensuring compliance with the requirements of the applicable environmental legislation relating to environmental aspects. Any other potential impacts and risks including mitigation measures will be elaborated in the limited environmental and social assessments during implementation of solar PV seawater desalination demo and to be completed prior to any physical work beginning on the installation of the required hardware.		
Certain elements of demo project construction, operation, or decommissioning may pose potential safety risks to local communities. *Project could pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials*.	Technical, Environmental, Community Health/Safety/ Working conditions	I=2 P=4 Moderate	Construction aspects and operation of demo solar PV systems (e.g., mini-grid), solar PV-powered water desalination units; and the EE retrofits can pose safety risk. All demos will involve site-specific environmental and social assessments and recommend measures to mitigate the identified safety risks. Appropriate capacity building will be provided to the participants of each demo to ensure that they will be able to properly and safely operate the installed systems in such a way that the release or handling of waste products are properly controlled and managed. This will minimize or avoid any community health risks and safety issues for the communities regarding construction work involved in the installation of the demos, and the minimization and management of waste generated (e.g., spent lead-acid batteries, spent lithium batteries).	PMU, DCIE, NUC	No change
The project would potentially result in the generation of waste (both hazardous and non-hazardous).	Technical, Environmental, Community Health/Safety/ Working conditions	I=3 P=5 Moderate	The construction and operation of the RE-based energy generation (power and non-power applications) demos will generate waste materials. For example, PV panels and batteries will require disposal at end of life. Operation of water desalination plants produce high salinity effluents. EE retrofit projects (e.g., Use of LED lamps to replace CFLs/FLs) will potentially generate hazardous waste, particularly mercury. The demos will be designed considering the potential waste generation and ensuring proper disposal of wastes from the various stages of construction, operation and disposal. Disposal plans will be one of the requirements of the site-specific environmental and social impact assessment that	PMU, DCIE	No change

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
			will be conducted for each of demo. Such plans may be for the disposal of the PV panels and batteries, which contain hazardous wastes, once their useful life is reached. For the EE retrofits, the replacement of old appliances such as refrigerators will require special plans for waste disposal in the E/S assessments. The refrigerators require proper disposal and may involve hazardous substances, particularly the refrigerant. Proper handling of the disposed refrigerants, as well as spent batteries, and Hg in spent CFLs/FLs will be incorporated in the operating manuals of these demo units.		
Weak capacity of the relevant GoN agencies to implement the NERM, which can lead to delays in the implementation, and even non-implementation of some project activities	Technical, Operational	P = 2 I = 4 Moderate	Relevant technical assistance will be provided in coordination with other development partners to assist the GoN in the NERM implementation. Close coordination with other ongoing UNDP-GEF projects in the country will be carried out to take advantage of potential synergies in the management of the project implementation, in addition to UNDP country office support that the GoN can request. UNDP Pacific Office (UNDP PO) will manage and expedite the procurement of external personnel who will work on the affected project activities in case government capacity remains inadequate. If need be, the affected activities may have to be modified to allow expeditious implementation and completion.	PMU, DCIE	No Change
The committed level of co-financing for specific activities of the project is not enough or may not become fully available in time	Financial Political	P = 1 I = 4 Moderate	The project team will work closely with the project partners that are implementing the subsumed baseline activities to either synchronize the schedule of the project implemented and supervised activities with that of the project partners. The project team shall secure GoN assurance of co-funding prior to project start. In case this problem will occur, the reallocation of budget may be considered to support the implementation of affected activities. This may entail the delivery of alternative outputs that will also contribute to the achievement of the relevant project outcome. Constant follow-up with the pertinent co-financers will be conducted either to secure the committed co-financing or negotiate the amount of co-financing.	PMU, DCIE, MoF	No Change
The established enabling conditions for government financing of sustainable energy development actions will not be fully sustained, particularly if there will be continuous reliance to inflows from RPC	Financial Operational	P = 3 I = 2 Moderate	Close coordination with the GoN agency that is involved in the new Nauru Trust Fund established by ADB, to provide the GoN with an investment vehicle for excess funds. The development of a sustainable follow-up plan is part of the project activities. This will be useful for the replication of the demonstrated applicable and feasible EE & RE technologies in the end-use sectors of the country.	PMU, MoF	No Change

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
Relevant GoN agencies fail to approve and enforce formulated policies and regulations	Political Regulatory	P = 3 I = 2 Moderate	Advocacy to gain adequate support from the parliament on the adoption of the formulated policies and regulations will be carried out by the implementing partners, with the assistance of UNDP if necessary. In case this happens, DCIE will facilitate discussions with project stakeholders and relevant government authorities through the Project Board to come up with decisions on expediting the approval, or reformulation, of the recommended policies/regulations.	PMU, DCIE	Reducing
Demonstration hosts may not support promptly and sufficiently the planned demos/pilots	Organizational Technical	P = 1 I = 3 Low	A capable project team comprised of competent local and international experts will be established to assist the DCIE in the project execution and in the coordination of the project implementation with the project partners. If the demo hosts are remiss in their obligations and commitments to the demo implementation, follow-up discussions between DCIE, demo host, other relevant GoN agencies and the UNDP Pacific Office (PO) will be carried out to determine and resolve any issue.	PMU, DCIE, NCBO	No Change
Adverse climate-related events may hamper the implementation of hardware-related activities	Environmental	P = 1 I = 3 Low	Adequate compliance with proper engineering and construction design and construction standards that facilitate not only structural integrity but also climate resilience will be done in the design and implementation of EE/RE activities that involve procurement, design/engineering, installation and operation of EE & RE technology system installations[28]. In case this happens, pre-cautionary and safety procedures will be put in place to at least minimize impacts of gale force winds.	PMU, DCIE	No Change
Political instability weakens energy policy commitment, and change in administration may influence government support for project	Political Regulatory	P = 1 I = 3 Low	UNDP to maintain policy dialogue with both government and opposition and will sustain a high level of consultation throughout implementation, and if necessary, UNDP executive management intervention may be called upon to assist. The DCIE, and other government agencies involved in the project will monitor political dynamics and will try to resolve any misunderstanding within the project. Project Board meetings and special meetings with the DCIE will be conducted in case this is happening, to discuss courses of actions to take to sustain the GON's commitment to support the project and carry out such actions accordingly.	PMU, DCIE	No Change
Low oil prices will reduce interest in RE-based power generation	Strategic	P = 1 I = 2 Low	Awareness raising activities will be designed to include features that will sustain the overall interest of the country in low carbon development and RE-based energy systems even when the oil prices are relatively low. In case of relatively low oil prices, the project will emphasize energy, environment and economic benefits of RE, and the country's objective to reach the NERM targets and its	PMU, MoF, DCIE	No Change

[28] The design and construction of the systems that will be installed will be based on what the major bilateral and multi-lateral donors require for the infrastructure projects they are funding in the Pacific Island region.

Description	Type	Impact & Probability	Mitigation Measures	Owner	Status
			obligation to achieve its climate change mitigation targets in its NDC to facilitate that the interest of the government in low carbon development is sustained.		

A preliminary Social and Environmental Safeguard screening was conducted during the PIF preparation and it has been reviewed and updated during this project design process and it will be submitted separately. The overall social and environmental risk rating of the project is ***moderate***. Because of this rating, all SMARTEN activities will be preceded by the preparation of an Environmental and Social Management Plan (ESMP). Since the completion of the ESMP is propaedeutic to any activities, it is important to complete the plan during the first year of SMARTEN implementation. The activities that will have the strongest impact will be the demo projects. For example:

1. Environmental:
   a. All special waste generated by implementing RE and EE technologies, especially those acquired or traded in with the financing scheme, will have to be properly disposed (i.e., incandescent lightbulbs, low energy efficiency household appliances, solar PV panels, etc.).
   b. Locations for the solar water pump reticulation system does not have a negative impact on the environment, whether the water will come from a well dug in the ground or if it is pipelined from the ocean.

2. Social:
   a. Waste disposal facilities must be chosen without affecting the health and safety of local population.
   b. Selection of the solar water pump reticulation system and schedule of operation of the hybrid public bus must be chosen in order to maximize the benefits of the largest number of people, especially from the lower income groups.

Environmental and social grievances will be reported to the GEF in the annual PIR.

Stakeholder Engagement Plan

Based on the stakeholder analysis, the project's key players include DCIE, NUC, MoF-PAD and related GoN Departments and agencies. They will take active part in the implementation of the SMARTEN project activities while the others will assume either supporting or beneficiary roles.

Stakeholder	Roles and Responsibilities in Project Implementation
Department of Commerce, Industry and Environment (DCIE)	The DCIE has been designated as the implementing partner for SMARTEN and therefore it will assume a leadership role during project implementation providing guidance and supervision. DCIE staff, especially from the newly established Energy Unit, will cooperate closely with the project implementation management team throughout the entire duration of the project and for all activities. The DCIE will be responsible for communication and coordination with the office of the national GEF OFP and UNDP and will liaise with district and village leaders during implementation of the demos. Lastly, they will provide data inputs on plans and programs of the country concerning the energy provision in the projects of the government.

Stakeholder	Roles and Responsibilities in Project Implementation
Nauru Utilities Corporation (NUC)	NUC was established as state owned enterprise in 2011. The national utility manages all assets and is responsible for the generation and distribution of electricity and desalinated water in Nauru. NUC role will be critical in the implementation of SMARTEN's activities related to electricity storage in desalinated water. Its management and staff will work closely with the implementation management team to provide information, support and it will be the recipient of several training programs.
Ministry of Finance (MoF) - Planning and Aid Division (PAD)	The role of the MoF-PAD will be pivotal for the development, approval and enforcement of fiscal and financial incentives to support the development of RE and EE technologies and measures. The MoF is also responsible for the purchase of all fossil fuels from Vital and is repository of information on all socio-economic activities in Nauru (e.g., RPCs, RONPHOS, etc.). Relevant personnel from the MoF and its planning and Aid Division will also be the recipient of training programs.
Department of Transportation (DoT)	The DoT will be involved in the activities concerning the procurement of a hybrid diesel-electric bus, which will serve a double purpose: (a) the facilitation of a public transportation system in Nauru; and (b) the promotion of implementation of environmentally friendly vehicles. Similarly, to most stakeholders involved, staff members will be trained through some of the programs that will be planned and delivered under SMARTEN.
Nauru Bureau of Statistics (NBoS)	The Nauru Bureau of Statistics will be involved during SMARTEN implementation activities. Their services, expertise and database of information will be especially useful for the success of the demonstration projects, for the data gathering and monitoring required for the design of the M&E system, and for the establishment, operation and maintenance of the energy information sharing platform as well as the energy data banking system. Staff members will be involved in several training initiatives.
Vital Energy Corporation	Vital is not a Nauruan company and they only provide fossil fuels and maintain the fuel tanks. However the company will continue to provide data inputs on plans and programs of the country concerning petroleum fuel supply and consumption in Nauru.
Community Leaders (districts and villages)	The community leaders have provided, and will continue to provide, their support for the selection of the location of the solar water pump reticulation demo. Furthermore, leaders from the 14 districts and from the villages will play a crucial role for the design, planning and replication of the RE/EE technologies demonstrated under SMARTEN.
NGO, Social community and the other social/civic groups	The project will also involve civil society organization such as the Women's Group, which will support and facilitate a gender inclusive project implementation and empowerment of women in low carbon development.
Private Sector Entities	Provision of technical advice in the design and development of possible scale-up and replication projects for public/private partnerships that have been demonstrated under the project, including provision of co-financing to specific project activities.
Nauru Population	The entire population of Nauru will be involved in the awareness activities that will be organized and implemented under SMARTEN. They will all be beneficiaries of improved water desalination sector as well as more sustainable electricity generation systems.

Gender Equality and Empowering Women:

Nauruan women working in both management and technical departments of GoN agencies/institutions will have opportunities for direct involvement in the design and implementation of the proposed GEF

project. Women who are in, or are qualified for, technical positions in the government and in the private sector can play important roles in the implementation of this project. During the design and development of this detailed project proposal, a thorough gender analysis has been conducted and the results will be presented separately. Furthermore, many activities have been designed in a gender inclusive way, supporting women equality in the sustainable energy development of the country. For example, the financing scheme introduced in Activity 2.2.1.1 will support women-led businesses and enhance the role and influence of women in the deployment of RE and EE technology and measures, as well as other applicable low carbon technologies and climate change mitigation options. A similar gender inclusive approach, which will help foster and support women empowerment, will be adopted for the entire duration of the project implementation phase, which will be also supported by the development of gender-sensitive policies in the efforts to achieve and sustain the NERM targets.

South-South and Triangular Cooperation (SSTrC):

Learning opportunities and technology transfer from peer countries will be further explored during project implementation. To present opportunities for replication in other countries, the project will codify good practices and facilitate dissemination through global ongoing South-South and global platforms, such as Africa Solutions Platform, the UN South-South Galaxy knowledge sharing platform and PANORAMA[29].

In addition, to bring the voice of Nauru to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNDP could support engagement with the global development discourse on climate change mitigation. The project will furthermore provide opportunities for regional cooperation with countries that are implementing initiatives on sustainable low carbon development in geopolitical, social and environmental contexts relevant to the proposed project in Nauru.

Innovativeness, Sustainability and Potential for Scaling Up:

Innovativeness: Achieving the %RE electricity target does not mean that this will only be realized through the installation of RE-based power generation facilities in NUC. Decentralized RE-based energy systems (e.g., solar PV power desalination units in districts and small rooftop solar PV systems) will also be contributing to that, and so is the widespread practice of energy efficiency in the end-use sectors. These will bring about reduced electricity demand, which indirectly help make the 50% RE electricity target easier to achieve. In addition, novel and more cost-effective energy storage system (e.g., the proposed demo on electricity storage in desalinated water) will also facilitate the achievement of that target. The planning, funding and actual deployment of decentralized RE-based energy systems, energy storage system and large-scale EE technology applications in the country can be optimally carried out through energy-integrated development planning, which in the Nauruan context, is a new approach. Presently, the electricity and water supply infrastructure planning in the country are mainly the purview of the NUC. However, if the involvement of the end-users (e.g., financing from the private sector and communities) in the successful implementation of the NERM is encouraged, a clearer and more holistic development planning that takes into consideration the energy and environmental impacts of all development plans and actions, is required. This is among the innovations that the proposed project will be bringing into the country. Part and parcel of this approach is the promotion of community-based and private sector-financed and commercial business operated energy service provision. This novel approach is aimed at achieving the objectives of the NERM. Such approach is innovative in the sense that presently, the policies

[29] https://panorama.solutions/en

and regulations that will facilitate community-based, private sector-financed RE-based electricity systems, as well as energy-integrated development planning are non-existent. Again, in the context of Nauru, another innovation is the initiative to improve the availability/access to financial resources (local and foreign) for financing RE and EE projects, through the development of financing schemes and other financial instruments that consider the current limitations, arrangements and programs of the GoN for financially supporting socio-economic development. The project will involve interventions that will enable the establishment of grid-connected and/or decentralized RE-based energy systems in the country, and for improving the energy efficiency and energy storage in the electricity end use sectors as ways of achieving RE and EE targets in the NERM.

Sustainability: The proposed project involves, among others, the showcasing of the application of feasible energy generation, energy storage and energy efficiency technologies, along with enabling activities that will facilitate the smooth and sustained operation of these demonstrations. Each of the interventions that involve the planning, design, engineering, installation, operation and maintenance of RE-based energy generation and energy storage systems, will be supported by appropriate schemes that will sustain their continuous operation, thereby realizing the expected energy savings and associated GHG emission reductions. For example, business plans for the operation of grid-connected, and decentralized solar PV power generation systems, or community-based solar PV-powered water desalination systems will be prepared and implemented to ensure sustainability. The necessary enabling conditions that will encourage/motivate interested investors to actively and continuously participate in the development of the country's electricity sector will be developed, implemented and sustained. To facilitate sustainability of these actions, the appropriate supportive policies/regulations and institutional mechanisms will be developed, adopted, and enforced, thereby ensuring the expected follow through from the stakeholders. And this follow through will be in terms of the increased interest in investing in and implementing RE & EE technology applications in the country. To facilitate financial support for future RE & EE efforts, the project team will coordinate with the relevant GoN agency(ies) on the optimal compliance with the country's financial reform program to catalyze new investments in RE & EE technology applications. The appropriate actions to facilitate sustainability of the policies, regulations, and institutional frameworks that will be established and enforced/implemented will be determined during the project preparation stage of this proposed project.

Potential for Scaling-up: The installation and operation of new solar PV energy generation systems either for electricity production or for non-power applications (e.g., water desalination, water pumping) are intended to demonstrate their benefits, viability and cost-effectiveness so that these can be replicated by others (e.g., private sector entity, community or household) or scaled-up. The successful demonstration of the application of RE & EE technologies (for power and non-power applications) in this proposed project can be expanded or replicated in the other districts of the country if the enabling conditions (in terms of policies, regulations and incentives) are there and are sustained. For example, a successful demo on solar PV water desalination and water distribution in one community, can potentially be expanded (e.g., addition of another unit) to include also the people in the adjacent community. Furthermore, best practices that will come out from the interventions that will be carried out in the project can also be shared with other PICs and SIDS with similar circumstances as Nauru.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): SDG 7: "Ensure access to affordable, reliable, sustainable and modern energy for all"; SDG 13: "Take urgent action to combat climate change and its impacts by regulating emissions and promoting developments in renewable energy";				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): *UN Pacific Strategy 2018-2022*: Outcome 1 – Climate Change, Disaster Resilience and Environmental Protection; *UNDP Sub-Regional Programme Document 2018-2022*: Outcome 1 – By year 2022, people and ecosystems in the Pacific are more resilient to the impacts of climate change, climate variability and disasters; and environmental protection is strengthened.				
	Objective and Outcome Indicators	**Baseline**	**Mid-term Target**	**End of Project Target**
Project Objective: Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets	Cumulative GHG emission reduction from fossil fuel utilization in the ***electricity sector***, tons CO_2	0	15,867	43,858
	Cumulative reduction in fossil fuel consumption due to implemented RE and EE technology projects as influenced by the project interventions, toe	0	5,048	13,955
	% RE electricity production	3.0%	45.3%	47.4%
	No. of individuals that are gainfully employed in new jobs created due to the application of RE and EE technologies in the country: Direct: * Male: * Female Indirect: * Male * Female:	0 0 0 0 0	12 4 4 2 2	36 12 12 6 6
Component 1:	**Energy Policy & Regulatory Framework Strengthening**			
Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use	% planned NERM 2018-2020, and revisions, activities that are implemented	0%	30%	95%
	No. of planned energy-integrated socio-economic development activities (e.g., in the districts) that feature RE and EE technology applications	0	1	3
	No. of new policies and regulations drafted, approved and implemented to cover the changing RE/EE sector	0	2	3
Outputs to achieve Outcome 1	Output 1.1: Formulated, approved and enforced policy and regulatory instruments (standards, policies and implementing rules and regulations) on the application of RE & EE technologies in the energy and energy end use sectors Output 1.2: Revised and updated energy policy framework (NEPF) , National Energy balance (NEB) and roadmap (NERM) and policies and regulations to achieve NERM targets Output 1.3: Approved and implemented fully budgeted national energy plan			
Component 2:	**Supporting RE & EE Initiatives**			
Outcome 2.1: Cohesive institutional mechanisms for facilitating widespread	No. of GoN agencies/entities that coordinate with the DCIE their energy-related plans and activities	0	3	3
	No. of districts that coordinate with the DCIE the planning and implementation of the energy-related	0	3	8

application of RE & EE technologies in the country	activities of the communities and private sector entities within their area			
	No. of jointly-implemented projects or collaborative initiatives carried out by the DCIE with other GoN entities (e.g., NUC, RONPHOS), private sector and public on sustainable energy and low carbon development	0	2	5
Outputs to achieve Outcome 2.1	Output 2.1.1: Well-coordinated planned and implemented RE/EE Projects of the GON, private sector and communities Output 2.1.2: Approved and implemented energy-integrated development projects in the end-use sectors including the mining industry and the regional processing centers Output 2.1.3: Established and operational institutional framework that supports the implementation of low carbon (EE & RE) development policies, standards and IRRs			
Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country	No. of RE and EE financial schemes, as well as fiscal and financial incentives, developed and adopted for supporting RE and EE initiatives in the country	0	2	2
	No. of women-led/owned and youth group operated businesses that benefited from the financing schemes, and fiscal and financial incentives	0	1	4
	No. of EE and RE technology projects financed either through the adopted financing scheme, and fiscal and financial incentives; or by private sector investment	0	3	8
Outputs to achieve Outcome 2.2	Output 2.2.1: Feasible financial support schemes for RE & EE technologies application projects in the energy end-use sectors, inclusive of the implementation arrangements, and procedures for financial assistance application process Output 2.2.2: De-risked RE-based power generation and grid stability projects, grid-connected or decentralized RE-based energy generation at the district level, inclusive of business plans for the GON and private sector to facilitate financing and implementation			
Component 3:	**Promotion of RE & EE Technologies Applications**			
Outcome 3: Improved confidence in, and application of, RE & EE technologies	No. of replication and scale-up RE and EE technology projects planned and implemented by the GoN to achieve the NERM targets	0	2	5
	Cumulative amount of energy savings from the successfully installed and operational demonstration RE and EE technology application projects, ktoe	0	66.1	200.0
	No. of RE and EE technologies application projects designed and financed by the private sector for implementation as influenced by the results and outcomes of the demonstrations implemented under the project	0	1	5
Outputs to achieve Outcome 3	Output 3.1: Documented and disseminated reports about the energy performance and impact assessments of implemented demonstrations Output 3.2: Approved implementation designs and plans for the replication and/or scale up of demonstrated RE & EE technologies applications Output 3.3: Established and operational energy audit system covering all energy end-use sectors			

	Output 3.4: Completed engineering designs and implementation plans of the identified demonstrations of RE & EE technologies applications in the energy generation and end-use sectors Output 3.5: Implemented and operational RE & EE technologies application demos			
Component 4:	**Improvement of Energy Sector Capacity**			
Outcome 4: Improved awareness and capacity of the GON, private sector and communities about cost-effective application of RE and EE technologies and practices	No. of RE and EE technology application projects designed, implemented and maintained by NUC and district communities	0	2	6
	No. of sustainable energy projects implemented by the private sector and district communities with funding sourced from the private sector and other development partners	0	1	3
	No. of consumers/users in the energy end-use sectors that are utilizing EE appliances and RE-based energy generating and consuming equipment	0	350	1,390[30]
Outputs to achieve Outcome 4	Output 4.1: Regularly conducted capacity development program on sustainable energy and low carbon development; continuing program on the promotion and awareness enhancement on integrated sustainable energy development Output 4.2: Established and operational information sharing system for the promotion and dissemination of knowledge on all aspects of sustainable energy and low carbon development Output 4.3: Established and operational energy supply and consumption monitoring & reporting and database system			

[30] This indicator has been evaluated in the Description of Investment Type Activities and Demonstrations report

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex 3 details the roles, responsibilities, frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[31]. The costed M&E plan included below, and the Monitoring plan in Annex 3, will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report:
A project inception workshop will be held within 60 days of project CEO endorsement to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project management unit, and the various identified project stakeholders, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

[31] See https://www.thegef.org/gef/policies_guidelines

GEF Project Implementation Report (PIR):
The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

Knowledge management:
The project team will ensure extraction and dissemination of lessons learned and good practices to enable adaptive management and upscaling or replication at local and global scales. Results will be disseminated to targeted audiences through relevant information sharing fora and networks. The project will contribute to scientific, policy-based and/or any other networks as appropriate (e.g. by providing content, and/or enabling participation of stakeholders/beneficiaries)

GEF and/or LDCF Core Indicators:
The GEF and/or LDCF/SCCF Core indicators included as Annex 9 will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent ground truthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website. The required Protected Area Management Effectiveness Tracking Tool (METTs) have been prepared and the scores include in the GEF Core Indicators.

Independent Mid-term Review (*MTR*):
The terms of reference, the review process and the final MTR report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired by UNDP evaluation specialists to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and will be posted on the UNDP ERC by January 31st, 2022. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

Terminal Evaluation (TE):
An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance prepared by the UNDP IEO for GEF-financed projects available on the UNDP Evaluation Resource Center.

The evaluation will be 'independent, impartial and rigorous'. The consultants that will be hired by UNDP evaluation specialists to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the consultants should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the UNDP-GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by 30 December 2023. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

Final Report:
The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information: To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[32] and the GEF policy on public involvement[33].

Monitoring and Evaluation Plan and Budget			
GEF M&E requirements	**Responsible Parties**	**Indicative Costs (US$)**	**Time Frame**
Inception Workshop	Implementing Partner (DCIE) Project Manager	10,000	Within 60 days of CEO endorsement of this project. Cannot be charged to GEF Fee.
Inception Report	Project Manager	5,000	Within 90 days of CEO endorsement of this project. Cannot be charged to GEF Fee.
Monitoring of indicators in project results framework	Project Manager will oversee national institutions/agencies charged with collecting results data.	4,000 per year	Annually prior to GEF PIR. This will include GEF core indicators. Cannot be charged to GEF Fee.
GEF Project Implementation Report (PIR)	Regional Technical Advisor UNDP Country Office	None	Annually typically between June-August

[32] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[33] See https://www.thegef.org/gef/policies_guidelines

Monitoring and Evaluation Plan and Budget			
GEF M&E requirements	**Responsible Parties**	**Indicative Costs (US$)**	**Time Frame**
	Project Manager		
Monitoring all risks (Atlas risk log)	Project Manager	2,500 per year	On-going. Cannot be charged to GEF Fee.
Monitoring of social and environmental safeguard screening	Project Safeguards Officer	2,500 per year	On-going. Cannot be charged to GEF Fee.
Monitoring of stakeholder engagement plan	Project Stakeholder Engagement Officer	2,500 per year	On-going. Cannot be charged to GEF Fee.
Monitoring of gender action plan	Project Gender Officer	2,500 per year	On-going. Cannot be charged to GEF Fee.
Project Board Meetings	Implementing Partner (DCIE) Project Manager	2,000 per year	Annually. Cannot be charged to GEF Fee.
Reports of Project Board Meetings	Implementing Partner (DCIE) Project Manager	None	Annually. Cannot be charged to GEF Fee.
Lessons learned and knowledge generation	Project Manager	4,000 per year	Annually. Cannot be charged to GEF Fee.
Supervision missions	UNDP Country Office	None	Annually
Oversight missions	UNDP-GEF RTA and UNDP-GEF Directorate	None	Troubleshooting as needed
Mid-term GEF and/or LDCF/SCCF Core indicators and METT or other required Tracking Tools	Implementing Partner (DCIE, NUC, DoF-PAD, NBoS, Community Leaders) Project Manager	10,000	Before mid-term review mission takes place. Cannot be charged to GEF Fee.
Independent Mid-term Review (MTR) and management response	UNDP Evaluation Specialists and independent evaluation consultants.	30,000	Between 2nd and 3rd PIR Only oversight can be charged to the GEF Fee.
Terminal GEF *and/or LDCF/SCCF* Core indicators *and METT or other required Tracking Tools*	Implementing Partner (DCIE) Project Manager	10,000	Before terminal evaluation mission takes place Cannot be charged to GEF Fee.
Independent Terminal Evaluation (TE) and management response	UNDP Evaluation Specialists and independent evaluation consultants.	30,000	At least three months before operational closure Only oversight can be charged to the GEF Fee.
Translation of MTR and TE reports into English	UNDP Country Office	None	Cannot be charged to GEF Fee.
TOTAL indicative COST Excluding oversight/project assurance costs.		175,000	

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

Implementing Partner: The Implementing Partner for this project is the Department of Commerce, Industry and Environment (DCIE)

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Risk management as outlined in this Project Document.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan.
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Responsible Parties: During the 4-year implementation period of the SMARTEN Project, the DCIE, as the implementing partner will require the cooperation and services of several responsible parties to implement or support the implementation of the project activities.

NUC will be involved in as recipient of many training programs, and it will be actively responsible for the "*Storage of excess solar PV generated electricity in desalinated water*" demo, since the water desalination system will be integrated with existing NUC managed equipment, NUC will also be asked to be responsible for the O&M of this demo. NUC will also provide data and information concerning electricity generation and consumption, as well as water desalination and distribution.

DoT contribution will be requested for the operation of the "*Hybrid diesel-electric bus for public transportation*", since the ultimate goals of this demo are to support the DoT in the development of a public transportation system as well as in reducing the fossil fuel consumption for land transportation. To better provide O&M of the hybrid bus and ancillary equipment (e.g., batteries and charging station), the DoT personnel will be the recipient of training programs designed ad-hoc.

MoF and Bendigo Bank will team up with the DCIE to operate the financing scheme for RE and EE technologies and measures, particularly the MoF will be co-signatory together with the DCIE, while Bendigo bank will manage the account where the finds are kept and disbursed. In addition, the MoF will also have a pivotal role in the establishment, approval and enforcement of fiscal and financial incentives.

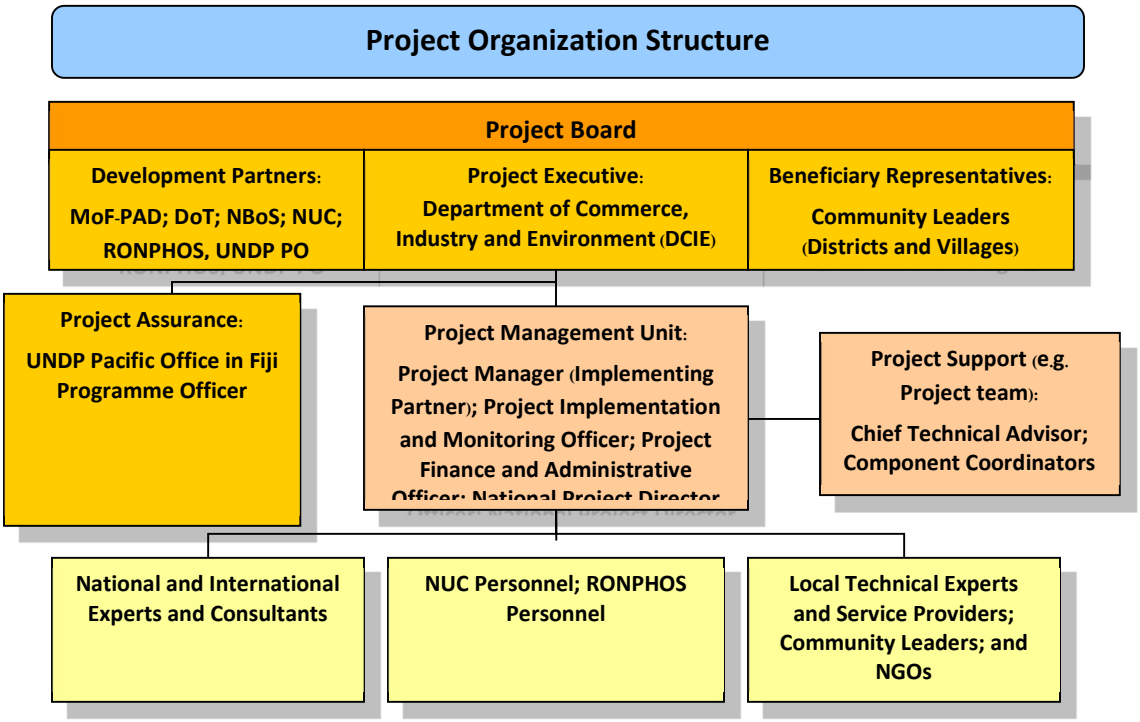
NBoS will be engaged primarily in the creation, operation and maintenance of the information sharing platform as well as the energy data banking system. The numerical and analytical skills of the bureau's employees will be a valuable resource also for the preparation of the National Energy Balance.

Department of Water & Sanitation will cooperate in the implementation of the "*Mini solar powered treated water production and distribution system*" demo. This will be particularly important since the department can then lead the replication and scale-up of this demo, which has a very large potential to be applied to other villages and community, and potentially to the entire country that does not have a water reticulation system.

Project stakeholders and target groups: for project stakeholders and target groups refer to the Stakeholder Engagement Plan section of Chapter IV and to Annex 4.

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is responsible for the Project Assurance role of the Project Board/Steering Committee.

Project Organization Structure:



Project Board: The Project Board is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Board

decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

Specific responsibilities of the Project Board include:

- 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 on new project risks and agree on possible mitigation and management actions to address specific risks.
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded.
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Ensure coordination between various donor and government-funded projects and programs.
- Ensure coordination with various government agencies and their participation in project activities.
- Track and monitor co-financing for this project.
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year.
- Appraise the annual project implementation report, including the quality assessment rating report.
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project.
- Review combined delivery reports prior to certification by the implementing partner.
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans.
- Address project-level grievances.
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses.
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

The composition of the Project Board must include the following roles:

a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implemented projects. The Project Executive is: Department of Commerce, Industry and Environment

   The Executive is ultimately responsible for the project, supported by the Beneficiary Representatives and the Development Partners. The Executive's role is to ensure that the project is focused throughout its life cycle on achieving its objectives and delivering outputs that will contribute to higher level outcomes. The Executive must ensure that the project gives value for money, ensuring cost-

conscious approach to the project, balancing the demands of Beneficiary Representatives and Development Partners.

Specific Responsibilities: (as part of the above responsibilities for the Project Board)

- Ensure that there is a coherent project organization structure and logical set of plans.
- Set tolerances in the AWP and other plans as required for the Project Manager.
- Monitor and control the progress of the project at a strategic level.
- Ensure that risks are being tracked and mitigated as effectively as possible.
- Brief relevant stakeholders about project progress.
- Organize and chair Project Board meetings.

b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representative (s) is/are: Community Leaders (districts and villages)

The Beneficiary Representatives are responsible for validating the needs and for monitoring that the solution will meet those needs within the constraints of the project. The Beneficiary Representative role monitors progress against targets and quality criteria. This role may require more than one person to cover all the beneficiary interests. For the sake of effectiveness, the role should not be split between too many people.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Prioritize and contribute beneficiaries' opinions on Project Board decisions on whether to implement recommendations on proposed changes.
- Specification of the Beneficiary's needs is accurate, complete and unambiguous.
- Implementation of activities at all stages is monitored to ensure that they will meet the beneficiary's needs and are progressing towards that target.
- Impact of potential changes is evaluated from the beneficiary point of view.
- Risks to the beneficiaries are frequently monitored.

c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partners are: MoF-PAD, DoT, NBoS, NUC, RONPHOS, and UNDP PO.

The Development Partners' primary function within the Board is to provide guidance regarding the technical feasibility of the project.

Specific Responsibilities (as part of the above responsibilities for the Project Board)

- Make sure that progress towards the outputs remains consistent from the Development Partners perspective.
- Promote and maintain focus on the expected project output(s) from the point of view of project development management.
- Ensure that the technical and financial resources required for the project are made available.

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- Contribute technical and financial opinions on Project Board decisions on whether to implement recommendations on proposed changes.
- Arbitrate on, and ensure resolution of, any technical and financial priority or resource conflicts.

d. Project Assurance: UNDP performs the quality assurance role and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of the Project Management function.

Project Manager: The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the Project Board. The Implementing Partner appoints the Project Manager, who must be different from the Implementing Partner's representative in the Project Board.

The Project Manager's primary responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The Project Manager will inform the Project Board and the Project Assurance roles of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted. The Project Manager will remain on contract until the Terminal Evaluation report and the corresponding management response have been finalized and the required tasks for operational closure and transfer of assets are fully completed.

Specific responsibilities include:

- Manage the overall conduct of the project.
- Plan the activities of the project and monitor progress against the approved workplan.
- Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.
- Monitor events as determined in the project monitoring plan and update the plan as required.
- Provide support for completion of assessments required by UNDP, spot checks and audits.
- Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form.
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.
- Monitor progress: watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.
- Ensure that changes are controlled, and problems addressed.
- Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.
- Prepare and submit financial reports to UNDP on a quarterly basis.
- Manage and monitor the project risks – including social and environmental risks - initially identified and 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.
- Capture lessons learned during project implementation.

- Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.
- Prepare the inception report no later than one month after the inception workshop.
- Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.
- Prepare the GEF PIR.
- Assess major and minor amendments to the project within the parameters set by UNDP-GEF.
- Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans.
- Monitor and track progress against the GEF Core indicators.
- Support the Mid-term review and Terminal Evaluation process.

Project extensions: The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs during the extension period must be covered by non-GEF resoruces.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is 26,067,968. This is financed through a GEF grant of *USD* 3,302,968*, USD 100,000 in grant co-financing by UNDP* and USD 22,765,000 in parallel co-financing. UNDP as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Confirmed Co-financing: The actual realization of project co-financing will be monitored during the mid-term review and terminal evaluation process and will be reported to the GEF. Co-financing will be used for the following project activities/outputs:

Co-financing source	Co-financing type	Co-financing amount (US$)	Planned Co-financing Activities/Outputs	Risks	Risk Mitigation Measures
DCIE	Grant	250,000	***Water Tanks Procurement:*** As part of the government (DCIE) efforts to strengthen its water security, water tanks will be procured and distributed to all districts	Government (DCIE) diverts funds to other uses	Facilitate through government procurement system as national priority
	Grant	320,000	***NEEDS Initiative:*** GoNZ-MFAT is providing technical assistance to the DCIE to select the most promising EE projects and measures from an existing shortlist that will enable Nauru to improve its EE	The technical assistance is currently being provided and there are no identified risks to prevent its completion	N/A
	Grant	15,000	***Sustainable Land Transport for Nauru:*** CTCN is supporting the DCIE in the assessment of the transport sector in Nauru with the objective to reduce the reliance on fossil fuels for the land transportation	The donor changes its priorities or delays the disbursement of the funds	Support the DCIE in liaising with CTCN to secure the budget
NUC	Grant	80,000	***Low Carbon Fund:*** This is an existing financial scheme operated and managed by the NUC to financially support the purchase of energy efficient appliances (washing machines and fridges) by households	The scheme will not be completed because energy and cost savings are not clearly quantified to the general public	Informative campaign to show the energy and cost advantages of RE/EE technologies is readily organized as part of SMARTEN
	Grant	22,000,000	***Solar Expansion Plan:*** This is an ADB-funded project of	Project may get delayed if the	There is no identified direct

			the NUC involving the installation and operation of a 6.0 MWac solar PV system supported by a 2.5MWh/5.0MW battery energy storage system, which will allow Nauru to get close to its 50% electricity from RE target	propaedeutic ground preparation stage conducted by the NUC incur in some hiccups	risk or mitigation measure for ADB, but it refers to the GoN (NUC) portion of the project
UNDP	Grant	100,000	Project management and M&E	None	N/A
Total		**22,765,000**			
Grant		**22,765,000**			
In-Kind		**0**			

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board. Should the following deviations occur, the Project Manager and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF: a) Budget re-allocations among components in the project with amounts involving 10% of the total project grant or more; b) Introduction of new budget items/or components that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen with 3 months of posting the TE report to the UNDP ERC**. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be

prepared and kept on file. The transfer should be done before Project management Unit (team) complete their assignments.

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the UNDP-GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the UNDP-GEF Directorate in New York. No action is required at CO level on the actual refund from UNDP project to the GEF Trustee.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	**00112930**	Atlas Output ID:	**00111222**
Atlas Proposal or Award Title:	Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)		
Atlas Business Unit	FJI10		
Atlas Primary Output Project Title	Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)		
UNDP-GEF PIMS No.	PIMS 6188		
Implementing Partner	In Nauru: Department of Commerce, Industry and Environment (DCIE)		

Atlas Activity (GEF Component)	**Atlas Implementing Agent (Responsible Party , IP or UNDP)**	**Atlas Fund ID**	**Donor Name**	**Atlas Budgetary Account Code**	**ATLAS Budget Account Description**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Total (USD)**	***See Budget Note:***
COMPONENT 1: Energy Policy & Regulatory Framework Strengthening											
Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use	**DCIE**	**62000**	**GEF**	71200	International Consultants	14,000	23,800	4,200	4,200	46,200	*1*
				71300	Local Consultants	4,200	6,300	2,100	1,500	14,100	*2*
				71600	Travel	2,000	2,000			4,000	*3*
				75700	Training, Workshops and Conferences		6,000	4,000	4,000	14,000	*4*
				74500	Miscellaneous Expenses		200	92	92	384	*5*
					Total Component 1	**20,200**	**38,300**	**10,392**	**9,792**	**78,684**	
COMPONENT 2: Supporting RE & EE Initiatives											
Outcome 2.1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country	**DCIE**	**62000**	**GEF**	71200	International Consultants	11,900	25,200	6,300	1,400	44,800	*6*
				71300	Local Consultants	3,900	5,400	1,800	2,700	13,800	*7*
				71600	Travel		3,000		2,000	5,000	*8*
				75700	Training, Workshops and Conferences		6,000		6,000	12,000	*9*
				74500	Miscellaneous Expenses	400	400	400	400	1,600	*10*
					Sub-total Outcome 2.1	**16,200**	**40,000**	**8,500**	**12,500**	**77,200**	

Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country	**DCIE**	**62000**	**GEF**	71200	International Consultants	27,300	19,600	4,200		51,100	*11*
				71300	Local Consultants	5,400	4,500	1,500	3,000	14,400	*12*
				71600	Travel	3,000	3,000			6,000	*13*
				72100	Contractual Services - company	50,000	90,000	100,000	100,000	340,000	*14*
				75700	Training, Workshops and Conferences		8,000		8,000	16,000	*15*
				74500	Miscellaneous Expenses	500	750	500	750	2,500	*16*
					Sub-total Outcome 2.2	**86,200**	**125,850**	**106,200**	**111,750**	**430,000**	
					Total Component 2	**102,400**	**165,850**	**114,700**	**124,250**	**507,200**	
COMPONENT 3: Promotion of RE & EE Technologies Applications											
Outcome 3: Improved confidence in, and application of, RE & EE technologies	**DCIE**	**62000**	**GEF**	71200	International Consultants	107,800	95,200	77,000	43,400	323,400	*17*
				71300	Local Consultants	9,000	9,000	9,000	7,800	34,800	*18*
				71600	Travel	2,500	2,500	2,500	2,500	10,000	*19*
				72200	Equipment and Furniture	164,000	597,000	796,000	358,000	1,915,000	*20*
				72800	Information Tech. Equipment	6,000	6,000			12,000	*21*
				75700	Training, Workshops and Conferences		15,000	36,000	36,000	87,000	*22*
				72300	Materials & Goods			7,500	7,500	15,000	*23*
				72500	Supplies	1,000	1,000	1,000	1,000	4,000	*24*
				74500	Miscellaneous Expenses	325	325	325	325	1,300	*25*
					Total Component 3	**290,625**	**726,025**	**929,325**	**456,525**	**2,402,500**	
COMPONENT 4: Improvement of Energy Sector Capacity											
Outcome 4: Improved awareness and capacity of the GON, private sector and communities about cost-effective application of RE and EE technologies and practices	**DCIE**	**62000**	**GEF**	71200	International Consultants	11,900	36,400	9,800	1,400	59,500	*26*
				71300	Local Consultants	1,800	6,600	4,500	3,300	16,200	*27*
				71600	Travel		2,000	2,000		4,000	*28*
				75700	Training, Workshops and Conferences		6,000	8,000	4,000	18,000	*29*

				71400	Contractual Services-individual	15,000		7,000	7,000	29,000	*30*
				73300	Rental & Maintenance of IT Equipment		5,000	15,000	5,000	25,000	*31*
				74200	Audio Visual & Print Prod Costs	1,500	1,500	1,000	1,000	5,000	*32*
				74500	Miscellaneous Expenses	150	150	150	150	600	*33*
					Total Component 4	**30,350**	**57,650**	**47,450**	**21,850**	**157,300**	
Project management costs	DCIE	**62000**	**GEF**	71400	Contractual Services-Individuals	21,039	21,039	21,039	21,039	84,156	*34*
				71200	International Consultants		15,000		15,000	30,000	*35*
				71300	Local Consultants		15,000		15,000	30,000	*36*
				74100	Professional Services	2,500	2,500	2,500	2,500	10,000	*37*
				71600	Travel	500	500	500	500	2,000	*38*
				72500	Office Supplies	282	282	282	282	1,128	*39*
					Total Project Management	24,321	54,321	24,321	54,321	**157,284**	
					PROJECT TOTAL	**467,896**	**1,042,146**	**1,126,188**	**666,738**	**3,302,968**	

Summary of Funds:

Fund Source	Amount Year 1	Amount Year 2	Amount Year 3	Amount Year 4	Total
GEF	467,896	1,042,146	1,126,188	666,738	3,302,968
UNDP	25,000	25,000	25,000	25,000	100,000
Government of Nauru	5,666,250	5,666,250	5,666,250	5,666,250	22,665,000
TOTAL	6,159,146	6,733,396	6,817,438	6,357,988	26,067,968

Budget Notes

No.	Explanation
1	International consultants: US$ 46,200 (to include fee, travel expenses and DSA) for 66 working days at US$ 700 per working day (multiple activities could be conducted by one consultant), including:
	• 23 working days for activities under Output 1.1: to formulate energy policies and regulatory instruments and for the development of an incentive framework (US$ 16,100)
	• 27 working days for activities under Output 1.2: to review background documents, revise and update national energy strategies and plans, to design and conduct training program on national energy balance, and formulate policies and regulatory instruments (US$ 18,900)

	• 16 working days for activities under Output 1.3: to establish national energy plans, to design and conduct training program on energy planning and financing, and periodically review achievements (US$ 11,200)
2	National consultants: US$ 14,100 for 47 working days at US$ 300 per working day (multiple activities could be conducted by one consultant), including:
	• 19 working days for activities under Output 1.1: to formulate energy policies and regulatory instruments, and for the development of an incentive framework (US$ 5,700)
	• 16 working days for activities under Output 1.2: to review background documents, revise and update national energy strategies and plans, to design and conduct training program on national energy balance, and formulate policies and regulatory instruments (US$ 4,800)
	• 12 working days for activities under Output 1.3: to establish national energy plans, to design and conduct training program on energy planning and financing, and periodically review achievements (US$ 3,600)
3	US$ 4,000 travel cost associated with consultation with key stakeholders of the project, national agencies and responsible persons in national energy development, planning and development, coordinating with government agencies for adoption and implementation of the policy measures.
4	US$ 14,000 for the organization and implementation of training programs for stakeholders from GoN departments, SOEs and district communities related to national energy balance, as well as energy planning and financing (US$ 6,000 for Activity 1.2.3 and US$ 8,000 for Activity 1.3.2).
5	US$ 384 for miscellaneous expenses to support the other aspects of the component outputs and as contingency to related inputs to the activities and target outputs.
6	International consultants: US$ 44,800 (to include fee, travel expenses and DSA) for 64 working days at US$ 700 per working day (multiple activities could be conducted by one consultant), including:
	• 20 working days for activities under Output 2.1.1: to develop inter-ministerial/departmental/agency mechanisms, establish a consultative mechanism, and prepare reports (US$ 14,000)
	• 26 working days for activities under Output 2.1.2: to assess capacity gaps and needs, to design and conduct training programs on energy integrated development planning and RE/EE technologies, and establish inter-departmental coordination mechanisms (US$ 18,200)
	• 18 working days for activities under Output 2.1.3: to review institutional arrangements, roles and responsibilities, assess gaps and needs, and clearly define institutional mandates and responsibilities (US$ 12,600)
7	National consultants: US$ 13,800 for 46 working days at US$ 300 per working day (multiple activities could be conducted by one consultant), including:
	• 16 working days for activities under Output 2.1.1: to develop inter-ministerial/departmental/agency mechanisms, establish a consultative mechanism, and prepare reports (US$ 4,800)
	• 20 working days for activities under Output 2.1.2: to assess capacity gaps and needs, to design and conduct training programs on energy integrated development planning and RE/EE technologies, and establish inter-departmental coordination mechanisms (US$ 6,000)
	• 10 working days for activities under Output 2.1.3: to review institutional arrangements, roles and responsibilities, assess gaps and needs, and clearly define institutional mandates and responsibilities (US$ 3,000)
8	US$ 5,000 travel cost associated with consultation with key stakeholders of the project, national agencies and responsible persons in national energy development, planning and development, coordinating with government agencies for adoption and implementation of the policy measures.
9	US$ 12,000 for the organization and implementation of training programs for stakeholders from GoN departments and SOEs related to energy integrated development planning and RE/EE technologies (Activity 2.1.2.2).
10	US$ 1,600 for miscellaneous expenses to support the other aspects of the component outputs and as contingency to related inputs to the activities and target outputs.
11	International consultants: US$ 51,100 (to include fee, travel expenses and DSA) for 73 working days at US$ 700 per working day (multiple activities could be conducted by one consultant), including:
	• 43 working days for activities under Output 2.2.1: to develop a financial support scheme, establish benchmark prices for RE/EE technologies, to design and conduct training program for women led/owned and youth group operated businesses on RE/EE investment opportunities and financing, and develop institutional frameworks (US$ 30,100)

	• 30 working days for activities under Output 2.2.2: to formulate strategies and policies, to design and conduct training program on RE/EE energy financing and evaluate government budget allocation (US$ 21,000)
12	National consultants: US$ 14,400 for 48 working days at US$ 300 per working day (multiple activities could be conducted by one consultant), including:
	• 30 working days for activities under Output 2.2.1: to develop a financial support scheme, establish benchmark prices for RE/EE technologies, to design and conduct training program for women led/owned and youth group operated businesses on RE/EE investment opportunities and financing, and develop institutional frameworks (US$ 9,000)
	• 18 working days for activities under Output 2.2.2: to formulate strategies and policies, to design and conduct training program on RE/EE energy financing and evaluate government budget allocation (US$ 5,400)
13	US$ 6,000 travel cost associated with consultation with key stakeholders of the project, national agencies and responsible persons in national energy development, planning and development, coordinating with government agencies for adoption and implementation of the policy measures.
14	US$ 340,000 for the EE Financing Scheme (Activity 2.2.1.1)US$ 240,000 for EE financing grant scheme. It will be managed by Responsible Party identified (including detailed process) during the inception workshop. Potential RPs are Bendigo Bank (commercial bank) and Eigigo (state-own company) (Activity 2.2.1.1).
15	US$ 16,000 for the organization and implementation of training programs for women led/owned and youth group operated businesses on RE/EE investment opportunities and financing, and for stakeholders from GoN departments and SOEs related to RE/EE energy financing (US$ 8,000 for Activity 2.2.1.4 and US$ 8,000 for Activity 2.2.2.3).
16	US$ 2,500 for miscellaneous expenses to support the other aspects of the component outputs and as contingency to related inputs to the activities and target outputs.
17	International consultants: US$ 323,400 (to include fee, travel expenses and DSA) for 462 working days at US$ 700 per working day (multiple activities could be conducted by one consultant), including:
	• 30 working days for activities under Output 3.1: to prepare case studies (US$ 21,000)
	• 96 working days for activities under Output 3.2: to assess feasible replication and/or scale-up projects, prepare reports, design and conduct training programs, and develop replication and/or scale-up project designs and implementation plans (US$ 67,200)
	• 56 working days for activities under Output 3.3: to design an energy audit system, conduct energy audits, and design and conduct training programs (US$ 39,200)
	• 232 working days for activities under Output 3.4: to assess feasible demo projects, prepare reports, develop demo project designs and implementation plans, complete grid stability studies, upgrade the SCADA system, establish RE-grid codes, and design and conduct training programs (US$ 162,400)
	• 48 working days for activities under Output 3.5: to install and operate the RE and EE demos, develop a M&E system, procure equipment and measurement instruments, design and conduct training programs, optimize the SCADA system and electric grid operation, and develop and test a forecasting tool (US$ 33,600)
18	National consultants: US$ 34,800 for 116 working days at US$ 300 per working day (multiple activities could be conducted by one consultant), including:
	• 16 working days for activities under Output 3.1: to prepare case studies (US$ 4,800)
	• 48 working days for activities under Output 3.2: to assess feasible replication and/or scale-up projects, prepare reports, design and conduct training programs, and develop replication and/or scale-up project designs and implementation plans (US$ 14,400)
	• 22 working days for activities under Output 3.3: to design an energy audit system, conduct energy audits, and design and conduct training programs (US$ 6,600)
	• 30 working days for activities under Output 3.4: to assess feasible demo projects, prepare reports, develop demo project designs and implementation plans, complete grid stability studies, upgrade the SCADA system, establish RE-grid codes, and design and conduct training programs (US$ 9,000)
19	US$ 10,000 travel cost associated with consultation with key stakeholders of the project, national agencies and responsible persons in national energy development, planning and development, coordinating with government agencies for adoption and implementation of the policy measures.
20	US$ 1,915,000 for Equipment, Installations, and Support Systems including: For Activity 3.5.1: US$ 1,020,000 for a large R/O water desalination system to store excess electricity from the solar PV systems; US$ 295,000 for a hybrid electric-diesel bus including charging station and spare parts (i.e., battery); and US$ 280,000 for the solar water pump reticulation system, including 2 solar PV pumps (1 spare pump), solar PV panels, Li-ion batteries, water tank, a small-scale R/O water desalination system, and water piping systems. For Activity 3.5.2: US$ 200,000 for power quality monitoring/measuring components, integration of all components and entire grid on the new SCADA system, upgrade of transformers, switchgears and RMU, and installation of

	shunt reactors and capacitors. For Activity 3.5.3: US$ 80,000 for the overcurrent and differential relays, operational setting protection, adaptive protection devices, and software for relaying systems. And for Activity 3.5.5: US$ 40,000 for equipment, integration to SCADA system, and for 1-year forecasting data and support.
21	US$ 12,000 to rental of the DigSILENT software (Activity 3.4.3 and Activity 3.4.5)
22	US$ 87,000 for the organization and implementation of training programs for GoN, SOEs and community stakeholders on design, engineering and installation of RE/EE technologies (US$ 12,000 for Activity 3.2.2); GoN and SOEs on RE/EE financing (US$ 12,000 for Activity 3.2.3); GoN on how to conduct energy audits (US$ 12,000 for Activity 3.3.2); NUC on O&M of battery energy storage system and utility practices (US$ 15,000 for Activity 3.4.7); NUC, DoT and Dept. of Water & Sanitation on O&M of the R/O system for electricity storage, O&M of hybrid vehicles and charging stations, and O&M of the solar water pump reticulation system (US$ 36,000 for Activity 3.5.1).
23	US$ 15,000 for instruments to conduct the energy auditing (Activity 3.3.3)
24	US$ 4,000 for ancillary supplies and miscellaneous provisions to support the other aspects of the component outputs and as contingency to related inputs to the activities and target outputs. (Workstations, internet and phone connections)
25	US$ 1,300 for miscellaneous expenses to support the other aspects of the component outputs and as contingency to related inputs to the activities and target outputs.
26	International consultants: US$ 59,500 (to include fee, travel expenses and DSA) for 85 working days at US$ 700 per working day (multiple activities could be conducted by one consultant), including:
	• 37 working days for activities under Output 4.1: to assess capacity gaps and needs, design and conduct training program sustainable energy and low carbon development, prepare reports, design and implement awareness raising programs, design and conduct surveys, and prepare informative material (US$ 25,900)
	• 18 working days for activities under Output 4.2: to establish an information sharing platform, and design and conduct training programs on operation and maintenance of the information sharing system (US$ 12,600)
	• 30 working days for activities under Output 4.3: to establish an energy data banking system, design and conduct training programs on operation and maintenance of the energy data banking system, prepare reports, and develop an EMRS (US$ 21,000)
27	National consultants: US$ 16,200 for 54 working days at US$ 300 per working day (multiple activities could be conducted by one consultant), including:
	• 26 working days for activities under Output 4.1: to assess capacity gaps and needs, design and conduct training program sustainable energy and low carbon development, prepare reports, design and implement awareness raising programs, design and conduct surveys, and prepare informative material (US$ 7,800)
	• 11 working days for activities under Output 4.2: to establish an information sharing platform, and design and conduct training programs on operation and maintenance of the information sharing system (US$ 3,300)
	• 17 working days for activities under Output 4.3: to establish an energy data banking system, design and conduct training programs on operation and maintenance of the energy data banking system, prepare reports, and develop an EMRS (US$ 5,100)
28	US$ 4,000 travel cost associated with consultation with key stakeholders of the project, national agencies and responsible persons in national energy development, planning and development, coordinating with government agencies for adoption and implementation of the policy measures.
29	US$ 18,000 for the organization and implementation of training programs for stakeholders from GoN departments, SOEs and community leaders related to sustainable energy and low carbon development, O&M of the information sharing system, and O&M of the energy data banking system (US$ 6,000 for Activity 4.1.2, US$ 6,000 for Activity 4.2.2 and US$ 6,000 for Activity 4.3.3).
30	US$ 29,000 (including fee, travel expenses and DSA) for the contractual service individual to carry out three (3) surveys for Activity 4.1.3 (US$ 15,000 for the 1st, 15 working days do design and conduct the survey and present results + travel expenses and DSA; and US$ 7,000 each for the 2nd and 3rd surveys, 10 working days each, which can be administered remotely).
31	US$ 25,000 for two (2) software systems and for management and maintenance of the Information Sharing Platform and the Energy Database, for Activity 4.2.1 and Activity 4.3.1 (US$ 12,500 each);
32	US$ 5,000 for printing, production costs for documenting and promoting the activities and outputs of the project

33	US$ 600 for miscellaneous expenses to support the other aspects of the component outputs and as contingency to related inputs to the activities and target outputs.
34	Contractual Service – Individual; Project Management Unit to support aspects of the component: (US$ 84,156) Project Manager (US$ 33,412), Comms Officer (US$ 15,662), Finance and Administration Officer (US$ 18,376) & Project Officer (US$ 16,706) – to support aspects of all components.
35	International consultants: USD 30,000 for the Mid-Term Review (MTR) and the Terminal Evaluation (TE)
36	Local consultant for the Mid-Term Review (MTR) and the Terminal Evaluation (TE)
37	Professional services: USD 10,000 in total for annual audits (at USD 2,500 per audit)
38	US$ 2,000 for Project Management Unit (PMU) travel cost
39	US$ 1,128 for PMU Office supplies, stationery

X. LEGAL CONTEXT

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".

This project will be implemented by the Department of Commerce, Industry and Environment (DCIE) ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XI. RISK MANAGEMENT

1. Consistent with the Article III of *the Supplemental Provisions to the Project Document*, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:

   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried.
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no 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.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

   (b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5.

   (a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph

4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA.
ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP.
iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof.
iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and
v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

(b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and program-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or program to comply with such standards, and (c) engage in a constructive and timely manner to address any concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any program or project-related commitments or compliance with the UNDP Social and Environmental

Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

10. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: **(**a**)** UNDP Policy on Fraud and other Corrupt Practices and **(**b**)** UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programs in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality. Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

1. Project Map and Geospatial Coordinates of the project sites
2. Multi Year Work Plan
3. Monitoring Plan
4. Stakeholder Engagement Plan
5. UNDP Risk Log
6. Overview of Technical Consultancies
7. Terms of Reference
8. Procurement Plan – for first year of implementation especially
9. GEF Core indicators
10. GEF 7 Taxonomy

Annex 1: Project Map and Geospatial Coordinates of Project Sites

Map of Nauru[34]:
Spatial Coordinates (DCIE)
Latitude: 0.5407732 S - Longitude: 166.240574 E

List of Investment and Demonstration Activities

Activity	Location
Investment 1: Enhanced Generation & Distribution System	NUC Headquarters and ADB Solar PV Farm
Investment 2: RE/EE Financing Scheme	Office buildings of DCIE, MoF, and Bendigo Bank
Demo 1: Storage and use of Excess Electricity from ADB solar farm	Meneng District
Demo 2: Mini treated water production & distribution system	3-block housing complex in "The Location"
Demo 3: Hybrid diesel-electric bus for public transport	The whole island and DoT Headquarters

[34] https://www.google.com/maps/place/Parliament+House/@-0.5407732,166.9240574,11597m/data=!3m1!1e3!4m13!1m7!3m6!1s0x0:0x0!2zMMKwMzEnMjIuMCJTIDE2NsKwNTUnNTMuNCJF!3b1!8m2!3d-0.522778!4d166.9315033!3m4!1s0x6f7d1e803a23b4d3:0xf468cd0e9a3ab39c!8m2!3d-0.5470631!4d166.9170199?hl=en

Annex 2: Multi Year Work Plan

Outcomes	Outputs	Activities	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: **Energy Policy & Regulatory Framework Strengthening**																		
Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use	**Output 1.1**: Formulated, approved and enforced policy and regulatory instruments (standards, policies and implementing rules and regulations) on the application of RE & EE technologies in the energy and energy end use sectors	**Activity 1.1.1:** Development and implementation of rules and regulations to control and enforce the quality and standards of imported energy equipment																
		Activity 1.1.2: Formulation, approval and enforcement of implementing rules and regulations relating to RE and EE initiatives to support the achievement of the NEPF targets																
		Activity 1.1.3: Development of an incentive framework for encouraging widespread RE/EE technology applications in the energy and end-use sectors																
		Activity 1.1.4: Establishment of a conducive legal regime with independent regulation as well as financing and risk management frameworks for the increased role for the private sector in the implementation of sustainable energy projects in Nauru																
	Output 1.2: Revised and updated energy policy framework (NEPF) , National Energy balance (NEB) and roadmap (NERM) and policies and regulations to achieve NERM targets	**Activity 1.2.1:** Review of the progress under NEPF and development of an updated NEPF that is aligned with National Sustainable Development Strategy (NSDS) and SDGs																
		Activity 1.2.2: Review of achievements under NERM in 2021 and development of an updated roadmap ensuring adequate resource allocation from public and private sources																
		Activity 1.2.3: Development of energy indicators for NERM and tracking/measuring and M&E of NERM indicators and associated capacity building of GoN (DCIE)																
		Activity 1.2.4: Development, approval and enforcement of effective policies and regulatory framework to support the implementation of RE and EE projects in the energy and end-use sectors																

	Output 1.3: Approved and implemented fully budgeted national energy plan	**Activity 1.3.1:** Design and establishment of an improved national energy planning and budgeting involving districts and key stakeholders with regular periodic reviews and reporting																
		Activity 1.3.2: Design and implementation of a training program for GoN personnel at managerial and operational levels in energy planning and budgeting and analysis covering the energy planning, financing in the supply and demand sectors																
Component 2. Supporting RE & EE Initiatives																		
Outcome 2.1: Cohesive institutional mechanisms for facilitating widespread application of RE & EE technologies in the country	**Output 2.1.1:** Well-coordinated planned and implemented RE/EE Projects of the GON, private sector and communities	**Activity 2.1.1.1:** Development and establishment of an improved and effective coordination mechanism between the relevant GoN agencies in the energy sector particularly in implementation of the NEPF and NERM																
		Activity 2.1.1.2: Establishment of a consultation and coordination mechanism for different RE & EE trainings/projects between government, private sector, key stakeholders and district communities																
		Activity 2.1.1.3: Development and establishment of a strengthened funding coordination in the energy sector between GoN agencies and multi-lateral/bilateral donors and development banks																
	Output 2.1.2: Approved and implemented energy-integrated development projects in the end-use sectors including the mining industry and the regional processing centers	**Activity 2.1.2.1:** Assessment of barriers to integrated energy planning and investments at GoN, SOEs, RONPHOS, RPC, NPT etc., identify gaps in capacity and identify training needs																
		Activity 2.1.2.2: Development and conduct of regular capacity building activities for pertinent GoN personnel including RONPHOS, RPC and SOEs on energy integrated development planning & RE/EE technologies																
		Activity 2.1.2.3: Establishment and implementation of a coordination mechanism with GoN entities, SOEs, RONPHOS, RPC for implementation of EE and RE projects																
	Output 2.1.3: Established and operational	**Activity 2.1.3.1:** Review of the existing institutional responsibilities in the energy sector including independent energy regulation; identification of																

	institutional framework that supports the implementation of low carbon (EE & RE) development policies, standards and IRRs	institutional gaps; and recommendation of proper alignment of responsibilities																
		Activity 2.1.3.2: Definition and implementation of clear mandates and responsibilities of relevant government agencies in the energy sector, based on the institutional and capacity gap assessment																
Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application projects in the country	**Output 2.2.1:** Feasible financial support schemes for RE & EE technologies application projects in the energy end-use sectors, inclusive of the implementation arrangements, and procedures for financial assistance application process	**Activity 2.2.1.1:** Development of sustainable financial support schemes including implementation modalities and processes for RE & EE technologies application projects and criteria to support women and youth led businesses																
		Activity 2.2.1.2: Establishment of a process for determination and publication of benchmark costs for RE systems and EE appliances by GoN																
		Activity 2.2.1.3: Development of a business and institutional framework for private sector investment and financing for RE and EE projects in the country																
		Activity 2.2.1.4: Development and implementation of training and capacity building programs for women led/owned and youth group operated businesses on RE&EE business and investment opportunities and financing																
	Output 2.2.2: De-risked RE-based power generation and grid stability projects, grid-connected or decentralized RE-based energy generation at the district level, inclusive of business plans for the GON and private sector to facilitate financing	**Activity 2.2.2.1:** Formulation, approval and enforcement of strategy and associated policies to diversify financing sources for energy sector activities																
		Activity 2.2.2.2: Development and implementation of strategies to increase the level of core budget allocation from GoN to support the implementation of the NERM																
		Activity 2.2.2.3: Conduct of capacity building and provision of advisory services for enhanced quantity and quality of appointed government personnel working on energy issues																

	and implementation																	
Component 3: **Promotion of RE & EE Technologies Applications**																		
Outcome 3: Improved confidence in, and application of, RE & EE technologies	**Output 3.1**: Documented and disseminated reports about the energy performance and impact assessments of implemented demonstrations	**Activity 3.1.1:** Evaluation of the performance of the demos and preparation of the demo project profiles as case studies																
	Output 3.2: Approved implementation designs and plans for the replication and/or scale up of demonstrated RE & EE technologies applications	**Activity 3.2.1:** Assessment of feasible RE/EE technologies, both for power generation and power storage, to support the achievement of the NERM targets and preparation of assessment report																
		Activity 3.2.2: Design and conduct of training programs for a pool of local technical experts on how to design, engineer and install RE & EE technologies in the energy and energy end-use sectors																
		Activity 3.2.3: Design and implementation of training programs for relevant GoN personnel and stakeholders in RE & EE financing to develop and prepare bankable project proposals																
		Activity 3.2.4: Development of the design and implementation plans for the replication and/or scale up of RE & EE technology application projects involving both GoN and the private sector																
	Output 3.3: Established and operational energy audit system covering all energy end-use sectors	**Activity 3.3.1:** Design and establishment of an energy audit system																
		Activity 3.3.2: Design and implementation of a training program for relevant GoN personnel and stakeholders in conducting energy audits, and design and facilitate the approval of an energy audit system																
		Activity 3.3.3: Performance of energy auditing of GoN, industrial and commercial buildings, which																

		will provide date for follow up RE & EE projects, including scale-ups and replications of demos																	
	Output 3.4: Completed engineering designs and implementation plans of the identified demonstrations of RE & EE technologies applications in the energy generation and end-use sectors	**Activity 3.4.1:** Evaluation of the techno-economic feasibility of RE & EE technology application demos and preparation of assessment reports																	
		Activity 3.4.2: Preparation of the engineering design and implementation plans for the implementation of the selected RE & EE technology application demos																	
		Activity 3.4.3: Conduct of a dynamic grid stability study to evaluate the impact of 50% Solar PV penetration and beyond on the entire grid system																	
		Activity 3.4.4: Conduct of an assessment to determine the required electrical HV component upgrades and communication/electrical infrastructure upgrades in the grid system in order to monitor and operate them from a new proposed SCADA system																	
		Activity 3.5: Conduct of a protection study to establish the detailed protection scheme and equipment protection settings of the entire grid system with Battery Energy Storage Systems and the new planned RE-based power generation systems																	
		Activity 3.6: Formulation and establishment of RE-grid code requirements for grid integration of RE-based power generation units for connection procedure, grid compliance testing, frequency/voltage control, power quality, protection, SCADA communication and load dispatch/regulation																	
		Activity 3.7: Design and conduct of training programs for local experts to improve their skills on the operation and maintenance of battery storage systems and utility practices with RE for data collection analysis and real time control																	
	Output 3.5: Implemented and operational RE &	**Activity 3.5.1:** Installation and operation of the selected RE & EE technology application demos																	
		Activity 3.5.2: Implementation of the required electrical HV component upgrades and																	

	EE technologies application demos	communication/electrical infrastructure upgrades in the grid system																
		Activity 3.5.3: Implementation of the recommendations from the grid system protection study focusing on the entire grid system with the new RE-based power generation systems and the Battery Energy Storage Systems																
		Activity 3.5.4: Demonstration of the monitoring, operation of the SCADA system with entire grid system, diesel generators, BESS system and RE-based power generation units																
		Activity 3.5.5: Implementation of an integrated RE generation forecasting tool to the SCADA system to perform day-ahead planning of the load dispatch planning and support the reliability and operational procedures																
		Activity 3.5.6: Demonstration of the monitoring, operation and performance of the RE-generation forecasting tool to support with day-ahead planning																
Component 4: **Improvement of Energy Sector Capacity**																		
Outcome 4: Improved awareness and capacity of the GON, private sector and communities about cost-effective application of RE and EE technologies and practices	**Output 4.1:** Regularly conducted capacity development program on sustainable energy and low carbon development; continuing program on the promotion and awareness enhancement on integrated sustainable energy development	**Activity 4.1.1:** Assessment of the current capacity of relevant GoN personnel and stakeholders and identification of gaps and needs to fill																
		Activity 4.1.2: Design and implementation of training programs for all relevant GoN personnel (DCIE, NUC, MoF-PAD, community leaders) and stakeholders on sustainable energy and low carbon development																
		Activity 4.1.3: Design, implementation and assessment of awareness raising programs on integrated sustainable energy development to increase people participation in the project demos, as well as scale-up and replication projects																
		Activity 4.1.4: Design and implementation of promotional campaigns and implementation of demand side management in the energy end-use sector																
		Activity 4.1.5: Design and implementation of a promotional campaign for the adoption of an																

		Energy Star program modeled on the program designed for the USA																
	Output 4.2: Established and operational information sharing system for the promotion and dissemination of knowledge on all aspects of sustainable energy and low carbon development	**Activity 4.2.1:** Establishment and operationalization of an information sharing system on all aspects of sustainable energy and low carbon development for the promotion and dissemination of knowledge																
		Activity 4.2.2: Design and implementation of training programs for the designated stakeholders who will operate and maintain the information sharing system																
	Output 4.3: Established and operational energy supply and consumption monitoring & reporting and database system	**Activity 4.3.2:** Establishment of an energy data banking system to collect and store all energy supply and consumption information, including monitoring and reporting activities as well as status of advancement of the NERM achievements																
		Activity 4.3.2: Assessment of gaps in energy data collection (all energy forms and both supply and consumption) and design an energy monitoring and reporting system																
		Activity 4.3.3: Design and implementation of training programs for the designated stakeholders who will operate and maintain the energy database and the monitoring and reporting system																

Annex 3: Monitoring Plan:

This Monitoring Plan and the M&E Plan and Budget in Section V of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source or Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project Objective: Enabling the increased applications of feasible RE and EE technologies for supporting socio-economic development in Nauru in accord with the country's energy roadmap targets	Cumulative GHG emission reduction from fossil fuel utilization in the ***electricity sector***, tons CO_2	37,375	Cumulative reduction of GHG emissions, over the implementation period of the SMARTEN Project, attributable to the execution of the RE/EE activities proposed under the Alternative Scenario	DCIE; NUC; MoF	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Annual energy supply and consumption reports submitted by relevant GoN entities, NUC, and the DCIE * Trade and commerce reports * Project M&E and activity reports	Continuous commitment, support & active participation of the national government in the implementation of the NERM in the energy and energy end-use sectors. Realization of committed co-financing from the national government in the implementation of project activities and monitoring systems
	Cumulative reduction in fossil fuel consumption due to implemented RE and EE technology projects as influenced by the project interventions, ktoe	13,986	Cumulative reduction of fossil fuel consumption, over the implementation period of the SMARTEN Project, due to the application of all EE measures and RE technology (whether implemented by the SMARTEN project, or not)	DCIE; NUC; Vital; MoF	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
	% RE electricity production	40.4	Annual amount of electricity generated with RE power generation systems (solar PV installations)	DCIE; NUC	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
	No. of individuals that are gainfully employed in new jobs created due to the application of RE and EE technologies in the country: Direct: * Male:	36 12	The establishment of a RE/EE market will favor the creation of new service jobs (e.g., repair, installation, waste collection, etc.)	DCIE; NBoS	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		

Monitoring	Indicators	Targets	Description of indicators and targets	Data source or Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	* Female Indirect: * Male * Female:	12 6 6						
Component 1:	**Energy Policy & Regulatory Framework Strengthening**							
Outcome 1: Enforcement of approved policies and rules and regulations on the widespread application of cost-effective RE and EE technologies for energy production and use	% planned NERM 2018-2020, and revisions, activities that are implemented	95%	Percentage of outstanding activities still to be implemented, as described in the updated NERM 2018-2020, that will be completed under SMARTEN	DCIE; GoN	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Annual NERM Progress Reports from DCIE * Documents on RE and EC&EE policies, regulations and energy standards for RE & EE system equipment and appliances * SMARTEN Project M&E and activity reports * Policies and regulations approved by the GoN * Surveys to track No. of suppliers, users and service providers	Full and continuous commitment and support of the national government in the implementation of energy policies and regulations in the energy and end-use sectors.
	No. of planned energy-integrated socio-economic development activities (e.g., in the districts) that feature RE and EE technology applications	3	Planned RE and EE applications at the district or village level as spurred by SMARTEN to enhance socio-economic development	DCIE; GoN	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
	No. of new policies and regulations drafted, approved and implemented to cover the changing RE/EE sector	3	Policy documents drafted and approved in Nauru concerning the application of RE/EE technologies in the energy end-use sectors	DCIE; GoN	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
Component 2:	**Supporting RE & EE Initiatives**							
Outcome 2.1: Cohesive institutional mechanisms	No. of GoN agencies/entities that coordinate with the DCIE their	3	SOEs and government agencies participating in the development and establishment of a	DCIE; GoN	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Documents on the institutional mechanisms	Continuous commitment and support by the national government,

Monitoring	Indicators	Targets	Description of indicators and targets	Data source or Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
for facilitating widespread application of RE & EE technologies in the country	energy-related plans and activities		coordination mechanism in the energy sector				* Annual Reports on the sectoral integrated development plan implementation * SMARTEN Project M&E and activity reports * Annual NERM Progress Reports from DCIE	private sector and public, in general on the successfully implemented institutional arrangements even after the SMARTEN project implementation period. Continued development of the banking and finance sector, and re-establishment of a banking regulatory and supervisory framework in Nauru.
	No. of districts that coordinate with the DCIE the planning and implementation of the energy-related activities of the communities and private sector entities within their area	8	Nauru's districts actively participating in the establishment of a consultation and coordination mechanism for the implementation of energy activities at the district level, such as RE and EE projects implementation and training programs	DCIE; NCBO	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
	No. of jointly-implemented projects or collaborative initiatives carried out by the DCIE with other GoN entities (e.g., NUC, RONPHOS), private sector and public on sustainable energy and low carbon development	5	The implementation of sustainable energy and low carbon development plans and programs that DCIE will carry out with GoN and SOEs at the national level, as well as with community leaders at the district and village level	DCIE; GoN; NCBO	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
Outcome 2.2: Adequate amounts of financial resources available for RE/EE Technology application	No. of RE and EE financial schemes, as well as fiscal and financial incentives, developed and adopted for supporting RE and EE initiatives in the country	2	Financing schemes as well as fiscal and financial incentives designed and implemented in coordination with MoF to support the development of RE/EE technologies and initiatives in Nauru	DCIE; MoF	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Documents on the adopted and implemented financial schemes/mechanisms, and fiscal and financial incentives	

Monitoring	Indicators	Targets	Description of indicators and targets	Data source or Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
projects in the country	No. of women-led/owned and youth group operated businesses that benefited from the financing schemes, and fiscal and financial incentives	4	Women and young Nauruans can access the established financing schemes and financial/fiscal incentives to implement RE and EE technologies and measures in their existing businesses or can establish new ones	DCIE; GoN	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Annual Reports on the planned & implemented RE & EE technology application projects that are financed through the adopted financing scheme, and fiscal and financial incentives * SMARTEN Project M&E and activity reports	
	No. of EE and RE technology projects financed either through the adopted financing scheme, and fiscal and financial incentives; or by private sector investment	8	With the establishment of financing schemes and financial/fiscal incentives, the general public can finance small scale RE/EE projects; additional initiatives will be financed by funds coming from the private sector	DCIE; MoF	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		
Component 3:	**Promotion of RE & EE Technologies Applications**							
Outcome 3: Improved confidence in, and application of, RE & EE technologies	No. of replication and scale-up RE and EE technology projects planned and implemented by the GoN to achieve the NERM targets	5	Follow-up RE and EE technology implementation projects spurred by the success of the demo projects implemented under the SMARTEN project	DCIE; GoN; NUC	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Demo RE and EE technology application projects feasibility assessment reports * Demo RE-based electricity generation and low carbon technology application project profiles * Performance and evaluation reports	* As per schedule implementation and completion of planned demonstrations * Consumers and the private sector fully support and commit to the feasible replication of successful results of the SMARTEN Project demonstrations
	Cumulative amount of energy savings from the successfully installed and operational demonstration RE and EE technology	200.0	Cumulative reduction of energy consumption, over the implementation period of the SMARTEN Project, due to the application of all RE/EE demo activities implemented under the	DCIE; NUC; MoF; Vital	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		

Monitoring	Indicators	Targets	Description of indicators and targets	Data source or Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	application projects, ktoe		SMARTEN project and their replication				on each demonstration	
	No. of RE and EE technologies application projects designed and financed by the private sector for implementation as influenced by the results and outcomes of the demonstrations implemented under the project	5	RE and EE technology implementation projects spurred by the success of the demo projects implemented under the SMARTEN project and financed by the private sector	DCIE; GoN	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Project documents of demo and replication RE and EE technology application projects * SMARTEN Project M&E and activity reports	
Component 4:	**Improvement of Energy Sector Capacity**							
Outcome 4: Improved awareness and capacity of the GON, private sector and communities about cost-effective application of RE and EE technologies and practices	No. of RE and EE technology application projects designed, implemented and maintained by NUC and district communities	6	Project designs and implementation plans for RE and EE technology applications financed with funds from governmental budgets or international donors, and maintained by NUC and district and village councils	DCIE; NUC; NCBO	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* Registry of projects implemented in the districts * RE & EE technology application project documents * RE & EE project monitoring reports * Completed/installed project infrastructures * Household energy survey reports	Relevant entities will be fully cooperating in the sharing of data and information
	No. of sustainable energy projects implemented by the private sector and district communities with funding sourced from the private sector and other development partners	3	Project designs and implementation plans for sustainable energy projects financed by private investors and development partners, and operated and maintained by district and village councils and private sector	DCIE; NCBO	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants		

Monitoring	Indicators	Targets	Description of indicators and targets	Data source or Collection Methods	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	No. of consumers/users in the energy end-use sectors that are utilizing EE appliances and RE-based energy generating and consuming equipment	1,390	Surveys are designed and conducted to establish the number of households that have adopted and purchased RE/EE technologies and measures acquired through the initiative developed under the SMARTEN project	DCIE; NBoS	Annually, Reported in DO tab of the GEF PIR	Project Manager and Consultants	* SMARTEN Project monitoring and activity reports	

Annex 4: Stakeholder Engagement Plan

A. Stakeholder Analysis

1. Objective

The main objective of the stakeholder analysis is the identification of the relevant stakeholders of the SMARTEN Project that will be engaged as partners to deliver specific outputs of the project and collectively with their outputs bring about the project outcomes. The main output of the analysis is a Stakeholder Engagement Plan (SEP). In such plan, the roles and responsibilities of the pertinent stakeholders are identified, including their perception of likely benefits, risks and impacts of SMARTEN. This is also to assess how to mitigate risks on stakeholders as a result of the implementation of SMARTEN.

2. GEF Policies and Requirements

Among the requirements of the GEF Policy on Stakeholder Engagement is the development and implementation of a SEP. The development of a GEF-funded project like SMARTEN requires meaningful stakeholder consultations. In such consultations, all project stakeholders can express their views on project plans, benefits, risks, impacts and mitigation measures that may affect them. The GEF Policy also requires that all relevant stakeholders are involved as early as possible in the preparation process and continue throughout all stages of the project cycle.

3. Consultation Methods

During the design and development phase of the SMARTEN Project, several consultations were organized and conducted with institutional stakeholders and potential stakeholders in the districts. Potential demonstration sites were identified based on the assessment of the suitability and effectiveness of the planned demonstrations. Institutional stakeholders were identified based on roles and functions, area of interest and linkage (technical, legislative, development, informational, training, financing, sustainability, monitoring and evaluation) in the energy sector. The initial list of stakeholders was derived from the logical framework analysis (LFA) workshop that was held in 2018. Thereafter, as the consultations proceeded new stakeholders are identified and included in the final list of stakeholders. The consultations attempted to capture the stakeholder's views on the project plan, benefits, risks, project impacts and mitigation measures that may affect the stakeholders. The specific consultations and assessments occurred during the time of the LFA workshop, and during the mission of the SMARTEN Project Development Team (PDT) in Nauru.

Below is a summary of stakeholder engagement activities that were applied during the project development phase:

- Telephone calls to stakeholders to organize meetings, follow-up with appointments and provide further information for stakeholders.
- Email exchange with stakeholders to provide further information on project scope, demonstrations and value-adding initiatives for the project.
- Attendance in specific meetings with the PDT staff and the identified potential co-financers, and implementers of identified baseline project to learn about potential synergies from such projects and share project information.
- Organized stakeholder consultations.
- Field visits and focus group discussions on project plans, benefits, risks, impacts and community interest and engagement; and,
- Focus group discussion with women on gender roles related to the planned project activities, benefits, risks, impacts and interest and engagement.

During the project implementation, after the project inception phase, the following are the indicative stakeholder engagement activities that will be carried out by the SMARTEN Project Management Unit (PMU):

- Telephone calls and email shots to stakeholders to organize meetings, follow-up with appointments and provide further information for stakeholders.
- Email exchange with stakeholders requesting for information related to the project implementation, as well as for responding to recommendations and comments from stakeholders.
- Organization and conduct of specific meetings with the DCIE and project partners for purposes of project monitoring and progress reporting.
- Field visits and focus group discussions on demonstration activities implementation plans, procurement plans; and,
- Coordination meetings with DCIE and project partners in the implementation of the capacity development, promotional, and awareness raising activities of the project, including related group discussions on specific project issues.

4. Project stakeholders

The following stakeholders were identified as having interest, experience, capacity, networks and potential benefits corresponding to the goal and objective of the SMARTEN Project:

Stakeholder	Involvement and Engagement in SMARTEN
Department of Commerce, Industry and Environment (DCIE)	This GON Department is the designated UNDP implementing partner for the SMARTEN Project. It will assume a leadership role during project implementation providing guidance and supervision in the coordination and implementation of the project activities. Particularly, the Energy Unit in DCIE, will be the one that will provide guidance to the project management unit (PMU) in the management and implementation of the project activities throughout the entire duration of the project. The DCIE (through the Energy Unit) will establish the PMU, which will be responsible for communication and coordination with the project stakeholders. The engagement of, and consultation with all the pertinent project stakeholders is the responsibility of the PMU. It will also liaise with the UNDP, national GEF OFP, project co-financers, owners/implementers of co-financed activities, and demonstrations hosts throughout the course of project implementation. Specifically, it will liaise with the leaders/coordinators of districts where the project demonstrations will be carried out. Lastly, the DCIE will provide data inputs on plans and programs of the country concerning the energy provision in the projects of the government.
Nauru Utilities Corporation (NUC)	The state-owned enterprise Nauru Utilities Corporation (NUC) is a key stakeholder/partner of the project. NUC operates and manages all assets for the generation and distribution of electricity, as well as the production and supply of desalinated water, in Nauru. NUC's mandate is critical in the implementation of all project activities particularly the demo on electricity storage in desalinated water. The PMU will closely coordinate and work with the NUC management and operations personnel for data/information provision, and support in the demo design, engineering, construction, operation, maintenance and performance monitoring and evaluation. It is also the recipient of several technical training programs that will be conducted under the project.

Stakeholder	Involvement and Engagement in SMARTEN
Ministry of Finance (MoF) - Planning and Aid Division (PAD)	The MoF is responsible for budgets of ongoing and planned sustainable energy development projects in the country, including those for the NERM action plans. As such. it is a repository of information on all socio-economic activities in Nauru (e.g., RPCs, RONPHOS, etc.). It is also responsible for the purchase of all petroleum fuels from Vital. The role of the MoF-PAD will be pivotal for the development, approval and enforcement of fiscal and financial incentives to support the development of RE and EE technologies and measures. The PMU shall coordinate with the MOF-PAD on matters concerning the implementation of the various donor-funded energy projects in the country, particularly those that are implemented in parallel with the SMARTEN Project, as well as in the implementation of the Component 2.2 activities. Relevant personnel from the MoF-PAD will also be the recipient of energy planning and finance training programs.
Department of Transportation (DoT)	The main involvement of the DoT in the SMARTEN Project is in the activities concerning the demonstration activity on the application of hybrid diesel-electric bus, which will serve a double purpose: (a) the facilitation of a public transportation system in Nauru; and (b) the promotion of implementation of environmentally friendly vehicles. The PMU will coordinate with the DoT the planning, procurement and operation of the demo hybrid diesel-electric bus, including the monitoring and evaluation of the demo bus performance and impacts. Similarly, to most stakeholders involved, staff members will be trained through some of the programs that will be planned and delivered under SMARTEN.
Nauru Bureau of Statistics (NBoS)	The Nauru Bureau of Statistics is an important project partner particularly in the provision of technical advice and information on energy data gathering and monitoring, reporting and data banking, as well as in the monitoring and evaluation aspects of the project. The PMU will coordinate the work done by project personnel who will be consulting with the NBoS on the implementation of the energy monitoring, reporting and database operation and maintenance activities of the project. NBoS' services, expertise and database of information will be especially useful for the success of the demonstrations, for the data gathering and monitoring required for the design and operation of the project's M&E system, and for the establishment, operation and maintenance of the energy information sharing platform as well as the energy data banking system. NBoS staff members will also be involved in several training initiatives.
Bendigo Bank	The Bendigo Bank is the only currently operating bank in Nauru. It is an Australian Bank – Bendigo bank which has operated an agency since 2015 under Australian banking regulations. Bendigo Bank currently only offers banking and financial transactions without offering any loan or credit products. The MoF and Bendigo Bank will team up with the DCIE to operate the proposed financing scheme for RE and EE technologies and measures, particularly for the purchase of EE appliances and rooftop solar PV units for households and businesses. Under the proposed financing scheme, the MoF will be co-signatory together with the DCIE, while Bendigo bank will manage the account where the finds are kept and

Stakeholder	Involvement and Engagement in SMARTEN
	disbursed. In addition, the MoF will also have a pivotal role in the establishment, approval and enforcement of fiscal and financial incentives. The PMU will coordinate the discussions and arrangements regarding the establishment of the financing scheme, as well as in the promotion of the scheme. Particularly in the promotion of the scheme, together with the sub-contractor that will be tasked for the scheme promotion, the PMU will assist in the coordination of such events to ensure that the scheme is widely known to the target beneficiaries.
Vital Energy Corporation (VEC)	VEC is a petroleum products supplier in the Pacific region. It is not a Nauruan company, but is in operation in the country for the supply of petroleum products, including the bulk handling and storage of petroleum fuels. The PMU will liaise with this energy supply company in the provision of data inputs on plans and programs of the country concerning petroleum fuel supply and consumption in Nauru.
Community Leaders (districts and villages)	The Nauruan people are the main beneficiary of the SMARTEN Project. They are also among the key players in some of the activities of this project, particularly in the demonstrations (e.g., solar powered water pumping, treatment and distribution) that will be carried out in specific districts. The final design and implementation arrangements for the pertinent demos will involve discussions and consultations with the community leaders of these districts. The PMU will coordinate with the community leaders the gathering and provision of the necessary data/information for the detailed design of the demos, the arrangements with the sub-contractors that will be engaged to do the engineering, construction and operation of the installed demo facilities. It will also be liaising with the community the monitoring of the operation and performance of the demo, including its promotion. It will also be coordinating with community leaders the RE and EE promotional and awareness raising campaigns that will be organized and implemented under the project targeting the Nauruan people. Furthermore, the PMU will coordinate and discuss with the community leaders from the 14 districts and from the villages/communities in the design, planning and replication of the RE/EE technologies demonstrated under SMARTEN.
NGO, Social community and the other social/civic groups	As in other UNDP projects, the SMARTEN Project will also involve civil society organization such as the Women's Group and other social/civic groups working in the communities in the implementation of the project activities. This is in line with the need to support and facilitate a gender inclusive project implementation, as well as empowerment of women in low carbon development. The PMU will coordinate the discussions with these entities regarding their active involvement in specific activities of the project, such as in the capacity development programs, and promotional campaigns on RE and EE applications in support of the achievement of the country's socio-economic development objectives, as well as the NERM targets.
Private Sector Entities (e.g., RONPHOS, Eigigu Holding, Meneng Hotel)	The design of the SMARTEN Project is also geared towards the active participation of the private sector. The electricity utilization and in some case electricity production of some of the private sector entities in the country have direct impacts on the project outcomes. Partnering with them is very important for example in the formulation of RE and EE policies, as well as in design and implementation of the

Stakeholder	Involvement and Engagement in SMARTEN
	project demos. For example, local capacity and expertise in solar PV system installation and maintenance are expected to be tapped for the demonstrations. The PMU will coordinate discussions with interested private sector entities in Nauru in the provision of technical advice in the design and development of possible scale-up and replication projects for public/private partnerships that will be demonstrated under the project, including provision of co-financing to specific project activities.

Stakeholder Classifications

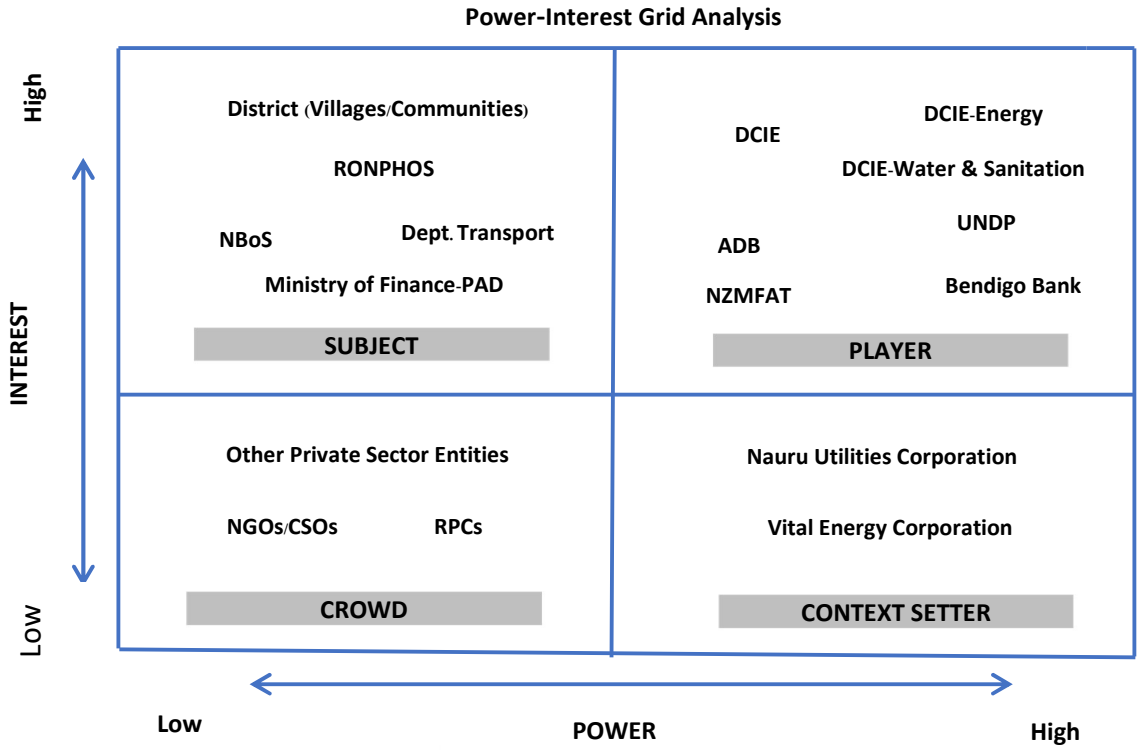
Players - Stakeholders categorized as '*players*' have high interest and high power to influence decisions in the project. The key players in this project are the DCIE, NUC, UNDP, GEF focal point and key implementing agent in the project implementation. Adequate resources should be used to actively engage, consult and mobilize key players when it matters for project success in implementation. This category of stakeholders shall be engaged in decision making responsibilities and render advice to the project when required. There are many key players in the project, and they may at times have opposing views on critical decision-making areas for the project. Grievances that might arise with, amongst or between key players shall be treated with caution and immediately managed at the advisory level. Key players shall be kept well informed about the project's progress in implementation on a timely manner.

Subjects - Stakeholders categorized as '*subjects*' have high interest and low power to influence decisions in the project. This category of stakeholder plays a key role in project implementation. They would require close guidance, monitoring and evaluation of their work performance against target outputs on a timely manner. Engagement of these stakeholders would ideally involve MOU's with the DCIE where needed. Enough resources should be used to coordinate their work in order to avoid duplication, overlaps and omissions. Grievances must be managed to avoid impacts on implementation. Given the possibility of overlapping roles especially in capacity building component, mutual agreements will be reached with stakeholders on the details of their activities and implementation approach of the activities specified and their engagement must be legally binding through a Memorandum of Understanding or Letter of Agreement with UNDP.

Crowd - Stakeholders categorized as 'crowd' have low interest and low power to influence decisions in the project. Engagement of crowd stakeholders can be kept at a minimum. However, crowd stakeholders may form alliance with 'players', 'subjects' and 'context setters' to influence their decisions or interests on a certain issue. Hence, their views are also important to gauge alliance support.

Context Setters - Stakeholders categorized as 'context setter' have low interest in specific concepts of the project but still have high power to influence decision in the project in key areas of collaboration. Engagement of context setters must be well moderated and highly consultative to avoid absence of engagement that may stall progress. Context setters must be properly consulted and rightly engaged to maximize contribution to the project.

Below is the Power-Interest Grid analysis. This illustrates the level of influence, importance and involvement of groups and institutions with vested interest in renewable energy, energy conservation and energy efficiency in the country. Not all the stakeholders assessed that have interest in the SMARTEN Project have power to influence decisions. The grid shows the position of individual stakeholders and the relations between or amongst them to identify and anticipate where potential stakeholder conflicts may arise and how to understand and manage stakeholder conflicts more effectively.



B. Stakeholder Engagement Plan

Stakeholder Engagement Plan

Project Stakeholder	Stakeholder Interest	Roles and Responsibilities in Implementation	Means of Engagement	Engagement Schedule during Implementation
DCIE	GHG emission reduction; NERM targets achievement	Implementing partner for SMARTEN Project (Energy Unit). Demonstration activity partner (Water & Sanitation Unit)	Access GEF funding	As required
			Reporting to PMU & UNDP	As required
			Project Board Meetings	Quarterly/Mid-Term
			Project Monitoring and Evaluation	As planned
DoT	Climate change mitigation in the transport sector	Support implementation and monitoring of EE transport project activities.	Project Board Meetings	Quarterly
			Project Mid-Term Evaluation	As planned

Project Stakeholder	Stakeholder Interest	Roles and Responsibilities in Implementation	Means of Engagement	Engagement Schedule during Implementation
MoF - PAD	Socio-economic development	Oversight on the project financing.	Project Board meetings Demo implementation	As scheduled As scheduled
District (villages & communities)	Socio-economic development	Support implementation of project in selected districts	Reporting lines	Quarterly
Nauru Utilities Corporation	Regulation, generation and distribution of electricity; sustainability of electricity production and distribution; water supply.	Support implementation of all activities of the demonstration project relative to the solar PV power generation electricity storage in desalinated water.	Project Board Meetings	Quarterly
			Knowledge Management	As required
			Implementation of electricity generation and distribution project activities	As required
Vital Energy Corporation	Supply and distribution of petroleum fuels	Support EE/NERM project activities	Project Board Meetings	Quarterly
			Knowledge Management	As required
			Implementation of EE fuel use project activities	As required
Bendigo BANK	Commercial banking business	Support EE project activities	Project Board Meetings	Quarterly
			Knowledge Management	As required
			Implementation of EE Appliance project activities	As required
Donor Partners (ADB, NZMFAT)	Project impacts, climate financing, networking	Build synergies across projects and expand on RE development in Nauru	Donor meetings	Yearly
GEF	GHG emission reduction	Project financing	Annual reporting	Yearly
UNDP	Sustainable Development	Project implementation	Project procurements, finance management and resource mobilization	Daily

C. Proposed Budget for Stakeholder Engagement

Stakeholder Engagement Activities	Quantity	Unit of measure	Unit Cost (USD)	Estimated Cost (USD)

Project Inception Meeting	1	Meeting	10,000	10,000
Project Board Meetings	20	Meeting	500	10,000
Project Monitoring and Evaluation	10	Mission	4,000	40,000
Knowledge Management Meetings	20	Meeting	500	10,000
Communication Strategy	1	Document	10,000	10,000
Website	1	Website	25,000	25,000
Trainings (Training of Trainers; Short Courses)	5	Sessions	3,000	15,000
Promotion and awareness campaigns	10	Events	2,000	20,000
TOTAL				**$140,000**

Annex 5: UNDP Risk Log

#	Description	Date Identified	Risk Category	Impact & Probability	Risk Treatment / Management Measures	Risk Owner	Status
1	Incompatible capacity of the implementing partner, DCIE, to implement the project based on the 'significant risk rating' of the micro-HACT assessment of DCIE.	November 2019	Organizational, Operational	Impact: 4 (high) Likelihood: 4 (high) Risk level: Substantial	Significant risk: This indicates an underdeveloped financial management system or control framework with a significant likelihood of negative impact on the Partner's ability to execute the program in accordance with the work plan. For Partners rated as **significant risk**, Direct Cash Transfers are not viable. Direct Payments or Reimbursement may be used only in selected specifically assessed areas where the Partner's internal controls were deemed adequate in the micro assessment. All other activities must be either through engaging a Responsible Party, such as a government entity or NGO, as a Responsible Party in implementing project activities. If the estimated cash transfers to the Responsible Party are above $300,000 per program cycle, a micro assessment and assurance activities on the Responsible Party will be required.	PMU, DCIE	No change
2	The Project would potentially reproduce discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits.	November 2019	Technical, Operational	I=3 P=1 Low	The project could potentially offer a wide range of opportunities for individuals and groups for example in participating and getting trained in capacity development program activities, or to be hired as a consultant or contractor for the project implementation. Any existing discrimination in the country towards specific gender or groups could continue to come to play through the project. Special measures have been taken to ensure that any potential discrimination against any group (e.g., women) or individuals in the design of the project activities. Special efforts have been carried out to explore and facilitate the inclusion of interventions to enhance the role of women. Examples of these could be special efforts to involve women in productive use of RE activities, to involve women with strong representation at seminar-workshops, and to ensure a significant proportion of project consultants are women.	PMU, DCIE	No change
3	Demos installed and operated in areas owned and occupied by private entities.	November 2019	Technical, Operational	I=3 P=5 Low	The demos may have to be installed in areas that are not state-owned or owned by private people/entity. In such cases, consultations with the relevant private sector entity will be carried out as a part of the site specific environmental and social impact assessments to be completed prior installation. These will include	PMU, DCIE, NCBO	No change

	The Project or portions of the Project will be located on private lands.				consultations with individual households and separate consultation meetings for women and men of the relevant communities. Alternatively, the demos can be limited to those that are to be installed in state-owned lands, or are owned and operated by private sector entities that are interested in partnering with the DCIE/NUC in promoting their project as demonstration of how a sustainable energy production project can be designed, financed, engineered, installed and operated as a commercial business.		
4	The project would potentially cause adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services.	November 2019	Environmental, Operational	I=2 P=3 Moderate	One potential demonstration under the project is the application of decentralized solar PV seawater desalination systems. The installed units may be sited on areas of habitat that could be adversely affected. The NUC is the main supplier of water in the country. Water production in the country is mainly by seawater desalination (electricity driven). The demonstration of decentralized solar energy-based seawater systems in selected districts will have potential environmental impacts during the installation and operation of the water desalination units. The potential environmental impacts during operation are mostly continuous, while those associated with construction activities are temporary and mostly reversible. The detailed feasibility studies to be carried out during full project implementation will clearly articulate mitigation measures for any alternation to the coastal environment in district where the desalination units will be installed. Although the installed units are relatively small size, specific mitigation measures are presently available for portable systems that are regarded as best practice with respect to environmental management of such systems, ensuring compliance with the requirements of the applicable environmental legislation relating to environmental aspects. Any other potential impacts and risks including mitigation measures will be elaborated in the limited environmental and social assessments during implementation of solar PV seawater desalination demo and to be completed prior to any physical work beginning on the installation of the required hardware.	PMU, DCIE, NUC	No change
5	Certain elements of demo project construction,	November 2019	Technical, Environmental, Community	I=2 P=4	Construction aspects and operation of demo solar PV systems (e.g., mini-grid), solar PV-powered water desalination units; and the EE retrofits can pose safety risk.	PMU, DCIE, NUC	No change

	operation, or decommissioning may pose potential safety risks to local communities. *Project could pose potential risks to community health and safety due to the transport, storage, and use and/or disposal of hazardous or dangerous materials.*		Health/Safety/Working conditions	Moderate	All demos will involve site-specific environmental and social assessments and recommend measures to mitigate the identified safety risks. Appropriate capacity building will be provided to the participants of each demo to ensure that they will be able to properly and safely operate the installed systems in such a way that the release or handling of waste products are properly controlled and managed. This will minimize or avoid any community health risks and safety issues for the communities regarding construction work involved in the installation of the demos, and the minimization and management of waste generated (e.g., spent lead-acid batteries, spent lithium batteries).		
6	The project would potentially result in the generation of waste (both hazardous and non-hazardous).	November 2019	Technical, Environmental, Community Health/Safety/Working conditions	I=3 P=5 Moderate	The construction and operation of the RE-based energy generation (power and non-power applications) demos will generate waste materials. For example, PV panels and batteries will require disposal at end of life. Operation of water desalination plants produce high salinity effluents. EE retrofit projects (e.g., Use of LED lamps to replace CFLs/FLs) will potentially generate hazardous waste, particularly mercury. The demos will be designed considering the potential waste generation and ensuring proper disposal of wastes from the various stages of construction, operation and disposal. Disposal plans will be one of the requirements of the site-specific environmental and social impact assessment that will be conducted for each of demo. Such plans may be for the disposal of the PV panels and batteries, which contain hazardous wastes, once their useful life is reached. For the EE retrofits, the replacement of old appliances such as refrigerators will require special plans for waste disposal in the E/S assessments. The refrigerators require proper disposal and may involve hazardous substances, particularly the refrigerant. Proper handling of the disposed refrigerants, as well as spent batteries, and Hg in spent CFLs/FLs will be incorporated in the operating manuals of these demo units.	PMU, DCIE	No change
7	Weak capacity of the relevant GoN agencies to	March 2018	Technical, Operational	P = 2 I = 4	Relevant technical assistance will be provided in coordination with other development partners to assist the GON in the NERM implementation. Close coordination with other ongoing UNDP-GEF projects in the country will be	PMU, DCIE	No Change

	implement the NERM, which can lead to delays in the implementation, and even non-implementation of some project activities			Moderate	carried out to take advantage of potential synergies in the management of the project implementation. Other government agencies, and/or responsible parties will manage and expedite the procurement of external personnel who will work on the affected project activities in case government capacity remains inadequate. If need be, the affected activities may have to be modified to allow expeditious implementation and completion.		
8	The committed level of co-financing for specific activities of the project is not enough or may not become fully available in time	March 2018	Financial Political	P = 1 I = 4 Moderate	The project team will work closely with the project partners that are implementing the subsumed baseline activities to either synchronize the schedule of the project implemented and supervised activities with that of the project partners. The project team shall secure GON assurance of co-funding prior to project start. In case this problem will occur, the reallocation of budget may be considered to support the implementation of affected activities. This may entail the delivery of alternative outputs that will also contribute to the achievement of the relevant project outcome. Constant follow-up with the pertinent co-financers will be conducted either to secure the committed co-financing or negotiate the amount of co-financing.	PMU, DCIE, MoF	No Change
9	The established enabling conditions for government financing of sustainable energy development actions will not be fully sustained, particularly if there will be continuous reliance to inflows from RPC	March 2018	Financial Operational	P = 3 I – 2 Moderate	Close coordination with the GON agency that is involved in the new Nauru Trust Fund established by ADB, to provide the GON with an investment vehicle for excess funds. The development of a sustainable follow-up plan is part of the project activities. This will be useful for the replication of the demonstrated applicable and feasible EE & RE technologies in the end-use sectors of the country.	PMU, MoF	No Change
10	Relevant GoN agencies fail to approve and enforce formulated policies and regulations	March 2018	Political Regulatory	P = 3 I = 2 Moderate	Advocacy to gain adequate support from the parliament on the adoption of the formulated policies and regulations will be carried out by the implementing partners, with the assistance of a responsible party if necessary. In case this happens, DCIE will facilitate discussions with project stakeholders and relevant government authorities through the Project	PMU, DCIE	Reducing

					Board to come up with decisions on expediting the approval, or reformulation, of the recommended policies/regulations.		
11	Demonstration hosts may not support promptly and sufficiently the planned demos/pilots	March 2018	Organizational Technical	P = 1 I = 3 Low	A capable project team comprised of competent local and international experts will be established to assist the DCIE in the project execution and in the coordination of the project implementation with the project partners. If the demo hosts are remiss in their obligations and commitments to the demo implementation, follow-up discussions between DCIE, demo host, other relevant GoN agencies and the UNDP Pacific Office (PO) will be carried out to determine and resolve any issue.	PMU, DCIE, NCBO	No Change
12	Adverse climate-related events may hamper the implementation of hardware-related activities	March 2018	Environmental	P = 1 I = 3 Low	Adequate compliance with proper engineering and construction design and construction standards that facilitate not only structural integrity but also climate resilience will be done in the design and implementation of EE/RE activities that involve procurement, design/engineering, installation and operation of EE & RE technology system installations[35]. In case this happens, pre-cautionary and safety procedures will be put in place to at least minimize impacts of gale force winds.	PMU, DCIE	No Change
13	Political instability weakens energy policy commitment, and change in administration may influence government support for project	March 2018	Political Regulatory	P = 1 I = 3 Low	UNDP to maintain policy dialogue with both government and opposition and will sustain a high level of consultation throughout implementation, and if necessary, UNDP executive management intervention may be called upon to assist. The DCIE, and other government agencies involved in the project will monitor political dynamics and will try to resolve any misunderstanding within the project. Project Board meetings and special meetings with the DCIE will be conducted in case this is happening, to discuss courses of actions to take to sustain the GON's commitment to support the project and carry out such actions accordingly.	PMU, DCIE	No Change
14	Low oil prices will reduce interest in RE-based power generation	March 2018	Strategic	P = 1 I = 2 Low	Awareness raising activities will be designed to include features that will sustain the overall interest of the country in low carbon development and RE-based energy systems even when the oil prices are relatively low. In case of relatively low oil prices, the project will emphasize energy, environment and economic benefits of RE, and the country's objective to reach the NERM targets and its obligation to achieve its climate change mitigation targets in its NDC to facilitate that the interest of the government in low carbon development is sustained.	PMU, MoF, DCIE	No Change

[35] The design and construction of the systems that will be installed will be based on what the major bilateral and multi-lateral donors require for the infrastructure projects they are funding in the Pacific Island region.

Annex 6: Overview of Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management		
Local / National Contracting		
Project Manager	208 weeks over 4 years	The Project Manager is responsible for overall management and regular monitoring of project results and risks, including social and environmental risks. He will develop annual work plans based on the multi-year work plan to support the efficient implementation of the project according to UNDP and GEF management and M&E standards, in co-operation with the DCIE and other stakeholders.
Project Communications Officer	208 weeks over 4 years	The Communications Officer will lead the knowledge management outputs in Component 4 and developing the project communications strategy at the project outset and coordinating its implementation across all project components. The Communications Officer will work closely with the M&E Officer on knowledge management aspects of the project.
Project Assistant	208 weeks over 4 years	The Project Assistant, under the overall supervision and guidance the Project Manager, will assist in day-to-day management and oversight of project activities, assist in the preparation of progress report, ensure that all project documents are properly maintained and readily available in hard and soft copies, and provide administrative and logistical assistance.
Project Finance and Administrative	208 weeks over 4 years	The Project Finance and Administrative Officer, under the direction of the Project Manager, will be involved full-time with the project. All this officer's role will be project management in function. Annex 7 includes the preliminary TOR for the Project Finance and Administrative Officer.
For Technical Assistance		
Outcome 1		
Local / National Contracting		
National Energy Policy consultant	9.4 weeks over 4 years	Under close supervision of the Project Manager (PM) and in coordination with the International consultant, the national consultant will support efforts in Energy Policy & Regulatory Framework Strengthening. Specific tasks to contribute to achievement of Outcome 1 will be: • formulate energy policies and regulatory instruments, and for the development of an incentive framework • review background documents, revise and update national energy strategies and plans, to design and conduct training program on national energy balance, and formulate policies and regulatory instruments • establish national energy plans, to design and conduct training program on energy planning and financing, and periodically review achievements
International / Regional and Global Contracting		
International Energy Policy consultant	13.2 weeks / over 4 years	Under close supervision of the Project Manager (PM), the International consultant will support efforts in Energy Policy & Regulatory Framework Strengthening. Specific tasks to contribute to achievement of Outcome 1 will be: • formulate energy policies and regulatory instruments and for the development of an incentive framework. • review background documents, revise and update national energy strategies and plans, to design and conduct training program on national energy balance, and formulate policies and regulatory instruments

Consultant	Time Input	Tasks, Inputs and Outputs
		• establish national energy plans, to design and conduct training program on energy planning and financing, and periodically review achievements
Outcome 2.1		
Local / National Contracting		
National Legal and Institutional Frameworks Expert	9.2 weeks / over 4 years	Under close supervision of the Project Manager (PM) and in coordination with the International Experts, the National consultant will contribute to achievement of Outcome 2.1. Specific tasks will be: • develop inter-ministerial/departmental/agency mechanisms, establish a consultative mechanism, and prepare reports. • assess capacity gaps and needs, to design and conduct training programs on energy integrated development planning and RE/EE technologies, and establish inter-departmental coordination mechanisms. • review institutional arrangements, roles and responsibilities, assess gaps and needs, and clearly define institutional mandates and responsibilities.
International / Regional and Global Contracting		
International Legal and Institutional Frameworks Expert	12.8 weeks over 4 years	Under close supervision of the Project Manager (PM) and in coordination with the National Experts, the International consultant will contribute to achievement of Outcome 2.1. Specific tasks will be: • develop inter-ministerial/departmental/agency mechanisms, establish a consultative mechanism, and prepare reports. • assess capacity gaps and needs, to design and conduct training programs on energy integrated development planning and RE/EE technologies, and establish inter-departmental coordination mechanisms. • review institutional arrangements, roles and responsibilities, assess gaps and needs, and clearly define institutional mandates and responsibilities.
Outcome 2.2		
Local / National Contracting		
National Financial Expert	9.6 weeks / over 4 years	Under close supervision of the Project Manager (PM) and in coordination with the International Experts, the National consultant will contribute to achievement of Outcome 2.2. Specific tasks will be: • develop a financial support scheme, establish benchmark prices for RE/EE technologies, to design and conduct training program for women led/owned and youth group operated businesses on RE/EE investment opportunities and financing, and develop institutional frameworks. • formulate strategies and policies, to design and conduct training program on RE/EE energy financing and evaluate government budget allocation.
International / Regional and Global Contracting		
International Financial Expert	14.6 weeks over 4 years	Under close supervision of the Project Manager (PM) and in coordination with the National Experts, the International consultant will contribute to achievement of Outcome 2.2. Specific tasks will be: • develop a financial support scheme, establish benchmark prices for RE/EE technologies, to design and conduct training program for women led/owned and youth group operated businesses on RE/EE investment opportunities and financing, and develop institutional frameworks.

Consultant	Time Input	Tasks, Inputs and Outputs
		• formulate strategies and policies, to design and conduct training program on RE/EE energy financing and evaluate government budget allocation.
Outcome 3		
Local / National Contracting		
National RE/EE Technology Experts	23.2 weeks over 4 years	In close coordination with the International RE/EE Technology Experts, the National RE/EE Technology Expert will contribute to achievement of promotion of RE&EE Technologies Applications. Tasks will include: • assess feasible demo projects, prepare reports, develop demo project designs and implementation plans, prepare case studies, complete grid stability studies, upgrade the SCADA system, establish RE-grid codes, and design and conduct training programs. • assess feasible replication and/or scale-up projects, prepare reports, design and conduct training programs, and develop replication and/or scale-up project designs and implementation plans. • design an energy audit system, conduct energy audits, and design and conduct training programs.
International / Regional and Global Contracting		
International RE/EE Technology Expert	92.4 weeks over 4 years	In close coordination with the National RE/EE Technology Expert, the International RE/EE Technology Expert will contribute to achievement of promotion of RE&EE Technologies Applications. Tasks will include: • assess feasible demo projects, prepare reports, develop demo project designs and implementation plans, prepare case studies, complete grid stability studies, upgrade the SCADA system, establish RE-grid codes, and design and conduct training programs. • assess feasible replication and/or scale-up projects, prepare reports, design and conduct training programs, and develop replication and/or scale-up project designs and implementation plans. • design an energy audit system, conduct energy audits, and design and conduct training programs.
Outcome 4		
Local / National Contracting		
National Communication Experts	11.6 weeks over 4 years	In close coordination with the International Communication consultant, the National Communication Experts will undertake several tasks related to the improvement of Energy Sector Capacity in the country. Tasks will include: • assess capacity gaps and needs, design and conduct training program sustainable energy and low carbon development, prepare reports, design and implement awareness raising programs, design and conduct surveys, and prepare informative material. • establish an information sharing platform and an energy data banking system, design and conduct training programs on operation and maintenance of the information sharing system and the energy data banking system, prepare reports, and develop an EMRS.
International / Regional and Global Contracting		

Consultant	Time Input	Tasks, Inputs and Outputs
International Communication consultant	18.6 weeks over 4 years	In close coordination with the National Communication Experts, the International Communication consultant will undertake several tasks related to the improvement of Energy Sector Capacity in the country. Tasks will include: • assess capacity gaps and needs, design and conduct training program sustainable energy and low carbon development, prepare reports, design and implement awareness raising programs, design and conduct surveys, and prepare informative material. • establish an information sharing platform and an energy data banking system, design and conduct training programs on operation and maintenance of the information sharing system and the energy data banking system, prepare reports, and develop an EMRS.

Annex 7: Terms of References

Project Manager

Background

The Project Manager (PM) will be appointed by the project implementing partner. The PM will be responsible for the overall management of the Project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors.

Duties and Responsibilities

- Manage the overall conduct of the project.
- Plan the activities of the project and monitor progress against the approved workplan.
- Execute activities by managing personnel, goods and services, training and low-value grants, including drafting terms of reference and work specifications, and overseeing all contractors' work.
- Monitor events as determined in the project monitoring plan and update the plan as required.
- Provide support for completion of assessments required by UNDP, spot checks and audits.
- Manage requests for the provision of UNDP financial resources through funding advances, direct payments or reimbursement using the FACE form.
- Monitor financial resources and accounting to ensure the accuracy and reliability of financial reports.
- Monitor progress: watch for plan deviations and make course corrections when needed within project board-agreed tolerances to achieve results.
- Ensure that changes are controlled, and problems addressed.
- Perform regular progress reporting to the project board as agreed with the board, including measures to address challenges and opportunities.
- Prepare and submit financial reports to UNDP on a quarterly basis.
- Manage and monitor the project risks – including social and environmental risks - initially identified and 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.
- Capture lessons learned during project implementation.
- Prepare revisions to the multi-year workplan, as needed, as well as annual and quarterly plans if required.
- Prepare the inception report no later than one month after the inception workshop.
- Ensure that the indicators included in the project results framework are monitored annually in advance of the GEF PIR submission deadline so that progress can be reported in the GEF PIR.
- Prepare the GEF PIR.
- Assess major and minor amendments to the project within the parameters set by UNDP-GEF.
- Monitor implementation plans including the gender action plan, stakeholder engagement plan, and any environmental and social management plans.
- Monitor and track progress against the GEF Core indicators.
- Support the Mid-term review and Terminal Evaluation process.

Required skills and expertise

- A university degree (MSc or PhD) in a subject related to natural resource management or environmental sciences.
- At least 5 years of demonstrable project/program management experience.
- At least 5 years of experience working with ministries, national or provincial institutions that are concerned with natural resource and/or environmental management.

Competencies

- Strong leadership, managerial and coordination skills, with a demonstrated ability to effectively coordinate the implementation of large multi-stakeholder projects, including financial and technical aspects.

- Ability to effectively manage technical and administrative teams, work with a wide range of stakeholders across various sectors and at all levels, to develop durable partnerships with collaborating agencies.
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project.
- Ability to coordinate and supervise multiple Project Implementation Units in their implementation of technical activities in partnership with a variety of subnational stakeholder groups, including community and government.
- Strong drafting, presentation and reporting skills.
- Strong communication skills, especially in timely and accurate responses to emails.
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search.
- Strong knowledge about the political and socio-economic context related to the Indonesian protected area system, biodiversity conservation and law enforcement at national and subnational levels.
- Excellent command of English and local languages.

Project Assistant

Under the guidance and supervision of the Project Manager, the Project Assistant will carry out the following tasks:

- Assist the Project Manager in day-to-day management and oversight of project activities.
- Assist in the preparation of progress reports.
- Ensure all project documentation (progress reports, consulting and other technical reports, minutes of meetings, etc.) are properly maintained in hard and electronic copies in an efficient and readily accessible filing system, for when required by PB, TAC, UNDP, project consultants and other PMU staff.
- Provide PMU-related administrative and logistical assistance.

The Project Assistant will be recruited based on the following qualifications:

- A Bachelor's degree or an equivalent qualification.
- At least three years of work experience preferably in a project involving biodiversity conservation, natural resource management and/or sustainable livelihoods. Previous experience with UN project will be a definite asset.
- Very good inter-personal skills.
- Proficiency in the use of computer software applications especially MS Word and MS Excel.
- Excellent language skills in English (writing, speaking and reading) and in local languages

Project Accountant/Finance Assistant/Finance officer

Under the guidance and supervision of the Project Manager, the Project Accountant will have the following specific responsibilities:

- Keep records of project funds and expenditures and ensure all project-related financial documentation are well maintained and readily available when required by the Project Manager.
- Review project expenditures and ensure that project funds are used in compliance with the Project Document and GoN financial rules and procedures.
- Validate and certify FACE forms before submission to UNDP.
- Provide necessary financial information as and when required for project management decisions.
- Provide necessary financial information during project audit(s).
- Review annual budgets and project expenditure reports and notify the Project Manager if there are any discrepancies or issues.
- Consolidate financial progress reports submitted by the responsible parties for implementation of project activities.
- Liaise and follow up with the responsible parties for implementation of project activities in matters related to project funds and financial progress reports.

The Project Accountant will be recruited based on the following qualifications:

- A Bachelor's degree or an advanced diploma in accounting/ financial management.
- At least five years of relevant work experience preferably in a project management setting involving multi-lateral/ international funding agency. Previous experience with UNDP or UN project will be a definite asset.
- Proficiency in the use of computer software applications particularly MS Excel.
- Excellent language skills in English (writing, speaking and reading) and in local languages.

Project Communications Officer

Under the overall supervision and guidance of the Project Manager, the Communications Officer will have the responsibility for leading knowledge management outputs in Component 4 and developing the project communications strategy at the project outset and coordinating its implementation across all project components. The Communications Officer will work closely with the M&E Officer on knowledge management aspects of the project. Specific responsibilities will include:

- Develop a project communications strategy / plan, incorporate it with the annual work plans and update it annually in consultation with project stakeholders; coordinate its implementation
- Coordinate the implementation of knowledge management outputs of the project.
- Coordinate and oversee the implementation of public awareness activities across all project components.
- Facilitate the design and maintenance of the project website/webpages and ensure it is up-to-date and dynamic.
- Facilitate learning and sharing of knowledge and experiences relevant to the project.

The Project Communications Officer will be recruited based on the following qualifications:

- A Bachelor's degree, preferably in the field of community development or natural resource / environmental management.
- A communications qualification (diploma, Bachelor's degree)
- At least three years of relevant work experience of communications for project or program implementation, ideally involving international donors. Previous experience with UN projects will be a definite asset.
- Previous experience in developing and implementing communications strategies for organizations or projects
- Strong professional working capacity to use information and communications technology, specifically including website design and desk top publishing software
- Understanding of illegal wildlife trade, biodiversity conservation, sustainable livelihoods and associated issues.
- Very good inter-personal skills
- Excellent language skills in English (writing, speaking and reading) and in local languages

Annex 8: Procurement Plan

Project Annual Workplan Activity or Task	Budget Code/Child Code	Position/Title	Cost Per Year	No. of years	Total Cost (US$)	*Y1-'20*	*Y2-'21*	*Y3-'22*	*Y4-'24*	Recruitment Procedure	Level Type	Duration Type	See Budget Notes:
Outcome 1: Output 1.1, 1.2, 1.3	71200	International Energy Planning, Policy & Financing Expert	Varies	4	46,200	14,000	23,800	4,200	4,200	Tender	International Consultant	Part-time	1
Outcome 1: Output 1.1, 1.2, 1.3	71300	National Energy Planning, Policy & Financing Expert	Varies	4	14,100	4,200	6,300	2,100	1,500	Tender	National Consultant	Part-time	2
Outcome 2.1: Output 2.1.1, 2.1.2, 2.1.3	71200	International Capacity and Institutional Development Expert	Varies	4	44,800	11,900	25,200	6,300	1,400	Tender	International Consultant	Part-time	6
Outcome 2.1: Output 2.1.1, 2.1.2, 2.1.3	71300	National Capacity and Institutional Development Expert	Varies	4	13,800	3,900	5,400	1,800	2,700	Tender	National Consultant	Part-time	7
Outcome 2.2: Output 2.2.1, 2.2.2	71200	International RE/EE Financing Scheme Expert	Varies	3	51,100	27,300	19,600	4,200	-	Tender	International Consultant	Part-time	11
Outcome 2.2: Output 2.2.1, 2.2.2	71300	National RE/EE Financing Scheme Expert	Varies	4	14,400	5,400	4,500	1,500	3,000	Tender	National Consultant	Part-time	12
Outcome 3: Output 3.1, 3.2, 3.3, 3.4, 3.5	71200	International Expert for the Engineering Design, Feasibility Assessments, Energy Audit, Training, and Procurement for the demonstration activities	Varies	4	323,400	107,800	95,200	77,000	43,400	Tender	International Consultant	Part-time	17
Outcome 3: Output 3.1, 3.2, 3.3, 3.4, 3.5	71300	National Expert for the Engineering Design, Feasibility Assessments, Energy Audit, Training, and Procurement for the demonstration activities	Varies	4	34,800	9,000	9,000	9,000	7,800	Tender	National Consultant	Part-time	18
Outcome 3: Output 3.5 - Activities 3.5.1, 3.5.2, 3.5.3, 3.5.4, 3.5.5	72200	Equipment, Installations, and Support Systems	Varies	4	1,915,000	164,000	597,000	796,000	358,000	Tender	Equipment & Furniture		20
Outcome 3: Output 3.4 - Activity 3.4.3, 3.4.5	72800	Rental of DigSILENT software	Varies	2	12,000	6,000	6,000	-	-	Tender	Information Techn. Equipment		21
Outcome 4: Output 4.1, 4.2, 4.3	71200	International Expert for Improving the Capacity of Nauru's Energy Sector	Varies	4	59,500	11,900	36,400	9,800	1,400	Tender	International Consultant	Part-time	26
Outcome 4: Output 4.1, 4.2, 4.3	71300	National Expert for Improving the Capacity of Nauru's Energy Sector	Varies	4	16,200	1,800	6,600	4,500	3,300	Tender	National Consultant	Part-time	27
Outcome 4: Output 4.2 - Activity 4.2.1, 4.3.1	73300	For two software systems and for management and maintenance of the Information Sharing Platform and the Energy Database	Varies	3	25,000	-	5,000	15,000	5,000	Tender	Rental & Maintenance of IT Equipment		31
Project management costs	71400	Project Management Unit staff: Project Manager, Comms Officer, Finance & Admin Officer, Project Officer	Consistent	4	84,156	21,039	21,039	21,039	21,039	Hire	Contractual Services - Individual	Full-time	34
Project management costs	74100	Professional services: financial audit fees, mid-term evaluation, and final evaluation.	Varies	3	70,000	-	30,000	10,000	30,000	Tender	Professional Services	Part-time	35
	TOTAL				**2,724,456**	**388,239**	**891,039**	**962,439**	**482,739**				

Annex 9: GEF Core Indicators

Core Indicator 6	**Greenhouse gas emission mitigated**				***(Metric tons of CO_2e)***
		Expected metric tons of CO_2e (6.1+6.2)			
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*1.029 million tCO_{2e}*[36]	*0.350 million tCO_{2e}*		
	Expected CO2e (indirect)		*0.699 million tCO_{2e}*		
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector				
		Expected metric tons of CO_2e			
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*N/A*	*N/A*	*N/A*	*N/A*
	Expected CO2e (indirect)	*N/A*	*N/A*	*N/A*	*N/A*
	Anticipated start year of accounting	*N/A*	*N/A*	*N/A*	*N/A*
	Duration of accounting	*N/A*	*N/A*	*N/A*	*N/A*
Indicator 6.2	Emissions avoided Outside AFOLU				
		Expected metric tons of CO_2e			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)	*1.029 million tCO_{2e}*[37]	*0.350 million tCO_{2e}*		
	Expected CO2e (indirect)		*0.699 million tCO_{2e}*		
	Anticipated start year of accounting		*2020*		
	Duration of accounting		*Until 2050*		
Indicator 6.3	Energy saved				
		MJ			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
			$6.53x10^8$		
Indicator 6.4	Increase in installed renewable energy capacity per technology				
	Technology	Capacity (MW)			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Solar Photovoltaic		*6.9 MWdc*		
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**				***(Number)***
		Number			
		Expected		Achieved	
		PIF stage	Endorsement	MTR	TE
	Female		817		
	Male		817		
	Total		1,634[38]		

[36] This includes both Direct and Indirect

[37] This includes both Direct and Indirect

[38] It is estimated that the *Mini solar powered water desalination and distribution system will directly benefit 120 persons (60 for each gender); the bus will provide a mean of transportation for a minimum of 100 persons (50 for each gender); SMARTEN is expected to directly create 24 new positions (12 women and 12 men); and finally it has been assesses that the financing scheme will benefit 1,390 Nauruans (50% women and 50% men).*

Annex 10: GEF 7 Taxonomy

Level 1	Level 2	Level 3	Level 4
☒ **Influencing models**			
	☒ **Transform policy and regulatory environments**		
	☒ **Strengthen institutional capacity and decision-making**		
	☐ **Convene multi-stakeholder alliances**		
	☐ **Demonstrate innovative approaches**		
	☐ **Deploy innovative financial instruments**		
☒ **Stakeholders**			
	☒ **Indigenous Peoples**		
	☒ **Private Sector**		
		☐ Capital providers	
		☐ Financial intermediaries and market facilitators	
		☐ Large corporations	
		☐ SMEs	
		☒ Individuals/Entrepreneurs	
		☐ Non-Grant Pilot	
		☐ Project Reflow	
	☒ **Beneficiaries**		
	☒ **Local Communities**		
	☒ **Civil Society**		
		☒ Community Based Organization	
		☐ Non-Governmental Organization	
		☐ Academia	
		☐ Trade Unions and Workers Unions	
	☒ **Type of Engagement**		
		☒ Information Dissemination	
		☐ Partnership	
		☒ Consultation	
		☒ Participation	
	☒ **Communications**		
		☒ Awareness Raising	
		☐ Education	
		☒ Public Campaigns	
		☐ Behavior Change	
☒ **Capacity, Knowledge and Research**			
	☒ **Enabling Activities**		
	☒ **Capacity Development**		
	☒ **Knowledge Generation and Exchange**		
	☐ **Targeted Research**		
	☐ **Learning**		
		☐ Theory of Change	
		☐ Adaptive Management	
		☐ Indicators to Measure Change	
	☒ **Innovation**		
	☒ **Knowledge and Learning**		
		☒ Knowledge Management	
		☐ Innovation	
		☒ Capacity Development	

Level 1	Level 2	Level 3	Level 4
		☐ Learning	
	☒ **Stakeholder Engagement Plan**		
☒ **Gender Equality**			
	☐ **Gender Mainstreaming**		
		☐ Beneficiaries	
		☐ Women groups	
		☐ Sex-disaggregated indicators	
		☐ Gender-sensitive indicators	
	☒ **Gender results areas**		
		☐ Access and control over natural resources	
		☒ Participation and leadership	
		☐ Access to benefits and services	
		☐ Capacity development	
		☒ Awareness raising	
		☐ Knowledge generation	
☒ **Focal Areas/Theme**			
	☐ **Integrated Programs**		
		☐ Commodity Supply Chains (39Good Growth Partnership)	
			☐ Sustainable Commodities Production
			☐ Deforestation-free Sourcing
			☐ Financial Screening Tools
			☐ High Conservation Value Forests
			☐ High Carbon Stocks Forests
			☐ Soybean Supply Chain
			☐ Oil Palm Supply Chain
			☐ Beef Supply Chain
			☐ Smallholder Farmers
			☐ Adaptive Management
		☐ Food Security in Sub-Sahara Africa	
			☐ Resilience (climate and shocks)
			☐ Sustainable Production Systems
			☐ Agroecosystems
			☐ Land and Soil Health
			☐ Diversified Farming
			☐ Integrated Land and Water Management
			☐ Smallholder Farming
			☐ Small and Medium Enterprises
			☐ Crop Genetic Diversity
			☐ Food Value Chains
			☐ Gender Dimensions
			☐ Multi-stakeholder Platforms
		☐ Food Systems, Land Use and Restoration	
			☐ Sustainable Food Systems
			☐ Landscape Restoration
			☐ Sustainable Commodity Production
			☐ Comprehensive Land Use Planning
			☐ Integrated Landscapes
			☐ Food Value Chains
			☐ Deforestation-free Sourcing
			☐ Smallholder Farmers
		☐ Sustainable Cities	
			☐ Integrated urban planning

Level 1	Level 2	Level 3	Level 4
			☐ Urban sustainability framework
			☐ Transport and Mobility
			☐ Buildings
			☐ Municipal waste management
			☐ Green space
			☐ Urban Biodiversity
			☐ Urban Food Systems
			☐ Energy efficiency
			☐ Municipal Financing
			☐ Global Platform for Sustainable Cities
			☐ Urban Resilience
	☐ **Biodiversity**		
		☐ Protected Areas and Landscapes	
			☐ Terrestrial Protected Areas
			☐ Coastal and Marine Protected Areas
			☐ Productive Landscapes
			☐ Productive Seascapes
			☐ Community Based Natural Resource Management
		☐ Mainstreaming	
			☐ Extractive Industries (oil, gas, mining)
			☐ Forestry (Including HCVF and REDD+)
			☐ Tourism
			☐ Agriculture & agrobiodiversity
			☐ Fisheries
			☐ Infrastructure
			☐ Certification (National Standards)
			☐ Certification (International Standards)
		☐ Species	
			☐ Illegal Wildlife Trade
			☐ Threatened Species
			☐ Wildlife for Sustainable Development
			☐ Crop Wild Relatives
			☐ Plant Genetic Resources
			☐ Animal Genetic Resources
			☐ Livestock Wild Relatives
			☐ Invasive Alien Species (IAS)
		☐ Biomes	
			☐ Mangroves
			☐ Coral Reefs
			☐ Sea Grasses
			☐ Wetlands
			☐ Rivers
			☐ Lakes
			☐ Tropical Rain Forests
			☐ Tropical Dry Forests
			☐ Temperate Forests
			☐ Grasslands
			☐ Paramo
			☐ Desert
		☐ Financial and Accounting	
			☐ Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting
			☐ Conservation Trust Funds
			☐ Conservation Finance

Level 1	Level 2	Level 3	Level 4
		☐ Supplementary Protocol to the CBD	
			☐ Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐ **Forests**		
		☐ Forest and Landscape Restoration	
			☐ REDD/REDD+
		☐ Forest	
			☐ Amazon
			☐ Congo
			☐ Drylands
	☐ **Land Degradation**		
		☐ Sustainable Land Management	
			☐ Restoration and Rehabilitation of Degraded Lands
			☐ Ecosystem Approach
			☐ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☐ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	

Level 1	Level 2	Level 3	Level 4
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	
			☐ Mangrove
			☐ Coral Reefs
			☐ Seagrasses
			☐ Polar Ecosystems
			☐ Constructed Wetlands
	☐ **Chemicals and Waste**		
		☐ Mercury	
		☐ Artisanal and Scale Gold Mining	
		☐ Coal Fired Power Plants	
		☐ Coal Fired Industrial Boilers	
		☐ Cement	
		☐ Non-Ferrous Metals Production	
		☐ Ozone	
		☐ Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐ Sound Management of chemicals and Waste	
		☐ Waste Management	
			☐ Hazardous Waste Management
			☐ Industrial Waste
			☐ e-Waste
		☐ Emissions	
		☐ Disposal	
		☐ New Persistent Organic Pollutants	
		☐ Polychlorinated Biphenyls	
		☐ Plastics	
		☐ Eco-Efficiency	
		☐ Pesticides	
		☐ DDT - Vector Management	
		☐ DDT - Other	
		☐ Industrial Emissions	
		☐ Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐ Green Chemistry	
	☒ **Climate Change**		
		☐ **Climate Change Adaptation**	
			☐ Climate Finance
			☐ Least Developed Countries
			☐ Small Island Developing States
			☐ Disaster Risk Management
			☐ Sea-level rise
			☐ Climate Resilience
			☐ Climate information
			☐ Ecosystem-based Adaptation
			☐ Adaptation Tech Transfer
			☐ National Adaptation Programme of Action
			☐ National Adaptation Plan
			☐ Mainstreaming Adaptation
			☐ Private Sector
			☐ Innovation
			☐ Complementarity
			☐ Community-based Adaptation
			☐ Livelihoods

Level 1	Level 2	Level 3	Level 4
		☒ **Climate Change Mitigation**	
			☐ Agriculture, Forestry, and other Land Use
			☒ Energy Efficiency
			☐ Sustainable Urban Systems and Transport
			☐ Technology Transfer
			☒ Renewable Energy
			☐ Financing
			☐ Enabling Activities
		☐ **Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐ Endogenous technology
			☐ Technology Needs Assessment
			☐ Adaptation Tech Transfer
		☐ **United Nations Framework on Climate Change**	
			☐ Nationally Determined Contribution
			☐ Paris Agreement
			☐ Sustainable Development Goals
		☒ **Climate Finance (Rio Markers)**	
			☒ Climate Change Mitigation 1
			☐ Climate Change Mitigation 2
			☐ Climate Change Adaptation 1
			☐ Climate Change Adaptation 2