GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)

Review CEO Endorsement and Make a recommendation

Basic project information

GEF ID

9974

Countries

Nauru

Project Name

Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)

Agencies

UNDP
Date received by PM

12/12/2019
Review completed by PM

6/10/2020
Program Manager

Ming Yang
Focal Area

Climate Change
Project Type

FSP

PIF
CEO Endorsement

Project Design and Financing

1. If there are any changes from that presented in the PIF, have justifications been provided?

Secretariat comment at CEO Endorsement Request
12/23/2019 MY:

Not at this time.

Please justify why the significant changes in baseline scenario listed on page 5 do not significantly affect the design of the project outputs and outcomes listed in Annex E on pages 43-45.

3/6/2020 MY:

Not at this time. Per the response of the Agency, lots of new renewable energy and energy efficiency activities were financed and will be financed by other parties such as the ADB and the EU. Please use a table to show each of these activities, funding amounts and their outputs or impacts in the country. Then, justify the revisions or changes of the current GEF project activities. Please also indicate why the Agency did not know these project activities at the PIF stage for a small country with less than 12,000 people.

In the new version of the CEO ER document, please highlight in color the revisions of the document.

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

As mentioned on Page 5 of the CEO Endorsement Request Document (CERDoc), some of the projects that were originally identified as baseline for the SMARTEN activities have either been already completed or will be completed before the beginning of the implementation phase of the SMARTEN Project. It is important to remark that the relevant outcomes and results of these completed, or about to be completed projects, have been considered in the design of the SMARTEN activities. Among these that were considered in the design of the SMARTEN activities are the EU/MFAT-financed solar PV system that is expected to contribute to the achievement of the 50% Renewable Energy (RE)-based electricity generation target, and the project on upgrading the transmission lines connecting both the ADB-, and the EU/MFAT-funded solar PV systems to the national electric grid. For example, the design of specific investment and technical assistance activities in the project considered the level of RE-based power generation from the completed EU/MFAT-financed solar PV system project and build on it. Moreover, the specific activities on grid stability are also based on the results of the project on the upgrading of the transmission lines of the national electric grid.

Some of the previously identified baseline projects have been replaced by new projects that will contribute to the achievement of the objective of the SMARTEN Project. Among these are, the projects on the installation of a solar farm by the ADB; setting up of new water tanks in all 14 districts by the GON; and, supporting a sustainable land transport system in Nauru by the Climate Technology Centre & Network (CTCN). These new baseline projects are also in line with the aim of facilitating the use of feasible RE and Energy Efficiency (EE) technologies for supporting socio-economic development in Nauru and are also in line with the achievement of the country's energy roadmap (NERM) targets.

CERDoc: Part II, Sec. 1a.2, pp. 5-6

Response to 3/6/2020 MY:

Just for clarity, the project proponents and the GEF Agency are aware that currently there are no EU funded projects that are ongoing or planned for Nauru. In the recent past, the EU has co-financed the installation of a ~1 MWp solar PV farm (in partnership with NZ MFAT) and the construction of a high voltage transmission system through the middle of the island to connect to the national grid the new solar PV power generation installations (i.e., the EU/MFAT project, and the planned ADB solar PV project) and the new loads, which are the new prison and the Refugee Processing Centres. These two donor-funded projects only included some hands-on training of local technicians on the installation, operation and maintenance of the equipment installed.

As already explained in the responses to the previous round of GEFSec comments, and clarified on Page 5 of the CERDoc, some of the projects that were originally identified during the PIF stage as baseline for the proposed SMARTEN Project have either been already completed or will be completed before the beginning of the implementation phase of this project. It is important to remark that the relevant outcomes and results of these completed, or about to be completed projects, have been considered in the design of the SMARTEN Project activities. Please refer to Table G-2 (Annex G) of the CEO Endorsement Request (CER) Document for the summary of the results/impacts of the completed baseline projects/activities.

Some of the previously identified baseline projects have been replaced by new projects that will contribute to the achievement of the objective of the SMARTEN Project. Among these are the projects on the installation of a solar PV system by the ADB; setting up of new water tanks in all 14 districts by the GON; and supporting a sustainable land transport system in Nauru by the Climate Technology Centre & Network (CTCN). These new baseline projects are also in line with the aim of facilitating the use of feasible renewable energy (RE) and energy efficiency (EE) technologies for supporting socio-economic development in Nauru and are also in line with the achievement of the country's energy roadmap (NERM) targets.

The reason why these projects were not included the list of baseline projects in the PIF is because they have only been announced, and funds secured, during the project preparation stage.

2. Is the project structure/ design appropriate to achieve the expected outcomes and outputs?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Not at this time.

Components 2 and 4 are in institutional capacity development, please merge them and save some GEF grant budget for capital investments in RE and EE in Component 3. Please indicate in which forms to develop local capacities, such as workshops, seminars, publications, TA training programs, or any others. Please indicate the targeted groups of the trainees, number of people, and number of workshops etc. Please elaborate how to evaluate the effectiveness of the capacity development and institutional supports for new RE and EE initiatives.

In output 3.5, please articulate where the demos to take place, which RE and EE technologies to use, how many MW to install, how many MWh electricity to save, whom to involve, which private stakeholders to engage, etc.

3/6/2020 MY:

Not at this time.

Training or capacity building for local government and industrial stakeholders is a means of, but not a goal of delivering global environment benefits. Please focus on investment in tangible technologies in this GEF project.

1. The listed 13 training activities need to be justified. Why does the country need so many training activities given that the ADB and the EU have done so many projects on ground. Please justify the additional value of the GEF training. Please justify why the GEF should always support face-to-face meetings for training, why not use virtual programs for the training.

2. Please articulate the training materials and trainers for the training program.

3. Please justify why not use one training program session for all government agencies.

4. Please redesign Table B into three components: 1. Policy development, training and capacity building. Please put all training and capacity building in this component. 2. Capital investment. Please use at least 80% of GEF grant in this component. The GEF investment should be in the area that has not been invested by the ADB and the EU.

5. Please design Component 3 to ensure that GEF's project will be implemented without distraction, and that the GEF project impacts will be sustainable after the GEF project implementation is over. For example, with this component implementation, the government will be able to really ensure and monitor the mainstream of renewable energy and energy efficiency in the country's energy development strategy, policy and investment.

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

The project proponents agree with the reviewer about the convenience of merging components to optimize the use of financial resources by grouping activities together, especially for training programs and capacity building. In fact, Component 2 of the proposed SMARTEN project already merges the strengthening of Institutional Framework and the improvement in Financial Resources for RE/EE technologies, two areas that have been often kept in separate components in similar GEF funded projects. On the other hand, while Component 4 is also a TA component, the contents of the training programs cannot be easily and conveniently grouped with those in Component 2.

However, it is the opinion of the project proponents that merging the two components together would create a quite complex and unmanageable set of activities without gaining any substantial financial benefit. The large majority of capacity building will be done through the design and implementation in training programs designed ad-hoc. In addition, there will be few awareness raising actions that will require some printed materials and publications.

List of Training Programs:

- Activity 1.2.3 of ProDoc (Page 22): 10-12 trainees from Department of Commerce, Industry and Environment (DCIE); Ministry of Finance – Planning and Aid Division (MoF-PAD); and Nauru Bureau of Statistics (NBoS). Cost: US$ 6,000 (see Budget Note #4).
- Activity 1.3.2 of ProDoc (Page 23): 18-20 trainees from DCIE; MoF-PAD; NBos; Nauru Utilities Corporation (NUC); Republic Of Nauru Phosphate (RONPHOS); and members district communities and private enterprises. Cost: US$ 8,000 (see Budget Note #4).
- Activity 2.1.2.2 of ProDoc (Page 25): 18-20 trainees from DCIE; MoF; NBos; Department of Transport (DoT); RONPHOS; Eigigu; and Refugees Processing Centres (RPCs). Cost: US$ 12,000 for two cycles of training (see Budget Note #9).
- Activity 2.2.1.4 of ProDoc (Page 27): 20+ trainees from women and youth-led and operated small businesses. Cost: US$ 8,000 (see Budget Note #15).
- Activity 2.2.2.3 of ProDoc (Page 28): 12-15 trainees from DCIE; MoF-PAD; NUC; RONPHOS. Cost: US$ 8,000 (see Budget Note #15).
- Activity 3.1.7 of ProDoc (Page 30): 10 trainees from NUC. Cost: US$ 15,000 for two cycles of training (see Budget Note #22).
- Activity 3.3.2 of ProDoc (Page 31): 15-18 trainees from DCIE; DoT; NUC; Eigigu; and locals service providers. Cost: US$ 12,000 (due to the large amount of information covered, the training program can be divided into two cycles) (see Budget Note #22).
- Activity 3.3.3 of ProDoc (Page 31): 12-15 trainees from DCIE; MoF-PAD; DoT; NBoS; NUC; and Eigigu. Cost: US$ 12,000 (see Budget Note #22).
- Activity 3.4.2 of ProDoc (Page 32): 6-8 trainees from DCIE; and MoF-PAD. Cost: US$ 12,000 for two cycles of training (see Budget Note #22).

- Activity 3.5.1 of ProDoc (Page 33): 4 trainees from DoT; Dept of Water and Sanitation; and local community. Cost: US$ 21,000 for two trainees overseas to learn how to operate and maintain the mini solar powered treated water production and desalination system; and US$ 15,000 for two trainees overseas to learn how to operate and maintain the hybrid bus and the charging station (see Budget Note #22).
- Activity 4.1.2 of ProDoc (Page 35): 18-20 trainees from DCIE; MoF-PAD; NUC; and community leaders. Cost: US$ 6,000 (see Budget Note #29).
- Activity 4.2.2 of ProDoc (Page 36): 10-12 trainees from DCIE; MoF-PAD; and NUC. Cost: US$ 6,000 (see Budget Note #29).
- Activity 4.3.3 of ProDoc (Page 37): 10-12 trainees from DCIE; MoF-PAD; and NUC. Cost: US$ 6,000 (see Budget Note #29).

The effectiveness of the training programs will be evaluated by preparing tests that will assess the level of knowledge and competence achieved regarding the subjects covered during the training activities. For example, the training program in Activity 3.5.1, which refers to hands-on experience on operation and maintenance of the demo technologies, the evaluation of the training activities will include practical experience and it will be organized as part of the training activities overseas.

ProDoc: Part IV, pp. 22-37.

Part IX; Budget Notes, pp. 68-70

Comment:

In output 3.5, please articulate where the demos to take place, which RE and EE technologies to use, how many MW to install, how many MWh electricity to save, whom to involve, which private stakeholders to engage, etc.

Response:

The detailed descriptions of the investment type activities and demonstrations that include all the data and information requested by the reviewer are already provided as part of the Supplemental Annexes to the SMARTEN Project proposal submission, more specifically as Annex B of the Supplemental Annex file.

Supplemental Annex File: Annex B; p. 17

Response to 3/6/2020 MY:

Comment:

Not at this time. Training or capacity building for local government and industrial stakeholders is a means of, but not a goal of delivering global environment benefits. Please focus on investment in tangible technologies in this GEF project.

Response:

The project proponents understand that capacity development is among the means of removing specific barriers, and once such barriers are removed will bring about the global environment benefits that are expected from this proposed project. Hence, this project is designed with the idea that capacity development as the contributors to the realization of the project goal. As it has been designed, the project focuses on the removal of barriers and to do that involves investment in tangible technologies that will bring about the achievement of the RE and EE targets of Nauru under its energy road map, but also bring about global environmental benefits. The investment activities and demonstrations of the project have a combined budget of US$ 2,604,400 (including detailed demo design), or 83% of the total GEF funding.

Comment:

1. The listed 13 training activities need to be justified. Why does the country need so many training activities given that the ADB and the EU have done so many projects on ground? Please justify the additional value of the GEF training. Please justify why the GEF should always support face-to-face meetings for training, why not use virtual programs for the training.

Response:

The proposed training programs have been designed based on the needs and gaps that emerged during stakeholder consultations with the members of the project development team. Nauru has very limited in-house expertise regarding the various aspects of RE and EE technology regulation and implementation, as also evidenced by the result of the Micro HACT assessment. This required the design of several training programs spanning from policy and regulations to finance and institutional mechanisms, as well as from awareness raising to technology installation, operation and maintenance.

The proposed training programs have been designed to complement, and not overlap, the training activities that will be carried on as part of the ADB project. As mentioned in the response above, EU did not provide training programs and currently there are none scheduled. Experience and lesson learned from other GEF projects implemented in the Pacific region SIDS have shown that in-person training have been more successful that online programs.

Comment:

2. Please articulate the training materials and trainers for the training program.

Response:

As already shown in the responses to the first round of GEFSec comments, the majority of the proposed training programs will range from US$ 6,000 to US$ 8,000, while those in the US$ 12,000-15,000 range will be delivered into two cycles. These training programs are relatively inexpensive and only require the procurement of international specialists and the preparation of some printouts to facilitate the trainees. The most expensive training is for 4 local technicians on how to operate and maintain the equipment that will be acquired as part of the demos. However, the cost for these training activities is part of the procurement and installation of the equipment and systems of each demo. The higher costs of this training activity is due to the fact that the technicians will be trained overseas, because the training will require actual hands-on experience. Such training is cheaper to organize at the vendors' facilities rather than shipping trainers and the required training units to Nauru.

Comment:
3. Please justify why not use one training program session for all government agencies.

Response:
While there might be some trainees that will participate in more than just one training program, due to the vast range of subjects covered several trainers will be required to conduct all 13 training programs. In addition, as indicated in the Multi-Year Work Plan of the ProDoc, the timing of all training programs does not coincide since some activities are propaedeutic to the training programs, while these are in turn preparatory to other activities. Finally, owing it to the large number and variety of topics covered in the programs it would be too difficult to effectively deliver them all at once, and obtain effective capacity development results.

Comment:
4. Please redesign Table B into three components: 1. Policy development, training and capacity building. Please put all training and capacity building in this component. 2. Capital investment. Please use at least 80% of GEF grant in this component. The GEF investment should be in the area that has not been invested by the ADB and the EU.

Response:
As explained in the responses to the first round of GEFSec comments, Component 2 of the proposed SMARTEN project already merges the strengthening of Institutional framework and the improvements in Financial Resources for RE/EE technologies, two areas that in the logical framework analysis (LFA) that was conducted to come up with the project results framework, are in separate components, as is in similar UNDP-GEF funded projects in the Pacific (e.g., Niue: AREAN, Vanuatu: BRANTV). The essence of the project's log frame will be significantly affected, and its clarity lost if the project components are organized by types of activities, as opposed to by areas of interventions (i.e., each component focusing on the removal of a major type of barrier).

As designed, based on the project Log Frame, there are already two Investment Components, for a combined budget of US$ 2,604,400, or 83% of the GEF grant (excluding the Project Management Costs).

Comment:
5. Please design Component 3 to ensure that GEF's project will be implemented without distraction, and that the GEF project impacts will be sustainable after the GEF project implementation is over. For example, with this component implementation, the government will be able to really ensure and monitor the mainstream of renewable energy and energy efficiency in the country's energy development strategy, policy and investment.

Response:
Delivering an appropriate range of training programs, as designed in the proposed project, to build local capacity will also address another sensible concern raised by the reviewer, guarantee sustainability past the implementation phase of SMARTEN by strengthening the capacity of the relevant government ministries and departments, as well as of the national utility.

3. Is the financing adequate and does the project demonstrate a cost-effective approach to meet the project objective?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Not at this time.

The financing is adequate but the project does not demonstrate a cost-effective approach to meeting the project objective.

The project aims at mitigating 1.049 million tonnes of CO2, including both direct and consequential emission reductions from RE technologies, while the total budget of the project reaches $26 million. In other words, it needs $3.15 GEF grant and $21.8 co-financing to mitigate one tonne of CO2, which is high in the GEF CCM portfolio. Please reduce budget in TA components and increase that in capital investment in EE or waste management, and make the project more cost-effective. Please account carbon emission reductions from EE technologies which are generally more cost-effective than RE technologies.

3/6/2020 MY:

Not at this time.

From the CEO RE document, the PM of the GEF cannot see any "increased applications of feasible RE and EE technologies" that is highlighted in the objective of the project by the Agency.

Also the agency used a wrong method to justify the cost-effectiveness of the current project. GEBs of GEF CCM projects, namely CO2 emission reductions, are not for emission trading. The costs of unit reduction of CO2 in GEF projects should not be used to compare that in any CO2 trading market. Please look at the GEF or UNDP CCM project portfolio and compare the cost-effectiveness of CO2 emission reduction of this project against the average of any of the portfolios.

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

The aim (objective) of the 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. From the successful implementation of the planned project activities, delivery of project outputs and realization of the project outcomes, a total lifetime incremental amount of 1.049 million tonnes of CO_2 emissions (direct and consequential) will be realized.

The project proponents agree that the project costs might seem high. However, one should take into account that the implementation costs of RE/EE technologies in general, including solar PV systems, in remote locations such as the small island state of Nauru, are always significantly higher than in other larger developing

countries. This is due to high transactions costs involved, not only due to the high freight and insurance costs, maintenance costs (in terms of spare parts), but also because these technologies very often require technical expertise that is not available locally, and a crew of specialists has to be flown in for the engineering and installation.

In addition, it should be pointed out that the unit abatement cost (UAC), i.e., GEF grant per ton CO_2 emission reduction, of approximately US$ 3.15/ton CO_2 removed, is significantly lower than the current carbon prices in existing carbon exchanges like the European Emission Allowances (*EUA Spot Price = US$ 26.74/ton CO_2, Ref: Climate Daily News: 27 January 2020; https://www.factorco2.com*). Please note that the 1.049 million CO_2 emission reduction is incremental to what the country may reduce if they only implement their baseline (business-as-usual) initiatives to reduce GHG emissions without GEF support.

Considering both the GEF grant of US$ 3.30 million and the co-financing of US$ 22.77 million, and the overall GHG emission reduction (baseline and incremental), the resulting UAC is US$ 24.85/ton CO_2, which is still lower than the 27 January 2020 EUA Spot Price of US$ 26.74/ton CO_2.

Supplemental Annex File: Annex B; p. 17

Comment:

Please reduce budget in TA components and increase that in capital investment in EE or waste management and make the project more cost-effective. Please account carbon emission reductions from EE technologies which are generally more cost-effective than RE technologies.

Response:

The project proponents agree with the suggestion of the reviewer to reduce the TA budget to increase the investment portion, as well as with the point that EE technologies are in general more cost-effective than RE technologies. In fact, based on the financial analysis performed for the two investment type activities and for the three demonstrations, as shown in Annex B of the Supplemental Annex file, the Internal Rate of Return (IRR), and consequently the Net Present Value (NPV), is highest for the RE/EE Financing Scheme at about 50%. For this reason, US$ 100,000 from the TA budget has been moved to the RE/EE Financial Scheme, which is now budgeted at US$ 350,000 (inclusive of expenses for the detailed design, promotion, and operationalization of the scheme). By increasing the funds for the RE/EE Financing Scheme, the number of beneficiaries has increased from 950 up to 1,390.

Supplemental Annex File: Annex B; p. 17

ProDoc: Part IX - Budget Notes; pp. 65-71

Response to 3/6/2020 MY::

First of all, it is important to take into consideration that with the completion of the ADB solar PV project, Nauru will generate nearly 50% of its electricity needs from solar PV systems. After the ADB project is completed, the electricity that will be generated during daytime with the solar PV panels will be larger than the power demand during the same period of time. Since ADB deems too expensive to store the electricity in batteries it will only provide half an hour batteries for grid stabilization and as a result the excess electricity that the ADB project will generate during peak sun hours will be curtailed. Adding more RE for electricity generation, which in Nauru means more PV (because solar thermal for power generation is not suited for SIDS in the Pacific, there is no sufficient wind near the equator, OTEC is too expensive, and there are no hydro resources), would mean adding power generation during the day time when there is already overcapacity and all the electricity generated would need to be stored. That is why our efforts have concentrated on a technology that would allow storing the electricity generated by the ADB solar PV system that would have been curtailed.

The designed demos and investment type activities will introduce in Nauru several RE and EE technologies, specifically:

a. The RE/EE financing scheme supports the adoption of high EE appliances and the implementation of small rooftop PV systems.

b. A water desalination unit used as an electricity storage system to recover the electricity curtailed by the ADB solar PV system, which will also serve another great need for Nauru, which is additional water desalination capacity. Furthermore, due to the modularity of these units, they can be easily replicated and scaled up in the future, as discussed in the Supplemental Annex file, pp.19-20.

c. The mini solar powered water production and distribution system for a community includes solar pumps, as well as solar PV panels and batteries to operate the water treatment unit and the distribution system.

d. The hybrid diesel-electric bus with a charging station will introduce an environmentally friendly public transportation system.

The project proponents do not mean to imply the trading of the CO_2 emission reductions nor the establishment of a CO_2 trading market in Nauru but are just using the price that the market gives to the removal of 1 ton of CO_2 emissions as a benchmark against which to compare the unit abatement cost (UAC) in Nauru.

Indeed, SMARTEN should be compared with other UNDP-GEF projects in SIDSs in the Pacific region, which are similarly small and far from large developed countries and therefore requiring very high freight costs as well as high costs to bring on-site technical experts for the project implementation. The unit abatement cost (UAC) for the SMARTEN Project, i.e., GEF grant per ton CO_2 emission reduction, of approximately US$ 3.15/ton CO_2, compares favorably to the average US$ 6.0/ton CO_2; i.e., GEF$ per total lifetime GHG ER (direct + indirect) of full-sized projects UNDP-GEF CCM projects in the Pacific region. Considering both the GEF grant of US$ 3.30 million and the co-financing of US$ 22.77 million, and the overall GHG emission reduction (direct + indirect), the resulting UAC is US$ 24.85/ton CO_2, which is lower than the average total cost (GEF + co-financing) per total lifetime GHG ER (direct + indirect) of US$ 42/ton CO_2 of UNDP-GEF CCM projects in the region.

Supplemental Annex file: pp. 18-26

4. Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk response measures? (e.g., measures to enhance climate resilience)

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes, it is listed in the PIF.

3/6/2020 MY:

After the project is redesigned, please address again the possible impact of climate change on the capital investment or on the tangible equipment that will be installed by the GEF financing in this project.

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

Response to 3/6/2020 MY:

Based on the responses in the previous comments above, the project proponents believe that the project design is in complete agreement with the concept as presented in the GEF-approved PIF and the project Log Frame. Hence, the risks and their analyses are the same included in the Risk Log table on pp. 40-44 of the ProDoc.
ProDoc: Part IV, pp. 40-44

5. Is co-financing confirmed and evidence provided?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes, the co-financing letters are uploaded in the GEF Portal Documents.

Response to Secretariat comments

6. Are relevant tracking tools completed?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes. But the carbon emission mitigation amount is very small. The unit (million tonnes of CO2) also needs to be entered in the GEF Portal

3/6/2020 MY:

One more question please.

Has the agency or the country considered this following fact:?

Nauru has a total of less than 11,000 people now. More than half of them will have been able to access renewable energy after the ADB and the EU programs are over, per the response of the agency. Can the agency and the country use the GEF grant and the co-financing grants (totaling $26 million) to provide zero-carbon electricity or energy to the rest 50% of the 11,000 people. Please address this question with evidence.

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

While the total GHG emission reduction is small in absolute terms, this is very significant in the context of a small island developing state like Nauru, a 21 km^2 island nation with a population of less than 13,000. In fact, the total GHG emissions in Nauru was only 57,000 tons of CO_2, in 2014, equivalent to 0.0002% of the overall global CO_2 emissions.

The data on GHG emission reduction as stated in Part I (Sec F) and Annex G (GEF 7 Core Indicator Worksheet) of the CEO ER Document have been entered in the GEF Portal.

Response to 3/6/2020 MY:

It is important to clarify that Nauru has a single national electric grid that reaches practically 100% of the population. Hence, everyone has access to the grid. The ADB solar PV system will be integrated into that grid. Once that project is completed, approximately 50% of the electricity generation will come from solar PV systems, with the balance coming from diesel generators. Therefore it is not correct to state that about 50% of the population will receive electricity from solar PV and the balance from diesel, but the correct statement is that about 50% of the electricity that each and every Nauruan consumes will be generated with solar PV systems and the remainder with diesel generators.

While the project proponents agree with the reviewer that the cost of the ADB project is quite high, it should be noted that the project proponents have no control over it. Furthermore, the design of the ADB project is based on providing enough PV panels to the existing installations to achieve 50% electricity generation from RE (one of the targets set by the government of Nauru in its energy roadmap), which ADB estimated to be US$ 22M. Therefore, if the costs estimates, which were performed by an Australian consulting firm, would have been lower, ADB would have allocated a lower budget and not provided more solar PV panels.

It is also important to remark that the sizing of the ADB solar PV farm has been based on generating 50% of the estimated electricity demand with solar PV systems. However, the demand curve during the sun hours does not match the generation curve. The generation capacity is larger than demand, and not enough electricity

storage is provided, because storage was estimated to be too expensive. Because of this design choice, during days with a clear sky, a portion of the ADB solar PV power generation capacity is curtailed. In other words a portion of the PV panels are disconnected during peak hours. This means that less than 50% of the electricity consumed comes from RE (please refer to the Supplemental Annex file, Part 3, pp. 13-15).

Supplemental Annex file: Part 3, pp. 13-15

7. Only for Non-Grant Instrument: Has a reflow calendar been presented?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

N/A

Response to Secretariat comments

8. Is the project coordinated with other related initiatives and national/regional plans in the country or in the region?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes, it is described on page 9.

Response to Secretariat comments

9. Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes, it is listed on pages 10-13.

Response to Secretariat comments

10. Does the project have descriptions of a knowledge management plan?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Not completed at this time.

In the KM section, please elaborate the number of government trainees (DCIE) and the power utility (NUC and Vital Energy). These number should be shown in Table B as well.

In the KM section, please add more information on:

1. an overview of existing lessons and best practice that inform the project concept
2. plans to learn from relevant projects, programs, initiatives & evaluations
3. proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation
4. proposed tools and methods for knowledge exchange, learning & collaboration
5. proposed knowledge outputs to be produced and shared with stakeholders
6. a discussion on how knowledge and learning will contribute to overall project/program impact and sustainability plans for strategic communications

3/6/2020 MY:

Not completed at this time.

For the total number of trainees (163-186 people), please divide them into two groups: (1) Critical group, without face-to-face training, this project will fail: (2) not so important group. For it, a virtual training program is enough.

Please re-write the pages 43-44 per the following sub-sections:

1. an overview of existing lessons and best practice that inform the project concept
2. plans to learn from relevant projects, programs, initiatives & evaluations
3. proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation
4. proposed tools and methods for knowledge exchange, learning & collaboration
5. proposed knowledge outputs to be produced and shared with stakeholders
6. a discussion on how knowledge and learning will contribute to overall project/program impact and sustainability plans for strategic communications

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

Comment:

Not completed at this time. In the KM section, please elaborate the number of government trainees (DCIE) and the power utility (NUC and Vital Energy). These number should be shown in Table B as well.

Response:

The response to "Comment #2" above gives a detailed breakdown of the number of trainees expected for each training programs that will be organized and conducted during the SMARTEN implementation stage. Based on the information provided in that response, the total number of participants in all training programs will be in the range of 163-186. The relevant numbers are also stated in Part I, Sec. B of the CERDoc

Response to Comment #2 of this document

Comment:

In the KM section, please add more information on: 1. an overview of existing lessons and best practice that inform the project concept; 2. plans to learn from relevant projects, programs, initiatives & evaluations; 3. proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation; 4. proposed tools and methods for knowledge exchange, learning & collaboration; 5. proposed knowledge outputs to be produced and shared with stakeholders; and 6. a discussion on how knowledge and learning will contribute to overall project/program impact and sustainability plans for strategic communications

Response to 3/6/2020 MY:

Comment:

Not completed at this time.

For the total number of trainees (163-186 people), please divide them into two groups: (1) Critical group, without face-to-face training, this project will fail: (2) not so important group. For it, a virtual training program is enough.

Response:

The project proponents, based on their experience with previous capacity development activities in the country strongly recommend the much effective training programs as designed, i.e., involving face-to-face training sessions instead of online training. It is also important to highlight that additional stakeholder consultations, held during the preparation of this round of responses to the latest comments from the GEFSec, have indicated that their preference would be for conducting face-to-face training programs.

The proposed budget for most training activities is already very thin (in the US$ 6-8k range) and there won't really be budget savings if anything, by changing the designed training activities to online courses. The project proponents also want to point out that, excluding the overseas training of the technicians that will operate

and maintain the demos, the combined budget for the remaining 12 training programs is only US$ 111,000, or 3.5% of the total GEF grant (excluding the Project Management Cost).

ProDoc: Part IX; Budget Notes, pp. 68-70

Comment:

Please re-write the pages 43-44 per the following sub-sections: (1) an overview of existing lessons and best practice that inform the project concept; (2) plans to learn from relevant projects, programs, initiatives & evaluations; (3) proposed processes to capture, assess and document info, lessons, best practice & expertise generated during implementation; (4) proposed tools and methods for knowledge exchange, learning & collaboration; (5) proposed knowledge outputs to be produced and shared with stakeholders; (6) a discussion on how knowledge and learning will contribute to overall project/program impact and sustainability plans for strategic communications.

Response:

The additional information requested by the reviewer and based on the suggested sub-sections have been provided in the Knowledge Management section of the CEO Endorsement Request Document.

CERDoc: Part II, Sec. 8; and, Annex F

Agency Responses

11. Has the Agency adequately responded to comments at the PIF stage from:

GEFSEC

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Not completed at this time.

At the PIF stage, the PM commented the following:

"In the CEO ER stage, please clearly indicate the capacities, expenditures, locations, and beneficiaries of the demonstration investments. Please add one more component: M&E. More co-financing from the private sector is needed to enlarge the ratio of co-financing."

The capacities, expenditures, locations, and beneficiaries of the demonstration investments have not been elaborated in the CEO RE document, they are shown in Table B.

3/6/2020 MY:

Not completed at this time.

Supplemental Annex File Annex B p. 17 presented the ADB project as the baseline of this GEF project (The ADB will installed 6 MW renewable energy for 50% of the country residents). But it does not show any thing about the RE energy capacity to be developed or installed by the GEF project. Please provide this information. Please put this information in Table B of the CEO ER document.

4/28/2020 MY:

Yes, cleared.

Response to Secretariat comments

Comment:

"In the CEO ER stage, please clearly indicate the capacities, expenditures, locations, and beneficiaries of the demonstration investments. Please add one more component: M&E. More co-financing from the private sector is needed to enlarge the ratio of co-financing."

Response:

Information about the capacities, budgets and locations of the demonstrations and investment type activities are provided in Annex B of the Supplemental Annex file. The beneficiaries have been specified in the Core Indicator 11, where a footnote also specifies a breakdown for each demo.

M&E is part and parcel of each of the project component. The costs for independent M&E (mid-term review and terminal evaluation) are covered in the Project Management Costs.

The total co-financing for this project is actually much higher than that indicated at the PIF stage. It went up from US$ 13,354,400 (per the GEF-approved PIF) to US$ 22,765,000, an increase of over 70%. The Co-financing ratio is approximately 7:1, which is considerably high for a small island developing state like Nauru, and is in line with the ambition for the co-financing ratio of at least 7:1 for the overall GEF portfolio.

Financial resources from the private sector will be leveraged through the RE/EE Financing Scheme. As explained in Annex B of the Supplemental Annex File, the financing scheme will only cover at most 30% of the investment (or 25% in case the participant does not trade in an old appliance). The participants to the scheme, primarily small businesses and households, will be responsible for covering the balance of 70% (or 75% if there is no trade-in). Assuming that all participants will trade in an old appliance, which represents the case for the lowest financial disbursement from the participants, the total private sector investment is calculated at US$ 674,000 (detailed calculations are included in the aforementioned Annex B of the Supplemental Annex file).

Supplemental Annex File: Annex B; p. 17

ProDoc: M&E Plan and Budget, p. 54

CERDoc, p. 10

CERDOC: Part I, Secs. B & C

Comment:

The capacities, expenditures, locations, and beneficiaries of the demonstration investments have not been elaborated in the CEO RE document, they are shown in Table B.

Response:

The information requested that are provided in Annex B of the Supplemental Annex file were tabulated and the resulting table is now included in the CEO ER Document as another annex (Annex E). Moreover, it is the understanding that the last phrase "*they are shown in Table B.*" meant that these data be presented in Part I, Sec B of the CERDoc. Hence, these data have now been included in the table in Sec B.

CERDoc: Annex E; p. 42.

Supplemental Annex File: Annex B; p. 17

Response to 3/6/2020 MY:

Supplemental Annex File Annex B p. 17 presented the ADB project as the baseline of this GEF project (The ADB will installed 6 MW renewable energy for 50% of the country residents). But it does not show any thing about the RE energy capacity to be developed or installed by the GEF project. Please provide this information. Please put this information in Table B of the CEO ER document.

Response:

The project proponents emphasize that the baseline ADB solar PV system (6 MW) will not serve only 50% of the country residents, but that system will enable about 50% of the electricity production in the country to be derived from renewable energy sources (i.e., solar energy). Since the electricity produced from that system is injected into the country's main and only grid, everyone in the country has access to that solar energy-derived electricity. Under the SMARTEN project, the GEF grant is used to finance 2 investment type activities and 3 demos (please see the Supplemental Annex file, pp 17-26):

The first investment type activity is for guaranteeing a much improved grid-connected solar PV system building on the ADB solar PV project. The improvement involves filling a major gap in that baseline activity. The baseline ADB solar PV project only provides a battery (half hour capacity) as a tool for grid stabilization. Such is deemed insufficient by the international grid system specialist member of the project development team. The consulting firm hired by ADB confirmed that

there wasn't a thorough grid stabilization analysis conducted, as it can be verified in the design documents prepared for the ADB project. The incremental investment type activities that will be implemented are to facilitate the full utilization of the electricity produced by the ADB solar PV system and enabling the stable operation of the national grid when the ADB solar PV system is integrated into it. Figure 1, on page 13 of the Supplemental Annex file, shows the average daily electricity demand in 2022 (when the ADB project is expected to be fully operational), which is relatively flat compared to other countries with just a slight peak during the day time. Figure 2, on page 15 of the Supplemental Annex file, shows the mismatch between the same average demand curve and the average daily electricity generation curve. This figure visually shows the excess generation capacity. Even in the most conservative option, which assumes that batteries are only charged when there is overcapacity, there is a substantial amount of power generation capacity that needs to be curtailed. For grid stability, it might be a preferred choice to charge the batteries first thing in the morning, to have electricity storage available to compensate for a potential sudden drop in PV power generation capacity. The project development team estimates, based on the average daily demand and generation curves, that the amount of electricity curtailed is 1,140 MWh/year. Considering that according to GHD estimates, which are very aggressive, the ADB solar PV farm can generate at full capacity (without curtailment) 12,450 MWh in 2022, the first full year of operation. In that case, the curtailed electricity represents about 9.1% of the total electricity generation potential or, in power generation capacity terms, it would be equivalent to reducing the power installed to about 5.45 MWp. An extremely important conclusion that can be drawn by analyzing Figure 2 is that any additional solar PV installation would be useless, unless enough storage capacity is added concomitantly .

The second investment type activity, which is a RE/EE financing scheme, is designed to address the financial barriers as well as to facilitate the achievement of the 30% EE target set by the government in its energy roadmap, and for which there are no sufficient efforts done. The scheme will allow installing 25 5-kWp rooftop solar PV systems and hundreds of high EE appliances. As it is shown on page 19 of the Supplemental Annex file, the scheme is expected to reduce the annual GHG emissions by 895 tCO2, which is the same result that would be achieved by installing and operating a 700 kWp solar PV system.

By adopting the same logic to the three demos, the annual reduction of GHG emissions would amount to an incremental 200 kWp solar PV system, which based on the calculations in "Footnote #1" would cost about US$ 1.8 million minimum.

In terms of GHG emission reductions, SMARTEN would achieve the same results that would be achieved by installing an incremental 900 kWp solar PV system, which based on the calculations in "Footnote #1" would cost about US$ 8.1 million minimum. In addition, there are the tangible benefits of improved grid stability from the first investment type activity, hundreds of thousands liters of desalinated water produced, a desalinated water generation and distribution mini-grid system for a small community, an energy efficient and environment friendly mean of public transportation, and deployment of hundreds of high EE appliances facilitated by the RE/EE financing scheme.

Supplemental Annex file: Annex B, pp. 13, 15, and 17-26

STAP

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes, on pages 23-26.

Response to Secretariat comments

GEF Council

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Not completed at this time.

In its Comment 1, France requires tangible investment in demo. Please provide details in capital investment for the demo sub-project. Also please see the PM's comments above on Component 3.

In the first comment, Germany requires the project to effectively mobilize private investment. The Agency' did not address the comment satisfactorily. The project can indeed engage the private companies or individual households in solar PV, small wind power installations, and EE technology investment. While finalizing the INV component for this project, please take into account engaging the private sector in capital investment.

3/6/2020 MY:

Not at this time. The Agency has not effectively addressed the comments of the Council members. Please see the comments of the PM above.

Please revise the project components per the above comments. Please use the GEF grant and the co-financing grants to do installation of renewable energy technologies in the country as the ADB is doing. There is little necessity for RE energy technology demonstrations since the ADB and the EU are massively installing renewable energy technologies in the country to supply renewable energy for 50% of the residents. The Agency needs to make best use of the GEF grant and government grant co-financing to supply the remainder 50% of residents with renewable energy .

5/5/2020 MY:

Yes, comments were addressed.

Response to Secretariat comments

As mentioned in the "After PPG Stage" response to the first comment of the French GEF Council Member, the investment portion of the SMARTEN project is the large majority of the requested GEF grant; specifically:

- Under Component 2.2, US$ 350,000 will be used to finance the RE/EE financing scheme. This budget has been increased from the original US$ 250,000 budget, following the suggestion of the reviewer on increasing the investment portion of the project.
- Under Component 3, US$ 1,915,000 will be used for the demos and the investment type activities. (see Budget Note #20 on the ProDoc, Page 69 and Annex B of the Supplemental Annex document). In addition there is a US$ 36,000 budget for the training on these demos.
- Under Component 3 there is also a US$ 15,000 budget for the equipment to conduct energy audits.
- Under Components 3 and 4 there is a combined US$ 37,000 budget for the acquisition of several software packages.
- Finally, under Component 3 there is a budget of approximately US$ 200,000 for the detailed designs of all demos and the investment type activity, which is an integral investment for the demonstrations.

In total, out of the US$ 3.15 million GEF grant (excluding the Project Management Costs), the investment portion in actual hardware and software products amounts to US$ 2.31 million, or 73% of the requested grant. This portion increases to US$ 2.55 million, or 81% of the investment, if designs of the demos and investment type activities and the training on the O&M of the demos are included.

Supplemental Annex File: Annex B; p. 17

ProDoc: Part IX, Budget Notes, pp. 67-70

CERDoc: Annex B, Exhibit B.1

Comment:

In the first comment, Germany requires the project to effectively mobilize private investment. The Agency' did not address the comment satisfactorily. The project can indeed engage the private companies or individual households in solar PV, small wind power installations, and EE technology investment. While finalizing the INV component for this project, please take into account engaging the private sector in capital investment.

Response:

The design of the RE/EE financing scheme is meant to attract funds from the private sector for investment in small scale solar PV systems and the purchase of high energy efficiency appliances and equipment. Regrettably, small wind power installations are not an option for Nauru, given its position very close to the equator, which is not optimal for wind as it has been demonstrated by a year-long SPREP data collection in 2010 – for a more detailed discussion of potential RE sources please refer to Annex A, pages 15-16 of the Supplemental Annex file).

Following the suggestion of the reviewer, the total budget allocated for the RE/EE financing scheme has been increased to US$ 350,000 up from the previous US$ 250,000 budget (40% increase).

In addition, as explained in the response to the first comment of the German GEF Council Member, Nauru does not currently have a banking/finance system in place, following the phosphate industry collapse. The banking/finance system will be re-established in the next 2-3 years by the GoN with the support of ADB. When this task will be accomplished, similar financing schemes can be replicated through a normal loan product portfolio.

Lastly, the SMARTEN activities devoted to the establishment of a supporting financial framework, together with fiscal/financial incentives, will spur investments from the local private sector, which has very limited financial resources, and it will also attract investments from expats and foreign investors.

As reported by the Nauru Utilities Corporation (NUC) which also keeps track of RE installations (specifically rooftop PV systems) in the private sector, to date there are a total of 9 solar PV installations for a combined 385 kWp. These are:

- 3 relatively large rooftop installations on a department store, an apartment complex and a warehouse all owned by a private investor, Capelle and Partner, (combined 357 kWp);
- 5 rooftop installations on private households (combined 23 kWp); and,
- 1 rooftop installation on a hotel (5kWp).

Supplemental Annex File: Annex B; p. 17.

Annex A; pp. 15-16

CERDoc: Annex B, Exhibit B.2

Response to 3/6/2020 MY:

Not at this time. The Agency has not effectively addressed the comments of the Council members. Please see the comments of the PM above.

Please revise the project components per the above comments. Please use the GEF grant and the co-financing grants to do installation of renewable energy technologies in the country as the ADB is doing. There is little necessity for RE energy technology demonstrations since the ADB and the EU are massively installing renewable energy technologies in the country to supply renewable energy for 50% of the residents. The Agency needs to make best use of the GEF grant and government grant co-financing to supply the remainder 50% of residents with renewable energy .

Response:

In the responses immediately above this, the project proponents have addressed the comments of the council members explaining why Nauru has reached a stage where additional installation of solar PV systems is not cost-effective (please refer to “Footnote #1”), and for this reason the project development team, following the

information gathered during stakeholder consultations, have designed a combination of power and non-power applications of solar energy in Nauru, which ultimately contribute to the achievement of the RE and EE targets set in the NERM. Unless a considerably cheaper electricity storage technology is demonstrated and deployed in Nauru, there is no financial convenience in installing more PV system. While pumped hydro storage seems to be a potential option, but this technology needs to be assessed in a complex environment such as Nauru, because of the topside limestone pinnacles covering the majority of the soil and the fact that the highest point of the island is only about 60-70 meters above the sea level.

Convention Secretariat

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Yes, it is listed in the PIF.

Response to Secretariat comments

Recommendation

12. Is CEO endorsement recommended?

Secretariat comment at CEO Endorsement Request

12/23/2019 MY:

Not at this time. Please address the comments above.

Please consider tangible energy efficiency and/or waste management investment in the project which will make the project innovative and cost-effective.

Please also notice the following policy statement:

As the agency knows, the implementation and execution roles on GEF projects are meant to be separate per policy and guideline. The GEFSEC will analyze any requests for dual role playing by an agency at the time of CEO endorsement and only approve those cases that it deems warranted on an "exceptional" basis. We strongly encourage the agency to look at third party options as a preferred way forward. We also strongly encourage the agency to discuss any and all options for execution that do not include the government with the GEFSEC early in the PPG phase. The technical clearance of this PIF in no way endorses any alternative execution arrangement.

3/6/2020 MY:

Not at this time. The Country needs more tangible investment than financial scheme. With the GEF $3.3 million grant and the cash co-financing $22.76 million of the national government, the GEF project should be able to fiance enough equipment for the remainder of 5,500 (50% of 11,000) people so that they will use renewable energy. The PM cannot figure out why the agency needs $4,727 per person ($26 million divided by 5,500 people) to develop a financing scheme for these people. The $4,727 per person is more than enough for them to harness renewable energy. In short, the project design is not cost-effective.

4/28/2020 MY:

Almost cleared. Please check the GHG emission reduction calculation method and the results. The data entered in the GEF Portal is not correct. Please see below and revise the data accordingly.

Core Indicators at CEO Endorsement (CEO)

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	0	0.35	0	0
Expected metric tons of CO_2e (indirect)	0	0.699	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				

5/5/2020 MY:

The above comment was addressed, but some more work needs to be done. Please check the document of the GEF-7 REPLENISHMENT PROGRAMMING DIRECTIONS. The circled two rows in Table A of the CEO ER document are not included in the document. Please delete the two rows and put all budgets in the first row. Please check other part of the CEO ER document, and revise it to make it consistent.

A. Focal Area Strategy Framework and Program

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-1_P1	Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration	GET	2,687,790	18,525,000
CCM-1_P1	Policy, planning and regulatory frameworks foster accelerated low GHG development and emissions mitigation	GET	163,680	1,128,000
CCM-1_P1	Financial mechanisms to support GHG reductions are demonstrated and operationalized	GET	451,498	3,112,000
		Total Project Cost($)	**3,302,968**	**22,765,000**

In the GEF Portal for the project (at the front page of the project), please put the following information:

1. Risk Matrix;
2. information on which stakeholders have already been consulted; and
3. Gender analysis and report (Note: "See Annex 4 of the Project Document", "A Gender Analysis Report will be submitted separately", etc. are not acceptable in the front page of the Portal)

6/19/2020 /MY:

Not at this time. Please address the following issues on policy and operations modality:

1- Audits are ineligible items under M&E.

			e GEF Fee.
Translation of MTR and TE reports into English	UNDP Country Office	None	Cannot be charged to GEF Fee.
Audit	Appointed auditors for project audits	2,500 per year	Annually or other frequency as per UNDP Audit policies.
TOTAL indicative COST Excluding oversight/project assurance costs. Project implementation costs to be included in Component 4 KM and M&E outcome in TBWP.		185,000	

	(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	US$ 70,000 costs of professional services consisting of US$ 10,000 for financial audit fees, US$ 30,000 mid-term evaluation and US$ 30,000 for terminal evaluation.
36	US$ 2,000 for Project Management Unit (PMU) travel cost
37	US$ 1,128 for PMU Office supplies, stationery

2- Although all the sources of co-financing indicated in the Portal come with co-financiers' letters, there seems to be a disconnect between what is in the Portal and the confirmed financing sources in the Project Document. The Project Document (see snapshot) refers to ADB, Gov't of New Zealand and CTCN as major sources of co-financing – the info has to be consistent across the documents and Portal.

Please check Table C and Table VIII carefully to find out the inconsistency and revise them.

7/13/2020 MY:

Yes, the agency addressed the comments and revised the project document. The PM recommends technical clearance for the project.

Response to Secretariat comments

Response to 6/19/2020 /MY:

Comment:

Audits are ineligible items under M&E.

Response:

The Financial Audit activity has been removed from M&E Plan and Budget table. The budget for this project management activity is as designed is covered under the project management cost.

***Comment*:**

Although all the sources of co-financing indicated in the Portal come with co-financiers' letters, there seems to be a disconnect between what is in the Portal and the confirmed financing sources in the Project Document. The Project Document (see snapshot) refers to ADB, Gov't of New Zealand and CTCN as major sources of co-financing – the info has to be consistent across the documents and Portal.

Please check Table C and Table VIII carefully to find out the inconsistency and revise them.

Response:

The project co-financing comes from the Department of Commerce, Industries and Environment (DCIE), Nauru Utilities Corporation (NUC), and the UNDP. The GoNZ-funded project (*NEEDS Initiative*) and the CTCN-funded project (*Sustainable Land Transport for Nauru*) are both under the DCIE. The GON-funded project (*Water Tanks Procurement*) is also under the DCIE. These baseline projects of the DCIE are part and parcel of the SMARTEN Project, and their collective available budgets (US$ 585,000) is part of the co-financing from DCIE. The ADB-funded project (Solar Expansion Plan) and the existing Low Carbon Fund are both under the NUC. These are also subsumed into the SMARTEN Project as baseline projects. Their collective available budgets (US$ 22.08 million) is part of the co-financing from NUC. The rest of the co-financing (US$ 100,000) is from UNDP.

The table in question, which is on the confirmed co-financing (ProDoc, Sec VIII, pp. 62-63) has been corrected to show the details of the co-financing as described above.

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 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	Project may get delayed if the propaedeutic ground preparation stage conducted by the NUC incur in some hiccups	There is no identified direct 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**			

Response to 4/28/2020 MY:

The data entry in GEF Portal has been revised as following.

Total Target Benefit	At PIF	At CEO Endorsement	Achieved at MTR	Achieved at TE
Expected metric tons CO2e (direct)	1,029,000	350,000	0	0
Expected metric tons CO2e (indirect)		699,000	0	0

The project proponents have adequately addressed the comments. They look forward to the CEO endorsement of this project.

Comment:

Please consider tangible energy efficiency and/or waste management investment in the project which will make the project innovative and cost-effective.

Response:

Energy efficiency is among the focus of the investment type activities of the SMARTEN Project. The promotion of, and the facilitation of the widespread practice of, EE in the country are among the interventions of the project. Part of the intervention is the design and implementation of a RE/EE Financing Scheme that will financially support the purchase and utilization of energy efficient appliances/equipment by households and small businesses. Per Annex B of the Supplemental Annex file, such tangible EE intervention is a cost-effective investment for the project, with an Internal Rate of Return (IRR) of over 50%. Note that following the reviewer comments on increasing the investment portion of the GEF grant, the budget allocated to this financing scheme has been increased by US$ 100,000 to a total of US$ 350,000.

Activities to improve demand side energy efficiency comprise mostly of changes to behavior and appliance/equipment. As such improving energy efficiency is seen as the most environmentally friendly activity as it largely does not require new infrastructure. However, where appliance/equipment replacement is envisioned in order to move towards more efficient technologies/models, obsolete equipment and other associated waste must be properly managed and disposed of in an environmentally friendly manner. In this regard, the activities on the design and implementation of the RE/EE Financing scheme also include those to address the disposal and management of the replaced old appliances and potentially hazardous waste materials from such decommissioned or disposed items.

Supplemental Annex File: Annex B; pp. 19-20.

Comment:

Please also notice the following policy statement: As the agency knows, the implementation and execution roles on GEF projects are meant to be separate per policy and guideline. The GEFSEC will analyze any requests for dual role playing by an agency at the time of CEO endorsement and only approve those cases that it deems warranted on an "exceptional" basis. We strongly encourage the agency to look at third party options as a preferred way forward. We also strongly encourage the agency to discuss any and all options for execution that do not include the government with the GEFSEC early in the PPG phase. The technical clearance of this PIF in no way endorses any alternative execution arrangement.

Response:

The project proponents understand that UNDP, as the GEF Agency for this proposed project, will not execute any of the SMARTEN project activities. All project activities will be nationally implemented by the project's implementing partner, which is the Department of Commerce, Industry and Environment (DCIE) on behalf of the Government of Nauru. The detailed description of the project implementation arrangement is described in Part VII: Governance and Management Arrangements on page 56 of the SMARTEN ProDoc.

ProDoc: Sec. VII: "Governance and Management Arrangements", p. 56

Response to 3/6/2020 MY:

As can be gleaned from the Supplemental Annex, it is not only the RE/EE financial scheme that comprise the tangible investments that will be implemented under the proposed project.

It is important again to take note that the baseline ADB solar PV project will allow achieving nearly 50% of electricity generation from RE sources. Since there is only a single national electric grid, this will serve everybody. In other words, every Nauruan will use electricity that is generated 50% from RE and the balance from diesel. Adding more RE capacity means to generate more electricity during a period of the day for which there is already overcapacity, which is impractical and expensive. Therefore, what is needed to supplement the baseline ADB project is an electricity storage system, which will be done in the project through desalinated water. The excess electricity from the baseline ADB project will be used to produce more desalinated water that will be distributed to water users in the country. This innovative energy storage scheme practically also provide additional water desalination capacity for the country.

Furthermore, regardless of the considerations on the cost-effectiveness of the baseline project, i.e., ADB solar PV system, although the project proponents are in full agreement with the reviewer that such project is not cost-effective, they and the project development team have no control and authority on how the budget of that project is determined and spent.

Even though the cost-effectiveness of the ADB solar PV system cannot be improved by the project proponents, the outputs of the baseline ADB project can, and will, be significantly optimized thanks to the design of the SMARTEN incremental activities. Specifically, the implementation of the "Enhanced Solar PV Power Generation and Distribution System" (Investment Type activity #1 on pp 17-18 of the Supplemental Annex file) will allow a much more stable and reliable operation of the Nauru national electric grid. Additionally, the installation of the "Storage of Excess Solar PV Generated Electricity in Desalinated Water" demo (pp 20-21 of the Supplemental Annex file), a significant portion of the curtailed electricity will be recovered. Such demo can be easily scaled-up by NUC, since additional water desalination capacity will have to be added that can utilize the portion of curtailed electricity not recovered through SMARTEN. The viability of both this incremental activities is also shown by the positive IRRs for the investment type activity (20.2%) and the demo 1 (28.3%).

The project proponents believe that the best benchmark would be to determine the cost per ton of CO_2 removed considering only the GEF grant, which would give us approximately US$ 3.01/tCO_2 (or US$ 3.17/tCO_2 including the Project Management Cost), since there is no way to control whatever the ADB has budgeted for its solar PV project in the country. This value compares to the average cost per ton of CO_2 removed in other UNDP-GEF CCM projects in Pacific, i.e., (GEF US$ 6.00/ton CO_2[1][1]), and specifically to similar full size projects in other SIDSs in the Pacific region that are of the same circumstances as Nauru, namely: remoteness, small population (which does not allow for any significant scale-up), limited indigenous RE resources and limited local technical expertise.

Finally, as mentioned in a previous response, the financing scheme has been designed to meet a specific stakeholders' request, to support the government efforts in achieving 30% energy efficiency improvements, one of the 3 targets set in the Nauru Energy Road Map (NERM).

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[1] This is average GEF$ per total lifetime GHG ER (direct + indirect) of full-sized projects. The average total cost (GEF + co-financing) per total lifetime GHG ER (direct + indirect) is US$ 42/ton CO_2.

Supplemental Annex file: Annex B, pp. 17-18, and 20-21

Response to 5/5/2020 MY:

Comment:

The above comment was addressed, but some more work needs to be done. Please check the document of the GEF-7 REPLENISHMENT PROGRAMMING DIRECTIONS. The circled two rows in Table A of the CEO ER document are not included in the document. Please delete the two rows and put all budgets in the first row. Please check other part of the CEO ER document, and revise it to make it consistent.

Response:

Table A of the CEO ER document has been revised as suggested.
Comment:
In the GEF Portal for the project (at the front page of the project), please put the following information:

1. Risk Matrix;
2. information on which stakeholders have already been consulted; and
3. Gender analysis and report (Note: "See Annex 4 of the Project Document", "A Gender Analysis Report will be submitted separately", etc. are not acceptable in the front page of the Portal)

Response:
The information on Risk Matrix, summary of Stakeholders engagement plan and summary of gender analysis report have been added into GEF Portal under section A.3, A4 and A.5.

Review Dates

	Secretariat comment at CEO Endorsement Request	Response to Secretariat comments
First Review		
Additional Review (as necessary)		
Additional Review (as necessary)		
Additional Review (as necessary)		
Additional Review (as necessary)		

CEO Recommendation

Brief Reasoning for CEO Recommendations

Aligned with Program 1 of Objective 1 of the GEF6, “Promote the timely development, demonstration, and financing of low-carbon technologies and policies” this project is to enable the increased applications of feasible renewable energy (RE) and energy efficiency (EE) technologies for supporting socio-economic development in Nauru in accord with the country’s energy roadmap targets.

With a total of 10,000 people and a land area of 21 km2, Nauru is the smallest state in the South Pacific and second smallest state by population in the world. The economy of the country is mainly based on phosphate production, which currently continues to decline as primary phosphate becomes more difficult to find and secondary phosphate takes an increasing share of production. Although Nauru contributes very low levels of CO2eq emissions to the world (0.0002 % of global emissions in 2014), it endeavors to play its part in addressing the threat of global warming. The local infrastructure, including power generation, drinking water and health services, have been adversely affected in recent years by the decline in income from the phosphate industry. Nauru is dependent on imports for almost everything for domestic consumptions. Fossil fuels are imported for power generation and transport which are the major sources of the country’s GHG emissions. This GEF project will help transform the country’s energy use in power generation and transport from a fossil fuel-based system to a renewable energy-based system.

The project has four majpr components: (1) Energy Policy & Regulatory Framework Strengthening. (2) Supporting RE & EE Initiatives. (3) Promotion of RE and EE applications; and (4) Improvement of energy sector capacities.

Co-financing amount and sources: The co-financing $22,765,000, all in grant, comes from the national government and the agency.

GHG emission reduction: The global environmental benefit target is to reduce 1.049 million tonnes of CO2 equivalent, including 0.35 million tonnes of direct and 0.699 million tonnes of consequential emission reductions over the project lifetime.