

Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility
(Version 5)

STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: May 31, 2018
Screener: Sunday Leonard
Panel member validation by: Ralph E. Sims
Consultant(s):

I. PIF Information *(Copied from the PIF)*

FULL-SIZED PROJECT	GEF TRUST FUND
GEF PROJECT ID:	9974
PROJECT DURATION:	4
COUNTRIES:	Nauru
PROJECT TITLE:	Supporting Mainstreamed Achievement of Roadmap Targets on Energy in Nauru (SMARTEN)
GEF AGENCIES:	UNDP
OTHER EXECUTING PARTNERS:	Department of Commerce, Industry and Environment (DCIE)
GEF FOCAL AREA:	Climate Change

II. STAP Advisory Response *(see table below for explanation)*

Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies):
Concur

III. Further guidance from STAP

1. The aim is to support renewable energy (RE) projects and improved energy efficiency (EE) through policies to help meet the energy supply and demand targets as outlined in the Nauru Energy Road Map (NERM) as set by the government of this very small nation.
2. Demonstrations of RE electricity generation and EE projects are planned that will use around three-quarters of the total funding sought, most of which will be as co-financing through the state-owned Nauru Utilities Corporation with power generation development supported by the governments of Australia, New Zealand and UAE.
3. Total investment sought to improve grid reliability, increase capacity and to reduce dependence on imported diesel-fuelled generation plant equates to around USD 1660 per capita. The recent installation of two new 2.8 MW diesel gensets funded by AusAid and ADB will produce greenhouse gases for many years to come. The reason for this investment decision, given the urgent need to reduce emissions globally, is not known. It was probably based on economic cost analysis alone with no value included for the CO₂ released. Consequently, the NUC target to reach 50% generation from renewables by 2020 is now highly unlikely to be met.
4. Renewable electricity, mostly solar PV, currently has a low share of total generation (~3-4%) and is expected to rise only slowly without further external investment. Strengthening of policies and measures to encourage RE development, together with creating greater awareness of the potential by government and the private sector, will be needed if the 50% target is eventually to be met within a decade or more.
5. Several RE and EE projects exist and others are planned within the NERM. However, this baseline is inadequate to meet the government targets and additional projects will need to be supported, (through this GEF project for example), in order to remove barriers to uptake such as by building local expertise and capacity.
6. Innovative ways to "smarten" the grid through decentralised generation and incentivising private sector involvement are commendable. The many opportunities for EE potential have been identified, and a PV powered desalination plant is planned to be built as a demonstration.

7. The assessment of 5.1 MW new solar PV capacity to be installed if around 25% renewable generation is to be achieved in the alternative scenario by end of project (footnote 20) assumes a capacity factor of around 20% which is acceptable for this location.

8. The greenhouse gas mitigation claims for this GEF project of around 1 Mt CO₂-eq exclude any emissions reductions resulting from EE projects. They equate to around USD 16/t avoided (including both GEF funding and co-financing) which is acceptable given that investment in EE projects should also give an improvement.

Further General Comment

The project is not particularly innovative but builds on earlier investments in RE and EE projects. The need to consider grid stability at the proposed higher levels of variable generation in either national or decentralised systems will need careful analysis on how best to reduce peak demand loads and the need for possible investment in energy storage. It is assumed the potential for wind power or bioenergy generation (e.g. using biogas) have been evaluated based on resources available and that solar has the lowest cost-effective potential. If not, then a more balanced generation system using solar, wind and bioenergy resources should be assessed.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Concur	<p>In cases where STAP is satisfied with the scientific and technical quality of the proposal, a simple “Concur” response will be provided; the STAP may flag specific issues that should be pursued rigorously as the proposal is developed into a full project document. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design prior to submission for CEO endorsement.</p>
2. Minor issues to be considered during project design	<p>STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent may wish to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised. (ii) Set a review point at an early stage during project development, and possibly agreeing to terms of reference for an independent expert to be appointed to conduct this review.</p> <p>The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.</p>
3. Major issues to be considered during project design	<p>STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to:</p> <p>(i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development including an independent expert as required.</p> <p>The GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP’s concerns.</p> <p>The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.</p>