Terminal Evaluation Review form, GEF Independent Evaluation Office, APR 2017

1. Project Data

	Su	mmary project data		
GEF project ID				
GEF Agency project ID		4331		
GEF Replenishment Phase		GEF-4		
Lead GEF Agency (include all for joint projects)		UNDP		
Project name		Technology Transfer for Grid-Connected Rooftop Photovoltaic Systems		
Country/Countries		Seychelles		
Region		AFR		
Focal area		Climate Change		
Operational Program Priorities/Objectives	or Strategic	Technology Transfer, SP3 Promoting Market Approaches to Renewable Energy		
Executing agencies in	volved		gy and Climate Change, Seychelles Public Utilities Corporation (PUC)	
NGOs/CBOs involven	nent	As project stakeholders		
Private sector involvement		As project stakeholders		
CEO Endorsement (FSP) /Approval date (MSP)		May 2012	May 2012	
Effectiveness date /	project start	September 2012	September 2012	
Expected date of pro	ject completion (at start)	June 2016		
Actual date of projec	t completion	December 31, 2016		
		Project Financing		
		At Endorsement (US \$M)	At Completion (US \$M)	
Project Preparation	GEF funding		At Completion (US \$M) -	
Project Preparation Grant		At Endorsement (US \$M)	At Completion (US \$M)	
	GEF funding	At Endorsement (US \$M)	At Completion (US \$M) - - 1.10	
Grant	GEF funding	At Endorsement (US \$M)	-	
Grant	GEF funding Co-financing	At Endorsement (US \$M) 1.16	- - 1.10	
Grant	GEF funding Co-financing IA own	At Endorsement (US \$M) 1.16 0.06	- - 1.10 0.06	
Grant GEF Project Grant	GEF funding Co-financing IA own Government	At Endorsement (US \$M) 1.16 0.06 1.22	- - 1.10 0.06 0.63	
Grant GEF Project Grant	GEF funding Co-financing IA own Government Others multi- /bi-laterals	At Endorsement (US \$M) 1.16 0.06 1.22	- - 1.10 0.06 0.63	
Grant GEF Project Grant	GEF funding Co-financing IA own Government Others multi- /bi-laterals Private sector	At Endorsement (US \$M) 1.16 0.06 1.22	- - 1.10 0.06 0.63	
Grant GEF Project Grant Co-financing	GEF funding Co-financing IA own Government Others multi- /bi-laterals Private sector	At Endorsement (US \$M) 1.16 0.06 1.22 4.90	- - 1.10 0.06 0.63 11.05	
Grant GEF Project Grant Co-financing Total GEF funding	GEF funding Co-financing IA own Government Others multi- /bi-laterals Private sector NGOs/CSOs	At Endorsement (US \$M) 1.16 0.06 1.22 4.90 1.16 1.16	- - 1.10 0.06 0.63 11.05 1.10	
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Grant GEF Project Grant Co-financing Total GEF funding Total Co-financing Total project funding (GEF grant(s) + co-fin TE completion date	GEF funding Co-financing IA own Government Others multi- /bi-laterals Private sector NGOs/CSOs	At Endorsement (US \$M) - 1.16 0.06 1.22 4.90 1.16 6.18 7.34 valuation/review informatio December 2016	- - 1.10 0.06 0.63 11.05 1.10 1.10 11.74 12.84	
Grant GEF Project Grant Co-financing Total GEF funding Total Co-financing Total project funding (GEF grant(s) + co-fin TE completion date Author of TE	GEF funding Co-financing IA own Government Others multi- /bi-laterals Private sector NGOs/CSOs ancing) Terminal ev	At Endorsement (US \$M) - 1.16 0.06 1.22 4.90 1.16 6.18 7.34 /aluation/review informatio December 2016 Jiří Zeman	- - 1.10 0.06 0.63 11.05 1.10 1.10 11.74 12.84	

2. Summary of Project Ratings

Criteria	Final PIR	IA Terminal Evaluation	IA Evaluation Office Review	GEF IEO Review
Project Outcomes	-	HS	HS	HS
Sustainability of Outcomes		L	L	L
M&E Design		HS	HS	HS
M&E Implementation		S	S	MS
Quality of Implementation		HS	HS	S
Quality of Execution		HS	HS	S
Quality of the Terminal Evaluation Report		-	MS	S

3. Project Objectives

3.1 Global Environmental Objectives of the project:

The Global Environmental Objective of the project is to increase the use of PV technology as a sustainable means of generating electricity, thereby significantly reducing reliance on fossil fuel, through pilot projects for rooftop PV systems on all the main and selected smaller islands of the Seychelles. (Project Identification Form, pg.5)

3.2 Development Objectives of the project:

The development objective of the project is increased use of grid-connected rooftop photovoltaic (PV) technology as a sustainable means of generating electricity in selected main islands and smaller islands of the Seychelles with a focus on small-scale producers who are already connected to the national electricity grid. The project was designed to: (i) revise the legal, regulatory and policy framework to better support the adoption of renewable energy technologies, and grid-connected PV systems in particular; (ii) design and implement financial mechanisms that will make the purchase and installation of solar PV systems more attractive to the private sector; (iii) establish the first market supply chain for solar PV systems in the country; (iv) provide training to establish local capacity for the installation and maintenance of PV systems; and (v)demonstrate for the first time in the Seychelles the viability and practicality of grid-connected PV systems through demonstration PV systems. (TE, pg.8) The project implementation targeted the following outcomes:

Outcome 1: Comprehensive and strengthened policy and legal frameworks adopted to promote Renewable Energy Technologies (RETs) and enable grid-connected renewable energy production

Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems

Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators

3.3 Were there any **changes** in the Global Environmental Objectives, Development Objectives, or other activities during implementation?

There were no changes either to the Global Environmental Objectives or Development Objectives.

4. GEF IEO assessment of Outcomes and Sustainability

Please refer to the GEF Terminal Evaluation Review Guidelines for detail on the criteria for ratings.

Relevance can receive either a Satisfactory or Unsatisfactory rating. For Effectiveness and Cost efficiency, a six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess. Sustainability ratings are assessed on a four-point scale: Likely=no or negligible risk; Moderately Likely=low risk; Moderately Unlikely=substantial risks; Unlikely=high risk. In assessing a Sustainability rating please note if, and to what degree, sustainability of project outcomes is threatened by financial, sociopolitical, institutional/governance, or environmental factors.

Please justify ratings in the space below each box.

4.1 Relevance	Rating: Satisfactory

The project is relevant with Seychelles national policy priorities as well as with GEF and UNDP priorities.

The project directly addressed government's 100% renewable energy agenda and implementation of 2010 Seychelles energy policy targets of 15% of energy demand to be met by renewables by 2030, and 5% by 2020. The 2009 Seychelles National Climate Change Strategy (SNCCS) includes relevant objectives "to achieve sustainable energy security and reduce greenhouse gas emissions" and "to mainstream climate change considerations into national policies, strategies and plans. The project objectives are also in line with the broader 2015 Seychelles National Development Strategy (NDS) promoting sustainable energy production.

The National Greenhouse Gas Mitigation Options report, produced for the Second National Communication to the United Nations Framework Convention on Climate Change (UNFCCC), recommended increased efforts to promote renewable energy to reduce CO2 emissions, and specifically pointing out that Seychelles government should "encourage wide use of photovoltaic cells, through demonstration projects such as the installation of PV panels on rooftops of public buildings to generate electricity".

The project is also consistent with the GEF's Strategic Programme #3 "Promoting Market Approaches for Renewable Energy" as described in the 2007 "Focal Area Strategies and Strategic Programming for GEF-4". The project contributed to the Expected Outcome of the Strategic Program #3 - "Growth in markets for renewable power in participating program countries" and to each of the three program indicators: tons CO_{2eq} avoided; adoption of policy frameworks, allowing renewable generators equitable access to the grid; and kWh generated from renewable sources. (TE, pg.52)

4.2 Effectiveness	Rating: Highly Satisfactory
4.2 Effectiveness	Rating: Highly Satisfactory

The TE rates the effectiveness as "Highly Satisfactory". The project objective and outcome targets have been generally reached and in some cases surpassed. TE notes some gaps in delivering some of the project outputs, namely the legislation regulating purchase of PV produced electricity, and claims that absence of the legislation has been fully offset by the net-metering scheme in place. However, this was not governed by an approved legislation yet as of time of the evaluation and was planned for 2017. Despite this shortcoming and several other moderately satisfactory indicators, the TER agrees with the rating of Highly Satisfactory since main project objective targets (amount of reduced CO2 emissions from the power sector, cumulative installed capacity of grid-connected PV systems, cumulative total electricity generation from installed grid-connected PV systems) were surpassed.

Achievements under the project's planned outcomes are listed below:

Outcome 1: Comprehensive and strengthened policy and legal frameworks adopted to promote Renewable Energy Technologies (RETs) and enable grid-connected renewable energy production

This outcome was achieved and most of the indicators were rated satisfactory except the ones related to the legislations. 181 grid-connected PV installations (against a target of minimum 30) across the inner islands of Seychelles (of which 133 residential, 42 commercial, and 6 schools) have been approved and benefitted from the net-metering scheme. The funding of the PV rebate scheme reached 86% of the target (1.26 M disbursed against 1.47 M target), which suggests that the target has not been formally met. However, the TE notes that "the remaining 14% of funding were not provided to the PV rebate scheme, because deemed not necessary due to fast PV uptake driven by the very effective net-metering scheme in place supported with additional three financial schemes". (TE, pg. 42) Business Tax Act and VAT Act were approved and enforced in December 2012 as planned and FairTrade Commission Act was last updated in August 2015. Number of financing scheme (2013), PV rebate (2014), SEEREP loan scheme (2012), MCB Green loan scheme (2016). (TE, pg.44)

Number of designed and completed education and awareness campaigns targeting key decision-makers, potential users of PV technology, and the public exceeded the targets identified at the beginning of the project.

National Energy Master Plan (NEMP) had not been approved by the Government as of 2016 although it was planned for the end of 2013. Revision of National Energy Policy document was still pending at the time of evaluation and was not expected to be completed by the end of project.

Outcome 2: Enhanced national capacity for the development, operation, and financing of RET systems

This outcome was achieved with a high number of highly satisfactory indicator assessments. All outputs related to completed capacity needs assessment and outreach on policy/economic issues as well as developed capacity building strategy have been satisfactorily completed and exceeded the expectations. In total 3 trainings were implemented on solar PV system installation, operation and maintenance: City

& Guilds training for Seychelles Institute of Technology (SIT) instructors, training of PV installers, development of SIT curricula for students. This was lower than the expected number of five trainings. Indicators related to the established partnership and information sharing platforms including meetings and joint ventures and/or licensing agreements exceeded the targets. (TE, pg.45-48)

Outcome 3: Increased electricity production from RET systems (e.g., PV systems) and interest among energy sector investors and operators

This outcome was achieved with several indicators exceeding the targets identified at the project start. Cumulative amount of reduced CO₂ emissions compared to the project baseline and cumulative total electricity generation from grid-connected PV systems by the end of the project were 2,449 tons CO_{2eq} and 3,485,130 kWh respectively. Both indicators exceeded the target values. Report on grid capacity requirements has been delivered with assistance of World Bank co-financing. Total installed capacity of grid-connected RE-based power systems in the Seychelles was 7.790 MW by the time of evaluation, little short of 8 MW target. Total power generation from the demo PV systems by the end of the project was 6,687 kWh/year which slightly exceeded the target value. (TE, pg.48-51)

4.3 Efficiency	Rating: Highly Satisfactory
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The TE rates Efficiency as Highly Satisfactory, the TER agrees with the rating.

The analysis of a sample of project expenditures indicated adequate usage of funds. As of September 2016, 3 months before the anticipated project end date, the project had spent 95% of its budget and all remaining funds were planned to be spent by the end of the project. The funds allocated for the PV Rebate scheme have not been fully spent and the remaining funds were allocated at the Development Bank of Seychelles (DBS) account which would operate the PV scheme even after the end of the project. (TE, pg.53)

The project objective has been reached and surpassed, however among the key risks identified in the project document, two of them were active - PV system operators not participating as promised due to concerns about Government commitment, pricing, and/or technical challenges, and delayed enactment of new and revised energy legislation and regulation. (TE, pg.27)

The TE rates project sustainability as Likely, based on the project design, fast market uptake of the PV in Seychelles and sustainability of financial schemes after project termination. This TER concurs and rates sustainability as Likely.

Financial Resources Sustainability: Moderately Likely Financial support schemes (PV rebate, and three soft loans schemes) were in place to remain operational after project termination, though the details of the support scheme would be finalized in 2017 which brought a level of uncertainty. TE notes that a special modification of a feed-in tariff was considered, where the PV power purchase price will consist of the marginal avoided fuel costs plus a premium to cover the difference between avoided fuel costs of

full PV costs. Since the funding for the premium would depend on actual fuel price and on the total volume of PV/RE installations supported. (TE, pg.54)

Sociopolitical Sustainability: Likely TE notes that all relevant governmental stakeholders were fully committed to implement the national renewable energy policy goal and recognized PV as a major technology that would be deployed. (TE, pg.55)

Institutional Framework and Governance Sustainability: Likely A new feed-in tariff scheme planned to be adopted in 2017 was designed to provide full remuneration for the actual fuel costs avoided plus a premium financed from the dedicated state fund up to the level that would make PV installations attractive for investors due to reduced financial burden. (TE, pg.55)

Environmental Sustainability: Likely The net environmental benefits of PV highly surpass the almost negligible environmental impacts; therefore, environmental sustainability of the project is likely.

5. Processes and factors affecting attainment of project outcomes

5.1 Co-financing. To what extent was the reported co-financing essential to the achievement of GEF objectives? If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for it? Did the extent of materialization of co-financing affect project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

TE notes that the actual total co-financing exceeded the planned budget, although not all planned co-financing was materialized. The lack of expected co-financing was more than offset by some other sponsors. (TE, pg.39)

5.2 Project extensions and/or delays. If there were delays in project implementation and completion, then what were the reasons for it? Did the delay affect the project's outcomes and/or sustainability? If so, in what ways and through what causal linkages?

There were delays in enactment of new and revised energy legislation and regulations. The Mid-Term Evaluation report was submitted with a significant delay in December 2015 reducing the capacity of the project to properly address the relevant recommendations. Project was issued one no-cost extension till the end of 2016.

5.3 Country ownership. Assess the extent to which country ownership has affected project outcomes and sustainability? Describe the ways in which it affected outcomes and sustainability, highlighting the causal links:

The Government of Seychelles (GOS) was highly committed to the project and its sustainability. The GOS has provided cash for financing of the PV rebate scheme as well as for other parallel renewable energy activities. Also, the net-metering scheme was approved by the GOS and implemented by the Public Utilities Corporation (PUC) in 2013, although not formalized in the legislation yet by the end of the project.

6. Assessment of project's Monitoring and Evaluation system

Ratings are assessed on a six point scale: Highly Satisfactory=no shortcomings in this M&E component; Satisfactory=minor shortcomings in this M&E component; Moderately Satisfactory=moderate shortcomings in this M&E component; Moderately Unsatisfactory=significant shortcomings in this M&E component; Unsatisfactory=major shortcomings in this M&E component; Highly Unsatisfactory=there were no project M&E systems.

Please justify ratings in the space below each box.

6.1 M&E Design at entry	Rating: Highly Satisfactory
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The TE rates M&E Design as highly satisfactory and this TER agrees with the rating. The M&E Plan at project design includes responsible parties for M&E activities, an indicative budget and specified time frame for each M&E activity. According to the M&E plan, key parties responsible for performing project monitoring and evaluation included Project Manager, Seychelles Energy Commission, UNDP Country Office, UNDP GEF Regional Technical Advisor, UNDP Regional Coordination Unit, UNDP Environment and Energy Group, external auditor and consultants/evaluators.

The standard UNDP monitoring and evaluation procedures for the project used the log-frame, Inception Workshop and Inception Report, Mid-Term and Final Evaluation, and standard UNDP and GEF planning and reporting tools including risk logs in Atlas, Quarterly Project Progress Reports (PPR), Quarterly and Annual Work Plans (AWP), Annual Performance Report (APR), Project Implementation Review (PIR), Tripartite Project Review (TPR), periodic progress reports, and financial audit. (TE, pg. 35)

The log-frame designed in the Project Document is logically structured, and it defines SMART indicators and targets for the project objective and for each project outcome and output. (TE, pg.25)

6.2 M&E Implementation	Rating: Moderately Satisfactory
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The TE rates M&E Implementation as satisfactory. This TER revises the rating to Moderately Satisfactory due to the significant delay in the submission of mid-term evaluation.

The Inception Workshop was held on November 30, 2012, and the Inception Report was finalized on December 3, 2012 by the project manager. Project implementation has been regularly reviewed by seven Project Steering Committee meetings held once or twice a year with the last one held in July 2016.

The Mid-Term Evaluation (MTE) report which was originally planned to be submitted in early 2014 was in fact submitted with a significant delay in December 2015. TE notes that the delay was caused partly by the belated procurement of the MTE evaluator, since the former project team was not sure if the MTE was compulsory for this project. Additional delay was caused by the mid-term evaluator who delivered the final MTE report with a significant delay of six months in December 2015. The late delivery of the MTE reduced the capacity of the project to properly address the MTE recommendations since very short time and very little funding was left until the project termination. (TE, pg.35-36)

7. Assessment of project implementation and execution

Quality of Implementation includes the quality of project design, as well as the quality of supervision and assistance provided by implementing agency(s) to execution agencies throughout project implementation. Quality of Execution covers the effectiveness of the executing agency(s) in performing its roles and responsibilities. In both instances, the focus is upon factors that are largely within the control of the respective implementing and executing agency(s). A six point rating scale is used (Highly Satisfactory to Highly Unsatisfactory), or Unable to Assess.

Please justify ratings in the space below each box.

7.1 Quality of Project Implementation	Rating: Satisfactory
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The TE rates the quality of project implementation and execution together as Highly Satisfactory. This TER rates the quality of implementation as Satisfactory due to several issues affecting the implementation performance.

Considering the budget management and delivery timeline of the project, it could be concluded that the project was implemented according to the planned management scheme specified in the Project Document. The project manager was located at premises of the Government-UNDP-GEF Programme Coordination Unit (PCU) in Seychelles. TE notes that this arrangement facilitated informal and effective cooperation among the UNDP and GOS-UNDP-GEF projects and the PV project benefited from cooperation with an on-going UNDP/GEF project "Promotion and Up-scaling of Climate-resilient, Resource-efficient Technologies in a Tropical Island Context Project". (TE, pg.40)

The Project Manager identified issues to be addressed by PCU, including the development of written guidelines detailing operating procedures and reporting mechanisms to ensure that all project managers deliver to the same standard, and putting in place an improved coordination structure between projects within the same focal area and their external partners. A major constraint to effective implementation was identified as delays in fund disbursement, specifically at the start of each year, partially due to UNDP-GEF administrative procedures, and long approval processes of Government. (PIR 2016, pg.32)

7.2 Quality of Project Execution Rating: Satisfactory

As mentioned in the section above, The TE rates the quality of project implementation and execution together as Highly Satisfactory. This TER rates the quality of execution as Satisfactory.

The main executing agency of the project; Ministry of Environment, Energy and Climate Change (MEECC) has appointed a National Project Director (NPD) to oversee implementation; the NPD also chaired the project Steering Committee which was comprised of key project stakeholders. MEECC also spearheaded the 100% renewable energy agenda which the project has contributed to. The other executing partners also played key roles in delivery of project targets. The Seychelles Energy Commission (SEC) developed terms of the PV rebate scheme, and jointly developed with the PUC the net-metering scheme; the SEC oversaw regulations development for renewable electricity generation. Public Utilities Corporation

(PUC) as the owner and operator of the national power generation and grid assets, played a critical role in PV market development. (TE, pg.33-34)

8. Assessment of Project Impacts

Note - In instances where information on any impact related topic is not provided in the terminal evaluations, the reviewer should indicate in the relevant sections below that this is indeed the case and identify the information gaps. When providing information on topics related to impact, please cite the page number of the terminal evaluation from where the information is sourced.

8.1 Environmental Change. Describe the changes in environmental stress and environmental status that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered these changes.

PV generated electricity and CO₂ emissions reductions have all exceeded the target, improving the environmental status and reducing the environmental stress was beyond the expected end-of project targets. (TE, pg.56)

8.2 Socioeconomic change. Describe any changes in human well-being (income, education, health, community relationships, etc.) that occurred by the end of the project. Include both quantitative and qualitative changes documented, sources of information for these changes, and how project activities contributed to or hindered these changes. Also include how contextual factors have contributed to or hindered.

The TE does not cite any socioeconomic changes that occurred by the end of the project

8.3 Capacity and governance changes. Describe notable changes in capacities and governance that can lead to large-scale action (both mass and legislative) bringing about positive environmental change. "Capacities" include awareness, knowledge, skills, infrastructure, and environmental monitoring systems, among others. "Governance" refers to decision-making processes, structures and systems, including access to and use of information, and thus would include laws, administrative bodies, trust-building and conflict resolution processes, information-sharing systems, etc. Indicate how project activities contributed to/ hindered these changes, as well as how contextual factors have influenced these changes.

a) Capacities

Education and awareness campaigns targeting key decision-makers, potential users of PV technology, and the public exceeded the targets identified at the beginning of the project. Information sharing platforms and partnerships have been established including meetings and joint ventures and/or licensing agreements.

b) Governance

TE states that the PV technology was adopted faster than anticipated due to strong incentives provided by the net-metering scheme. Although not formalized in legislation, the net-metering scheme was approved by the Government and implemented effectively by the Public Utilities Corporation (PUC) (TE, pg.8)

8.4 Unintended impacts. Describe any impacts not targeted by the project, whether positive or negative, affecting either ecological or social aspects. Indicate the factors that contributed to these unintended impacts occurring.

The TE does not cite any unintended impacts that occurred by the end of the project.

8.5 Adoption of GEF initiatives at scale. Identify any initiatives (e.g. technologies, approaches, financing instruments, implementing bodies, legal frameworks, information systems) that have been mainstreamed, replicated and/or scaled up by government and other stakeholders by project end. Include the extent to which this broader adoption has taken place, e.g. if plans and resources have been established but no actual adoption has taken place, or if market change and large-scale environmental benefits have begun to occur. Indicate how project activities and other contextual factors contributed to these taking place. If broader adoption has not taken place as expected, indicate which factors (both project-related and contextual) have hindered this from happening.

The PV rebate scheme also supports residential customers with lower consumption and lower electricity tariffs and there was a new PV democratization program of the government targeting low-income households that received social benefits and were not able to afford the initial investment in PV. (TE, pg. 53-54)

The project also facilitated broad-scale replication by reducing the costs of PV technology through a market-based approach that would establish financial incentive mechanisms for PV systems and reduce transaction costs.

9. Lessons and recommendations

9.1 Briefly describe the key lessons, good practices, or approaches mentioned in the terminal evaluation report that could have application for other GEF projects.

- I. Proper project timing, and strong and effective country ownership and commitment are key prerequisites for successful project implementation. The PV project matched with this timewindow opportunity when the project was launched after Seychelles had adopted RE policy and targets already, but practically no PV installations were in place yet. The timing of the project can serve as the best-case example, maximizing impact against investment.
- II. High electricity tariffs combined with provisions allowing feed in of the generated power into the grid and affordable terms of financing create a strong market incentive for investors and do not require significant additional subsidies. However, PV requires 100% back-up, it does not

offset utility infrastructure costs, and thus remaining electricity tariffs need to finance all utility infrastructure costs in case of a monopolistic market (or transmission/distribution costs only in case of a competitive market). PV technology makes the best economic sense in case of high marginal variable utility generation costs, i.e. high fuel costs, especially in the short/mid-term. The subsidy needed to cover the difference between avoided fuel marginal costs and PV generation costs in Seychelles can be financed either by tax payers from public budgets, or by electricity customers through utility electricity tariffs. The net-metering scheme in Seychelles with heavily cross-subsidized electricity tariffs provides a very strong incentive for high-tariff consumers to install PV at the cost of PUC/other customers, and at the same time there is no financial motivation to invest in PV for low-tariff customers.

III. Technical integration of PV into the PUC infrastructure is a more complex task than envisaged and budgeted for in the project document. Integration of PV technology impacts utilities' capacity to control frequency and voltage in their grids. Capacity to control frequency in the grid within required limits requires sufficient fast (spinning) capacity at the utility power plant. PV generation depends on actual solar irradiation that can change quickly with clouds, and thus increases demand for frequency control capacity. The higher the PV market penetration, the greater the need for frequency control capacity. Within the scope of the PV project, with 1.79 MWp of PV installed so far, the frequency control is manageable with existing PUC technologies. However, problems with voltage controls in low-voltage networks may arise and should be addressed even with low PV penetration rate – especially in cases when a utility has difficulties with maintaining proper voltage in low-voltage networks. In such cases, projects designed to expand PV should be followed-up with an additional support on grid stability, as it is the case in Seychelles, which integrated grid strengthening into their first application for Green Climate Fund support. (TE, pg.11-12)

9.2 Briefly describe the recommendations given in the terminal evaluation.

I. GOS (SEC, MEECC)

The PV Rebate scheme is eligible also for PV installations already in operation, there is no time limit, until when investors shall apply for the rebate. The terms of the PV rebate scheme should be adjusted to support new PV installations only. The ex-post support during PV operation should not be eligible, because in such case the direct impact on new PV installation is minimal. The PV rebate scheme should also be adjusted in the future to the actual terms of updated net-metering scheme, or its replacement, and target primarily investors that might have difficult access to debt financing, such as low/mid-income investors. If the new support scheme to replace net-metering scheme would prove to be attractive enough, the demand would be low, and the PV rebate funds would remain unused, an exit strategy should be developed, that might include extension of the PV rebate scheme also to other RE/EE technologies, or incorporation of the remaining funds under the PV rebate scheme with the new PV support scheme.

II. UNDP (replication project developers and sponsors)

When developing similar PV/RE projects in other countries, the timing and actual local development context, including effectiveness of country ownership, level of electricity tariffs, financial capacity of local utility/government to subsidize PV schemes, as well as financial capacity of local investors/households to invest, and other factors are decisive and should be properly taken into account, and the project design adjusted accordingly. Although this is a well-recognized fact, it cannot be overstated. A mere replication of a successful project in a different local context will not automatically generate the same results.

III. UNDP (replication project developers and sponsors)

PV/RE development projects should not focus only on strengthening PV/RE supply chain, and on development of a RE legislation supporting financial integration of the PV/RE into the local electricity market, but they need to address also effective technical integration of RE into power utility infrastructure. The technical integration becomes more important especially with higher RE power generation targets, and in case when utility infrastructure has not been fully modernized to current standards yet. The technical integration of RE is a bigger challenge primarily for smaller utilities that do not have sufficient financial and technical capacity to upgrade their infrastructure. Further technical and financial assistance to PUC is needed to improve PV absorption capacity both on a central power generation site (sufficient fast/spinning frequency control capacity), and especially in low-voltage distribution networks (voltage control within a standard voltage interval).

IV. GOS

There is a continuous need for PV/RE related training and capacity strengthening at all levels, including government, utility, and PV installers since PV/RE is a new and fast-growing branch. GOS should integrate targeted RE trainings and capacity strengthening activities into their other RE related projects and facilitate training integration also with other donors/projects.

V. SEC, UNDP (MEECC, PUC)

Information developed by the PV project and published on the project web site should remain online even after the PV project termination, either at the UNDP sponsored sites (PCU) or governmental and partners' web sites, such as MEECC, SEC and/or PUC web site. Potential PV investors might benefit also from simple but real-life examples of financial performance of PV installation and actual cash flow.

VI. UNDP (replication project developers)

Log-frame indicators and targets should be defined for project objective, outcomes and outputs, not only formally, but de facto as well. Too detailed specification of project output indicators, which in fact refer rather to activity level indicators, is not suitable for monitoring of overall project results. More detailed project activity level indicators are defined in annual and quarterly work plans and monitored by project manager as a standard routine of a daily project management, as well as in quarterly and annual project reports.

VII. GOS (SEC, MEECC), UNDP (replication project developers)

When designing the legally formalized PV/RE support scheme with remuneration for PV power purchase based on a combination of avoided fuel costs and a premium, the total amount of funding needed to finance the premium should be estimated as well as the financing sources identified and funding secured. (TE, pg.12-13)

10. Quality of the Terminal Evaluation Report

A six point rating scale is used for each sub-criteria and overall rating of the terminal evaluation report (Highly Satisfactory to Highly Unsatisfactory)

Criteria	GEF IEO comments	Rating
To what extent does the report contain an assessment of relevant outcomes and impacts of the project and the achievement of the objectives?	The report contains a thorough assessment of project outcomes/outputs and impacts with comparisons to the project design requirements.	S
To what extent is the report internally consistent, the evidence presented complete and convincing, and ratings well substantiated?	Ratings are well substantiated and mostly evidence based. However, the assessment of implementation and execution quality could be more detailed	S
To what extent does the report properly assess project sustainability and/or project exit strategy?	The report provides information on sustainability and briefly assesses it's four dimensions	MS
To what extent are the lessons learned supported by the evidence presented and are they comprehensive?	The lessons learned and recommendations are comprehensive and addresses the relevant parties involved in project implementation	S
Does the report include the actual project costs (total and per activity) and actual co-financing used?	The report includes the actual project costs per outcome and actual co-financing with the breakdown of project sponsors	S
Assess the quality of the report's evaluation of project M&E systems:	The report adequately assesses evaluation of project M&E at design and implementation	S
Overall TE Rating		S

11. Note any additional sources of information used in the preparation of the terminal evaluation report (excluding PIRs, TEs, and PADs).