

Mid Term Review Management Response:

PIMS 4331

GRID-CONNECTED ROOFTOP PHOTOVOLTAIC SYSTEMS

Mid-Term Review held in May 2015

Final report accepted by the UNDP Resident Representative on 11 December 2015.

Management Response finalised on 10 December 2015.

Atlas Award ID: 65515

Project ID: 81971

Budget Department: B0371

PIMS: 4331

PROJECT SUMMARY TABLE

Project Title:	Grid-connected Rooftop Photovoltaic Systems
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ProDoc Signature:	Original Planned Closing Date:	Revised Closing Date:
September 2012	April 2016	30 th September 2016 (extension to be requested to 31 st December 2016)

GEF Project ID:	4164	Finance	<i>at endorsement (Million US\$)</i>	<i>at mid-term (Million US\$)</i>
UNDP Project ID:	00065515	GEF financing:	\$1.160	\$0.881
Country:	Seychelles	IA/EA own:	\$0	\$0.030
Region:	Africa	Government:	\$1.224	\$0.231 (rebate scheme)
Focal Area:	Climate Change Mitigation	NGOs/Other:	\$4.902	\$3.071
FA Objectives, (OP/SP):	Promote low-GHG energy technologies, through the increased production of renewable energy in electricity grids.	Total co-financing:	\$6.127	\$3.302
Executing Agency:	Ministry of Environment, Energy and Climate Change (Seychelles Energy Commission)	Total Project Cost:	\$7.287	\$4.183

KEY ISSUES

Evaluation issue 1: The project is well designed with an opportune selection of topic and timing such that the removal of barriers has resulted in the desired adoption rate

Management response: Agreed

Evaluation issue 2: The project is ahead of schedule in reaching its installed capacity, energy generation and GHG emissions reduction targets. Project management has been highly effective in engaging stakeholders around these targets

Management response: Agreed

Evaluation issue 3: As a result of reaching its main objectives, the project has the opportunity to address some factors beyond its original design, such as supporting a feed-in tariff or other mechanism to expand sustainability and adoption beyond that originally envisaged and a more comprehensive quality assurance programme.

Management response: The project will provide some support to SEC through the Project Manager, but has spent most of its budget allocation such that it has limited potential to provide additional technical expertise or materials. The sister UNDP-GEF project ongoing for Resource Efficiency is closely linked to the PV project and is already providing additional support to the SEC.

Evaluation issue 4: Project management has been highly effective in bringing together national stakeholders, such as the Public Utilities Corporation, the Seychelles Energy Commission, and the Development Bank of the Seychelles to support the deployment of PV. Without such effective inclusion of stakeholders it is likely the adoption of PV would have been delayed many years or not achieved.

Management response: Agreed. This has been a key role of the Project Manager, who (supported by SEC and the PV installers) has successfully created national awareness of the benefits of adopting PV and to some extent changed the mind-set of some stakeholders, notably PUC, away from a focus on the business of producing and selling energy towards the adoption of energy efficient solutions that benefit the country as a whole. In addition, the project has also created synergies with the Ministry of Finance through the SEEREP Initiative.

Evaluation issue 5: The relationship between the rebate scheme (and SEEREP financing mechanism) and the adoption of PV remains poorly understood as evidenced by half of the installations essentially ignoring the rebate. Further understanding of the financial mechanism or streamlining of its processes is needed to

make it more attractive to potential PV system owners.

Management response: Management agrees that the PV installers have had a major synergistic effect in terms of their own promotion and stimulation of the adoption of PV systems outside of the project framework. The project has had a major impact in creating the enabling environment for the adoption of PV, and promoting the required changes (such as adoption of dual metering systems and feed-in tariff) at the national level, but the installers have undoubtedly actively pursued their agenda with or without recourse to the rebate scheme. Early adopters of PV have in many cases been households of the upper-income brackets who use a lot of energy, thus can easily see the benefits of reducing their use of PUC-generated power due to the differential rates, and have the financial resources to invest in PV systems without needing to go through the rather tedious process of obtaining a rebate. Management agrees that there is still a need to improve the attractiveness of the rebate scheme (make information more accessible and the process of applying for a rebate less time-consuming) and the process of reviewing financial mechanisms and their appeal (particularly referring to SEEREP) is currently underway (under the GOS-UNDP-GEF Resource Efficiency project).

Evaluation issue 6: The project has not yet addressed some items, most specifically the solar radiation mapping (the National Performance Assessment is to be pursued in its place, a good adaptation in view of current circumstances of a large PV installed base), capacity building and training, and implementation of secondary legislation to support long-term adoption of PV. Addressing these issues should be a priority in the remaining project time.

Management response: Management has noted this point and is including these activities within the work plan for the remaining project period, insofar as the remaining budget allows.

Evaluation issue 7: Record keeping for main documents, PIRs and reports is to be commended, not just for this project but for the web portal which supports such functions for all Seychelles projects under UNDP-GEF.

Management response: Management appreciates the observation.

Evaluation issue 8: In terms of design, timing and intervention, the project can be considered best practice as it identified an opportunity where UNDP-GEF intervention could effectively remove barriers to adoption of a technology and thus facilitate its uptake.

Management response: Agreed.

Evaluation Issue 9: Adoption on Praslin has lagged behind adoption on Mahé. While this should be expected, further effort to encourage adoption can be effective, in particular supporting one or two installers on the island

Management response: Management agrees that the project should focus on increasing uptake of PV on Praslin and La Digue during the remaining project period.

This has in fact already commenced from late 2015, with several awareness-raising events and installation of a demonstration system on La Digue (there is already a demonstration system on Praslin installed under the GEOS-UNDP-GEF CB2 project, and more are to be installed by SEC in early 2016 in collaboration with the current project). In regard to supporting installers on Praslin, this is not possible under the remit of the project, which does not have the mandate to support independent business start-ups (and in any case lacks the funds to do so). UNDP is also discussing with Government for scaling PV to cover the whole of la Digue. The proposal will be developed for submission under the Green Climate Fund.

Evaluation issue 10: Lack of capacity at PUC and SEC is a limitation which should be addressed.

Management response: This is addressed to MEECC. Management notes, however, that this is a problem that occurs across Government sectors due to the quite limited Government budgetary resources and the many demands on these funds. There is a need for MEECC to discuss with Finance for proper allocation and staffing of SEC. As for PUC, capacity may be at a higher level as this is a parastatal which is composed of hundreds of staff. A review of its functional capacity for the future changing context may be required. This can, however be addressed as part of a national capacity assessment of the various institutions and is outside the scope of this project.

RECOMMENDATIONS

Recommendation 1: The project should prioritise in the coming period: establishment of sustainable legislation, capacity building and training (for installers, PUC, and SEC), and implementation of the National Performance Assessment (NPA).

Management response: Agreed

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
1.1.a The National Energy Master Plan is pending funding from the EU and will be implemented by SEC once funding is cleared (this is not included within the current project).	2016	SEC		
1.1.b The Energy Policy has been drafted with MEECC co-financing and is currently under review, expected to be finalized in early 2016.	March 2016	SEC		
1.1.c Secondary legislation to support the Energy Act is under development: the project will host workshops to present draft technical standards to PV suppliers and to validate the Grid Code	June 2016	SEC, PCU, PUC		
1.2 The main institution identified to deliver	Until December 2016	SIT, PCU	A constraint noted by	

Summary of Key Actions	Tracking
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capacity building and training (for installers, PUC and SEC) is the Seychelles Institute of Technology (SIT) which has already been capacitated to design and deliver training through project-financed ToT. SIT will develop its curricula accordingly, and the project will provide additional equipment needed for implementation of the training courses. In terms of market development training, the project will review the recommendations of the international trainer Dr Sean White, to determine if this also needs to be included within the training modules to be developed by SIT.			SIT is that the trained trainers have many calls on their time and have not yet been able to allocate time to develop the training curricula. This will be addressed through additional support from the sister RE project.	
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1.3 The NPA was started by the previous Project Manager but further work needs to be done on analyzing PV production data, with the help of the PV installers. The new Project Manager will support SEC in this. Future monitoring will be undertaken through the retrofitting of automated weather stations to collect irradiation data, at least two of which will be supported by the project and others through NMS, SEC or other co-financing.	June 2016	Project Manager, SEC, installers, National Meteorological Service		
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Recommendation 2: The relationship between financial incentives and adoption is not clearly understood. Better study of the current financial mechanism and how to increase its appeal to consumers (in combination with legislation) is necessary.

Management response: Agreed. The new Project Manager is in the process of reviewing the uptake of the PV rebate scheme, Additionally, a study of the adoption of the SEEREP is under way through the sister RE project.

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
2.1 The latter will present recommendations for improving the uptake of financial schemes relative to the demand and market for EE and RE appliances, and to a lesser extent PV.	March 2016	Project Managers, consultants, SEC		
2.2 A variety of mechanisms will be applied through the project communications strategy to better inform consumers of the financial schemes and their benefits (the communications strategy is currently being revised and will be implemented	Communications Strategy review completed by December 2015. Implementation partly supported by the current	Project Managers, SEC		

Summary of Key Actions	Tracking
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jointly with the sister RE project).	project until December 2016, thereafter by RE project until December 2018.			
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Recommendation 3 It is necessary to establish a system that removes current delays and bottle-necks in installation, whether by increasing resources at PUC and SEC, or by changing installation procedures to require reduced PUC and SEC resources.

Management response: The process for approving rebates under the financial scheme is time consuming, mostly due to staffing bottlenecks at PUC which can mean long waits for approval and commissioning of the installed system. Another reason reported by clients and suppliers is the complicated terms and conditions for the rebate. Together, these have resulted in many clients not bothering to apply for the rebate (even though this can mean a saving of around \$3,000 for a typical residential system).

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
3.1. The potential for addressing these issues is being explored by the review of the rebate scheme under the PV project, as well as SEEREP and associated financial mechanisms undertaken through the sister RE project.	March 2016	Project Managers, consultants, SEC		
3.2 The project is not able to address the issues of staff shortages at SEC and PUC that result in long periods of time elapsing between stages for checking and installing grid connections, etc. This recommendation implies the provision of additional manpower for these institutions and is thus addressed to MEECC.	Discussions to start with MEECC in Q1 -2016.	MEECC/UNDP		

Recommendation 4: Increasing capacity at PUC and SEC, through capacity building, increased hiring, and/or outsourcing should be carefully considered as the electricity sector in general takes on ever-larger changes. Where hiring of additional staff is not possible or not favourable, specific functions may be outsourced (potentially at no cost to PUC and SEC). Examples include filing of paperwork, or particular site activities or inspections which may be done by qualified and certified personnel (potentially the installers) and only spot-checked by PUC and SEC, as compared with the present system where PUC and SEC must visit each PV installation multiple times (initial inspection, at construction, and commissioning).

Management response: See 3.2 above

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
4.1 See 3.2 above. The potential for certified independent staff (once a nationally accredited PV training course is set up at	Discussions to start in January 2016.	MEECC		

Summary of Key Actions	Tracking
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SIT) or installers to take on roles in checking/connection of the PV systems, and presumably passing on the cost of these additional responsibilities to the customers, is a matter for discussion at MEECC level as it is not clear who would then be responsible for faults, etc. This matter will be taken up with SEC and MEECC.				
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Recommendation 5: There is currently no mechanism to ensure quality or hold installers responsible. A sort of consumer protection mechanism, supported for example by standard contracts, should be put in place. Such a mechanism should track installers and hold them accountable. It should also track system performance (perhaps making cumulative performance of system by an installer available to the public). Such a mechanism should also protect installers from unreasonable customer claims

Management response: . It is not within the mandate of the project to impose a contract on independent suppliers but for the most part, suppliers offer 20-year warranties on PV panels and 5-year warranties on inverters, offering some degree of responsibility

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
5.1 A set of technical standards for PV are being developed by SEC - which will be presented to installers in 2016 - should ensure the quality of systems being imported into the country. A register of certified PV installers will also be established and periodically reviewed based on specific criteria.	March 2016	SEC, PUC		

Recommendation 6: Follow-up of co-finance commitments for the remaining tasks as these can be important resources in supporting and achieving remaining tasks.

Management response: Project Manager will follow up co-financing on a quarterly basis. Ministry of Finance has already (since the MTR) made a further payment of SR 3.8 million (\$292,000) into the rebate scheme and a private supplier has donated a 5kW (\$14,000) installation as a demo to SIT. Follow up on co-financing will be the responsibility of the PM and the PCU. This will be done on a quarterly basis

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
6.1. Quarterly reports on co-financing will be prepared and updated with each progress report.	Until December 2016	Project Manager		

Recommendation 7: There are presently no installers on Praslin. The support of one or two installers on Praslin could make PV much more accessible to the residents of Praslin as compared with having to request installers from the main island.

Summary of Key Actions

Tracking

Management response: The project does not have a mandate for supporting business start-ups. Currently, one supplier (Vetivertech) has a person on Praslin promoting PV but the other companies are too small to have a permanent staff member on the smaller islands – although all companies regularly visit potential clients there as part of their marketing strategies. The island of La Digue is to be promoted by GOS as a global eco-capital, with an aim for the island to be made carbon-neutral by 2020. The island of Praslin will follow. This agenda is to be supported through a GOS application to the Green Climate Fund, building on the current project (as its sister Resource Efficiency project), to be developed with UNDP support in early 2016.

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
7.1. The project will continue to engage with suppliers in publicising and promoting the adoption of PV on the two islands of Praslin and La Digue during the remaining project period.	Current – December 2016	SEC, Project Manager		
7.2 Supplier engagement in these islands will likely intensify as GOS moves towards the implementation of its development strategy for carbon neutrality.	April 2016	MEECC, SEC, PCU (with assistance from UNDP-GEF RTAs)		

Recommendation 8: Given resources, the project may have an opportunity for further cooperation with other entities (e.g. Clinton Climate Initiative) to promote longevity of the project, support study and research related to PV and Seychelles climate mitigation, or enable projects and other development vehicles to accept external investment.

Management response: Agreed. Cooperation with other initiatives will continue until the end of the project. In late 2015, GOS has requested PCU/UNDP to commence working on a proposal for the GCF related to establishing two inner islands as carbon-neutral, with a focus on scaling-up initiatives under this project and the sister RE project, taking forward new technologies, etc.

Key action (s)	Timeframe	Responsible unit/s	Tracking	
			Comments	Status
8.1 The project (and sister RE project) will continue cooperation with the Clinton Climate Initiative, the Indian Ocean Commission and other agencies concerned with renewable energy in Seychelles.	Until December 2016	Project Manager		
8. PCU/UNDP will start work on developing a new proposal for the GCF	April 2016	MEECC, SEC, PCU (with assistance from UNDP-GEF RTAs)		

Approved by Mr Simon Springett, UNDP Resident Representative

Signature: 

Date: 11 December 2015

ANNEX: TERMINAL EVALUATION RATINGS

Elements evaluated	Rating
A. Attainment of project objectives and results	HS
Outcome 1	HS
Outcome 2	HS
Outcome 3	HS
B. Project implementation and adaptive management	S
C. Sustainability	ML