



1. Project Data

Project ID P127585	Project Name TZ-Renewable Energy CDM PoA	
Country Tanzania	Practice Area(Lead) Energy & Extractives	
L/C/TF Number(s) TF-16921	Closing Date (Original) 31-Dec-2023	Total Project Cost (USD) 494,284.74
Bank Approval Date 25-Apr-2014	Closing Date (Actual) 31-Dec-2023	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	5,149,183.11	5,149,183.11
Revised Commitment	538,053.95	1,624,637.06
Actual	494,284.74	494,284.74

Prepared by Maria Shkaratan	Reviewed by Dileep M. Wagle	ICR Review Coordinator Avjeet Singh	Group IEGSD (Unit 4)
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2. Project Objectives and Components

a. Objectives

The Original Project Development Objective (PDO) was stated in the Program of Activities Design Document (PoA-DD) as follows: “The objective of the Program of Activity (PoA) is to increase access to modern energy services in Tanzania promoting both off-grid (isolated mini-grid) and national grid renewable energy projects in the country” (PoA-DD, April 23, 2014, page 1).

The PDO was not revised. For the purposes of this ICR review, the objective will be assessed as one PDO.



b. Were the project objectives/key associated outcome targets revised during implementation?

Yes

Did the Board approve the revised objectives/key associated outcome targets?

Yes

Date of Board Approval

08-Jan-2020

c. Will a split evaluation be undertaken?

Yes

d. Components

The Project had one component which was to implement the Carbon Development Mechanism (CDM) Program of Activities (PoA). The PoA would encourage generation of electricity from renewable sources, replacing fossil fuels and increasing and improving energy supply in the rural areas. This was a recipient-executed project, to be implemented by the Tanzania's Rural Energy Agency (REA). The implementation involved the following: i) coordinating the implementation of the PoA; (ii) screening and accepting CDM program activities (CPAs); (iii) supporting commercialization of certified emission reductions (CERs); and (iv) liaising with the PoA's sub-project developers to maintain the required database for verification. The sub-projects were to be implemented by different private developers; and REA would have a contractual agreement with each. The contract would give REA the legal rights to deal with the carbon credits generated by the sub-projects and monitor emission reductions from each CPA. The conditions for the sub-projects' inclusion in the PoA would follow the United Nations Framework Convention on Climate Change (UNFCCC) regulations. The UNFCCC would conduct a verification of the produced CERs.

There were three categories of CPAs, based on the type of power transmission (grid or mini-grid or both): (i) Category 1: Renewable energy (RE) technology (hydro, wind, biomass, or PV) connected to the national grid; carbon emission reduction was expected from avoided fossil fuel-based generation; (ii) Category 2: RE technology (hydro, wind, biomass, or PV) connected to isolated mini-grids; carbon emission reduction was expected from the replacement of diesel-based generation; (iii) Category 3: RE technology (hydro, wind, biomass or PV) connected to both the national grid and the isolated mini-grids.

The component was not revised.

e. Comments on Project Cost, Financing, Borrower Contribution, and Dates

Project Cost: The appraisal estimate was US\$4.06 million, and the actual disbursement was US\$0.49 million. The difference between the actual cost at closure and the estimated cost at approval was due to a reduction of Project scope at the restructuring.



Project Financing: The Project was fully financed by a Recipient-Executed Trust Fund grant from the Carbon Fund of the Carbon Partnership Facility.

Borrower contribution: there was no Borrower contribution.

Dates: The Project was approved on April 25, 2014. It became effective prior to the approval date, on March 31, 2014 when the Certified Emission Reductions Purchase Agreement for Programmatic Clean Development Mechanism (ERPA) was signed by the International Bank for Reconstruction and Development (IBRD) (as Trustee of the Second Tranche of the Carbon Fund of the Carbon Partnership Facility) and the REA, for the period 2015-2020.

Note: An ERPA is a legally binding contract allowing one party to deliver verified carbon credits to another and defining related obligations; as well as the price, volume, and delivery schedule of emissions reductions (carbon credits). It gives project developers ('sellers' of carbon credits) an upfront guarantee that a specific volume of carbon credits will be purchased. The buyers benefit from locking in a below-market price for carbon credits. The Bank's involvement was in utilizing its trust funds for carbon finance to support client governments in developing carbon finance mechanisms. (based on ICR, page 4)

No MTR review was held. The ERPA was amended once: on December 18, 2019, reflecting a significant change in the PDO target. The Project closure was planned for December 31, 2023, and that was the date of actual closure.

Significant change:

On December 18, 2019, the PDO outcome target was reduced, signaling reduced Project ambition: in the original PDO indicator "Reduce greenhouse gas emissions by 820,139 tCO₂e from 2015 to 2020 from the displacement of fossil fuel electricity generation through the generation of small hydropower in Tanzania", the stated target was changed to 116,268 tCO₂e. The ERPA was amended accordingly. The reduction of the target was due to the Project's slow progress, explained in the ICR by the following reasons: a low number of projects joining the program, the inability of project developers to raise the required capital, technical issues the projects were experiencing, and the changing regulatory environment (ICR, page 9). The government policy toward private sector altered after the change in government in 2017. Specifically, the government ownership of the Project diminished, and the new uniform tariffs negatively affected the small power producers (SPPs) and the mini-grid systems operators. While the Government established a framework for the development of SPPs in 2019, it was too late because the ERPA's time period for generating CERs under the Project was to end in 2020.

No other significant changes were made during Project life.

3. Relevance of Objectives

Rationale

Country and Sector Context. At the time of the Project appraisal, in 2012, only 15.3 percent of Tanzania's population had access to electricity, with rural access being below six percent. At the same time, the country had a relatively high technical potential for small scale renewable energy (RE) projects, relevant for



the rural power access needs. Tanzania's efforts to support the development of rural RE included the establishment of the Rural Energy Agency (REA) in 2005 and the promotion of the Rural Energy Fund (REF), which was to focus on RE. Despite the improved policy environment in support of small-scale RE, the pace of development of such projects remained slow, primarily because of the high equity obligations: private investors were required to contribute 30-40 percent of the total upfront investment cost, which was a constraint for local developers. Bridging 5-10 percent of the investment gap would accelerate the financial closure of the small-scale RE projects in the REA's pipeline. The Project was designed to support REA in using carbon financing (RE CDM) to bridge the RE projects' investment gap.

Relevance to Government Strategies. The Project was aligned with the government priorities at closure. Tanzania's National Five-Year Development Plan for 2021/22 - 2025/26 (FYDP III) recognized that private sector development was a driving force of economic transformation, specifically in relation to infrastructure investments. Within the energy sector, one of the strategic goals was stated as "improving the enabling environment for private sector investment in the energy sector" and one of the six key planned interventions was defined as "promoting and developing renewable energy technologies and projects (biogas, geothermal, LPG, solar, and wind energies), particularly for rural households" (FYDP III, page 80).

Relevance to the World Bank's Country Partnership Framework. The Project was aligned with the World Bank's Country Partnership Framework (CPF) for Tanzania FY 2018-2022, specifically, with two objectives under the Focus Area 1 *Enhance Productivity and Accelerate Equitable and Sustainable Growth*: (i) Objective 1.4 *Increase Access to Energy Services*; and (ii) Objective 1.6. *Enhance transport, energy, and digital connectivity for improved services to rural areas*. Under Objective 1.4., the CPF underscored its continued support to private investment in "on-grid and off-grid renewables" (CPF, page 22). Under Objective 1.6., area *Energy Sector Connectivity*, the stated priority was "supporting rural electricity connectivity for households and enterprises, through both traditional grid coverage and stand-alone solar power installations" (CPF, page 25).

Related World Bank operations. The Project was aligned with the WB's Tanzania Energy Development and Access Expansion Project (TEDAP, P101645, approved in FY2007, closed in FY2017): it was designed to help private rural RE project developers, supported through TEDAP's SPP component, to bridge the investment gap. (PID, page 3) The Project was also aligned with other WBG's operations, including the WB's Tanzania Rural Electrification Expansion Project (TREEP, P153781, approved in FY2016, closed in FY2023), which supported building both on- and off-grid rural connections. (CPF FY 2018-22, page 21)

Overall, the Project was aligned with major government priorities at closure and with WB strategic priorities during implementation and at closure. It was designed to support a WB investment operation and was linked to other operations. Therefore, the rating is High.

Rating

High

4. Achievement of Objectives (Efficacy)



OBJECTIVE 1

Objective

To increase access to modern energy services in Tanzania promoting both isolated mini-grids and national grid renewable energy projects in the country using hydro, solar, wind and biomass technologies for electricity generation.

Rationale

The theory of change (ToC) for the Project was not developed at appraisal. The ICR did not develop a ToC either but presented the logic of the Project-supported carbon financing scheme in a diagram. The diagram and the accompanying bullet points indicated that Tanzania's REA and the Carbon Partnership Facility (through IBRD) would sign ERPAs for the purchase of CERs with the private developers of the RE SPP sub-projects under the PoA and, with donor support, would create an REA Revolving Facility. REA would also sign Carbon Purchase and Equity Advance Agreements and Green Generation Performance Grants with the sub-project developers to provide an upfront subsidization of the required equity contribution by developers and, therefore, to support the issuance of commercial loans by banks to the developers. The Revolving Facility would be receiving funds from the Carbon Partnership Facility and other donors (an advance payment for the anticipated carbon revenues), and, at the time of the ERPA contracts signing, disburse the Green Generation Performance Grants to the Project, to be awarded to the private RE sub-project developers. (ICR, page 6).

The Original Project's Results Framework (RF) had one PDO indicator and one output indicator. The indicators monitored the implementation of the main activities in the CDM PoA component of the Project (the single component of the Project): supporting the commercialization of certified emission reductions (CERs) from the participating rural RE sub-projects, implemented by different private developers.

Outputs

1. **"Installed renewable energy generation capacity (Megawatt (MW))"**. The achievement at closure was 10.97 MW, against the original target of 12 MW. The target was 91.4 percent achieved.

Outcome:

1. **"Reduce greenhouse gas emissions by 820,139 tCO₂e from 2015 to 2020 from the displacement of fossil fuel electricity generation through the generation of small hydropower in Tanzania"**. The achievement at closure was 96,584 tCO₂e (as per the UNFCCC verification of November 2023). The target was 11.8 percent achieved.

2. **Non-RF indicator of Project performance, linked to the PDO indicator.** The Project originally intended to support ten CDM PoAs (RE SPP sub-projects). However, only five of them became operational and had generated CERs prior to Project closure. Out of the five non-operational PoAs, four were dropped due to sub-project development delays and one stopped working in 2017 due to its low efficiency (ICR, page 13).

The original project partially achieved its objectives, and the efficacy rating is Modest. The PDO indicator target was barely achieved, while the output target was substantially achieved, and the result of the number of sub-projects implemented (which was outside of the RF) was partially achieved.



Rating

Modest

OBJECTIVE 1 REVISION 1

Revised Objective

To increase access to modern energy services in Tanzania promoting both isolated mini-grids and national grid renewable energy projects in the country using hydro, solar, wind and biomass technologies for electricity generation.

Revised Rationale

Please see the discussion of the ToC under Original Project.

Output:

1. **“Installed renewable energy generation capacity (Megawatt (MW))”**. The achievement at closure was 10.97 MW, against the original target of 12 MW. The target was 91.4 percent achieved.

Outcome:

1. **“Reduce greenhouse gas emissions by 116,268 tCO₂e from 2015 to 2020 from the displacement of fossil fuel electricity generation through the generation of small hydropower in Tanzania”**. The achievement at closure was 96,584 tCO₂e (as per the UNFCCC verification of November 2023). The target was 83.1 percent achieved.

2. **Non-RF indicator of Project performance, linked to the PDO indicator**. The Project originally intended to support ten CDM PoAs (RE SPP sub-projects). However, only five of them became operational and had generated CERs prior to Project closure. Out of the five non-operational PoAs, four were dropped due to sub-project development delays and one stopped working in 2017 due to its low efficiency (ICR, page 13). This (non-RF) target was partially achieved.

The Revised Project substantially achieved its objectives, and the efficacy rating is Substantial. The PDO and the outputs targets were substantially achieved, and the result of the number of sub-projects implemented (which was outside of the RF) was partially achieved.

Revised Rating

Substantial

OVERALL EFFICACY

Rationale



For the Original Project, efficacy is Modest: the Project barely reached the PDO target of reduction in green house gas emissions, while the output target was substantially achieved.

Overall Efficacy Rating
Modest

Primary Reason
Low achievement

OVERALL EFFICACY REVISION 1

Overall Efficacy Revision 1 Rationale

For the Revised Project, efficacy is Substantial: the Project substantially achieved both the PDO target of reduction in green house gas emissions and output targets.

Overall Efficacy Revision 1 Rating

Substantial

5. Efficiency

Economic analysis

Neither economic nor financial analysis was conducted at appraisal or at closure.

Administrative efficiency

The Project was implemented within the original financing envelope, without an extension of Project closure and with no adjustment to the Project component. This was due to the high quality of the financing scheme's design, which was the core of the Project.

However, as the ICR reported, the Project was ambitious (reflected in the over-optimistic PDO indicator, which had to be significantly reduced in 2019), resulting in delays with the implementation of the CDM PoAs (sub-projects), which struggled to meet the quality requirement for emission reduction monitoring and certification; and therefore the Carbon Partnership Facility was unable to transfer carbon revenues to the Revolving Facility (RF). Consequently, the Revolving Facility was unable to provide grants to sub-project developers, negatively affecting the issuance of bank loans for the sub-projects. Sub-projects also faced technical issues supplying electricity to the grid. The ICR noted that the risk of achieving financial closure for sub-projects could have been mitigated by scheduling the disbursement of the advance payment only after the plants were commissioned. (ICR, page 16)

There was also an over-optimistic assumption that bridging 5-10 percent of the equity gap was sufficient for the sub-projects to acquire bank loans; this worked for some of them but not for all. Carbon finance could not overcome financial and institutional barriers, such as low capacity of financial institutions, high risks of private sector investments, and regulatory uncertainty. (ICR, page 21)



External factors negatively affected implementation efficiency, such as the change in government that took place in December 2015, which resulted in diminished support for private sector development and a reduced priority of the Project; and cost constraints for developers due to the newly introduced uniform tariffs (ICR, page 16).

Internal factors, which were under the Project's control but were not mitigated, also had a negative impact. The ICR noted that the TEDAP project, which underpinned the reviewed Project, closed in 2017, disrupting the internal monitoring process. Project supervision faced several challenges, including a reduced capacity to follow up with counterparts, causing further delays (ICR, page 20).

On balance, considering that the Project was implemented with no additional financing and on time, but also taking into account the administrative shortcomings (including delays with the sub-project implementation) and the lack of economic analysis at appraisal and at closure, the Project's efficiency is rated Modest.

Efficiency Rating

Modest

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

	Rate Available?	Point value (%)	*Coverage/Scope (%)
Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate		0	0 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

	Original project	Revised project
Relevance of Objectives	High	
Efficacy	Modest	Substantial
Efficiency	Modest	
Outcome	Moderately Unsatisfactory (MU)	Moderately Satisfactory (MS)
Outcome value	3	4
Amount disbursed (US\$ million)	0	0.49
Disbursement %	0%	100%
Total Value	4 -Moderately Satisfactory	



Based on the shares of the disbursed funds before and after restructuring (US\$0.0 million or zero percent before the restructuring in December 2020 and US\$0.49million or 100 percent after restructuring), the overall project outcome rating is Moderately Satisfactory* ($0.0 \times 3 + 1.0 \times 4 = 4.0$).

a. **Outcome Rating**
Moderately Satisfactory

7. Risk to Development Outcome

Government ownership. The change in Government in 2017 led to a shift in policy towards the private sector and diminished support for the Project (ICR, page 16). While the Ministry of Energy established a framework for the development of small power projects in 2019, thus supporting rural electrification (ICR, page 9), this was insufficient to ensure the sustainability of the Project outcomes. This is a continued risk; however, it might be diminishing due to the formation of a new government in March 2021 and the somewhat reduced negativity toward the private sector

Regulatory. During Project implementation, “due to the change in enabling environment and the uniform tariff scheme, [sub-project] developers faced a lengthy process” getting access to the network, “adding to the difficulties obtaining financing for construction” (ICR, page 16). This is a continued risk.

Financial. The ICR noted that although the financing scheme was well designed, it did not work as expected in practice: developers struggled to secure bank loans from the banks because the bridge subsidy from the Project was insufficient, and the time to get the CERs was too long (ICR, page 16). This is a continued consideration because of the high risk of the private sector investments in the country overall, and more so in rural electricity.

Technical capacity. The ICR reported that the REA and the project developers faced challenges in operating the equipment. While the World Bank provided capacity building to REA, and Project staff were trained in CPA operation and management, as well as operators, low technical capacity is still a consideration, specifically as it relates to acquiring and supporting new technology/equipment.

8. Assessment of Bank Performance

a. **Quality-at-Entry**

The ICR reported that Project design was knowledge-based, including in relation to energy sector development specifics in Tanzania. An experienced and committed task team provided technical support for Project preparation. Major risk factors and lessons learned from earlier World Bank CDM PoA projects in other countries were incorporated into Project design. The Project was designed as per the requirements of UNFCCC for a CDM Program of Activities, building on the TEDAP IDA project. The PDO was clear, the Project design was simple, and the indicators were adequately aligned with the PDO. Three main barriers were considered: (i) challenging (for private investors) equity requirements for financial closure; (ii) lack of private sector experience with the new regulations for distributed power and



tariffs setting methods, (iii) insufficient technical capacity as related to the RE technology/equipment. The project also had a suitable plan for monitoring and tracking, detailing the parameters, data collection, methodologies for each of the CPA categories, and the reporting methodology. An operations and management plan was in place; and there was clarity about the division of responsibilities for implementation. (ICR, page 15-16, page 20)

However, the ICR also reported that the design was overambitious, mainly because the risks were not properly estimated or fully accounted for in the Project design. Specifically, the limited capacity of the SPP operators and the REA was not taken into consideration, and the sub-project developers had difficulties accomplishing emission reduction monitoring and certification according to the quality requirements, which resulted in delays in obtaining the CERs, negatively affected the functioning of the Revolving Facility, and led to a significant reduction of Project scope, as five out of ten potential sub-projects were unable to participate in the Project. Also, the Project was lacking in stakeholder communication mechanisms that would be useful in the context of the change in government in 2017 (which led to a shift in policies, negatively affecting the Project). In addition, the Project was designed to bridge a 5-10 percent equity gap for sub-project developers, underestimating the subsidization needs, which could have been avoided if the private sector investment risks were properly estimated at design. (ICR, page 16, pages 21-22)

Quality-at-Entry Rating Moderately Satisfactory

b. Quality of supervision

The ICR reported that the World Bank team was proactive in its support to the counterparts to identify and address issues as they emerged, provided REA with capacity building as well as guidelines and templates to develop the sub-projects, and hired a consultant to provide direct support to REA for sub-projects supervision. (ICR, page 20)

However, there were significant issues during implementation. Specifically, there were delays with sub-project development, and ultimately, the scope of the Project had to be significantly reduced. M&E implementation was weak (as reported in section 9 of this Review), and this had negatively affected the Project, especially during the COVID-19 pandemic when the World Bank environmental and social team could not conduct any supervision missions (from March 2020 to the end of 2022). When TEDAP, which underpinned the reviewed Project, closed in 2017, the internal monitoring process through operational ISRs was disrupted, and the standalone supervision of the Project faced challenges, including a reduced capacity to follow-up with counterparts, causing further delays. The challenges were exacerbated as the newly introduced task teams needed time to get up to speed in understanding the ongoing challenges and find solutions. (ICR, pages 16-17, pages 21-22)

Overall, the Bank Performance is rated as Moderately Satisfactory per OPCS harmonized guidelines.

Quality of Supervision Rating



Moderately Unsatisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The results framework (RF) was linked to the PDO and the implicit ToC (as described in section 4, under Original Project). The objective of the Project was clearly specified, and the RF indicators reflected both expected outputs and outcomes. The selection of the RF indicators was sound, and while the RF included only two indicators, they were sufficient to monitor Project implementation. Both indicators had baselines and targets and were time-bound. The ICR reported that there was an adequate monitoring and reporting plan, with detailed parameters, data collection arrangement, methodologies for each CPA category, and a reporting methodology (ICR, page 16).

Considering the nature of the Project (subsidization of the RE sub-projects using advance payments for the anticipated carbon revenues), the RF indicators, including the PDO indicator, which measured GHG emission reduction from the sub-projects, were supposed to be strictly monitored by the plant operators at each sub-projects site. The data were to be recorded daily, while any data gaps would be also recorded and reported to the plant engineer and then to the CPA manager, who was to manage the CPA database in line with the CDM requirements, under REA's supervision. Electricity generated would be metered, with a maximum error of 0.5%. Quarterly monitoring reports would be produced and submitted to the REA and to other relevant parties. (ICR, page 18)

b. M&E Implementation

The ICR reported that the electricity generation, as well as the parameters used to estimate emission reduction, were monitored. REA was acting as the coordinating and managing entity (CME) for implementing the PoA and, as such, was supervising the implementation of the M&E monitoring plan and the related training of the REA and CPAs staff. Data quality assurance and quality control (QA & QC) measures for data reading, recording, auditing, and archiving were established (ICR, page 18).

However, there were delays in the monitoring and reporting of the sub-projects, which was the main factor in the delays with obtaining the CERs and ultimately in the need to reduce the Project scope in December 2019. Also, the monitoring did not fully follow Project design; specifically, there was no regular monitoring of the implementation progress, and the environmental monitoring reports were delayed as a rule. This was especially concerning during the COVID-19 pandemic, as no supervision missions were possible from 2020 to 2022. (ICR, pages 18-19)

c. M&E Utilization

The ICR reported that the M&E framework was helpful in keeping track of the Project's progress and constraints. The framework design was simple and therefore easy to implement. However, due to the



inadequate quality of the M&E implementation (delays in the monitoring and reporting of the sub-projects, the lack of regular monitoring of the implementation progress, and delays with environmental reporting) and the lack of employees from REA fully dedicated to the Project, M&E utilization during Project implementation, which could have supported timely Project adjustment, was weak (ICR, page 19).

On balance, given the robust M&E design, but weak implementation and utilization, the M&E quality is rated as Modest.

M&E Quality Rating

Modest

10. Other Issues

a. Safeguards

Environmental and Social (E&S) Safeguards. At appraisal, the Project was classified as Environmental Category B, due to the investments in power generation. Five environmental safeguards policies were triggered, namely: Environmental Assessment (OP 4.01), Physical and Cultural Resources (OP 4.11), Involuntary Resettlement (OP/BP 4.12), Safety of Dams (OP/BP 4.37), and Projects on International Waterways (OP/BP 7.50). An Environmental and Social Action Plan (ESSAP), as well as an Environmental and Social Management Framework and a Resettlement Framework were prepared for the off-grid electrification component. In relation to the OP/BP 4.37, the ESMF for the SPP component explained the application of dam safety to small dam projects. In relation to the OP/BP 7.50, a riparian notification was carried out, and no comments were received opposing the Project.

A final joint Environmental and Social Safeguard field visit was conducted by the World Bank and the REA to three selected CPAs in November 2022 (ICR, page 19-20). At IEG's request, the team provided information on E&S compliance, based on this field visit. The Mini hydropower plants conducted an Environmental and Social Impact Assessment (ESIA) and were in possession of ESIA Certificates in compliance with the National Environmental Management Act, 2004, including the requirements regarding impact on sensitive areas and cultural sites. Dam safety measures were considered during the designing, construction, and operation of mini-hydro plants; all the recommended mitigation measures were implemented, and no major pending environmental issues were identified. Environmental & Social Management Plans (ESMPs) were implemented as appropriate, and progress reports were regularly submitted. SPPs were considered to have a low potential of causing serious adverse effects. The SPPs had no GRM structures and responded to villagers' concerns through local government offices. No grievances that could impede the construction and operation of SPPs have been reported. The grievances were mainly related to delays in establishing electricity connections. The conclusion was that SPPs need to establish a formal GRM mechanism and directly communicate with the communities.

The Overall Safeguards Rating was mostly Moderately Satisfactory during Project implementation but improved to Satisfactory in December 2022 and stayed at that level up to the Project closing.



b. Fiduciary Compliance

Financial management (FM). The ICR reported that Project funds were used for their intended purposes and that the FM supervision was carried out regularly, which included reviews of project accounts, documents, and internal control procedures. The management of project funds was satisfactory and in compliance with the World Bank’s procedures. (ICR, page 20) Both the FM and the procurement ratings were Satisfactory from May 2021 until the Project closing.

Procurement. Since this was a carbon finance operation, governed by the ERPA (please see a description of ERPA in section 2.e. of this review and a description of the carbon financing scheme in section 4, first paragraph), there was no procurement involved: the funds were disbursed upon acceptance of the third-party verification and subsequent issuance and transfer of CERs by UNFCCC.

c. Unintended impacts (Positive or Negative)

d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	
Quality of M&E	Substantial	Modest	Given the robust M&E design, but weak implementation and utilization, the M&E quality is rated as Modest.
Quality of ICR	---	Substantial	

12. Lessons

The following lessons were derived from the ICR (based on ICR, pages 21-22):

1. Designing an easy-to-implement monitoring plan prior to project implementation is critical for the timely delivery of the expected project outcomes. The design of the reviewed Project did not account for the limited capacity of the SPP operators and the REA. The sub-project developers struggled to satisfy the quality requirements for emission reduction monitoring and certification, which resulted in delays in obtaining the CERs. This led to bottlenecks in the functioning of the Revolving Facility and, ultimately, to the need to reduce the Project’s scope, as one-half of the potential sub-projects were not able to participate in the revolving scheme. The



Project could have taken these issues into account at the design stage by including capacity-building activities in the implementation plan, thus creating a basis for timely and proper monitoring and reporting by the sub-project developers.

2. Designing an efficient stakeholder communication mechanism and using it to provide information about the project's benefits early on is critical for timely project implementation and satisfactory performance. In the reviewed Project, having such a mechanism would have supported government ownership at the time when the change of government (and of policies towards the private sector) occurred by clearly communicating Project benefits.

3. When developing a revolving fund in a country with a high investment risk, it is important to ensure that risk estimates are sufficiently robust during project design. The reviewed Project intended to provide subsidies that would cover 5-10 percent of the sub-projects cost, with the assumption that it would be enough to bridge the equity gap; however, it was an underestimate, as the sub-project developers were often unable to cover the rest of the banks' upfront capital requirement. More generally, the level of the financial institutions' risk aversion in Tanzania was reflective of such critical factors as insufficient development of financial institutions, high risk of new business development, and regulatory uncertainty. Developing a carbon finance project in such high-risk environment was challenging, and the reviewed Project was not able to fully mitigate these risks.

4. SPPs are a preferred option for developing off-grid electricity in rural areas, thus providing significant economic and social benefits to the communities; and small power producers' (SPPs') social and environmental responsibility can be essential for community trust and support. The reviewed Project's experience demonstrated that social and environmental (including water resource conservation) sustainability of the SPP sub-projects was an important factor in community support to the sub-projects and to the off-grid electricity overall.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provides a succinct and useful technical description of the project's design, sufficient to understand its logic. It also candidly presents Project outcomes, the factors of Project performance, and various aspects of Project implementation. The ICR contains enough evidence to evaluate project efficacy, Bank performance, and M&E design and implementation. The lessons learned are useful for future operations. At the same time, the ICR has some gaps: the Safeguards section could have provided information on policies triggered and related safeguard documents prepared.

Overall, the ICR quality is rated as Substantial.



a. Quality of ICR Rating
Substantial