UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

SUSTAINABLE DEVELOPMENT GOALS

Project Implementation Report

(1 July 2023 – 30 June 2024)

Project Title:	Mini-grids based on small hydropower sources to augment rural electrification in Tanzania
GEF ID:	4004
UNIDO ID:	100261
GEF Replenishment Cycle:	*GEF-4*
Country(ies):	Tanzania
Region:	*AFR - Africa*
GEF Focal Area:	*Climate Change Mitigation (CCM)*
Integrated Approach Pilot (IAP) Programs[1]:	*N/A*
Stand-alone / Child Project:	*Stand-alone*
Implementing Department/Division:	*ENE / CTI*
Co-Implementing Agency:	
Executing Agency(ies):	Vice President's Office-Division of Environment Ministry of Energy and Minerals Rural Energy Agency Tanzania Electric Supply Company Ltd.
Project Type:	*Full-Sized Project (FSP)*
Project Duration:	*72 months*
Extension(s):	*2*
GEF Project Financing:	USD 3,350,000
Agency Fee:	USD 335,000
Co-financing Amount:	USD 13,463,500
Date of CEO Endorsement/Approval:	11/7/2011
UNIDO Approval Date:	3/12/2012
Actual Implementation Start:	6/11/2012
Cumulative disbursement as of 30 June	*USD 3,341,970*

[1] Only for **GEF-6 projects**, if applicable

2024:	
Mid-term Review (MTR) Date:	6/30/2015
Original Project Completion Date:	6/30/2015
Project Completion Date as reported in FY23:	12/31/2020
Current SAP Completion Date:	10/31/2019
Expected Project Completion Date:	10/31/2019
Expected Terminal Evaluation (TE) Date:	10/31/2018
Expected Financial Closure Date:	12/31/2023
UNIDO Project Manager[2]:	*Jossy THOMAS*

I. Brief description of project and status overview

Project Objective
The main objective of this project is to promote market-based approaches for developing mini/micro/small hydropower based mini-grids in order to augment the country's effort to increase access to modern and clean energy as well as its rural electrification rate. The project will reduce GHG emissions resulting from the use of traditional energy sources in rural Tanzania.

Baseline
Tanzania possesses a substantial verified potential for generating electricity using small-scale hydropower particularly in highlands water catchment areas. The potential for small-scale hydropower accounts for about 300-500 MW, of which, only around 24 MW has been harnessed so far. Wide development of micro/mini/small hydropower has not been realized, despite its potential and availability. This is due to various reasons including lack of proper institutional structure to support the development of small hydropower schemes, lack of technical expertise, high cost and difficulties in sourcing and importing equipment and lack of local manufacturing capabilities/facilities. This project, therefore, aims at addressing most of these barriers by establishing a platform for the development of small-scale hydropower in the country. The activities will include, i) conducting detailed feasibility studies for the demonstration sites, ii) capacity building for the stakeholders in developing micro/mini/small hydropower based mini-grids and iii) developing viable business model for micro / mini hydropower based mini-grid and iv) demonstration of micro / mini hydropower plants for a cumulative capacity of at least 3.2 MW. The project is expected to strengthen the policy, regulatory and institutional framework supporting the micro/mini hydropower based mini-grid systems in Tanzania.

Please refer to the explanatory note at the end of the document and select corresponding ratings for the current reporting period, i.e. FY24. Please also provide a short justification for the selected ratings for FY24.

In view of the GEF Secretariat's intent to start following the ability of projects to adopt the concept of adaptive management[3], Agencies are expected to closely monitor changes that occur from year to year and

[2] Person responsible for report content

[3] Adaptive management in the context of an intentional approach to decision-making and adjustments in response to new available information, evidence gathered from monitoring, evaluation or research, and experience acquired from implementation, to ensure that the goals of the activity are being reached efficiently

demonstrate that they are not simply implementing plans but modifying them in response to developments and circumstances or understanding. In order to facilitate with this assessment, please introduce the ratings as reported in the previous reporting cycle, i.e. FY23, in the last column.

Overall Ratings[4]	**FY24**	**FY23**
Global Environmental Objectives **(GEOs)** / Development Objectives **(DOs)** Rating	*Highly Satisfactory (HS)*	*Highly Satisfactory (HS)*
The project has been operationally closed since 2019 with a cumulative capacity of 4,208 kW of installed small hydro power plants (SHP) and, thus, there is no progress to report in FY24.		
Implementation Progress **(IP)** Rating	*Highly Satisfactory (HS)*	*Highly Satisfactory (HS)*
As of 2023, the project has completed the installation of two additional sites bringing the cumulative installed capacity to 4,208 kW o SHP. The project is operationally closed and, thus, there is no progress to report in FY24.		
Overall **Risk** Rating	*Moderate Risk (M)*	*Moderate Risk (M)*
The project is operationally closed and, thus, there is no progress to report in FY24.		

II. Targeted results and progress to-date

Please describe the progress made in achieving the outputs against key performance indicator's targets in the project's **M&E Plan/Log-Frame at the time of CEO Endorsement/Approval**. Please expand the table as needed.

Project Strategy	KPIs/Indicators	Baseline	Target level	Progress in FY24
Component 1 – Techno-economic feasibility studies for the identified demonstration sites				
Outcome 1: **Site specific details on potential micro / mini hydropower sites available for further development**				
Output 1.1: Detailed feasibility studies and plant designs prepared for the demonstrations in the identified potential sites	A number of feasibility reports of the demonstration sites (Cumulative 3.2 MW).	No feasibility studies exist for the micro / mini hydropower plants development.	To undertake feasibility studies of demonstration sites.	The project is operationally closed and, thus, there is no progress to report in FY24.
Component 2 – Capacity building of stakeholders in developing micro / mini hydropower based mini-grids				
Outcome 2: Investment cost of micro/ mini hydropower based mini-grids reduced because of the local availability of technical experts and high quality indigenous hydropower equipment.				
Output 2.1: National micro / mini hydropower technical centre established at	Approval received and Centre operating	Insufficient technical capacity exists in various institutions on micro	To establish the centre, strengthen it with trained personnel and	The project is operationally closed and, thus, there is no progress to report in FY24.

[4] Please refer to the explanatory note at the end of the document and assure that the indicated ratings correspond to the narrative of the report

CoET, UDSM to provide technical support for various technical institutions in Tanzania		/ mini hydropower systems.	equipped with necessary tools and systems for micro / mini hydropower plant development	
Output 2.2: Technology transferred for local fabrication of micro / mini hydropower equipment.	1. A number of local fabricators trained and licensed in the manufacturing of micro / mini hydropower equipment. 2. Number of locally fabricated turbines used in at least 2 installations of the project	All hydropower equipment imported.	1. To transfer and adapt micro / mini hydro turbine technology to Tanzania. 3. To train at least 5 interested suppliers.	The project is operationally closed and, thus, there is no progress to report in FY24.
Output 2.3; Existing guidelines and standards adapted to suit installation and management of micro / mini hydropower plant mini-grids in Tanzania. disseminate guidelines and standards on installation and management of micro / mini hydropower mini-grid projects	Existing guidelines and standards adapted to suit the micro / mini hydropower development, installation and commissioning in Tanzania	No guidelines and standards exist for micro / mini hydropower installation and management. Current focus is on large hydropower plants only.	To prepare and disseminate guidelines and standards on installation and management of micro / mini hydropower mini-grid projects	The project is operationally closed and, thus, there is no progress to report in FY24.
Output 2.4: Feed-in tariff for micro / mini hydropower in place.	Feed-in-tariff system favouring RE including micro / mini hydropower market available.	No market based systems favouring RE including micro / mini hydropower exists in the country.	To facilitate introduction of feed-in tariff for micro / mini hydropower systems	The project is operationally closed and, thus, there is no progress to report in FY24.
Component 3 –Developing viable business models for micro / mini hydropower based mini-grid				
Outcome 3: **Interest in developing micro / mini hydropower projects increased among the local entrepreneurs**				
Output 3.1: Existing financing options of REA streamlined to benefit local entrepreneurs interested in micro / mini hydropower	Percentage increase in engagement of local entrepreneurs to develop micro / mini hydropower project	Low interest from private entrepreneurs to engage in micro / mini hydropower project development.	At least 10 private sector initiatives facilitated for micro /mini hydropower based mini grids	The project is operationally closed and, thus, there is no progress to report in FY24.
Project Component 4: Demonstration of micro / mini hydropower plant based mini-grids				
Outcome 4: Technical and economic viability of micro / mini hydropower technologies demonstrated				
Output 4.1: 3.2 MW implemented in different locations within the country.	Micro / mini hydropower power plants established and running in	Currently only 5 MW of the potential 250 MW micro / mini hydropower exist.	To develop micro / mini hydropower plants within the capacity ranging from 98 kW –	The SHP centre established at UDSM singlehandedly installed and commissioned one of the remaining sites. Thus bringing the total installed cumulative capacity to 4,208 kW

	different sites of Tanzania.		1MW in selected sites.	

III. Project Risk Management

1. Please indicate the overall project-level risks and the related risk management measures: (i) as identified in the CEO Endorsement document, and (ii) progress to-date. Please expand the table as needed.

	(i) Risks	(i) Risk level FY24	(i) Risk level FY23	(i) Mitigation measures	(ii) Progress to-date	New defined risk[5]
1	Micro/mini hydro-power based mini-grids present some technological risks as they are relatively new to the rural areas.	Low risk (L)	Low risk (L)	This risk is considered low, as there will be detailed techno-economic feasibility studies carried out on the identified sites and the actual project the development will be based only for proven sites. Moreover, hydropower technology requires only minimum maintenance and it poses fewer problems from the point of view of the technical aspect. Through the various training offered under the project, micro / mini hydropower plants can be operated successfully in rural areas of Tanzania with very low technical risk.	The project is operationally closed and, thus, there is no progress to report in FY24.	☐
2	No off takers for the generated electricity	Low risk (L)	Low risk (L)	The electricity generated from micro / mini hydro power plants will be supplied to the local communities and other identified customers in each site. The present demand of electricity outstrips the supply and hence there will not be any risk for electricity offtake.	The project is operationally closed and, thus, there is no progress to report in FY24.	☐
3	No investors willing to invest in micro / mini hydropower based mini-grids.	Low risk (L)	Low risk (L)	Letters for financial commitments from all the relevant stakeholders have been already obtained. Hence, the project does not have any financing risk. Under PC 2, incremental efforts will be taken to establish a FiT scheme for	The project is operationally closed and, thus, there is no progress to report in FY24.	☐

[5] New risk added in reporting period. Check only if applicable.

				micro / mini hydropower projects. When such a scheme is implemented, grid-connected micro/mini hydropower projects will become very attractive for project investors. Under PC 3, by streamlining the existing financing options from REA for MHP projects, the capacity of the local entrepreneurs to undertake micro / mini hydropower projects will be increased		
4	The current policies are too generic, addressing the energy issues in a broader aspect. Failure to fix FiT for RE electricity	Modest risk (M)	Modest risk (M)	This risk is low, as the government of Tanzania through the MEM is now revising the policy to see the possibility of developing a FiT for promoting RE technologies. The MEM in collaboration with the TANESCO is, with the ultimate aim of having a FiT in the country that will create an attractive environment for most of the private investors. In addition, the proposed project is mini-grid based and will not be affected by FiT. However, the project has been designed with a broader vision of promoting micro/mini hydropower on the whole within the country, which will be accelerated only if FiT is available exclusively for the grid-connected micro/mini hydropower projects.	The project is operationally closed and, thus, there is no progress to report in FY24.	☐
5	New governments change the existing policies on RE and withdraw support to the GEF project.	Low risk (L)	Low risk (L)	As the electricity requirement is a basic demand in Tanzania and is essential for its economic growth, even when the government changes, there is less possibility for not continuing this project.	The project is operationally closed and, thus, there is no progress to report in FY24.	☐
6	Failure to achieve project outcomes and objective after successful delivery of outputs.	Low risk (L)	Low risk (L)	Sustainability of the project will be ensured right from the beginning until the completion of the project. Detailed feasibility studies and productive use of electricity by the beneficiary communities will ensure the sustainability of the project.	The project is operationally closed and, thus, there is no progress to report in FY24.	
6	Climate Change Risk: Drying of water resources	Low risk (L)	Low risk (L)	Enough water storage facility will be provided to take care of the water requirement	The project is operationally closed and,	

				during the dry season. Hence, this risk can be overcome	thus, there is no progress to report in FY24.	
8	Additional Risk: Risk of not completing the activities on time, especially due to delay of some of the demonstration sites mobilizing co-financing fund to develop the site	Modest risk (M)	Modest risk (M)	There has been some unforeseen situations where some of the project activities may be delayed and fall outside the project duration, efforts are been made to finish the project activities within a short extension period.	The project is operationally closed and, thus, there is no progress to report in FY24.	

2. If the project received a sub-optimal risk rating (H, S) in the previous reporting period, please state the actions taken since then to mitigate the relevant risks and improve the related risk rating. Please also elaborate on reasons that may have impeded any of the sub-optimal risk ratings from improving in the current reporting cycle; please indicate actions planned for the next reporting cycle to remediate this.

NA

3. Please indicate any implication of the **COVID-19** pandemic on the progress of the project.

The project was operationally closed in 2019. Thus, COVID-19 had no impact on the project.

4. Please clarify if the project is facing delays and is expected to request an **extension**.

N.A.

5. Please provide the **main findings and recommendations of completed MTR**, and elaborate on any actions taken towards the recommendations included in the report.

N.A. The project has conducted its terminal evaluation and is operationally closed.

IV. Environmental and Social Safeguards (ESS)

1. As part of the requirements for **projects from GEF-6 onwards**, and based on the screening as per the UNIDO Environmental and Social Safeguards Policies and Procedures (ESSPP), which category is the project?

☐ Category A project

☐ Category B project

☐ Category C project

(By selecting Category C, I confirm that the E&S risks of the project have not escalated to Category A or B).

Please expand the table as needed.

	E&S risk	Mitigation measures undertaken during the reporting period	Monitoring methods and procedures used in the reporting period
(i) Risks identified in ESMP at time of CEO Endorsement	NA	NA	NA
(ii) New risks identified during project implementation (if not applicable, please insert 'NA' in each box)	NA	NA	NA

V. Stakeholder Engagement

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes** regarding engagement of stakeholders in the project (based on the Stakeholder Engagement Plan or equivalent document submitted at CEO Endorsement/Approval).

The project has been operationally closed since 2019 and, thus, there has not been any stakeholder engagement since then.

2. Please provide any feedback submitted by national counterparts, GEF OFP, co-financiers, and other partners/stakeholders of the project (e.g. private sector, CSOs, NGOs, etc.).

The project has been operationally closed since 2019 and, thus, there has not been any stakeholder engagement since then.

3. Please provide any **relevant stakeholder consultation** documents.

The project has been operationally closed since 2019 and, thus, there has not been any stakeholder engagement since then.

VI. Gender Mainstreaming

1. Using the previous reporting period as a basis, please report on the **progress** achieved **on implementing gender-responsive measures** and **using gender-sensitive indicators,** as documented at CEO Endorsement/Approval (in the project results framework, gender action plan or equivalent),.

The project is operationally closed.

VII. Knowledge Management

1. Using the previous reporting period as a basis, please elaborate on any **knowledge management activities / products**, as documented at CEO Endorsement / Approval.

The project is operationally closed.

2. Please list any **relevant knowledge management mechanisms / tools** that the project has generated.

The project is operationally closed.

VIII. Implementation progress

1. Using the previous reporting period as a basis, please provide information on **progress, challenges and outcomes achieved/observed** with regards to project implementation.

The SHP centre established at UDSM recently singlehandedly completed the installation and commissioned one of the remaining sites. Thus bringing the total installed cumulative capacity to 4,208 kW

2. Please briefly elaborate on any **minor amendments**[6] to the approved project that may have been introduced during the implementation period or indicate as not applicable (NA).

Please tick each category for which a change has occurred and provide a description of the change in the related textbox. You may attach supporting documentation, as appropriate.

☐	Results Framework	
☐	Components and Cost	
☐	Institutional and Implementation Arrangements	
☐	Financial Management	
☒	Implementation Schedule	*Two extensions.*
☐	Executing Entity	
☐	Executing Entity Category	
☐	Minor Project Objective Change	
☐	Safeguards	
☐	Risk Analysis	
☐	Increase of GEF Project Financing Up to 5%	
☐	Co-Financing	
☐	Location of Project Activities	
☐	Others	

[6] As described in Annex 9 of the *GEF Project and Program Cycle Policy Guidelines*, **minor amendments** are changes to the project design or implementation that do not have significant impact on the project objectives or scope, or an increase of the GEF project financing up to 5%.

3. Please provide progress related to the **financial implementation** of the project**.**

Please refer to the attached expense delivery report.

IX. Work Plan and Budget

1. Please provide **an updated project work plan and budget** for the remaining duration of the project, as per last approved project extension. Please expand/modify the table as needed.

The project is operationally closed.

X. Synergies

1. **Synergies** achieved:

Not Applicable – the project is operational closed and the local project team released.

3. Stories to be shared (Optional)

Not Applicable.

XI. GEO LOCATION INFORMATION

The Location Name, Latitude and Longitude are required fields insofar as an Agency chooses to enter a project location under the set format. The Geo Name ID is required in instances where the location is not exact, such as in the case of a city, as opposed to the exact site of a physical infrastructure. The Location & Activity Description fields are optional. Project longitude and latitude must follow the Decimal Degrees WGS84 format and Agencies are encouraged to use at least four decimal points for greater accuracy. Users may add as many locations as appropriate. Web mapping applications such as OpenStreetMap or GeoNames use this format. Consider using a conversion tool as needed, such as: https://coordinates-converter.com

Please see the Geocoding User Guide by clicking here

Location Name	Latitude	Longitude	Geo Name ID	Location and Activity Description
Dar es Salaam, Tanzania	*-6.814920*	*39.288410*	160263	

Please provide any further geo-referenced information and map where the project interventions is taking place as appropriate.

EXPLANATORY NOTE

1. **Timing & duration:** Each report covers a twelve-month period, i.e. 1 July 2023 – 30 June 2024.

2. **Responsibility:** The responsibility for preparing the report lies with the project manager in consultation with the Division Chief and Director.

3. **Evaluation:** For the report to be used effectively as a tool for annual self-evaluation, project counterparts need to be fully involved. The (main) counterpart can provide any additional information considered essential, including a simple rating of project progress.

4. **Results-based management**: The annual project/programme progress reports are required by the RBM programme component focal points to obtain information on outcomes observed.

Global Environmental Objectives (GEOs) / Development Objectives (DOs) ratings	
Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global environmental objectives, and yield substantial global environmental benefits, without major shortcomings. The project can be presented as "good practice".
Satisfactory (S)	Project is expected to achieve most of its major global environmental objectives, and yields satisfactory global environmental benefits, with only minor shortcomings.
Moderately Satisfactory (MS)	Project is expected to achieve most of its major relevant objectives but with either significant shortcomings or modes overall relevance. Project is expected not to achieve some of its major global environmental objectives or yield some of the expected global environmental benefits.
Moderately Unsatisfactory (MU)	Project is expected to achieve some of its major global environmental objectives with major shortcomings or is expected to achieve only some of its major global environmental objectives.
Unsatisfactory (U)	Project is expected not to achieve most of its major global environmental objectives or to yield any satisfactory global environmental benefits.
Highly Unsatisfactory (HU)	The project has failed to achieve, and is not expected to achieve, any of its major global environmental objectives with no worthwhile benefits.

Implementation Progress (IP)	
Highly Satisfactory (HS)	Implementation of all components is in substantial compliance with the original/formally revised implementation plan for the project. The project can be presented as "good practice".
Satisfactory (S)	Implementation of most components is in substantial compliance with the original/formally revised plan except for only few that are subject to remedial action.
Moderately Satisfactory (MS)	Implementation of some components is in substantial compliance with the original/formally revised plan with some components requiring remedial action.
Moderately Unsatisfactory (MU)	Implementation of some components is not in substantial compliance with the original/formally revised plan with most components requiring remedial action.
Unsatisfactory (U)	Implementation of most components in not in substantial compliance with the original/formally revised plan.
Highly Unsatisfactory (HU)	Implementation of none of the components is in substantial compliance with the original/formally revised plan.

Risk ratings	
Risk ratings will access the overall risk of factors internal or external to the project which may affect implementation or prospects for achieving project objectives. Risk of projects should be rated on the following scale:	
High Risk (H)	There is a probability of greater than **75%** that assumptions may fail to hold or materialize, and/or the project may face high risks.
Substantial Risk (S)	There is a probability of between **51%** and **75%** that assumptions may fail to hold or materialize, and/or the project may face substantial risks.
Moderate Risk (M)	There is a probability of between **26%** and **50%** that assumptions may fail to hold or materialize, and/or the project may face only moderate risk.
Low Risk (L)	There is a probability of up to **25%** that assumptions may fail to hold or materialize, and/or the project may face only low risks.