REPORT NO.: RES48187

RESTRUCTURING PAPER

ON A

PROPOSED PROJECT RESTRUCTURING

OF

MALI RURAL ELECTRIFICATION HYBRID SYSTEM PROJECT

APPROVED ON DECEMBER 11, 2013

TO

THE REPUBLIC OF MALI

Energy and Extractives

West and Central Africa Region

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ABBREVIATIONS AND ACRONYMS

AF	Additional Financing
COVID-19	Coronavirus Disease 2019
ESIA	Environmental and Social Impact Assessment
GPOBA	Global Partnership on Output-Based Aid
HV	High Voltage
IDA	International Development Association
IT	Information Technology
kV	Kilovolt
MW	Megawatt
MWp	Megawatt-peak
PDO	Project Development Objective
PV	Photovoltaic
SREP	Scale Up Renewable Energy Program
UGP	Project Coordination Unit (*Unité de Gestion du Projet)*

BASIC DATA

Product Information

Project ID	Financing Instrument
P131084	Investment Project Financing
Original EA Category	**Current EA Category**
Partial Assessment (B)	Partial Assessment (B)
Approval Date	**Current Closing Date**
11-Dec-2013	30-Sep-2021

Organizations

Borrower	Responsible Agency
Government of Mali	AMADER

Project Development Objective (PDO)

Original PDO

The objective of the Project is to expand access to modern energy services in rural areas of the Recipient and to increase renewable energy generation in target areas.

Summary Status of Financing (US$, Millions)

Ln/Cr/Tf	Approval	Signing	Effectiveness	Closing	Net Commitment	Disbursed	Undisbursed
IDA-64720	23-Jul-2019	20-Sep-2019	17-Jan-2020	30-Sep-2021	20.00	6.68	14.36
IDA-53560	11-Dec-2013	23-Dec-2013	18-Jun-2014	30-Sep-2021	25.00	21.19	1.63
TF-B0437	20-Sep-2019	20-Sep-2019	17-Jan-2020	30-Sep-2021	2.70	.88	1.82
TF-A4148	27-Dec-2016	27-Dec-2016	27-Dec-2016	31-Oct-2025	4.80	0	4.80
TF-15897	23-Dec-2013	23-Dec-2013	18-Jun-2014	30-Jun-2018	4.18	4.18	0
TF-15961	23-Dec-2013	23-Dec-2013	18-Jun-2014	30-Jun-2018	.38	.38	0

TF-18873	11-Dec-2013	23-Dec-2013	18-Jun-2014	30-Sep-2020	14.90	13.18	1.72

Policy Waiver(s)

Does this restructuring trigger the need for any policy waiver(s)?

No

I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

A. Background and project status

1. The financing for the Mali Rural Electrification Hybrid System Project (*Projet Systèmes Hybrides d'Électrification Rurale*, SHER – P131084) was approved by the World Bank Board of Executive Directors on December 11, 2013, and became effective on June 18, 2014, and an Additional Financing (AF) was approved on July 23, 2019. The project financing was originally set to US$44.9 million, including a US$25.0 million credit from the International Development Association (IDA), US$14.9 million grant from Strategic Climate Fund – Scale up Renewable Energy Program (SCF-SREP), and US$5.0 million grant from Global Partnership on Output-Based Aid (GPOBA). The project received an AF in the amount of US$20.0 million credit from IDA and US$2.7 million grant from the Japan Fund for Policy and Human Resources Development (PHRD), bringing the total project financing to US$67.6 million. The AF (ratified by decree 2020-0091/P-RM of February 18, 2020) aimed to (i) cover the financing gap caused by cost overruns and allow the realization of certain activities which could not be completed without additional funds, and (ii) improve the development effectiveness of the project by scaling-up the activities that were successfully implemented under the original financing. The closing date of the original financing was September 30, 2020 and was extended by one year through the AF. The current closing date is September 30, 2021.

2. The Project Development Objective (PDO) is to expand access to modern energy services in rural areas in Mali and to increase renewable energy generation in target areas. The project consists of three components:

(a) Component 1: service improvement and extension of existing mini grids (originally US$39.40 million, US$53.30 million after AF). This component supports activities related to: (i) the supply and installation of solar photovoltaic (PV)/diesel hybrid power generation plants for mini-grids in rural areas; and (ii) the extension and densification of existing mini - grids including household connections.

(b) Component 2: development of off-grid lighting markets and energy efficiency promotion (originally US$2.70 million, US$4.86 million after AF). This component aims to: (i) expand Lighting Africa-certified portable solar lanterns off-grid lighting and solar lanterns in targeted rural areas, by catalyzing markets; and (ii) improve energy efficiency through the promotion of energy efficiency equipment to reduce the demand on existing mini-grids.

(c) Component 3: support to project management and capacity building (originally US$2.80 million, US$9.44 million after AF). This component supports project management, capacity building, technical studies, and technical assistance to the rural electrification agency of Mali (*Agence Malienne pour le Développement de l'Énergie Domestique et de l'Électrification Rurale*, AMADER), and to private operators in rural areas.

3. Progress towards achievement of the PDO and implementation progress are rated Moderately Satisfactory. As of September 2021, the project beneficiaries were 557,288 people (target is 1,060,000) and 5.63 MW of renewable generation capacity (target is 6.70 MW). A total of 36 power plants have been completed, out of the 45 planned, including 18 in service and 18 in the testing phase, while nine plants are under construction. Regarding the extension of the network, 114 km of MV and LV lines were completed, and 80 km are under construction. A total of 8,034 solar home systems were installed, well above the target of 6,680. However, only 65,145 solar lanterns out of a target of 100,000 have been delivered translating into an execution rate of 65 percent. A technical assistance has been provided to analyze the market constraints and suggest improvements in speeding up the rollout of the solar lanterns in rural areas. A six-month extension of the project closing date to March 31, 2022, is, therefore, required to provide sufficient time to finalize ongoing project activities. Additional 24,855 will be distributed in the next 6 months, making the total solar lantern to be distributed to 90,000.

4. As of September 2021, the overall project disbursement standing at US$44.71 million, equivalent to about 66 percent of total financing. Of those, disbursements from the AF (IDA-64720) reached US$5.78 million out of US$20 million. Total commitments reached US$45 million for the IDA grants (100 percent of IDA) and US$24.26 million for other grant sources (. It is important to highlight that only the following credit lines are still effective: (i) IDA-53560 (current closing date is September 30, 2021); (ii) IDA-64720 (current closing date is September 30, 2021); (iii) TF-A4148 (current closing date is October 30, 2025). Following the conclusion of OP 7.30 assessment on September 6, 2021 and the resumption of disbursements as a result, the project disbursements are expected to significantly increase to about 75% as there are pending invoices for completed works and services.

5. All legal covenants stipulated in the legal agreements have been complied with. There are no overdue audits or interim financial reports at the time of the restructuring. The financial management performance is rated Satisfactory while the procurement is rated Moderately Satisfactory. Both environmental and social safeguards performances are rated Moderately Satisfactory and there are no unresolved issues. GRM system is now in place and is functional for the entire project.

6. The detailed status of progress of implementation by components are as follows:

(a) Component 1 (service improvement and extension of existing mini grids): About twelve EPC contractors were awarded contracts for supply and installations of 45 solar PV/diesel hybrid systems. As of today, construction of 36 systems has been completed. These include 18 systems that are in operation and 18 that are in commissioning phase, while nine systems are under construction. A total of 114 km of MV and LV lines were built, and 80 km are under construction. Finally, 281 966 people have now access to electricity via connection to mini-grids and through solar home systems. This component financed the installation of 8,034 solar home systems in remote rural households with limited revenues, including the PHRD grant financed 4,427 solar home-based systems (100%). The PRHR grant financed activities were implemented by 15 operators out of which 10 have been audited by an independent verification agent. The remaining 5 operators will be audited by November 2021. This grant financed the installation of 200-250 Wp installations in rural households with limited revenues.

(b) Component 2 (development of off-grid lighting and energy efficiency markets): The main activities completed are: (i) the distribution of 10,000 solar lanterns and Lighting Africa-certified solar kits in schools and socio-community centers; and (ii) the installation of 50 energy-saving equipment in social establishments. In addition, the distribution of 100,000 Lighting Africa-certified lanterns is also underway, with 65,145 distributed so far. The installation of 800 lanterns in eight solar libraries remains to be done. 24301 LED/CFLs have been distributed (128.57%).

(c) **Component 3 (support to project management and capacity building):** The activities intended for project management and capacity building are implemented in parallel with those of the other two components. Important activities have not yet been carried out, mainly: (i) construction of the control center for remote monitoring of hybrid power plants; (ii) studies and other consultancy services; (iii) environmental and social safeguard closing audit; and (iv) mapping electrical infrastructure and basic social services.

B. Rationale for restructuring

7. The socio-political situation, characterized by two military coups (and related disbursement suspensions), in addition to the COVID-19 pandemic, had a serious impact on project implementation. Although the project also suffered from a long procedure for the approval and the signing of the contract amendments to increase generation capacities and extend distribution networks in some localities[1], its implementation has been severely hampered by two military coups (in August 2020 and May 2021), multiple deteriorating security conditions, and the COVID-19 pandemic.

8. Project implementation was also affected by the following:

(a) Delays of about 12 months in mobilizing state resources for the compensation of affected people.

(b) Difficulties in putting into effect contracts linked to the opening of letters of credit with some local companies. This delayed the implementation by about 8 months.

(c) Five-month suspension of project activities (from November 7, 2019, to March 2, 2020) following an accident in Sibendi.

(d) Military coups in August 2020 and May 2021, causing interruptions of all disbursements for about eight months (from August 18 to November 8, 2020, and from May 24 to September 6,2021 respectively).

(e) Generalized disruptions caused by the COVID-19 global pandemic, both in the ordering of equipment and in the execution of works.

(f) A severe deterioration of security conditions in localities in the center of the country.

9. The project remains of strategic importance to the Government of Mali, and it has demonstrated agility in its implementation despite the difficult environment. Despite a challenging context, the project has demonstrated agility in keeping activities moving forward, despite the accumulation of delays. The project contributes to improving people's lives and supporting economic development, including post-COVID-19 recovery. Its PDO continues to be highly relevant and achievable – subject to an extension of the closing date — and is in line with the country's strategic energy-sector objectives to achieve universal access by 2030. The project is fully aligned with the World Bank Group Country Partnership Framework for Mali for the period FY16-FY20[2]. The Government of Mali is determined to improve the living environment of its population, particularly those living in rural areas, by making access to energy one of the pillars of its actions to fight poverty and address fragility drivers. This political determination was clearly manifested by the country's high authorities through the implementation of Projects for Society (*Projets de Société*) and the Government's General Policy Statement (*Déclaration de Politique Générale*, DPG). Also, access to electricity is among the top priorities of the country's Strategic

[1] In facts, some contract amendments required Cabinet approval since the original contracts' ceilings required a similar process. Others were delayed at the Ministry of Finances because certain contractors could not honor their tax obligations on time.

[2] A new partnership strategy is under preparation.

Framework for Economic Recovery and Sustainable Development[3]. One of the objectives of this strategy is to achieve a national electricity access rate in line with SDG indicators, which is recognized as a critical success factor for reducing conflicts and violence and the country's overall poverty reduction and growth strategy. The project also directly responds to the objectives of the Sahel Alliance target of doubling renewable energy installed capacity and electricity access in the G5 Sahel countries over the 2018-2023 period. Upon completion, the project will provide electricity access to close to 612,000 people in rural areas and install 6.7 additional MW of solar power capacity, displacing costlier fuel-based generation and thereby reducing the need for recurrent budget transfers to the sector through fuel subsidies for electricity generation.

10. The project needs to be fully implemented to contribute to the country conflict resilience and prevention strategy. Mali faces a multiplicity of challenges including political instability, violent conflicts, strong regional disparities in socioeconomic development, marginalization issues at the subnational level, low presence of state institutions, and poor access to basic services. Some of the project sites are in conflict zones, electrification of which would contribute to the conflict resilience. It would also electrify localities that are closer to conflict zones and hence contribute to conflict prevention in these areas. In this context, if fully implemented, the project's contribution to least-cost electricity supply and access extension would be key to mitigate increased fragility risks

11. In this context and perspective, the Government of Mali has requested the project extension by six months in a letter dated June 24, 2021. The Project Coordination Unit (PCU) has prepared an action plan, discussed, and agreed with the World Bank, reconfirming timelines, and approaches to complete all remaining project activities within the proposed closing date. The proposed extension will not result in additional costs to the project except for the PCU operating costs which can be absorbed by the exiting allocation. The proposed extension does not involve any change to the project design, results framework (aside from targets' end-date), or implementation arrangements.

12. A six-month project extension would allow, among other things, to complete the following:

(a) Component 1: complete the ongoing construction of solar power plants (MWp) in 11 localities.

(b) Component 2: finalize the distribution of solar home systems and solar lanterns (how many more?).

(c) Component 3: Carry out all activities such as the control center for remote monitoring of hybrid power plants (critical activity for the sustainability of these plants).

(d) Avoid any risk of stranded costs and litigation with contractors related to unfinished work at different sites.

13. The proposed closing date extension is in line with the World Bank Policy on Investment Project Financing (IPF). This request is based on the following: (i) PDO remains highly relevant, in line with the government priority, and achievable subject to extension of closing date; (ii) the project's progress towards achievement of the PDO and implementation progress are both rated as Moderately Satisfactory and the Recipient's implementation capacity has recently been reinforced; (iii) the project remains likely to fully achieve its PDO within the extended period; (iv) the Recipient has prepared a revised implementation schedule (agreed with the World Bank) to ensure implementation of all project activities and disburse all funds by the proposed closing date; (v) the project is not subject to suspension; and (vi) the audit reports are satisfactory to the World Bank there and there are no outstanding ones. The project will continue to benefit

[3] Energy is a on top agenda of the Mali's medium term strategic plan "Cadre stratégique pour la Relance Economique et le Développement Durable ("CREDD) 2019-2023 towards achieving universal access in accordance with the Sustainable Development Goal 7.

from environmental and social provisions throughout the proposed extension. The World Bank's team will continue to provide close follow-up on the activities to ensure their completion by March 31, 2022. The revised implementation schedule can be found in Annex 1.

14. It is also proposed to reallocate budget between disbursement categories. The proposed reallocation is based on the following reasons:

(a) Following the closing of SREP grant (TF-18873) on December 2020, the remainder on Category 2 of IDA-53560 credit line could not be disbursed. IDA and SCF-SREP co-financed the construction of hybrid systems with 53.3 and 46.7 percent, respectively. It is proposed to transfer the undisbursed amount to category 1 of IDA-53560.

(b) Part of the resources on IDA-53560 (Category 3) and IDA-64720 (Category 2) to finance the distribution of Lighting Africa certified solar kits will not be disbursed following the market failure because of competing similar products on the market. It was envisaged to distribute 110,800 solar kits (new target is 100,800 kits, 10,000 less). It is proposed to reallocate the balance of category 3 of IDA-53560 to category 1 of IDA -53560 and the balance of category 2 of IDA-64720 to category 1 of IDA-64720. The additional funds allocated to category 1 of IDA-53560 will allow to finance studies to scale up activities to new sites and spare parts of the systems.

The allocation for contingencies IDA-64720 (category 3) was not disbursed. It is proposed to reallocate the undisbursed amount to category 1 of IDA-64720. The additional funds allocated to the category 1 of IDA-64720 will be used to finance operational activities during the extended period of project implementation of six months and the implementation of Geographic information system.

15. As a result of proposed change to disbursement categories, it is also proposed to revise the results framework accordingly. The proposed reallocations between disbursement categories, resulting from the early closing of SREP TF-18873 and as described above, should be translated in the appropriate changes in the results framework.

II. DESCRIPTION OF PROPOSED CHANGES

16. The proposed changes to the project include the following: (i) extension of the closing date of credits IDA-53560 and IDA-64720 and the PHRD TF0B0437 by six months; (ii) changes to disbursement estimates; (iii) changes to the implementation schedule; (iv) update to the results framework; (v) reallocation between disbursement categories.

17. Closing date extension: It is proposed to extend the closing date of credits IDA-53560 and IDA-64720, and TF B0437 by six months, from the current closing date of September 30, 2021, to March 31, 2022. The proposed extension aims to allow time to fully implement all project activities and disburse all the funds. All home-based solar systems to be financed under PHRD TF0B0437 have been completed, the independent verificationion agentis conducting technical audits of the installations for the operators to be paid.

18. Changes to implementation schedule: It is proposed to revise the implementation schedule to reflect the delays described in the sections above and to be aligned with the proposed closing date. Annex 1 provides a revised implementation schedule.

19. Changes to disbursements estimates: It is proposed to update disbursements projections in accordance with the revised implementation schedule. Revised disbursement estimates based on reversed time for project implementation during the extended period is provided below in the detailed proposed changes.

20. Reallocation between disbursement categories: It is proposed to reallocate the undisbursed amounts of categories 2 and 3 of IDA-53560 to its Category 1, and undisbursed amounts of categories 2 and 3 of IDA-64720 to its Category 1. The revised table of disbursement categories for IDA-53560 and IDA-64720 is provided below in the detailed proposed changes.

21. Updated results framework: It is proposed to reduce the number of hybrid systems from 45 to 42, and hence all related results indicators – including the total installed capacity, number of beneficiaries, etc. The change will also be done to the dates of end targets to align them with the new closing date. The revised results framework is provided below in the detailed proposed changes.

III. SUMMARY OF CHANGES

	Changed	Not Changed
Results Framework	✓	
Loan Closing Date(s)	✓	
Reallocation between Disbursement Categories	✓	
Implementation Schedule	✓	
Implementing Agency		✓
DDO Status		✓
Project's Development Objectives		✓
PBCs		✓
Components and Cost		✓
Cancellations Proposed		✓
Disbursements Arrangements		✓
Disbursement Estimates		✓
Overall Risk Rating		✓
Safeguard Policies Triggered		✓
EA category		✓
Legal Covenants		✓
Institutional Arrangements		✓
Financial Management		✓
Procurement		✓
Other Change(s)		✓
Economic and Financial Analysis		✓
Technical Analysis		✓
Social Analysis		✓
Environmental Analysis		✓

IV. DETAILED CHANGE(S)

LOAN CLOSING DATE(S)

Ln/Cr/Tf	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
IDA-53560		15-Sep-2020	30-Sep-2021	31-Mar-2022	31-Jul-2022
IDA-64720		30-Sep-2021		31-Mar-2022	31-Jul-2022
TF-15897	Closed	30-Jun-2018	13-Mar-2019		
TF-15961	Closed	30-Jun-2018	13-Mar-2019		
TF-18873	Closed	30-Sep-2020			
TF-A4148	Effective	31-Oct-2025			
TF-B0437		30-Sep-2021		31-Mar-2022	31-Jul-2022

REALLOCATION BETWEEN DISBURSEMENT CATEGORIES

Current Allocation	Actuals + Committed	Proposed Allocation	Financing % (Type Total)	
			Current	Proposed
IDA-53560-001 | Currency: XDR				
iLap Category Sequence No: 1	Current Expenditure Category: GD,WK,NCS,CS,OP,TR EXCPT P1.1(i)			
4,564,000.00	4,467,991.29	6,214,193.00	100.00	100.00
iLap Category Sequence No: 2	Current Expenditure Category: GD,WK,NCS,CS, P1.1(i)			
11,084,000.00	9,912,593.71	9,912,593.71	53.30	53.3
iLap Category Sequence No: 3	Current Expenditure Category: OUTPUT-BASED SUBSIDIES PART2.1(i)			
652,000.00	173,213.19	173,213.29	100.00	100.00
Total 16,300,000.00	**14,553,798.19**	**16,300,000.00**		
IDA-64720-001 | Currency: EUR				

iLap Category Sequence No: 1		Current Expenditure Category: G,W,N/CS,O,TR Pt 1.1,1.2i,3.1,3.4			
	14,490,000.00	3,886,254.93	17,426,573.50	100.00	100.00
iLap Category Sequence No: 2		Current Expenditure Category: OUTPUT-BASED SUBSIDIES PART2.1(i)			
	1,710,000.00	274,779.41	573,426.50	100.00	100.00
iLap Category Sequence No: 3		Current Expenditure Category: UNALLOCATED			
	1,800,000.00	0.00	0.00		
Total	**18,000,000.00**	**4,161,034.34**	**18,000,000.00**		

Results framework

COUNTRY: Mali
Mali Rural Electrification Hybrid System Project

Project Development Objectives(s)

The objective of the Project is to expand access to modern energy services in rural areas of the Recipient and to increase renewable energy generation in target areas.

Project Development Objective Indicators by Objectives/ Outcomes

Indicator Name	PBC	Baseline	End Target
Expand access to modern energy services *(Action: This Objective has been Revised)*			
People provided with access to electricity under the project by household connections - other renewable energy - off grid (Number)		0.00	550,800.00
Action: This indicator has been Revised			
Direct project beneficiaries (Number)		0.00	1,000,800.00
Action: This indicator has been Revised			
Female beneficiaries (Percentage)		0.00	50.40
Increase renewable energy generation in target areas *(Action: This Objective has been Revised)*			
Annual generation of electricity from renewable energies (solar) (Megawatt hour(MWh))		0.00	13,000.00
Action: This indicator has been Revised			
Generation Capacity of Renewable Energy (other than hydropower) constructed (Megawatt)		0.00	6.18
Action: This indicator has been Revised			

Indicator Name	PBC	Baseline	End Target
Installed solar power (Megawatt)		0.00	6.18
Action: This indicator has been Revised			
Annual greenhouse gas emission reductions (Tones/year)		0.00	10,678.00
Action: This indicator has been Revised			

Intermediate Results Indicators by Components

Indicator Name	PBC	Baseline	End Target
Component 1: Service improvement and extension of existing mini-grids *(Action: This Component has been Revised)*			
Hybrid mini-grid systems installed (Number)		0.00	42.00
Action: This indicator has been Revised			
Number of Solar Home systems installed (Number)		0.00	6,860.00
Additional connections to mini-grids (Number)		0.00	9,770.00
Action: This indicator has been Revised			
Distribution lines constructed or rehabilitated under the project (Kilometers)		0.00	225.00
Action: This indicator has been Revised			
Distribution lines constructed under the project (Kilometers)		0.00	225.00
Action: This indicator has been Revised			
Number of CFLs or LEDs distributed (Number)		0.00	58,700.00
Action: This indicator has been Revised			

Indicator Name	PBC	Baseline	End Target
Component 2: Development of Off-grid Lighting Markets and Energy Efficiency *(Action: This Component has been Revised)*			
Number of solar lanterns disseminated (Number)		0.00	90,000.00
Action: This indicator has been Revised			
Number of Energy efficient equipment for social infrastructure distributed (Number)		0.00	50.00
Localities reached by information and communication campaigns (Number)		0.00	50.00
Component 3: Project Management Support and Capacity Building *(Action: This Component has been Revised)*			
Number of persons trained under the project (Number)		0.00	420.00
Studies related to rural electrification completed (Number)		0.00	12.00
Action: This indicator has been Revised			
Project related grievances registered under the project grievance redress mechanism (GRM) and addressed (Percentage)		0.00	100.00

Annex 1 – Revised disbursement plan for IDA-53560 and IDA-64720

CREDIT IDA-53560	**Total to be disbursed** (XDR)	**Disbursement projections**			
		Q4, 2021 *Oct – Nov – Dec*		**Q1, 2022** *Jan – Feb – Mar*	**Q2, 2022** *Apr – May – Jun*
Category 1	1,130,993	45,593		873,404	211,996

CREDIT IDA-64720	**Total to be disbursed** (EUR)	**Disbursement projections**			
		Q4, 2021 *Oct – Nov – Dec*		**Q1, 2022** *Jan – Feb – Mar*	**Q2, 2022** *Apr – May – Jun*
Category 1	12,579,416	8,969,328		3,130,743	479,345
Category 2	457,347	343,010		68,602	45,735
(**Total**)	**13,036,763**	**9,312,338**		**3,199,345**	**525,080**

Annex 2 – Revised implementation schedule