



Combined Project Information Documents / Integrated Safeguards Datasheet (PID/ISDS)

Appraisal Stage | Date Prepared/Updated: 31-May-2019 | Report No: PIDISDSA26886



BASIC INFORMATION

A. Basic Project Data

Country Mali	Project ID P169912	Project Name Additional Financing to the Mali Rural Electrification Hybrid Systems Project	Parent Project ID (if any) P131084
Parent Project Name Mali Rural Electrification Hybrid System Project	Region AFRICA	Estimated Appraisal Date 04-Jun-2019	Estimated Board Date 17-Jul-2019
Practice Area (Lead) Energy & Extractives	Financing Instrument Investment Project Financing	Borrower(s) Government of Mali	Implementing Agency AMADER

Proposed Development Objective(s) Parent

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.

Components

- Component 1: Service improvement and extension of existing mini-grids
- Component 2: Development of Off-grid Lighting Markets and Energy Efficiency
- Component 3: Project Management Support and Capacity Building

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	22.70
Total Financing	22.70
of which IBRD/IDA	20.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Development Association (IDA)	20.00
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IDA Credit	20.00
Non-World Bank Group Financing	
Trust Funds	2.70
Japan Policy and Human Resources Development Fund	2.70

Environmental Assessment Category

B-Partial Assessment

Decision

The review did authorize the team to appraise and negotiate

B. Introduction and Context

Country Context

1. **Mali is a vast, landlocked and geographically diverse country located in the western part of Sub-Saharan Africa.** It is geographically diverse and encompasses parts of the Sahara Desert, the Sahel in the North, and more fertile areas in the South. The country spreads over a surface area of 1,241,230 square kilometers and had a population estimated at 18.6 million in 2017. About 65 percent of Mali’s land area is desert or semidesert with economic activity confined to the riverine area irrigated by the Niger River. Approximately 75 percent of the active population works in the agriculture sector. Mali’s population increases by 3.02 percent on average annually and is expected to double by 2035. The country’s poverty levels are highly vulnerable to climatic and economic shocks. High population growth rates and adverse climatic events, such as the severe drought events in 2011, constitute major challenges for the country’s agriculture and food security.

2. **Mali has a low human development index (0.427), ranking 182nd among 189th nations (2017 ranking).** This indicates a low level of achievement in three basic dimensions of human development: life expectancy, level of education and standard of living. The national poverty rate of 42.7 percent in 2017, masks regional disparities in wealth distribution and a large urban-rural divide. Approximately 90 percent of all poor people live in rural areas (which cover 73 percent of the total population) and are concentrated in the south of the country, where the population density is the highest. Conflict - arising from allocations of increasingly deteriorating natural resources - has also increased the incidence of poverty.

3. **In early 2012, some regions in the northern part of the country fell under the control of extremist forces, while a coup d’état in its capital city created political instability and turmoil.** A strong international military response in early 2013 prevented further destabilization and a peace agreement between the Government of Mali (GoM) and the ‘Platform and Coordination Groups in the North’ in June 2015, revived hopes for peace and stability. With the progressive consolidation of political stability and improved security conditions in 2013, annual growth resumed at 2.3 percent and accelerated to 7 percent in 2014, its highest



level since 2003 (when it was 7.6 percent). By 2014, economic growth had reached pre-crisis levels, indicating that the economy was catching up and recovering from the crisis. The political and security crisis eroded GoM's ability to provide basic services to the populations especially in the North, where some regions remain outside government control. Security conditions remain volatile with armed groups defying State authority in the center of the country and criminal activities spreading to the South.

4. Economic performance remains strong with an average annual growth rate exceeding 5 percent over the 2014-18 period. Annual GDP growth is expected to hold steady at about 5 percent over the medium term. Cotton and gold exports make up around 80 percent of export earnings. The country's fiscal status fluctuates with commodity prices and rainfall patterns. In 2017, inflation rate was modest at 1.8 percent due to higher food prices and increased international oil prices. Despite pressure on public expenditure, the authorities have managed to contain the budget deficit to 2.9 percent, thanks to the rationalization of current expenditure and significant improvement in domestic revenue. The most recent debt sustainability analysis conducted by the International Monetary Fund (May 2018) concluded that the country is at a moderate risk of external debt distress but vulnerable to changes in financing conditions and shocks to export growth.

Sectoral and Institutional Context

5. Despite significant progress over the last decade, access to modern energy services in Mali remains low, particularly in rural areas. The electricity access rate in 2017, is about 39 percent nationally (compared to 64 percent in Senegal, 63 percent in Côte d'Ivoire). This corresponds to a rate of 86 percent in urban areas and 19 percent in rural areas (IEA, World Electricity Outlook 2017). Rural areas households mainly rely on fuelwood for cooking, and kerosene lamps for lighting. The electricity services in Mali are primarily delivered by EDM (*Energie du Mali*), which operates under a concession agreement signed with GoM. Within the perimeter of its concession, EDM has the monopoly for power transmission and distribution. The bulk of the energy supplied is generated by EDM-owned and rental thermal generation plants, as well as by electricity imports from Côte d'Ivoire and from the regional hydropower facilities (Manantali and Felou) owned by Senegal River Basin Authority (OMVS). Independent power producers supply the balance of the power.

6. Mali relies heavily on expensive thermal power generation, which has a significant impact on the financial viability of the sector. In 2017 the total peak demand in the interconnected system was 338 MW of which 80 MW (24 percent) was supplied by rental thermal rental plants, 63 MW (19 percent) by EDM thermal power plants, 116 MW (34 percent) by Manantali and Felou hydropower plants, and 50 MW (15 percent) from electricity imports from Côte d'Ivoire. Additionally, isolated remote areas are supplied with diesel-powered mini-grids, with a total installed capacity of 90 MW. The cost of electricity in the rural areas is less reliable, and generally twice or more as expensive than electricity supplied through the main grid.

7. The Malian Rural Electrification Agency, AMADER, uses a public-private partnership approach to supply electricity services in rural areas through mini-grids and solar home systems. AMADER's mandate is to provide electricity services to the population living outside EDM's concession perimeter. The agency provides household energy and rural electrification solutions in rural and suburban areas, as well as technical assistance and investment subsidies. Its business model involves the issuance of long-term (generally 15 years) authorizations to private operators to build, operate and maintain mini-grids, and provide electricity services to consumers. These operators receive investment subsidies from AMADER through a financing agreement reflecting their commitments. The two binding agreements (authorization and financing



agreement) create concession-type arrangements. Ownership of the fixed assets remains with GoM. At the end of the contract period, the operator is allowed to receive a compensation for the non-depreciated portion of its contribution to the assets. A significant number of local private or community-based energy actors have emerged with the support from AMADER. AMADER currently manages 63 operators who manage 250 mini-grids nationwide. Overall, these concession-type arrangements have proved resilient, allowing mini-grids operators to continue to operate even faced with political instability, internal armed conflict, and rising fuel prices. Additional efforts and subsidies are required to improve the business model and reduce costs in areas that will not be reached by the main electricity grid within the next decade.

C. Proposed Development Objective(s)

8. 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.

Key Results

9. The achievement of the development objective of the project is measured through the following indicators:

- People provided with access to electricity by household connection— rural mini-grids and off-grid (number)
- Generation capacity of renewable energy (solar) (MW)
- Annual electricity output from renewable energy (solar, biofuel) (MWh/y)
- Greenhouse gas emission reductions (tons of CO₂ equivalent); and
- Direct project beneficiaries (number) of which female (percentage).

10. Intermediate results indicators are as follows:

- Hybrid mini-grid systems installed (Number)
- Additional connections to mini-grids (Number)
- Number of Solar Home systems installed (Number)
- Number of CFLs/LEDs distributed (Number)
- Distribution lines constructed or rehabilitated under the project (Kilometers)
- Number of solar lanterns disseminated (Number)
- Number of Energy efficient equipment for social infrastructure distributed (Number)
- Localities reached by information and communication campaigns (Number)
- Number of persons trained under the project (Number)
- Studies related to rural electrification completed (Number)

D. Project Description



11. The Mali Rural Electrification Small Hybrid System (the parent project) was approved by the Board on December 11, 2013 and became effective on June 18, 2014. The proposed operation is an additional financing (AF) to the parent project.

12. The parent project consists of an IDA credit in the amount of SDR 16.3 million (US\$25 million equivalent), a grant from the Scaling-Up Renewable Energy in Low Income Countries Program of the Strategic Climate Fund (SCF-SREP) in the amount of US\$14.9 million, and a grant from the Global Partnership for Output Based-Aid (GPOBA) of US\$5 million. The GPOBA Trust Fund closed on June 30, 2018 and was fully disbursed.

13. The proposed AF seeks to (a) cover financing gap due to cost overruns using an additional IDA credit, and (b) enhance the development effectiveness of the project by scaling-up activities that were successfully implemented under the parent project, using a grant from the Japan Policy and Human Resources Development Fund (PHRD). The AF will help reduce transaction cost and time and allow streamlined preparation and processing procedures. It is structured around three main components.

- **Component 1 (Service improvement and extension of existing mini-grids): US\$11.6 million equivalent IDA credit and US\$ 2.3 million PHRD grant.**

14. Sub-component 1.1: Hybrid generation (US\$ 8.1 million equivalent IDA). The additional fund will cover the funding shortfall for the construction of the solar photovoltaic (PV) plants introduce renewable energy generation at least 45 existing diesel plants supplying mini-grids in rural areas.

15. Sub-component 1.2: Mini-grid extension and densification (US\$ 1.5 million equivalent IDA). IDA funds will cover the financing gap due to the underestimation of capital cost for the realization of the mini-grid network extensions (medium and low voltage) considered under the parent project. The PHRD grant will finance new activities to scale-up the results achieved through the GPOBA grant (under the parent project) to help remove barriers to the electrification of poor communities in rural areas (e.g. high upfront investment cost, unaffordable connection charges and costly internal wiring, etc.) and ultimately, make access to basic electricity services affordable. This objective will be achieved by (i) financing the supply and installation of up to 4,420 SHS in 20 villages and the deploy approximately 22,100 LED lamps (five per SHS), and (ii) supporting the deployment of 800 additional Lighting Africa certified solar portable lanterns and related pico-PV equipment in selected public schools.

16. A provision of US\$ 2 million equivalent of IDA funds has been made to finance contingencies.

- **Component 2 (Development of Off-Grid Lighting Markets and Energy Efficiency): US\$1.9 million equivalent IDA credit and US\$ 0.4 million PHRD grant.**

17. Sub-component 2.1 – Off-grid Lighting and Solar Lanterns. The IDA funds will cover the increase in subsidies allocated to private distributors for the sale of Lighting-Africa certified portable solar lanterns. The PHRD grant will support the deployment of 800 Lighting Africa certified solar portable lanterns and related pico-PV equipment in selected public schools. The PHRD funds will also finance the services of independent verification agents, support information and communication campaigns, and cover operational costs. The campaigns will involve community meetings, the production and launch of radio and TV commercials and the dissemination of flyers of other marketing material.



- **Component 3 (Project Management Support and Capacity Building): US\$6.5 million equivalent IDA credit.**

18. The additional funds will cover the financing gap for the procurement of the owner’s engineer and other consulting services, the procurement of a geographic information system, the establishment of a technical control center to monitor the operational performance of the mini-grids, the implementation of gender mainstreaming activities and operational cost.

E. Implementation

Institutional and Implementation Arrangements

19. The Rural Energy Service Agency (AMADER) manages and coordinates the design, implementation, monitoring and evaluation of the rural electrification programs in Mali, including the Parent Project. It will thus be responsible for responsible for the implementation of this AF. AMADER has a solid experience in implementing national programs and delivering subsidies according to established GoM’s policy.

20. AMADER is an independent public body with a distinct legal personality (“Etablissement Public Autonome”). It was created by statute (Decree 03-226, May 30, 2003, pursuant to Legislative Act 03-006 May 21st, 2003), has its own Board of Directors, and enjoys a greater ability to retain needed expertise and act with a relative degree of autonomy.

F. Project location and Salient physical characteristics relevant to the safeguard analysis (if known)

The additional funds finance activities in the same rural areas as the parent project. Thus, the initial 45 localities where the project is constructing the hybrid systems are the same as those supported by the additional financing. These areas are in the southern and central parts of Mali. The central part corresponds to the semi-desert climate with annual precipitation ranges from 100 to 600 mm. This sector is characterized by the presence of the inner delta of the Niger River which provides fertile farmland and water resources for agricultural production, especially local rice. The southern part of the country comprising the regions of Kayes, Koulikoro (included Bamako city), Ségou and Sikasso, is wetter than the central part of the country, with annual rainfall going from 600 to 1000 mm. This situation occurs under a tropical savanna climate. This type of climate offers appropriate conditions to produce solar energy. It favors the setting of hybrid system but also causes the energy needs increase during the dry season. As some ESIA and their ESMP were prepared and are still being used for the parent project civil works, the project category “B” is maintained. The implementation of the ESMP will continue during the implementation of the activities supported by the additional fund. However, since the additional funds will cover the financing gap due to the underestimation of capital cost for the realization of the mini-grid network extensions (medium and low voltage) for which the exact ways or routes are not yet known, the original Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) have been updated. Also, the 2 safeguards policies: Environmental Assessment (OP/BP 4.01) and Involuntary Resettlement (OP 4.12) triggered on parent project will be maintained for the additional financing.



G. Environmental and Social Safeguards Specialists on the Team

Emeran Serge M. Menang Evouna, Environmental Specialist
Mahamadou Ahmadou Maiga, Social Specialist
Tolidji Blaise Donou, Environmental Specialist

SAFEGUARD POLICIES THAT MIGHT APPLY

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	As the parent project, the additional financing funds predominantly support the acquisition and installation/distribution of electronic and electric devices which, though small-sized and site-specific, may induce environmental concerns during their exploitation (maintenance) and at the end of their lifecycle (electronic and electric waste). Also, the additional funds cover the financing gap due to the underestimation of capital cost for the realization of the mini-grid network extensions (medium and low voltage) for which the exact ways or routes are not yet known. Therefore, the Environment and Social Management Framework (ESMF) of the parent project has been updated and reviewed by the bank. It has been disclosed in-country and on the Bank's website.
Performance Standards for Private Sector Activities OP/BP 4.03	No	As with the parent project, the ownership of the infrastructure built remains with the public sector. The Project Implementation Unit (PIU) is responsible for identifying, assessing and managing the environmental and social risks associated with the activity financed by the additional financing.
Natural Habitats OP/BP 4.04	No	None of the activities supported by the project's additional funds are implemented in natural habitat or involve the use of resources collected from natural habitats which could result in their degradation.
Forests OP/BP 4.36	No	The project's additional funds will not support activities that involve forest exploitation or induce degradation of forest areas.



Pest Management OP 4.09	No	The project’s additional funds do not support activities that involve the purchase, distribution, or utilization of pesticides or related chemicals.
Physical Cultural Resources OP/BP 4.11	Yes	The project’s additional funds do not support activities expected to have an impact on, or affect physical cultural resources. However, a Chance Finds procedure has been included in the updated ESMF.
Indigenous Peoples OP/BP 4.10	No	There are no indigenous peoples in the project area.
Involuntary Resettlement OP/BP 4.12	Yes	This policy is triggered because activities under component 1 may require some land acquisition and/or resettlement of people or restrictions of access to resources or livelihoods. Because the exact locations for the realization of the mini-grid network extensions (medium and low voltage) are unknown, the parent project Resettlement Policy Framework (RPF) has been updated and reviewed by the bank. It has been disclosed in-country and on the Bank’s website.
Safety of Dams OP/BP 4.37	No	The project’s additional funds will not finance dams or dam related investments.
Projects on International Waterways OP/BP 7.50	No	The project’s additional funds do not finance water resources activities or support activities that involve water use from any international waters flowing through the country (Niger and Senegal).
Projects in Disputed Areas OP/BP 7.60	No	The project’s additional funds do not support activities that are implemented in any disputed areas.

KEY SAFEGUARD POLICY ISSUES AND THEIR MANAGEMENT

A. Summary of Key Safeguard Issues

1. Describe any safeguard issues and impacts associated with the proposed project. Identify and describe any potential large scale, significant and/or irreversible impacts:

As the parent project, the additional will mainly finance acquisition and installation/distribution of electronic and electric devices which, though small-sized and site-specific, may induce environmental concerns during their exploitation (maintenance) and at the end of their lifecycle (electronic and electric waste). The additional fund will cover the financing gap due to the underestimation of capital cost for the realization of the mini-grid network extensions (medium and low voltage) for which the exact ways or routes are not yet known. These activities will have impacts on the environment and on social aspects. Indeed, the movements of vehicles transport of construction and electrical materials will cause disruption of traffic around construction sites. Excavations, and embankments will destroy the soil balance and the micro ecosystems found there. The risks of water pollution in the used oils and other toxic products considered in the renewal or installation of electrical equipment are important. Land acquisition or involuntary resettlement of populations as a result of the works remains a high social risk of the project. According to



the Gender Based Violence (GBV) risk assessment result, the project is implemented in GBV high risk zones. The ESMF has been updated and includes activities designed to address the risk of GBV. The PIU is responsible for all the implementation of all GBV related mitigation measures and project response actions.

2. Describe any potential indirect and/or long term impacts due to anticipated future activities in the project area:

The indirect impacts of the project relate to the positive effects of improved availability of electrical energy. Indeed, the better availability of energy can help reduce the pressure of populations on natural resources, particularly plant resources. Regarding the social aspect, one of most positive impact of the project is the electrification of basic social infrastructures such as schools, health centers, women-led groups and centers, public places of villages.

3. Describe any project alternatives (if relevant) considered to help avoid or minimize adverse impacts.

There are no projects alternatives at this stage since the additional funds are needed to fill the funding gap of the parent project.

4. Describe measures taken by the borrower to address safeguard policy issues. Provide an assessment of borrower capacity to plan and implement the measures described.

Under the additional finance, the same safeguards policies (4.01 Environmental assessment and 4.12 Involuntary resettlement) triggered on the parent project are triggered. Accordingly, the borrower updated the Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) which have been disclosed in-country and at the Bank's website.

The rural electrification agency (AMADER) has built capacity for safeguard management during the implementation of the parent project. But the PIU did not show sufficient commitment to prepare timely relevant environment safeguard instruments including the contractors' ESMPs related to the activities supported under the parent project. For the Additional Financing, the World Bank Environmental and Social team will work closely with the Government to ensure that relevant instruments are timely prepared and implemented. The capacity of the PIU will be strengthened to ensure field regular monitoring. No civil work will start before the ESMPs are approved and notified. The PIU will also work closely with the Ministry of environment (DNACPN) to ensure full compliance with national environmental regulations.

Under the parent project, the PIU prepared the Resettlement Action Plan (RAP) to address involuntary population resettlement. The RAP has been implemented and the implemented report is available and has been publicly disclosed.

5. Identify the key stakeholders and describe the mechanisms for consultation and disclosure on safeguard policies, with an emphasis on potentially affected people.

The Ministry of Energy and Water is responsible for the sector reform activities and AMADER (Malian Agency for the Development of Domestic Energy and Rural Electricity) is responsible for the fiduciary aspects of these activities.

Other key stakeholders include:

- CREE (Water and Electricity Regulatory Commission)
- Civil society represented by Consumer Associations and NGOs
- The prefects and mayors of the municipalities covered.
- The wise men and religious figures and the population in various associations of development

The stakeholder consultations have been conducted. During the implementation phase, the key stakeholders will be frequency consulted. The consultation mechanism is managed by the PIU.



B. Disclosure Requirements (N.B. The sections below appear only if corresponding safeguard policy is triggered)

Environmental Assessment/Audit/Management Plan/Other

Date of receipt by the Bank 24-Apr-2019	Date of submission for disclosure 28-May-2019	For category A projects, date of distributing the Executive Summary of the EA to the Executive Directors
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"In country" Disclosure

Mali
28-May-2019

Comments

Resettlement Action Plan/Framework/Policy Process

Date of receipt by the Bank 24-Apr-2019	Date of submission for disclosure 28-May-2019
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"In country" Disclosure

Mali
28-May-2019

Comments

If the project triggers the Pest Management and/or Physical Cultural Resources policies, the respective issues are to be addressed and disclosed as part of the Environmental Assessment/Audit/or EMP.

If in-country disclosure of any of the above documents is not expected, please explain why:

C. Compliance Monitoring Indicators at the Corporate Level (to be filled in when the ISDS is finalized by the project decision meeting) (N.B. The sections below appear only if corresponding safeguard policy is triggered)

OP/BP/GP 4.01 - Environment Assessment

Does the project require a stand-alone EA (including EMP) report?



Yes

If yes, then did the Regional Environment Unit or Practice Manager (PM) review and approve the EA report?

Yes

Are the cost and the accountabilities for the EMP incorporated in the credit/loan?

No

OP/BP 4.11 - Physical Cultural Resources

Does the EA include adequate measures related to cultural property?

Yes

Does the credit/loan incorporate mechanisms to mitigate the potential adverse impacts on cultural property?

Yes

OP/BP 4.12 - Involuntary Resettlement

Has a resettlement plan/abbreviated plan/policy framework/process framework (as appropriate) been prepared?

Yes

If yes, then did the Regional unit responsible for safeguards or Practice Manager review the plan?

Yes

Is physical displacement/relocation expected?

TBD

Is economic displacement expected? (loss of assets or access to assets that leads to loss of income sources or other means of livelihoods)

TBD

The World Bank Policy on Disclosure of Information

Have relevant safeguard policies documents been sent to the World Bank for disclosure?

No

Have relevant documents been disclosed in-country in a public place in a form and language that are understandable and accessible to project-affected groups and local NGOs?

No



All Safeguard Policies

Have satisfactory calendar, budget and clear institutional responsibilities been prepared for the implementation of measures related to safeguard policies?

Yes

Have costs related to safeguard policy measures been included in the project cost?

No

Does the Monitoring and Evaluation system of the project include the monitoring of safeguard impacts and measures related to safeguard policies?

Yes

Have satisfactory implementation arrangements been agreed with the borrower and the same been adequately reflected in the project legal documents?

Yes

CONTACT POINT

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APPROVAL

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Approved By

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