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Report No: RES00028

RESTRUCTURING PAPER
ON A
PROPOSED PROJECT RESTRUCTURING
OF

Madagascar - Least-Cost Electricity Access Development Project - LEAD

APPROVED ON 01-Mar-2019

TO

REPUBLIC OF MADAGASCAR

Energy & Extractives
Eastern and Southern Africa Region

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ABBREVIATIONS AND ACRONYMS

ADER	<i>Agence de Développement de l'Électrification Rurale</i> /Rural Electrification Development Agency
AF	Additional Financing
ARELEC	<i>Autorité de Régulation de l'Électricité</i> / Electricity Regulation Authority
CSB	<i>Centre de Santé de Base</i> / Basic Health Center
CMS	Commercial Management System
DCC	Distribution Control Center
DMS	Distribution Management System
EPC	Engineering Procurement and Construction
ERP	Enterprise Resource Planning
ESMAP	Energy Sector Management Assistance Program
FM	Financial Management
HV	High voltage
IDMS	Integrated Distribution Management System
IPF	Investment Project Financing
JIRAMA	<i>Jiro sy Rano Malagasy</i> / National Electricity Utility
kV	Kilovolt
kWh	Kilowatt-hour
LCDP	Least Cost Power Development Plan
MV	Medium voltage
NES	National Electrification Strategy
O&M	Operation and maintenance
OMDF	Off-Grid Market Development Fund
PAP	People affected by the project
PDO	Project Development Objective
PIU	Project Implementation Unit
RAP	Resettlement Action Plan
RPP	Revenue Protection Program
SHS	Solar Home System
TA	Technical Assistance
ToRs	Term of reference
UNOPS	United Nations Office for Project Services
WBG	World Bank Group



BASIC DATA

Product Information

Operation ID P163870	Operation Name Madagascar - Least-Cost Electricity Access Development Project - LEAD
Product/Financing Instrument Investment Project Financing (IPF)	Geographical Identifier Madagascar
Approval Date 01-Mar-2019	Current Closing Date 30-Jun-2024
Original EA Category Partial Assessment (B) (PAD Approval Package-01 Mar 2019)	Current EA Category

Organizations

Borrower REPUBLIC OF MADAGASCAR	Responsible Agency JIRAMA, Ministère de l'Eau, de l'Energie et des Hydrocarbures
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OPERATION STATUS

Project Development Objective (DO)

Original Development Objective

The Project Development Objective is to increase access to electricity services for households, enterprises, and health facilities in Madagascar.

Disbursement Summary (in USD million)

Source of Funds	Net Commitment	Disbursed	Balance	% Disbursed
IBRD	--	--	--	0



IDA	150.00	74.19	75.81	49.46
Grants	--	--	--	0

BACKGROUND INFORMATION FOR MANAGEMENT ATTENTION (THIS SECTION WILL BE AUTOMATICALLY REMOVED BY THE SYSTEM BEFORE THE PAPER IS DISCLOSED)

Risks/Issues

Are there any particular risks or issues associated with this restructuring that are not in the Restructuring Paper and need to be brought to management attention?	No
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Policy Waivers

Does this restructuring trigger the need for any policy waiver(s)?	No
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OPERATION STATUS

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I. PROJECT STATUS AND RATIONALE FOR RESTRUCTURING

1. This paper seeks approval from the Country Director (CD) for a Level II restructuring of the Least-Cost Electricity Access Development Project - LEAD, Credit No. 6373-MG (P163870), which will: (a) extend the project closing date; and (b) reallocate funds. This is the first restructuring of the project.

2. **Background:** LEAD, an Investment Project Financing (IPF), was approved by the Board on March 1st, 2019, in the amount of US\$150 million equivalent, and became effective on July 19th, 2019. The initial closing date of the financing is June 30, 2024. The Project Development Objective (PDO) is "to increase access to electricity services for households, enterprises, and health facilities in Madagascar." LEAD consists of three main components: (a) Component 1: Grid Electrification (US\$80 million equivalent); (b) Component 2: Off-Grid Electrification (US\$55 million equivalent); and (c) Component 3: Technical Assistance and Project Implementation Support (US\$15 million equivalent).

The project is aligned with the Global challenge program (GCP) Energy Transition, Efficiency and Access: to increase access to affordable, reliable, sustainable, and modern energy, by scaling up clean energy, phasing down fossil fuel use, and supporting just transition. The project is focusing on (i) expanding and improving access; (ii) increasing renewable energy integration.

3. **Project performance to date:** Progress towards achieving the PDO is rated Satisfactory (S), and Implementation Progress (IP) is rated Satisfactory (S). Financial Management is currently rated Moderately Satisfactory (MS). A financial management firm to strengthen the implementation agency was recruited in November 21st, 2023. Procurement is rated Moderately Unsatisfactory due to staff shortages, delays in evaluation, poor cost estimates and slow preparation of technical specifications and Term of references (ToRs). The recruitment of a procurement assistant is already underway to reinforce the project team. There are no pending audits. Activities completed so far under the project have improved the electricity access rate for the country with around 1 million people provided with new or improved electricity service from the beginning of the project. The project was also an essential support for the improvement of the sector planning, adoption of the new connection policy and reinforcement of Government entities such the rural electrification agency (ADER), and adoption of Verasol standard for Solar home system (SHH). In particular, the project has financed the updating of the sector's least-cost development plan to identify important large hydro to be considered for the energy transition.

4. **Status of implementation:** Overall disbursement as of April 3rd, 2024, is US\$72.82 million, which represents 50.51 percent of the available funds. To date, the three project components have progressed as follows:

a) Component 1: Grid Electrification (US\$80 million equivalent) managed by JIRAMA:

All the major contracts under this component are signed and activities have been launched since 2023. Until now, JIRAMA has completed around 15,000 new connections which represents 7.5% with an objective of completing 200,000 new connections by the end of the project.

- i. 400 Engineering Procurement and Construction (EPC) grid extension activities (US\$23.20 m): All contracts are signed; however, implementation has been delayed due to administrative difficulties encountered by JIRAMA's related to the disbursement process at the Ministry of Finance (MEF) level to execute the preliminary payments. A solution was found with the MEF in November 2023, and for LEAD direct payments to suppliers were finally executed to suppliers. Works are expected to be finalized in February 2025.
- ii. 35 grid extension activities by JIRAMA (US\$4.79m): The manufacture of 5094 concrete poles by the supplier was delayed due to several late payments by JIRAMA (latest payment delays also linked to the "régularisation budgétaire"). One part of this activity will be transferred to other manufacturers to finalize the works by the end of December 2024. The works are expected to be finalized by June 2025. Note that a new mechanism



was agreed between the Gouvernement and the World Bank. It has been applied to the entire financial portfolio of the World Bank and has ended the conditioning of disbursements on budgetary regularization from January 1st, 2024.

- iii. The delivery of grid equipment for these 35 activities has also experienced delays due to late payments. Payment has been executed early January 2024, the provision of a bank guarantee is still ongoing, and the equipment is expected to arrive by end of Mai 2024.
- iv. 170.000 EPC lifeline connections (US\$20.06 m): The supplier has been selected for the works, but just like with grid extensions activities, payments were blocked. For the census of customers to be connected, a campaign identified around 180,000 eligible households. Works are expected to be finalized in February 2025.
- v. 25,000 lifeline connections by JIRAMA (US\$ 2.12m): Delivery of equipment and Ready Boards kits for the 25,000 connections was completed in July 2023. Around 15,000 customers were connected by JIRAMA. Works are expected to be finalized in July 2024.
- vi. Supply of 195,000 prepaid meters (US\$6.64 m): contract was signed in February 2023. JIRAMA received the 1st part (25,000 meters and connection kits) by air during the second quarter of 2023 for the lifeline connections to be installed by themselves. The 2nd tranche of 170,000 meters by sea is now at the Toamasina Port awaiting customs clearance.
- vii. Supply of vehicles (US\$2.5 m): All contracts have been signed except for crane trucks for which the bidding process was unsuccessful due to high prices or incompatible delivery schedule. A contract with the United Nations Office for Project Services (UNOPS) was signed in the third quarter of 2023, but direct payment was also blocked due to the general problem of disbursement. With the problem resolved, JIRAMA will confirm the new receipt date.
- viii. Electrification of 250 health centers by JIRAMA: the working group formed by the Ministry of Health, JIRAMA and the Ministry of Energy decided to shift from health centers to 21 hospitals. It has been estimated that health centers were too far from the current grid to envisage connecting them at a reasonable cost. The contract was signed in November 2023 and works are expected to be finished by the end of January 2025.
- ix. Complementary activities:
 - a. For JIRAMA's Business Unit in charge of organizing and monitoring lifeline connections, complementary resources are planned, with the acquisition of IT hardware and printers, security equipment and vehicles.
 - b. Acquisition of a new smart meter management platform and 5,000 smart meters: the contract was signed on March 2024. The equipment is expected to be delivered in September 2024.

b) Component 2: Off-Grid Electrification (US\$55 million equivalent) managed by the Ministry of Energy:

- i. Off-Grid Market Development Fund (OMDF): Around 191,350 solar kits which represents 58%, have been distributed under the OMDF system with an initial objective of 330,000 by the end of the project. However, due to the affordability issue and the election period the fund manager has reduced the target number of solar kits distributed at the end of the project to 265,000 (versus 330,000 previously).
- ii. A pilot proposal on end-user subsidy in the South-West of Madagascar was submitted by the OMDF team to its Steering Committee. It consists of an innovative business model where the capex is subsidized, and the operating costs are financed through a monthly fee considering the current affordability statistics of the end users in rural areas.
- iii. An audit of the OMDF program and the performance of the fund manager have been carried out, and the report has been available since February 2024.
- iv. The Government has requested to allocate the unused funds by the OMDF to provide access to solar kits for around 400,000 vulnerable households targeted by the FID. This activity will be carried out by UNOPS. The



- contract is expected to be signed by the end of April 2024. This will double the initial target of the project in terms of solar kits distribution. This activity is expected to be finalized by March 2025.
- v. Electrification of Basic Healthcare Centers: As part of phase 1, the commissioning of all 47 CSBs has been completed in Q2 2023. As part of phase 2 for the electrification of 453 additional CSBs, contracts were completed and signed in March 2024 and the works launched. Works are estimated to take 6 months.
- c) **Component 3: Technical Assistance and Project Implementation Support (US\$15 million equivalent).** Strategic assessments were completed under this component, (a) updating of the Least Cost Development Plan (LCDP) providing the roadmap for the development of least cost generation projects and associated transmission networks; (b) Geospatial analysis defining the technical, institutional, and financial arrangements to scale-up sustainable provision of electricity services; (c) development of a tariff study to address sector financial viability; (d) strengthening capacity of public agencies responsible for least-cost planning and electrification (Ministry of Energy, Electricity Regulation Authority [ARELEC], Rural Electrification Development Agency [ADER], and JIRAMA ; (e) adoption of the new connection policy,(f) and adoption of Verasol standard for Solar home system (SHS).

The proposed restructuring aims (i) to extend the closing date to finalize the implementation of all remaining activities under components 1 and 2, and (ii) to reallocate the unused credit under the OMDF to finance the distribution of SHS for vulnerable households in rural regions.

II. DESCRIPTION OF PROPOSED CHANGES

- 5. **Loan Closing Date(s) extension.** The closing date(s) of the credit will be extended by an additional 12 months to June 30, 2025. This extended timeline has been discussed and agreed with the Government and will be sufficient to complete the implementation of all remaining works under component 1 and component 2, given the progress to date.
- 6. **Reallocation of non-used credit under the OMDF.** USD 23 million non-used credit under the OMDF category 3 will be reallocated to category 2 to finance the distribution of 400,000 SHS for vulnerable households in rural regions. This will double the final target of the project compared to the initial objective.

Note to Task Team: The following sections are system generated and can only be edited online in the Portal.

III. PROPOSED CHANGES

Operation Information	Proposed Changes	Operation Information	Proposed Changes
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MFD/PCE	Yes	Loan Closing Date Extension	Yes
Results	Yes	Reallocations	Yes
Disbursements Estimates	Yes	Procurement	No
Appraisal Summary	No	Implementation Schedule	No
Safeguard Policies Triggered	No	Institutional Arrangement	No
Disbursements Arrangements	No	Loan Cancellations	No
Clients	No	Financial Management	No
Legal Covenants	No		
DDO	No		
Conditions	No		
Components	No		
Risks	No		
Development Objective	No		
ISDS	No		
Implementation Modalities	No		

IV. DETAILED CHANGE(S)

COSTS & FINANCING

Private Capital Facilitation

Is this an MFD-Enabling Project (MFD-EP)? Yes^{Under revision}

Is this project Private Capital Enabling (PCE)? Yes^{Under revision}

LOANS

Loan Closing

Loan/Credit/Trust Fund	Status	Original Closing	Revised Closing(s)	Proposed Closing	Proposed Deadline for Withdrawal Applications
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IDA-63730-001	Effective	30-Jun-2024	30-Jun-2024	30-Jun-2025	30-Oct-2025
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Reallocations

IDA-63730-001	Currency: XDR	Cancellations (if any): 0.00	New Allocation: 0.00
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Category No.	Expenditure Category	Current Allocation	Actuals + Committed	Proposed Allocation	Financing % (Type Total)	
					Current	Proposed
1	Gds,Wrks,Ncs,Cs,Tr,IO C pt1;	57,500,000.00	28,967,772.66	57,500,000.00	100.00	100.00
2	Gds,Wrks,Ncs,Cs,Tr,IO C pt,2a(c)2b,3;	21,600,000.00	7,645,505.48	38,171,333.37	100.00	100.00
3A	Line of Credit prt 2A(a);	10,800,000.00	3,845,415.15	3,845,412.63	100.00	100.00
3B	Results-based Finan Pymnts pt 2A(b);	18,000,000.00	5,663,946.04	8,383,254.00	100.00	100.00
Total		107,900,000.00		107,900,000.00		

DISBURSEMENTS

Operation Dates & Projection Details

To change the full Disbursement date and/or the projection, select one or more reasons below:

Restructuring

Year	Original Estimation at Preparation		Revised Estimation		Actual
	Model Generated	Task Team Input	Model Generated	Task Team Input	
FY2019	3,109,500.00	1,073,100.00	0.00	0.00	0.00
FY2020	11,123,700.00	9,850,200.00	0.00	0.00	11,090,618.98
FY2021	19,168,350.00	14,873,250.00	0.00	0.00	4,281,350.39
FY2022	32,539,500.00	27,496,200.00	0.00	0.00	7,390,625.53
FY2023	48,645,000.00	43,460,400.00	1,850,000.00	308,333.30	12,081,506.92
FY2024	32,116,950.00	53,246,850.00	27,180,000.00	27,180,000.00	39,349,496.21
FY2025	0.00	0.00	28,730,000.00	0.00	0.00



RESULTS

COUNTRY: Madagascar

Madagascar - Least-Cost Electricity Access Development Project - LEAD

PDO Indicators by PDO Outcomes

Households electricity access								
Indicator Name	Baseline		Actual (Previous)		Actual (Current)		Closing Period	
	Result	Month/Year	Result	Date	Result	Date	Result	Month/Year
Revise Millions of people provided with access to electricity (Number)	0.00	Jul/2019	984250.00	19-Feb-2024	0.984250	18-Feb-2024	4.50	May/2025
Revise Enterprises provided with new or improved electricity services (Number)	0.00	Jul/2019	9,742.00	19-Feb-2024	9,742.00	19-Feb-2024	10,000.00	May/2025
Revise Health centers provided with new or improved electricity services (Number)	0.00	Jul/2019	47.00	19-Feb-2024	47.00	19-Feb-2024	521.00	May/2025

Intermediate Results Indicators by Components

Grid Electrification								
Indicator Name	Baseline		Actual (Previous)		Actual (Current)		Closing Period	
	Result	Month/Year	Result	Date	Result	Date	Result	Month/Year



Revise Households provided with new on-grid electricity access (Number)	0.00	Jul/2019	15,000.00	19-Feb-2024	15,000.00	19-Feb-2024	200,000.00	May/2025
Revise Enterprises provided with new on-grid electricity service (Number)	0.00	Jul/2019	0.00	19-Feb-2024	0.00	19-Feb-2024	8,000.00	May/2025
Revise Health centers provided with new on-grid electricity service (Number)	0.00	Jul/2019	0.00	19-Feb-2024	0.00	19-Feb-2024	21	May/2025
Revise Public availability of customer satisfaction survey (Yes/No)	No	Jul/2019	No	19-Feb-2024	No	19-Feb-2024	Yes	May/2025
New connection policy for grid connections approved (Yes/No)	No	Jul/2019	Yes	19-Feb-2024	Yes	19-Feb-2024	Yes	Jun/2024
Revise The Board of JIRAMA approves a financial recovery plan for the company (Yes/No)	No	Jul/2019	No	19-Feb-2024	No	19-Feb-2024	Yes	May/2025
Off-grid Electrification								
Indicator Name	Baseline		Actual (Previous)		Actual (Current)		Closing Period	
	Result	Month/Year	Result	Date	Result	Date	Result	Month/Year
Revise Households and businesses provided with new off-grid electricity access (Number)	0.00	Jul/2019	191,350.00	19-Feb-2024	191,350.00	19-Feb-2024	700,000.00	May/2025
Revise Enterprises provided with new off-grid electricity service (Number)	0.00	Jul/2019	9,142.00	19-Feb-2024	9,142.00	19-Feb-2024	2,000.00	May/2025
Revise Health centers provided with new or improved electricity access (Number)	0.00	Jul/2019	47.00	19-Feb-2024	47.00	19-Feb-2024	500.00	May/2025
Revise Beneficiaries reached with financial services (Number)	0.00	Jul/2019	129475.00	19-Feb-2024	129475.00	19-Feb-2024	150000.00	May/2025
Revise Millions of people and businesses using financial services, of which (%) are women and youth (Number)	0.00	Jul/2019	84,410.00	19-Feb-2024	0.0841	18-Feb-2024	0.075	May/2025



Revise Number of SMEs with a loan or line of credit (Number)	0.00	Jul/2019	4.00	19-Feb-2024	4.00	19-Feb-2024	3.00	May/2025
Revise Volume of results-based financing channeled to private companies (Number)	0.00	Jul/2019	5,700,000.00	19-Feb-2024	5,700,000.00	19-Feb-2024	11,655,000.00	May/2025
Revise Volume of debt financing extended to private companies (cumulative) (Number)	0.00	Jul/2019	5,180,000.00	19-Feb-2024	5,180,000.00	19-Feb-2024	5,345,000.00	May/2025
Revise Number of participating participating firms and financial Institutions under the OMDF (Number)	0.00	Jul/2019	21.00	19-Feb-2024	21.00	19-Feb-2024	5.00	May/2025
Revise OMDF has operational tracking system to monitor portfolio quality of loans/credit extended by participating FIs and OGS companies (Yes/No)	No	Jul/2019	Yes	19-Feb-2024	Yes	19-Feb-2024	Yes	May/2025
Revise Generation capacity of energy constructed or rehabilitated (Megawatt)	0.00	Jul/2019	0.30	19-Feb-2024	0.30	19-Feb-2024	3.00	May/2025
Revise Renewable energy generation capacity (other than hydropower) constructed under the project (Megawatt)	0.00	Jul/2019	0.30	19-Feb-2024	0.00030	19-Feb-2024	0.003	May/2025
Technical Assistance and Project Implementation Support								
Indicator Name	Baseline		Actual (Previous)		Actual (Current)		Closing Period	
	Result	Month/Year	Result	Date	Result	Date	Result	Month/Year
Revise Beneficiaries of job-focused interventions (Number)	0.00	Jul/2019	0.00	19-Feb-2024	0.00	19-Feb-2024	150.00	May/2025



Revise Monitoring in place of follow-up actions by participants of job-focused interventions (Yes/No)	No		No		No		Yes	
Revise Consumer awareness campaign completed (Yes/No)	No	Jul/2019	Yes	19-Feb-2024	Yes	19-Feb-2024	Yes	May/2025
Revise Lighting Global quality standards for solar home systems adopted and published (Yes/No)	No	Jul/2019	Yes	19-Feb-2024	Yes	19-Feb-2024	Yes	May/2025
Revise Response rate to GRM complaints (Percentage)	0.00	Jul/2019	100.00	19-Feb-2024	100.00	19-Feb-2024	100.00	May/2025
Revise Geospatial analysis and planning platform established and operational (Yes/No)	No	Jul/2019	Yes	19-Feb-2024	Yes	19-Feb-2024	Yes	May/2025
Revise National Electrification Investment Plan developed and adopted (Yes/No)	No	Jul/2019	No	19-Feb-2024	No	19-Feb-2024	Yes	May/2025



PROJECT LEAD - WORK SCHEDULE AND SERVICES

	ACTIVITIES	Current situation (April 2024)	Start date	2024												2025					
				Apr	May	June	July	August	September	Oct	Nov	Dec	Jan	Feb	March	Apr	May	June			
COMP 1: DENSIFICATION AND EXTENSION																					
1	Completion of 25,000 connections by JIRAMA	Work in progress	05/2023																		
2	170,000 EPC connections completed	Work in progress	04/2024																		
3	JIRAMA to carry out 35 extension activities	Supply in progress	04/2023																		
4	Completion of 285 Extension activities by EPC	Work and supplies in progress	11/2023																		
5	EPC connections for 21 hospitals	Signed contract	04/2024																		
6	Acquisition of crane trucks by UNOPS	Signed contract	12/2024																		
COMP 2: OFF-GRID ELECTRIFICATION																					
7	OMDF	Distribution quote	03/2020																		
8	440,000 solar kits purchased with UNOPS	Contract preparation phase	04/2024																		
9	Service provider (FID) for solar kit distribution	Contract preparation phase	04/2024																		
10	Electrification of 453 CSBs	Order / Local construction work	03/2024																		
COMP 3: TECHNICAL ASSISTANCE																					
11	A.T for communication support - for the period 2024-2025	Phase 2 Support in progress Phase 3 Waiting for tdr	07/2023																		
12	Preparation of specific decrees	Drafting the first decree	10/2023																		
13	Digitalization at MEH	Functional and technical design	01/2024																		
14	Audit of the OMDF Fund Manager and implementation of a social fund Solar Kits	Support for the implementation of social kits	10/2023																		
15	AVI	Verification in progress	01/2024																		
16	A.T monitoring and control of electrification of 453 CSBs	Procurement phase	05/2024																		