

Project Name Madagascar-Energy Services Delivery Project

Region Africa Region

Sector Other Fuels;  
Distribution & Transmission;  
Other Power  
Energy Conversion

Project ID MGPE74659

Borrower(s) GOVERNMENT OF MADAGASCAR

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Environment Category B

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## 1. Country and Sector Background

The main issues in the electricity sector facing the Government today are: (a) power sector reform and capacity expansion to meet the demand of a growing economy; (b) inadequate and unreliable electricity supply; (c) high level of technical and non-technical losses and poor collection performance; (d) high operating costs in secondary centers; (e) high level of public arrears; and (f) Lack of access to modern sources of energy in rural areas as a means to improving productivity, income and reducing poverty.

**Government Strategy**

(a) The Government strategy is naturally focused on those elements that sustain the economy and provide basic public services. The ability of one of these services, namely electricity, to reliably meet the demand of a growing economy is now uncertain. The Government plans to speed up the implementation of structural reforms to make the economy more efficient, to raise productivity and foster the emergence of income generating activities. The Government policy of developing private power generation is already bearing fruits and several independent power producers are generating and selling electricity to the grid. The Government has committed itself to privatize the inefficient national utility and enact laws and regulations for the promotion of private sector participation and consumer protection. The Government has also committed to paying its bills through regular budgetary appropriations or/and cross-debt compensation;

(b) The Government is aware of the need to reduce poverty in the rural areas where the majority of the poor live. Widening access to modern sources of energy is seen as a key element in the Government's strategy for raising income, improving health outcomes and reducing poverty, especially in the poorest provinces.

**Rural electrification strategy**

The Government of Madagascar rural electrification strategy, consistent with the overall program of power sector restructuring, shifts from the conventional approach under which rural electrification is undertaken by a State-owned vertically-integrated power utility to a demand-driven, private sector led, commercially-oriented approach with transparent and effective subsidies, drawing on the experience of South Asia. The key elements of this approach are:

Rural electrification forms an integral part of the Government's wider rural transformation and poverty eradication agenda. The primary objective of the RE Strategy is to reduce inequalities in access to electricity and to exploit the associated opportunities for increased social welfare, education, health and income generating opportunities. The RE strategy aims to achieve for the year 2010 a rural electrification rate of 10% (compared to about 3% today) and a rural electricity coverage rate - the percentage of rural households living in the served areas - of 30%.

Government's role will be to determine policy, promote investments, set targets and provide guidance and subsidies to investors, while projects and investments will be demand-driven and undertaken by any capable sponsor. Initially, however, the Government will issue bids for RE projects. The current system of standard tariffs within the zone will be replaced by a system that reflects the investor's cost of supply. RE projects will be regulated by the Regulatory Authority, with "light-handed" regulation of small systems to reduce barriers for local initiatives and private sector involvement.

**A Rural Electrification Fund (RE Fund)** - with funds from the general budget, a kWh sold levy, and bilateral/multilateral donors - to provide smart, performance based subsidies - will be established to support the increased access to electricity in rural areas. This Fund will be the key instrument for achieving economic and equitable regional access to electricity. The

commercial financial sector is expected to provide debt financing on commercial terms to private investors for RE investments. However, given the current status of Madagascar's financial sector and the lack of experience in financing RE activities, this support is expected to be progressive. A Credit Support Facility will be developed that will support, not supplant or replace, the financial sector in providing credit for RE. The RE Strategy includes long-term capacity building, awareness raising and promotion activities in order to overcome the barriers of limited technical knowledge and business skills, and lack of experience with credit for RE investments. Technical assistance to project promoters, operators, construction firms, service and equipment suppliers involved in RE will be provided on a business-to-business basis under private-public partnership arrangements.

## 2. Objectives

The project development objectives are to: (a) expand access to electricity in rural and peri-urban areas especially in the poorest provinces; and (b) support the growth of the economy by reliably meeting the demand for electricity at least-cost. The achievement of the project objectives is enhanced by the support provided by ongoing Energy Sector Development Project (ESDP) in the following areas:- putting in place a legal and regulatory framework (an electricity reform law and a regulatory law have been enacted);- carrying a least-cost expansion plan to determine the optimal investment sequence; - carrying a rural electrification master plan;- opening up of the power sector to independent power generation; - setting the stage for the restructuring/privatization of the national power utility, JIRAMA; and- creation of institutions for decentralized electricity access (ADER and FER). The project also aims at helping the Government in the transition to a power sector where private investment is predominant, especially in those segments that are potentially competitive such as generation and commercial (i.e. metering, billing and collection) activities.

## 3. Rationale for Bank's Involvement

The participation of the Bank was instrumental in developing a comprehensive review of sector reform options with a catalyzing effect on reform implementation. The presence and continued support of the Bank in the sector should increase the level of confidence and interest of the private sector in investing in the electricity sub-sector. Furthermore, the Bank's worldwide experience in similar reform programs and the Bank's specific experience in the power sector in Madagascar, will contribute to a better design of the reform program in the power sector, as well as of post-reform regulatory activities.

## 4. Description

1. Improvement in system reliability.
2. Transmission and Substations.
3. Distribution.
4. Rural Electrification (including US\$20 million IDA guarantee).
5. Support to sector reform and project coordination and monitoring.

## 5. Financing

Total	( US\$m)
BORROWER	2

IDA	148
LOCAL SOURCES OF BORROWING COUNTRY	10
Total Project Cost	160

## 6. Implementation

Implementation period: The project is expected to take 5 years and be completed by December 31, 2006. Executing agencies: Three executing agencies will be involved in project implementation: (a) The Ministry of Energy and Mines (MEM). A project management unit within the Ministry of Energy and Mines will be responsible for overall project coordination and monitoring. This unit already exists and has coordinated the implementation of several projects, including the ongoing IDA financed Energy Sector Development Project (Cr. 2844-MAG). (b) JIRAMA will implement the improvement in system reliability and the transmission and

distribution components. JIRAMA, also has a vast experience in implementing large projects, including those financed by IDA, AFD, and other donors; and (c) The Agence d'Electrification Rurale (the Rural Electrification Agency) will be responsible for the implementation of the rural electrification component. The Agency will be staffed with the requisite skills to carry out its tasks efficiently. The establishment of ADER, the appointment of its director and some key staff, including a financial specialist, will be a condition of negotiation. ADER will organize the bidding for rural electrification schemes. It will serve as the secretariat of the Rural Electrification Fund (REF) and report to the Rural Electrification Board (REB). REB also serves as the REF Board. The trust agent is contracted by REB to administer REF payments to approved projects. Accounting, financial reporting and audits: Where it does not exist, an accounting and financial management system based on internationally accepted accounting principles would be established and operational before effectiveness. The certification of the financial and accounting system will be a condition of effectiveness. Project accounting and procurement will be centralized within each executing agency. Project accounts, SOEs and Special Account (SA) will be audited annually. The audit reports would include separate opinions on SOEs and the SA, as well as a management letter identifying major weaknesses in financial management and proposing practical recommendations. The audit reports would be submitted to IDA not later than six months after the end of each calendar year. The selection of external auditors will be a condition of effectiveness. Monitoring and evaluation: Not later than 45 days after each quarter, each executing agency will submit to IDA, quarterly progress reports covering all project activities, including procurement, and a financial summary report. A mid-term review, 30 months after effectiveness, will provide detailed analysis of implementation progress towards development objectives. Prior to project completion, baseline data for selected performance indicators will be assembled to be used during the post-implementation period.

## 7. Sustainability

Project sustainability will mainly rest on the success of reforms in the power sector, private sector financing of generation and private sector involvement in the financing, management and operation of rural electrification. It is also important that private RE projects be sustainable to provide adequate and reliable service over the long-term, meeting a growing demand as time passes. Private RE needs nurturing in

the initial years to establish itself solidly at the grassroots level.

8. Lessons learned from past operations in the country/sector

(a) Projects should have clear and limited objectives and their design must be kept simple to fit the borrower limited implementation capacity; (b) The instruments should be consistent with the objectives of the project; and (c) Lack of ownership impacts negatively on reform and project success; The design of the proposed project takes into account these lessons: (a) The objectives of the project are few and simple. The project does not represent a burden on MEM or JIRAMA because it consists of activities to which they are accustomed as part of their normal operation. The project supports the establishment and capacity building of the rural electrification agency so that it is able to carry out the rural electrification program. The project also provides technical assistance where appropriate to complete priority tasks, particularly those related to the reform of the power sector and the environment; (b) The instruments are appropriate to the objectives of the project; and (c) There is a wide consensus, including the Government, on the restructuring/privatization process and a commitment to the success of this project.

9. Program of Targeted Intervention (PTI) N

10. Environment Aspects (including any public consultation)

Issues : The project is expected to displace generation which otherwise would have been fossil fuel through the use of renewable energy. This would result in local and global environmental benefits from reduction of emissions of SO<sub>x</sub>, NO<sub>x</sub> and particulates. In addition, the increased use of solar home systems will significantly reduce indoor use of kerosene and other lighting fuels and improve the indoor environment, therefore reducing health risks. On the other hand, the construction and operation of generation plants (small hydro, diesel, etc.) as well as transmission and distribution lines and substations may have potential adverse environmental impacts. The integrated safeguard data sheet (ISDS) has been prepared and entered in the system. An environmental and social assessment is already underway on the assumption that the category is A. The terms of reference have been discussed and agreed with the Office National de l'Environnement (ONE). For the third turbine at Andekaleka and the transmission and distribution components, the environmental and social assessment will identify the impacts the project would have and determine the need for further studies and/or environmental mitigation, if any. An environmental and social management framework (ESMF) will be prepared. This framework would essentially apply to investments in rural electrification and provide a clear framework for environmental and social safeguard screening, assessment, and mitigation as appropriate. Consultations with affected people and communities as well as procedures for addressing complaints are integral parts of ESMF. Monitoring of safeguard compliance will be the responsibility of ADER. Before a subsidy proposal is forwarded to the RE Board, ADER will ensure that the ESMF is properly complied with by requiring, in particular, evidence of an adequate safeguard assessment and mitigation plan approved by ONE. ADER will undertake monitoring of safeguard compliance as part of its general project monitoring activities. A person will be trained to ensure the compliance of business plans with the ESMF. There is, at this time, no sale of JIRAMA's generation assets that could involve environmental liabilities.

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Note: This is information on an evolving project. Certain components may not be necessarily included in the final project.

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