

**PROJECT INFORMATION DOCUMENT (PID)
APPRAISAL STAGE**

Report No.: AB1741

Project Name	Renewable Energy Market Transformation
Region	AFRICA
Sector	Renewable energy (100%)
Project ID	P073322
GEF Focal Area	C-Climate change
Borrower(s)	GOVERNMENT OF SOUTH AFRICA
Implementing Agency	Department of Minerals and Energy Mineralia Centre, 234 Visagie Street Pretoria, South Africa Tel: +27 12 317 8005/6 (Dr. Rob Crompton)
Environment Category	<input type="checkbox"/> A <input type="checkbox"/> B <input checked="" type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	July 18, 2005
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Date of Board Approval	December 6, 2005

1. Country and Sector Background

South Africa's overall economic conditions. The economy grew at an average rate of 2.8% from 1994 to 2003. Foreign debt is low and overall borrowing has been brought below 40% of GDP, the budget deficit has averaged 1% over the last five years, and inflation is expected to fall within the 3-6% target range later this year.

Power sector. South Africa has a well-developed power sector, where the generation and transmission of power is concentrated in the hands of Eskom, the State-owned utility. Eskom is also the largest single distributor in the country in terms of energy sales for final consumption and number of customers, though there are more than 400 other distributors, mainly municipal electricity departments, which also supply electricity to end customers. While Eskom is widely recognized as a world-class power utility (electricity prices in South Africa are among the lowest in the world, with an average sales price of around 2 US ¢ per kWh), the government has initiated a program of sector reforms, with an initial goal forming six "regional electricity distributors"; changes to the generation and transmission sectors will be made in due course.

Development of renewable energy. South Africa's greenhouse gas (GHG) emissions are high, both in absolute and per capita terms, because of its reliance on low-cost domestic coal for power generation and other uses. The Renewable Energy Market Transformation (REMT) project aims to help the Government implement the follow-up actions to the Government's White Paper on Renewable Energy, which was approved in 2003. The White Paper on Renewable Energy (2003) sets the target of "10,000 GWh (0.8 Mtoe) renewable energy contribution to final energy consumption by 2013, to be produced mainly from biomass, wind, solar and small-scale hydro."

The White Paper lists these sources for meeting the target “*The renewable energy is to be utilized for power generation and non-electric technologies such as solar water heating and bio-fuels.*”

The 10,000 GWh target is an ambitious target for South Africa, and there is likely to be limited progress toward it because there are significant barriers to renewable energy development in South Africa. The main barriers are (i) virtually no renewables-based power generation and (ii) only a nascent market for commercial solar water heating.

2. Objectives

The project’s renewable energy objective, in line with GEF Operational Program 6, is to remove the barriers to, and reduce the implementation costs of, renewable energy technologies to help mitigate greenhouse gas emissions. The specific priority is *CC-3 Power sector regulatory frameworks and policies for grid-based renewable energy.*

The principal outcomes of the project will be the establishment of (i) the frameworks and capacity required for meeting and going beyond the Government’s renewable energy target; and (ii) an established commercial solar water heating industry. In terms of the Government’s ultimate objective, the project will significantly increase the likelihood of meeting and going beyond the 10,000 GWh target.

3. Rationale for Bank Involvement

Under the apartheid regime, South Africa was unable to participate in many aspects of the international arena, including the progress in renewable energy. In this project, the Government intends to use the World Bank as a ‘knowledge bank,’ and not as a lending institution, which is consistent with the overall relationship between the Government and the Bank so far. This role will allow South Africa to take advantage of the Bank’s knowledge of renewable energy developments, in particular suitable policy frameworks as well as developments in external carbon finance funds. The project is closely coordinated with Danida, which is supporting the Department of Minerals and Energy (DME) on renewable energy. The Bank’s comparative advantage is its ability to (i) provide high level technical support, such as that already provided in finalizing the Government’s White Paper on Renewable Energy and (ii) mobilize significant amounts of external carbon funds for renewable energy development.

4. Description

The project would provide technical assistance (TA) and capacity building for (i) Renewables-based power generation in South Africa and (ii) Commercial solar water heating (which complements a UNDP-GEF project focused on the residential segment).

Renewable energy power generation. The project will assist South Africa in the creation and/or strengthening of the organizations and institutions that would help the Government meet its renewable energy target. The capacity areas covered would be the policy setting, promotion, regulation, service provision, and monitoring/evaluation of renewable energy power generation.

Commercial solar water heating. The project will provide TA and capacity building to professional, technical and business groups in key market segments and companies engaged in selling CSWH systems and services and implementation support. This will include assistance in developing standards and codes and the establishment of a ‘participating CSWH company program’. The fact that the companies are participating in a program sponsored by an established international agency, which will supervise the program and suspend them if needed, will significantly improve the companies’ status, and make them more credible to the potential customers and lenders. The program will assist the companies in a variety of ways on as-needed basis: getting certifications that their equipment meets standards, independent installation and performance verifications to increase customer confidence, equipment performance guarantees in case this should be needed initially, performance grants for installed systems that are deemed to be demonstrative or path-breaking. In return, the participating companies will agree to meet the program’s code of behavior and risk suspension in case they fail to meet the conduct code.

5. Financing

Component	Cost Estimates (US\$M)	Financing Plan (US\$M)		
		GEF	Government	Private
• Renewable energy power generation	6.425	4.425	2.000	0.000
• Commercial Solar Water Heating (CSWH)	10.875	1.575	0.300	9.000
Total	17.300	6.000	2.300	9.000

6. Implementation

Institutional and Implementation Arrangements. DME will contract the Development Bank of Southern Africa (DBSA) to be the implementing agent for this component. A Memorandum of Understanding (MOU) will be signed between DBSA and DME which will outline the details of responsibility for each party. A Steering Committee (SC), to be appointed by DME will oversee the project. The SC will guide and follow the development of the project according to the implementation schedule, and cause periodic progress reports to be submitted, including use of funds, to the Bank, the DME and the IDT.

DBSA will be responsible for carrying out the various project activities, i.e. the policy and institutional framework, capacity building and implementation activities. As such DBSA will be handling procurement, quality assurance, and progress reporting with accountability to the Steering Committee (SC). DBSA will also be responsible for administering the participating CSWH company program grants for the commercial solar water heating industry. The private sector will be responsible for implementing all the investments to be supported under this project.

DBSA will establish an Implementation Support Unit (ISU) to manage its REMT activities for the four years of the project. The unit is expected to begin with a minimum staff, and to increase to full strength in line with the expected increase in the pace of implementation over the first two years. The unit will be headed by a project coordinator and will include up to two professionals and up to two support staff. An advisor with international expertise will provide services on an as needed basis for up to the equivalent of 15 person months.

Monitoring and Evaluation of Outcomes/Results. The overall responsibility for monitoring and evaluation will be with DME; the day-to-day responsibility will be with DBSA. DBSA will submit regular reports to DME, which will include all the information necessary for managers and policymakers to assess the project's effectiveness.

7. Sustainability

South Africa's commitment to renewable energy is shown by the White Paper on Renewable Energy, and there is little risk that the policy framework supported by this project will not be developed. There is limited concern about the sustainability of the investments, as they would be installed and financed mainly by private sector entrepreneurs, who would have a clear incentive to maintain and sustain their individual investments.

However, there are some concerns that lack of local or external funds to support renewable energy investment might prevent South Africa from achieving its long-term target of 10,000 GWh, even if the framework is successfully developed. Underlying this is the low cost of generating coal-based power in South Africa, which makes it difficult for renewable energy to be competitive. At present, the Government's strategy is based on a voluntary approach, under which individual projects seek to attain their own financial viability, without any obligation on the power generation companies to utilize renewable energy. However, if this voluntary approach proves to be inadequate, the Government would have to consider other options, such as 'mandated market shares' or an 'electricity feed law.' In recognition of these uncertainties, the Government has scheduled a mid-term review of its long-term target, scheduled to take place after years the adoption of the target, i.e., in 2008. During the course of this review, the Government will assess and adjust, as needed, its target, the schedule for meeting it, and the instruments to be used to achieve it.

Within South Africa, there is no need to replicate the frameworks and capacities after they have been established. Outside South Africa, the framework developed in this project would also be applicable in other countries throughout Africa, as well as in other parts of the world. At present, few of the Bank's client countries have a well-functioning framework for promoting renewable energy power generation, and this project could provide a replicable framework to pursue this route.

8. Lessons Learned from Past Operations in the Country/Sector

Since there has been no significant experience with renewable energy power generation in sub-Saharan Africa, the only available lessons are from experience in other parts of the world. GEF – one of the prime supporters of renewable energy power generation - has sponsored a number of

studies that review the world wide experience including that in industrialized countries. The main lessons derived from these reviews are:

- Policies that promote production-based incentives rather than investment-based incentives are more likely to spur the best industry performance and sustainability.
- Power-sector regulatory policies for renewable energy should support IPP/PPA frameworks that provide incentives and long-term stable tariffs for private power producers.
- Regulators need skills to understand the complex array of policy, regulatory, technical, financing, and organizational factors that influence whether renewable energy projects are viable.

9. Safeguard Policies

The technical assistance and solar water heating investments in the project are not expected to present any environmental or social risk. Solar water heating is not a 'listed activity' with respect to South African environmental requirements, and therefore would not be subject to the environmental screening or environmental assessment process. Since the project does not involve any land taking, and the only construction will be within the perimeter of existing institutional, commercial, or industrial establishments, (and in fact, mostly on rooftops) no social safeguards are expected to be triggered. Therefore, the project has been rated as a 'C' (no environmental or social safeguard impact).

10. List of Factual Technical Documents

- White Paper on Renewable Energy
- Conningarth Economists, *Economic and Financial Analysis Due Diligence*, Renewable Energy Market Transformation (REMT) Project, Report to the World Bank, June 2004
- Assessment of interest and capacity of South African financial organizations to finance renewable energy investments", August 17, 2004

11. Contact point

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