SOUTH AFRICA

1 CDM investment climate index: regional comparison

CDM investment climate index (CDM ICI), Africa - October 2010 (excerpt)

Rank	Country	CDM ICI (max. 100 points)	Regional classification)
1	South Africa	86.1	Good
2	Morocco	79.8	Good
3	Tunisia	77.2	Good
4	Egypt	74.6	Satisfactory
5	Senegal	67.9	Satisfactory
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54	Somalia	15.7	Unsatisfactory

Source: DEG - Deutsche Investitions- und Entwicklungsgesellschaft mbH
(For calculation method, see www.kyoto-coaching-cologne.net)

The CDM ICI measures the investment climate for CDM projects. It can range between 100 points (highest) and 0 points (lowest). Altogether, the climate for South Africa is rated as 'good', the best rating in Africa. Both the institutional environment for CDM projects and the general climate for private investments are better than in Morocco and Tunisia. South Africa is also well positioned in the world ranking at seventh place. Other countries, such as Malaysia and Brazil, however, rank higher thanks to their investment climates.

2 General climate for foreign investments

General economic statistics 2009	
Population:	49.1 million inhabitants
Nominal GDP:	US$ 285.8 billion (estimate)
Per capita GDP:	US$ 5,521 (estimate)
GDP growth (real):	-1.8% (forecast 2010: +2.8%)
Consumer prices:	+7.1%
Goods exports:	US$ 66.1 billion
Goods imports:	US$ 65.8 billion
Foreign direct investments (2008):	US$ 9.0 billion
Foreign debt (end of 2009):	US$ 37.2 billion (gross)
Currency reserves (end of 2009):	US$ 38.7 billion
Foreign exchange rates (as at 8 Sept. 2010):	EUR 1 = Rand 9.25; US$ 1 = Rand 7.23
Country credit rating acc. to Institutional Investor (September 2010):	62 out of 100 points (Rank 50 of 178, no point change compared with previous year)
Corruption Perceptions Index 2009 Transparency International:	4.7 out of 10 points (Rank 55 of 180; 10 = free of perceived corruption)

Locational advantages:
Favourable macroeconomic framework, relatively stable political climate, 'mature' economy with advanced services and financial sector, good infrastructure (road, air, telecommunications)

Locational disadvantages:
Special requirements for enterprises under the Black Economic Empowerment Programme, poor energy infrastructure/energy shortage, high unemployment, shortage of qualified labour, security problems

3 Specific climate for CDM projects

3.1 Ongoing CDM projects in the country

As at September 2010, the CDM Executive Board (EB; responsible UN body for the international approval of CDM projects) had registered 17 projects from South Africa. The anticipated emission reductions from this amount to 2.96 million t of carbon dioxide equivalent (CO_2e). This marks a step forward on the two registered projects in 2006, but compared with the international market it remains a rather small number. Due to its very high emissions from coal-fired power generation, however, South Africa has a good CDM potential.

Projects in South Africa registered by the CDM Executive Board as at September 2010

Project category	Number of projects	Estimated annual emission reductions up to 2012 (1,000 t CO_2e)
Industrial gases (N_2O)	4	1,816
Landfill gas	4	626
Renewable energies	3	275
Fuel switch	2	120
Energy efficiency	2	62
Methane gas avoidance (waste water and manure)	2	63
Total	**17**	**2,962**

Source: UNFCCC, UNEP Risø Centre

By September 2010, the Designated National Authority (DNA) had issued national approval for 25 projects (Letter of Approval - LoA) and another nine projects were on the waiting list. In addition, 126 project ideas have been submitted to the DNA as Project Idea Notes (PINs). Overall, the 160 projects have an annual reduction potential of about 110 million t CO_2e.

PDDs and PINs submitted to the DNA as at September 2010

Project category	Number of projects	Share in estimated annual emission reductions (in %)
Energy efficiency	25	47
Fuel switch	22	33
Methane gas avoidance and use (landfill gas, sewage, etc.)	32	9
Cogeneration	22	6
Transport	3	3
Biofuels	5	1
Industrial processes	5	1
Renewable energies	42	<1
Industrial gases (N_2O)	4	<1
Total	**160**	**100**

Note: A detailed project list is available at the DNA webpage
Source: DNA/Department of Energy

The chemicals industry has already identified the opportunities afforded by CDM and largely exhausted the potential for reducing NO_2 emissions with the current projects. There are, however, good prospects in the energy sector with fuel switch (substitution of coal with natural gas or biomass/gas), in mining (methane gas avoidance/mine gas) or in industry through energy-efficient processes. Agriculture also affords scope for CDM projects through the use of biogas and biomass. The DNA favours projects in renewable energies and energy efficiency.

The DNA sees another priority for future development in the programmatic approach (Programme of Activities - PoA), where many small measures are bundled into one project. At present, there are eight PoA projects in the pipeline, one of which has already been approved by the DNA. Solarthermal appliances for hot water will be installed in six out of the eight measures, whereas two projects involve energy-efficient cooking (cooking with heat storage). As an example, DNA often cites the Kuyasa Project, the first CDM project registered in South Africa, where low-income households were equipped with solarthermal hot water systems, insulation and energy-saving electric light bulbs. Further information on possibilities and project examples is available in the English-language CDM Status Report of 2009 published on the DNA website.

Known buyers of South African Certified Emission Reductions (CERs) include a power producer in the Netherlands and the World Bank. The Carbon Fund of Kreditanstalt für Wiederaufbau (KfW) is also engaged on the South African market (for example, in the PoA South African Solar Water Heater Programme) and provides flexible pricing schemes for the purchase of CERs up to 2020.

3.2 Quality of Designated National Authority (DNA)

The DNA is attached to the Department of Energy. While only two personnel were available in 2006, seven are now employed in 2010. The Director of the DNA is Lindiwe Olga Chauke. Experts in the sector consider the South African DNA to be very helpful and competent, especially in comparison with its sister organisations in other African states.

The legal basis for the operations of the South African DNA is Government Notice No. R 721 of 22 July 2005. The appraisal criteria and the national project approval procedure are published under www.energy.gov.za/files/esources/kyoto/dnaapproval.pdf on the webpage of the Department of Energy. A committee consisting of representatives from ten ministries advises the DNA in decision-making.

The letter of no objection issued by the DNA after a voluntary preliminary appraisal is no guarantee that a project will also be finally approved. To obtain definitive approval from the DNA, projects must meet various social, ecological and economic requirements for sustainable development. According to its own information however, the DNA currently adopts a very flexible approach to the criteria. A project, for example, need not meet all requirements to be issued with a LoA.

For the LoA, the DNA requires the project owner to submit a validated Project Design Document (PDD). Unlike usual practice in many other CDM host countries, the applicant must initially bear the costs for validation without being sure whether the project will then also be approved. Besides this, the DNA can also require an environmental audit for some project types.

After receipt of the PDD, the DNA cites 45 days as the maximum handling deadline for project approval. It reports that it has been able to meet this term so far in all projects, provided the complete documents have been submitted by the applicant.

3.3 Local consultants, validators and verifiers

Both international and national advisers are engaged on the South African consulting market. In PDD preparation, the only local company that has been able to gain a leading market position is CDM Africa Climate Solutions. An overview of project developers engaged in South Africa has been compiled by the DNA in its 2009 publication, CDM Status Review. The KfW PoA Support Centre assists project developers in preparing PINs or PDDs for PoA projects.

In the validation of registered South African CDM projects, the Norwegian DNV has dominated the market to date. There are no local Designated Operational Entities (DOE), but some foreign DOEs maintain branch offices in South Africa, also including TÜV Rheinland. As the only company, PriceWaterhouseCoopers had a local DOE status until 2008, but then closed its office. A South African enterprise called Carbon Check is presently awaiting registration as a DOE.

3.4 Local legal requirements for CDM projects and taxation aspects

The South African DNA presently reserves the right to oblige owners of CDM projects that only just meet the requisite sustainability criteria or earn disproportionately high income from the sale of CERs to invest a part of the certificate proceeds in additional measures for the promotion of sustainable development near the project.

One hurdle for CDM projects is the environmental audit the DNA can require. This can cause delays in some provinces, because the competent authorities lack the necessary capacities to verify the criteria.

An obstacle in landfill gas projects is the uncertainty whether the certificates generated will be classified by the Ministry of Finance as assets or as a financial instrument. The Public Finance Management Act does not contain any clear provisions on this. The problem is that the municipalities cannot decide on the sale of assets on their own.

According to the South African Ministry of Finance, income from the sale of primary CERs is exempt from VAT. Moreover, the government is considering introducing an emissions tax.

3.5 CDM partnership agreements

CDM partnerships have been agreed so far with Denmark (DANIDA), Canada, Japan, France and Austria. An agreement with UNDP is due to be signed soon.

3.6 Opportunities for CDM projects in the energy sector

Over the last two years, developments have been very rapid in South Africa's energy sector. The state electric utility company, Eskom, is investing billions in the construction of new coal power stations to add about 16,000 MW in basic load capacity. South Africa is Africa's largest power producer and consumer. Coal makes up the mainstay of energy supply, accounting for about 70% of primary energy demand. Due to the attendant emission pollution, the baseline is very favourable for CO_2 savings in the energy sector.

Energy and environmental data

	South Africa	Africa	OECD
Primary energy supply (Mtoe, 2008)	134.49		
of which from renewable energy sources	approx. 10%[1)]		
Electricity consumption (TWh, 2008)	232.23		
of which from renewable energy sources	approx. 2.4%		
CO_2 emissions from fuel combustion (Mt, 2008)	337.42		
Electricity consumption/capita (kWh/capita, 2008)	4,770	571	8,486
CO_2/Primary energy supply (t of CO_2/toe, 2008)	2.51	1.36	2.33
CO_2 per capita (t of CO_2 per capita 2008)	6.93	0.90	10.61
CO_2/GDP (kg of CO_2/US$, purchase power parity 2000; 2008)	0.63	0.36	0.38

1) A large part of this is attributable to the relatively high biomass use by the population for heating; hydropower: 2.2%, solar energy: 0.2%
Sources: IEA, Germany Trade & Invest

The natural conditions in South Africa favour renewable energies. In 2003, the government already submitted a white paper on the issue with the aim of building enough capacities by 2013 to generate 10,000 GWh electric power every year from renewable energy sources. To promote this, South Africa also adopted a feed-in tariff in 2009 (REFIT) for windpower, large-scale PV, CSP, small hydropower, biomass, biogas and landfill gas (www.nersa.org.za). However, no capacities have gone online as yet under the tariff, because Eskom has not been

obliged to purchase the electricity. The government is currently preparing the appropriate institutional framework for implementing REFIT. Difficulties with the power purchase agreement (PPA) between interested independent power producers (IPP) and Eskom have already arisen before. Power generation projects have often failed to materialise because the owners could not come to an agreement with Eskom on a PPA.

Generally, the ambitious government goals have not been sufficiently implemented, because renewables have hardly played a role till now. The main reason for this are the very low prices of electricity in South Africa by international standards. Substantial increases have been adopted for prices but these remain relatively low compared with other countries. Data for the calculation of the baseline and the grid emission factors are available on the Eskom webpage (www.eskom.co.za).

Windpower, however, could see an upswing in the coming years. Some, albeit smaller, windparks have now been installed. The first windfarm in the country was already built several years ago with a capacity of 5.2 MW near Darling, about 150 km from Cape Town. A second one with 45 MW was completed at Coega in 2010 near Port Elizabeth. Other offshore windparks are currently under discussion in the coastal provinces Western Cape and Eastern Cape.

Energy efficiency is also gaining in importance. Insulation is attested large potential. Programmes and calls to tender are underway above all for solar water heaters. Electric hotwater boilers are installed today on almost all house roofs in South Africa. Eskom now promotes the installation of solar hotwater systems with financial incentives of between EUR 150 and EUR 500. Up to 2013, it intends to subsidise 925,000 of these hotwater boilers. Some municipal suppliers in Johannesburg, Cape Town and Port Elizabeth, for example, have adopted a similar approach. They plan to buy up to 1.5 million solar boilers in the coming years and lease these to households. The DNA sees good prospects for programmatic CDM projects in energy efficiency in households and buildings.

3.7 Finance facilities for CDM projects

The South African capital market is stable, liquid and professional. Local banks offer long-term finance in local and foreign currency. The Standard Bank provides finance and consultancy services specially for CDM projects in close cooperation with EcoSecurities. International and regional development banks, however, also have local offices and help with finance. Many buyers of certificates finance CDM documentation (PIN and PDD) in return for the subsequent sale to them of CERs from the project.

DEG - Deutsche Investitions - und Entwicklungsgesellschaft mbH has been engaged in South Africa since 1994 with long-term investment finance for private enterprises. Finance is provided on commercial terms (long-term loans, mezzanine finance, equity contributions and guarantees). Through its climate protection network, Kyoto Coaching Cologne (KCC), DEG can also draw on know-how and partners to provide support in the CDM registration procedure. Furthermore, it can cofinance certain project activities with particularly beneficial developmental impacts via the PPP programme of the Federal Ministry for Economic Cooperation and Development with up to EUR 200,000. Up to September 2010, DEG has cofinanced 31 PPP projects of this kind in South Africa.

4 Recap

Owing to its coal-based economy and extensive industrial sector, South Africa is attested a high CDM potential. There is scope in the energy sector through fuel switch or in industry through more energy-efficient processes. The potential is large in renewable energies, but as long as electricity prices remain as low as they are and/or the legal framework for their promotion is not fully in place, this sector will be slow to develop. New opportunities are afforded by the programmatic approach of bundling many small measures.

The CDM market in South Africa has the largest potential by far in Africa, but though continuous, development is rather slow by international standards but ought to grow further in future as well. Climate protection will come to be an increasingly important issue in South Africa, also at policy level.

5. Advice/Service

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