

# CLIMATE INVESTMENT FUNDS

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Meeting of the CTF Trust Fund Committee  
Washington, DC  
October 27, 2009

## **Review of the Clean Technology Fund Investment Plans**

(Paper submitted by the representative of World Resources Institute,  
as elected civil society observer)



	Ukraine	South Africa	Morocco
Baseline and objectives	A business as usual (BAU) scenario is set against Ukraine's Energy Strategy. Plan based on Ukraine's targets under the Kyoto Protocol, and to reduce emissions by 20% and 50% below 1990 levels by 2020 and 2050 respectively. Energy and industry priority sectors for intervention as account for 91% of emissions. Based on "low carbon development" options to reduce emissions relative to the BAU including: rehabilitation of fossil fuel power plants, 6GW of additional nuclear power plants, switching to 5 500 MW combined cycle / heat and power plants; renewable power generation; increasing electricity production from hydropower by 5 TWh; renovation of the gas network; improving industrial efficiency; improving household efficiency.	Framed by the Long Term Mitigation Scenarios, a national effort to identify opportunities to reduce South Africa's GHGs. More than 70 % of emissions come from the energy sector because of its reliance on coal, and its economy is highly energy intensive. The scenarios identify energy efficiency, renewable energy, nuclear energy, and modal shifts towards public transport as key opportunities to reduce emissions. The plan is placed in the context of its renewable energy policy and newly adopted renewable energy feed in tariffs, 12% energy efficiency improvement target, and initial experiments with carbon taxes.	Framed by second national UNFCCC communication. GHGs increased 35% between 2000 and 2006, particularly in the electricity (increased coal), and transport sectors. Reducing energy demand could reduce by 6.17 MtCO <sub>2</sub> e per year. Energy supply measures including renewable energy, nuclear power, and increased natural gas could offer 17.6 MtCO <sub>2</sub> e. National Plan of Priority Actions seeks to: diversify fuel supply; increase access to energy; promote renewable energy and energy efficiency; integration with European Markets. Targets by 2020 include: increase wind production by 600% to reach 20% of generation; low energy lighting to reduce energy demand by 800MW; tariff revisions to promote conservation; 15% reduction in energy use in buildings, industry and transport.
Priorities of Clean Technology Investment Plans	-100 MW private sector renewable energy (wind farms) and funding through financial intermediaries for 80 MW of smaller projects eg. small hydro and biomass (RE) -450 MW Natural Gas Combined Cycle Combined Heat and Power plant (CCGT/CHP) -Financing for Energy Efficiency (EE) Smartgrid development to support renewable energy scale up -Upgrading 30% of compressors in Ukraine's gas transit system to higher efficiency levels <i>It is not clear that the CCGT/CHP and the Gas Transit System meet the investment criteria.</i>	-100 MW Eskom Uppington Concentrating Solar Thermal plant 100 MW Western Cape Province wind farm Support municipal governments to deploy solar water heaters Scale up energy efficiency financing to the commercial and industrial sectors	Renewable energy promotion, energy conservation, and public transport identified as key interventions for CTF financing support. Does not provide details on specific programs.  Instead, proposes to work through the newly established Fond de Développement de l'Energie (FDE), a government owned fund to enhance energy security that has attracted \$1 billion in co-financing from the UAE, Saudi Arabia, and the King Hassan Fund. CTF would help "buy down the costs of low carbon growth" through this fund.
Financing	CTF: \$350 million = \$75m RE; \$50m CCGT/CHP; \$75m EE; \$50m smartgrid; \$100m gas system MDB Co-Financing: \$2550m IBRD: \$ 250m EE; \$300m Smartgrid; IFC: \$50m RE; \$750m CCGT/CHP EBRD: \$250m RE; \$100m CCGT/CHP; \$75m EE; \$750m gas network	CTF: \$500m MDB Co-Financing: \$560m IBRD: \$150m CSP; \$110m Wind IFC: Energy Efficiency and Solar Water heating \$200m AfDB: \$50m CSP + \$50m Wind	CTF: \$150 million MDB Co-Financing: \$400 – 600m IBRD: \$100 – 200m IFC: \$200m or more AfDB: \$100 – 200m
Detailed Review of Plan Interventions Targeting the Electricity Sector			
Energy Planning	Little discussion of energy planning frameworks and processes. The Ministry of Fuel and Energy oversees the sector and that efforts are underway to introduce competition including through a wholesale electricity market and power pool. Multiple energy strategies and policies are discussed.	Mentions Eskom new build program, noting that there are few near term alternatives to coal to meet energy needs. The lack of effective and transparent planning processes, the responsibility for which has recently been returned to Eskom as system operator is not mentioned.	Notes that the Ministry of Energy Plan sets ambitious goals for increasing supply including by scaling up renewable energy and energy efficiency conservation.

Energy Efficiency (EE) Policy Regs.	A new government energy efficiency law is referenced. The National Agency for the Appropriate Use of Energy (NAER) has developed and implemented several energy efficiency policies, and can participate in the design for tariff policies. Focus of the plan is on making financing for energy efficiency available to commercial banks in the Ukraine.	2009 National Energy Efficiency strategy sets 12% energy efficiency improvement targets. A new standard offer model to incentivize energy efficiency is discussed.	An energy efficiency law is under development. The plan emphasizes the targets to reduce energy consumption by 15% in key sectors. It also mentions programs to incentivize household efficiency by offering a 20% discount to households that reduce consumption by 20% below targets; a demand side management program administered by the National Office for Electricity (ONE); and other provisions to enhance efficiency.
Renewable Energy Policy & Regulations	The Law on Alternative energy Sources of 2003 provides a framework for alternative energy, but has lacked financial support until the adoption of the green tariff (see below). Ukraine is in the process of developing procedures and standards for RE development.	Discussion of the implications of the new renewable energy feed in tariff for creating a market for renewable energy, but does not address current uncertainties around their implementation.	Laws to promote independent power production provide the basic framework for promoting renewable energy development in Morocco. A lack of supportive tariff and regulatory frameworks for wind energy scale up noted. Energipro program allows industrial customers to produce their own renewable energy through reduced wheeling and access to transmission infrastructure.
Pricing	A green tariff has recently been introduced to support renewable energy which presents a coefficient for the retail price for various renewable energy sources.	REFIT incentives for renewable energy noted. Low prices for energy highlighted as a disincentive for efficiency, while noting upcoming price increases. Some reflection on the cost structure of Solar Water systems.	Pricing incentives for energy efficiency in place at ONE are discussed in some detail.
Subsidies	Notes that energy prices (and gas prices in particular) have historically been low. Does not address underlying subsidies for conventional energy that are reflected in pricing and energy systems.	The close relationship between Eskom and the mining industry is mentioned, but no discussion of the underlying cost structure of the coal industry.	The plan notes the increase in public subsidies for oil, but does not discuss the possibility or viability of measures to address subsidies for conventional energy.
Executive capacity	The National Agency for the Appropriate Use of Energy seeks to promote energy efficiency. A state inspection for energy efficiency unit has been established. Ministries for Regional Development and Housing are also active on efficiency. A Renewable Energy Agency is mentioned, but there is no discussion of its capacity or relationship with other sector actors.	Limited consideration of the various and overlapping roles of the Department of Energy, Department of Public Enterprises, and Department of Environment which all play a role in governing the sector.	The roles of various ministries and agencies including the Ministry of Energy, ONE, and the Center for Development of Renewable Energies (CDER) are described; there is limited of their respective capacities and opportunities for institutional capacity enhancement, though it is clear that these institutions have important programs to promote renewable energy and efficiency underway.
Regulatory Capacity	Limited discussion the role of regulatory agencies; notes that the EBRD has been supporting the National Electricity Regulatory Commission to implement the renewable energy policy.	NERSA's role in introducing critical regulations to enable sustainable energy is noted, but there is limited attention to its capacity and authority to oversee the sector.	There is no independent electricity regulator in Morocco: ONE reports to the Ministry of Energy.
Transparency	Some discussion of the need for better information on renewable energy options. Corruption is recognized as a major risk for the sector, but there is little discussion of how transparency provisions can help mitigate these risks.	Recognizes the importance of raising consumer awareness of energy efficiency options, including Solar Water Heating. In general there is little attention to important issues of transparency in program implementation.	Risk assessment notes that the transparency of the operations of the FDE and its compliance with accepted standards of good governance to ensure that funds are spent in accordance with agreed priorities. There is no further elaboration of how these critical objectives will be met. A brief reference

Public + consumers  Utility capacity  Local Technology Centers  GHG Managem- ent			is made to a pre-preparation grant from the CTF to support this objective.
	Not discussed.	The engagement of consumers in the energy efficiency program is noted, but there is no other consideration of stakeholder engagement in the program.	Little discussion of how to engage the public or consumers in development or implementation of programs.
	The need to support renewable energy companies to participate in the market is discussed, but there is little discussion of the role of the dominant energy companies in Ukraine.	Eskom's capacity to implement CSP and wind energy programs will be enhanced through the program.	ONE capacity to implement renewable energy and efficiency programs is mentioned; a law to allow ONE to build its own renewable energy facilities is under development.
	No discussion of the role of local technology centers in the project implementation.	Supports technology development capacity within Eskom. Notes the potential to support the newly established South African National Energy Research Institute (SANERI)	The role of the Center for Development of Renewable Energies which is now being reorganized into the Agency for the Development of Renewable Energy and Energy Efficiency in implementing programs is noted.
	Not discussed.	Notes that a GHG inventory process for the transport sector is underway to support public transport planning. Limited other attention to GHG management capacity within South Africa.	Not discussed
This review is based on the Clean Technology Fund Investment Plans that have been publicly disclosed on the Climate Investment Fund website as of 25 October 2009.			