

**Meeting of CTF Countries and Regions
November 1, 2012 - Istanbul, Turkey**

Progress Updates from CTF Pilots

Country/regional pilot: Morocco / Middle East and North Africa Region

Investment Plan

- X Endorsed
- Endorsement date: October 28th 2009

Briefly outline your country's experience in terms of coordination and ownership of the CTF investment plan. What has been positive? What are the main challenges and barriers to a programmatic approach, and what could be done to address them?

Overall experience with coordination and ownership:

- Country ownership: the Ministries responsible for finance, Economy, Governance and Energy play a leadership role, in close collaboration with sectorial agencies, offices
- In October 28th 2009, the Trust Fund Committee reviewed and approved the Morocco CTF IP and agreed to allocate up to US\$ 150 million to support Morocco's Fonds de Développement de l'Énergie (FDE).

Challenges and barriers:

FDE was established irrespective of the CTF, but the CTF's participation was expected to leverage FDE resources. This proved unfeasible because of FDE's legal status. The Energy Investment Society (SIE) is FDE's investment fund for renewable energy and energy efficiency projects; it is not a lending institution. SIE is not habilitated to contract or to provide loans to project promoters. This legal hurdle has delayed the presentation of projects for financing. To overcome barriers to FDE and SIE managing CTF funding, in January 2010 the Government of Morocco created the Moroccan Committee for Financing Renewable Energies and Technologies (COMAFTEP), whose objective is to evaluate and approve eligibility of projects for CTF support.

Improvements needed:

The Trust Fund Committee approved the Morocco CTF IP in October 2009, but solving the legal barriers to FDE on-lending CTF funding delayed the presentation of projects for financing. In the meantime the Government of Morocco concluded that the approach most likely to enable the country to maximize the impact of CTF resources would be to support Morocco's National

Utility (ONE) to implement the 2000 MW wind power public-private partnership program. This program holds great promise for replication

Revised CTF Investment Plan: Proposed Decision , Letter from the Moroccan Government Endorsed on October 28, 2011

Please share with us your experience from one of the CTF projects in your country under development or implementation: What is the status of the project? How is this project helping to accomplish your country's low emissions development goals? What challenges have been experienced in developing/implementing this project? What are 3 key lessons from this project?

Project, status, goals:

- Country and program name: ONE Wind Plan—Morocco
- Purpose of the program: To develop infrastructure and business models to scale up wind power and rural electrification

Component A: Wind energy generating system with hydro-storage

Component A consists of constructing wind and hydroelectric.

The Government of Morocco recognizes the necessity to offset the irregularity of wind power with the consistency of hydroelectric power and create an integrated renewable energy generation system that helps make Morocco's electricity supply more reliable.

Wind will contribute two thirds of the plan's expected generation capacity. Three wind farms of 100-300 MW installed capacity each will be constructed, starting in 2012. Full operational capacity is expected in 2019. The combined capacity of the three wind farms is expected to be 550 MW. All the farms presented win the context of this project will be tendered as public-private partnerships or as independent power producers.

Hydroelectric generation will contribute a third of the power generated by the plan. The Wind plan includes two hydro facilities: one of 350 MW and one of 170 MW. ONE will develop and own both sites. The hydro sites will supply baseload power, an important element in the management of on-site demand and supply. It will displace the need for additional investments in spinning capacity, such as in the gas turbines that usually accompany wind farms.

Component B: Rural electrification

Component B, the rural electrification component will be financed by the AfDB only and will create increased energy demand that can be met through the hybrid generating system. The rural electrification component will finance the connection of 25 provinces to the grid, allowing Morocco's access rate to mount to about 100%. The component will finance the construction of new lines MV and LV switchgear, the installation of transformer stations and the connection to the electrical system of nearly 85,891 households. CTF funding is not sought for component B.

Challenges: Morocco's challenge is to meet fast-growing demand without endangering energy security or environmental sustainability. The key objective of the country's energy policy is to

improve energy security and mitigate climate change while ensuring access to energy for all citizens and businesses at the lowest possible cost. To meet these objectives, Morocco has resolved to develop its large renewable resources aggressively.

Lessons:

- Implementing a large scale wind Plan in an integrated manner will allow the Government of Morocco and the Moroccan private sector to acquire high tech wind technologies. The Wind Plan aims at integrating the manufacturing of wind equipment within national industrial activities.
- Government of Morocco will complement physical investments with necessary investments in Human capital and R&D such as establishing specializations in wind engineering, training of wind technicians, fostering of applied R&D and collaborative public private research in the area of wind as well as others.
- The Wind Plan is expected to create a significant amount of green jobs. About 700 direct permanent jobs in maintenance of the wind farms, as well as over direct 4200 one-year jobs in construction are being expected. Local manufacturing of the equipment is estimated to create additional jobs. In accordance with international research about 4-5 permanent jobs per MW, implying about 4000-5000 total green jobs created through WEP.
- 1070 MW of WEP will reduce greenhouse gas emissions to the equivalent of 33 78 35 52 metric tons of CO₂. The lifetime CO₂ offset of the proposed Plan will exceed Morocco's annual carbon emissions for 1 year. Implementing the proposed Plan will double the wind capacity already installed or under development in Morocco, thereby doubling greenhouse gas emissions reductions.

It will significantly scale up the deployment of renewable energy in Morocco, it is innovative in its use of wind/hydro hybrid technologies, it addresses access to energy and rural poverty, it will create a significant number of jobs and has a very clear results framework with baselines, indicators and targets.

Have circumstances in your country changed since your investment plan was endorsed? Is your country planning to revise its CTF investment plan?

The Morocco CTF IP was endorsed in October 28th 2009 to support Morocco's Fonds de Développement Énergétique (FDE).

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To overcome barriers to FDE and SIE managing CTF funding, in January 2010 the Government of Morocco created the Moroccan Committee for Financing Renewable Energies and Technologies (COMAFTEP), whose objective is to evaluate and approve eligibility of projects for CTF support. The COMAFTEP is represented by concerned Ministries (Energy, finances, Economy and Governance..), agencies, Offices and private sector..)

Moroccan CTF investment plan has already been revised and endorsed in 2011

Briefly outline three major lessons learned arising from your CTF programming and implementation process.

The Clean Technology Fund will play an important role in helping to materialize the Moroccan's vision of clean energy development.

- The CTF's investment will facilitate the replication of the wind energy public-private partnership (PPP) model by exposing ONE to greater expertise in PPPs and by providing the conditions for attracting the private sector in the future.
- Transmission and distribution networks are essential for crowding in private investors, as they assure investors that power can be evacuated.
- The investments in water storage and pumping are necessary to stabilize the grid and allow for environmentally friendly and affordable storage of wind –generated energy. Finally, CTF funding will signal private investors that the government is committed to the viability of the planned 2000 MW wind farms.