

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

Report No. 57838

Project Name	TN-ENERGY EFFICIENCY AND BIOMASS
Region	MIDDLE EAST AND NORTH AFRICA
Sector	Energy Efficiency (60%) and Renewable energy (40%)
Project ID	P121364
Borrower(s)	Republic of Tunisia
Implementing Agencies	ANME (National Agency for Energy Management) and ANGED (National Agency for Waste Management)
Environment Category	<input type="checkbox"/> A <input checked="" type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> FI <input type="checkbox"/> TBD (to be determined)
Date PID Prepared	July 20, 2010
Estimated Date of Appraisal Authorization	January 21, 2011
Estimated Date of Board Approval	April 15, 2011

1. Key development issues and rationale for Bank involvement

Tunisia holds an important position among developing countries when it comes to its energy management policy, having formulated and implemented a policy for rational use of energy and promotion of renewable and alternative energy sources as early as 1985. Tunisia's engagement with the World Bank (WB) is strong, and the Government of Tunisia (GoT) considers the WB Group (WBG) as a key strategic and reliable partner which plays an important role in its development and hence has requested Bank support in a broad range of sectors and areas, two of which are promoting Energy Efficiency (EE) and Renewable Energies (RE).

The Country evolved from being a net exporter of oil and gas in the 1970s and 1980s into a net energy importer by the late 1990s. Given administrated prices and high public subsidies to energy products (around US\$1.1 billion in total or 110 US\$/capita/year), public energy expenditures represent 10% of the total state budget, and negatively affect national economic competitiveness¹, as it diverts financial resources from investment that could make the economy more competitive. As a result, efficient use of energy and development of alternative sources remain key priorities to reduce fossil fuel dependency, as well as the energy intensity of the economy.

The Government of Tunisia has thus initiated a policy to improve energy efficiency and increase the role of renewables: the objectives are to reduce the energy intensity of the Tunisian economy by 3% per annum, to increase the contribution of renewables to 4% of primary energy demand, and to ensure significant energy savings by 2016². The 11th Development Plan (2007-11) also sets the broad directions of energy policy, including gradual reduction in energy subsidies, and calls for a scaling-up of investment in energy efficiency and renewable energy. In this context, energy efficiency efforts of the GoT have benefited from several sources of support over the years, particularly as related to Market Transformation and Labeling of Refrigerators (UNDP), Experimental Validation of Building Codes and Removal of Barriers to Their Adoption (UNDP), Credit Line for Environmental and Energy projects (Agence Française de Développement), Development of an Energy Efficiency Program for the Industrial Sector/PEEI (World Bank/GEF), and the recently approved Energy Efficiency/Cogeneration Credit Line to Commercial Banks Project (World Bank).

¹ANME presentation for World Energy Council Forum, June 2009.

² 4-year Energy Conservation Program (4ECP) for the period 2008-11 and Tunisian Solar Plan for the period 2010-2016.

The proposed “Energy Efficiency and Biomass” Project (the proposed Project) is complementary to these previous WB EE projects (PEEI and EE/Cogeneration Credit Line). The US\$55 million WB EE/Cogeneration Credit line was approved by the WB Board in June 2009 and made effective in February 2010. It is intended to address the barriers to scaling-up EE/cogeneration investments, and expected to mobilize US\$55 million of additional financing from subproject sponsors, commercial banks and the GoT, so that total investment under this project would reach an estimated US\$110 million. The proposed Project will finance technical assistance to support this EE/Cogeneration Credit Line, and also assist the development of biomass potential in Tunisia.

The Bank’s involvement into the proposed Project can be justified as follows: (i) it will reinforce the existing EE/Cogeneration Credit Line project through TA, and (ii) it will support a new type of cogeneration fuel, biomass. The proposed Project, including TA support to the WB Credit Line, will scale up the previous work in industry, and will seek to address areas not sufficiently covered by the previous activity, including biomass. So far, the industrial capacity building activities of the PEEI project have been successful and have generated a steady pipeline of good EE subprojects, including the subprojects that have already been approved for receiving the GEF investment grant, as well as a sizeable amount of new subprojects.

The proposed Project is intended to support the efforts to manage energy demand and reduce carbon emissions, while developing the biomass potential as an alternative to conventional fossil fuels in Tunisia³. It contributes to: (i) promotion of energy efficiency/cogeneration through facilitation to disbursement of existing WB EE/Cogeneration credit line to commercial banks, and (ii) development of biomass potential with implementation of a pilot project and capacity building activities through technical assistance, direct investment and capacity building.

The EE Technical Assistance Component of the proposed Project was already considered during preparation of the Credit Line, but the allocation of GEF funds has been delayed and hence the TA has been included into the proposed EE and Biomass Project. This was not seen as a major issue in the short term, as existing capacity is already significant in Tunisia, but the proposed TA will be a key element to allow efficient and prompt disbursement of the Credit Line.

Tunisia has a significant potential for energy recovery from biomass. Biomass production in the country was estimated at about 6 million tons/year in 2009: 2.2 million tonnes of household waste; 2.2 million tonnes from farms and agro-industry; 1 million tonne from olive oil processing; 400,000 tonnes from poultry droppings; and 200,000 tonnes from waste water treatment. The proposed Project’s biomass Component focuses on rural/agro-business production of biomass (farms and agro-industries, olive oil processing, poultry droppings), i.e. 3.6 million tonnes or 60% of the total biomass capacity in Tunisia⁴. The proposed Project’s Biomass Components II (co-financing a Biomass power plant in a farm) and III (TA) are aimed at reinforcing existing capacity and providing analysis and knowledge on biomass in the country.

2. Proposed objective(s)

The proposed project development objectives are to: (i) facilitate the disbursement of the existing energy efficiency credit line of US\$55 million to three commercial banks; (ii) pilot biomass demonstration project in the rural/agro-business sector, and (iii) provide capacity building for biomass development in

³ CPS for Tunisia for FY10-13, Report No. 50223 –TUN.

⁴ Strategy and Action Plan for Use of Biomass for Energy, MESD and ANGED, April 2010.

Tunisia. The proposed project is expected to contribute to Tunisia's higher level objectives of increasing energy efficiency and use of alternative energy sources, including biomass.

3. Preliminary description

The Proposed Project has four components:

Component I: *Capacity Building and Market Outreach for EE Credit Line*: This component will support the WB EE/Cogeneration Credit Line Project (P104266 - approved by the Bank Board on June 30, 2009) by providing (i) technical training and capacity building to the participating commercial banks and the ANME (National Agency for Energy Management) in the area of energy efficiency and cogeneration, including biomass generation/cogeneration; (ii) support to subproject developers in the industrial sectors to assist them in the preparation of required financial documents (financial studies and business plans), as well as to assist them during subproject implementation; and (iii) support for targeted awareness and training efforts.

Component II: *Pilot Biomass Power Plant*: This component will support the co-financing of a biomass power plant selected by the Ministry of Environment and Sustainable Development (MESD) and approved by the World Bank. The selected project should provide an example (from reserves, technology and financing structure points of view), so as to encourage other financiers to participate in its funding in a successful and timely manner. The beneficiary farm will be proposed by the MESD, based on a number of sustainability criteria such as availability of biomass resource reserve, economic and technical feasibility of the plant, and successful completion of social and environmental safeguards screening procedures.

Component III: *Biomass Feasibility Studies and Institutional & Capacity Building*: The main purpose of this Component is to (i) finance detailed business plans and execution studies and preparation of request for funding proposals of the selected farm for direct GEF funding and 3-4 other farms; (ii) provide assistance to co-financing research for the 4-5 biomass projects; (iii) prepare a biomass energy production master plan for Tunisia including aspects uncovered by existing studies and analysis such as identification of optimum project and technology structures for Tunisia, and training and dissemination activities to target sector/project stakeholders (farms, local governors, private sector representatives and public authorities, etc.).

Component IV: *Project Management*: In addition to the above components, the GEF funds will be utilized for supporting project management to the extent of less than 10% of total costs. Project management at the level of the PIUs (including management of the WB Credit Line) is estimated around US\$1.99 million, of which US\$190,000 will be funded by GEF funds and US\$1.8 million by Tunisian public funds.

4. Safeguard policies that might apply

Safeguard Policies Triggered	Yes	No	TBD
Environmental Assessment (OP/BP 4.01)	X		
Natural Habitats (OP/BP 4.04)		X	
Forests (OP/BP 4.36)		X	
Pest Management (OP 4.09)		X	
Physical Cultural Resources (OP/BP 4.11)		X	
Indigenous Peoples (OP/BP 4.10)		X	
Involuntary Resettlement (OP/BP 4.12)			X
Safety of Dams (OP/BP 4.37)		X	
Projects on International Waterways (OP/BP 7.50)		X	
Projects in Disputed Areas (OP/BP 7.60)		X	

5. Tentative financing

Source:	(\$m.)
Borrower	66.4
IBRD/IDA	55.0
Others (Bank-managed Funds)	2.5
Total	123.9

6. Contact point

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