

## Impact Assessment of Clean Technology Fund in Renewable Energy and Energy Efficiency Market in Turkey

### Knowledge Management Grant

<b>Proposal Summary</b>	
<b>CTF Funding Request (US\$)</b>	244,000
<b>Project/Activity Title</b>	Turkey Clean Technology Fund Impact Assessment Study
<b>Country / Region</b>	Turkey
<b>Requesting Agency</b>	Undersecretariat of Treasury
<b>Responsible MDB</b>	European Bank for Reconstruction and Development, International Finance Corporation and World Bank
<b>MDB Task Manager</b>	<p><b>Shinya Nishimura</b>                      Senior Energy Specialist, World Bank                      1818 H street NW, Washington DC, USA                      +1 202-458-9063                      snishimura@worldbank.org</p>
<b>Implementing Agency</b>	The World Bank
<b>Deliverables</b>	Impact Assessment Study, Presentation (printed material, video)
<b>Closing Date</b>	December 28, 2012

## I. BACKGROUND

To achieve their development goals and to realize sustainable shared growth, the Government of Turkey has pursued a wide range of economic policies and structural reforms, set out in its Ninth Development Plan for 2007-2013),<sup>1</sup> and 2012-2014 Medium-Term Program. One of the priority issues in achieving this policy objective of sustainable growth is climate change. Although GHG emissions per capita in Turkey are still low, the emissions doubled in the 1990-2009 period and are projected to continue to rise. The Government approved a National Climate Change Strategy in May 2010 and a National Climate Change Action Plan was issued in July 2011, grounded in baseline conditions and incorporates existing plans to develop medium and long-term targets in key sectors of the economy.

The Strategy and the Action Plan identified national priorities for mitigating Greenhouse Gas (GHG) emissions and building resilience through managing impacts and encouraging mitigation and adaptation to climate change. Key areas identified in the Strategy and Action plan included; (i) promotion of renewable energy to utilize domestically available renewable energy sources, and (ii) promotion of energy efficiency to curve the high growth in energy demand due to high population and economic growth.

Considerable achievements have been made in setting up regulatory and institutional frameworks to promote both RE and EE. Following the enactment of a Renewable Energy Law in 2005, the Government implemented measures to develop a functioning electricity market and the introduction and implementation of the Electricity Pricing Mechanism. Renewable energy generation, in particular hydro and wind, has taken off as a result. The Parliament in December 2010 approved an amendment of the Renewable Energy Law in order to provide prospective investors enhanced predictability about Turkey's support framework, including: (a) technology-based feed-in tariffs; and (b) firm off-take arrangements. With the Electricity Market Strategy, the Government adopted a goal to increase the share of renewables in electricity generation to 30% by 2023. The Energy Efficiency Law (No. 5627), enacted in 2007, provides the framework to promote EE throughout the economy. Energy Efficiency Strategy 2012 - 2023, approved by the High Planning Council on February 27, 2012, sets the long-term target as 20% reduction in energy intensity by 2023 compared to 2011 figures. Work is on-going to align the government programs and legislative/regulatory framework to achieve this target.

In order to support the implementation of this policy, the Government focused their Investment Plan for the Clean Technology Fund (CTF) on renewable energy development and energy efficiency. The CTF Trust Fund Committee endorsed Turkey's two – phased Investment Plan in January 2009.<sup>2</sup> CTF, a multi-donor grant facility aimed at development of clean energy, approved the following allocation as Phase 1:

<sup>1</sup> The Government is currently preparing Turkey's Tenth Development Plan.

<sup>2</sup> Information about the Clean Technology Fund, Turkey's CTF Investment Plan and other CTF investment plans is available at <http://www.climateinvestmentfunds.org/cif/>.

<b>Clean Technology Fund - Financing Table (Phase 1)</b>					
<b>Project / Financing Source</b>	<b>Turkey 1/</b>	<b>World Bank</b>	<b>IFC/EBRD</b>	<b>CTF</b>	<b>Total Cost</b>
RE/EE2 (phase I)	530	500		100	1,130
IFC/EBRD RE/EE (phase I)	170		250	100	520
TEIAS Transmission incl. SmartGrid for CTF	100	300		50	450
<b>Total (phase I)</b>	<b>800</b>	<b>800</b>	<b>250</b>	<b>250</b>	<b>2,100</b>

Source: CTF Investment Plan (2009)

(a) *Private Sector Renewable Energy and Energy Efficiency Project (World Bank)*

The Private Sector Renewable Energy and Energy Efficiency Project (PSREEE) provides US\$ 100 million of CTF funds and additional US\$500 million IBRD loan through two implementing financial intermediaries, Industrial Development Bank of Turkey (TSKB) and Development Bank of Turkey (TKB).

(b) *Commercializing Sustainable Energy Finance Program (IFC)*

The Commercializing Sustainable Energy Finance Program (CSEF) provides US\$20 million of CTF funds and additional up to US\$100 million of IFC’s own funds to help develop Turkey’s Sustainable Energy (SE) private financing by helping local leasing companies to develop SE financing products.

(c) *Sustainable Energy Financing Facility (EBRD)*

The Sustainable Energy Financing Facility (TurSEFF) provides US\$ 40 million of CTF funds and up to US\$ 160 million of EBRD financing for on-lending through partner banks, and also includes EUR 6.8 million of technical assistance funds provided by CTF and EU and US\$ 20 million co-financing from JICA.

## **II. CTF KNOWLEDGE MANAGEMENT**

At the investment project level, knowledge products are designed to capture and share lessons learned from the overall CTF experience. Capturing early experiences and lessons emerging from the implementation of CTF programs and projects, and sharing them with CTF’s broad stakeholder community, will contribute to CIF’s broader knowledge capital as well as national, regional, and global implementation and replication of CTF funded operations.

As successful cases of CTF co-financed projects, the impact of the CTF financing through financial intermediaries should be assessed and analyzed for any lessons learned that may inform other similar

operations globally for dissemination. Looking forward to the CIF Partnership Forum in November 2012, it is expected that this study will facilitate dialogue with partners and stakeholders, and contribute substantively to the ongoing work of the CTF as well as to the general debate on global climate finance.

### **III. OBJECTIVE**

The objective of the proposed activity is to assess and analyze the impact of the CTF funding provided to the projects/programs in Turkey for the RE/EE market development in Turkey. Along with the strong government policy and support, the projects have played a catalytic role in creating a market for the advanced RE technologies and EE, and in increasing capacity for sustainable energy lending at the participating financial institutions. The study is to assess and measure, as much as possible, the impact the CTF had on (a) leveraging private sector capital, (b) introduction of new technologies in RE to Turkey, (c) encouragement of EE investments, (d) bringing in new entrants to RE/EE market.

### **IV. AUDIENCE**

The target audience will be the donor countries; wider climate related financing community; and other member states that have submitted the investment plan, as well as the wider public in Turkey. The analysis will be used to contribute to provide guidance on a more efficient and effective targeting of financing and policy actions to scale up the RE/EE market for Turkey and also to provide as lessons learned for other countries.

### **V. SCOPE OF WORK**

A team of consultants will be hired to gather information from all relevant stakeholders, including the borrowers, sub-borrowers and respective teams/task leaders from the World Bank, IFC, and consultants provided by EBRD for their assessments of the facility . The consultants will also be expected to gather wider market data to measure the impact the project had on the wider RE/EE market development, perform interviews and draft a comprehensive impact assessment of CTF on RE/EE market in Turkey based on input and from all relevant stakeholders, on (but not limited to) the following aspects:

- a) leveraged private sector capital into RE/EE investments;
- b) introduction of new technologies in RE to Turkey;
- c) encouragement of EE investments;
- d) bringing in new entrants to RE/EE market; and
- e) other relevant indicators.

The team of consultants will also conduct an overall assessment of the Monitoring and Evaluation (M&E) system in the country. Under this activity, the consultants will be expected to:

- a) analyze the M&E system in Turkey, including options for integrating CIF M&E systems into existing national M&E systems;
- b) recommend mechanisms for country-driven M&E systems, including institutional settings, to monitor implementation and results reporting of the CTF investment plan as well as impact level monitoring post investment plan implementation; and
- c) conduct quantitative and qualitative analysis of the impact achieved by the project based on the CTF Results Framework proposed in the investment plan.

## VI. EXPECTED OUTPUT AND TIMETABLE

The consultants are expected to follow the below schedule:

Expected Output	Date	Notes/Contents
Inception Report	July 27, 2012	This report shall include a methodology, indicators and work program.
Draft Report	September 14, 2012	The Draft Report should have all proposed indicators and interview results included in.
Final Report	October 15, 2012	The final report needs to be reviewed and approved by all relevant stakeholders.
Dissemination/Presentation	November 1-7, 2012	The final draft of the study should be printed (about 500 copies) and the consultant should be prepared to provide a detailed presentation on the findings for the study.

The consultants should anticipate a period of about 2-3 weeks for the concerned Turkish parties and MDBs' review and approval of the draft reports submitted. The reports shall be prepared in English and Turkish.

## VII. DISSEMINATION

Lessons learned from the implementation of the Private Sector Renewable Energy and Energy Efficiency project in Turkey may inform other similar operations globally for dissemination. The results of this study would be disseminated at the CIF Partnership Forum to be held in Istanbul during November 1-7, 2012. The November Forum is an opportunity for Government of Turkey, MDBs and the Clean Investment Funds to showcase their most advanced projects to other donors, countries and the domestic audience in Turkey and elsewhere. It is expected that consultants will deliver a detailed presentation on the main findings of the

report, as well as hard copies be available for dissemination among relevant stakeholders. The report would also be published in digital format to reach out other relevant stakeholders globally.

## VIII. BUDGET<sup>3</sup>

The cost of this study is estimated at US\$244,000, with additional elements already covered by funding provided to EBRD. The cost breakdown is shown in the following table:

Component		CTF Funding Request (US\$)
<b>Consultants<sup>4</sup></b>		<b>182,500</b>
	Team Leader (25 days)	37,500
	Energy Specialist (35 days)	52,500
	Banking Specialist (35 days)	52,500
	Local Consultant (40 days)	40,000
<b>Travel</b> (airfare, hotel, and per-diem)		<b>38,880</b>
	Team Leader (10 days)	12,960
	Energy Specialist (10 days)	12,960
	Banking Specialist (10 days)	12,960
<b>Dissemination</b> (edit, design, print 500 copies of the report)		<b>22,620</b>
<b>TOTAL (US\$)</b>		<b>244,000</b>

## IX. IMPLEMENTATION ARRANGEMENTS

The knowledge management grant will be co-managed by European Bank for Reconstruction and Development, International Finance Corporation and the World Bank in collaboration with Undersecretary of Treasury as the counterpart on the Government side. The consultant selection, grant accounting and disbursements will be made under the World Bank procedures and coordinated with EBRD and IFC. All institutions will provide inputs at all stages of the assignment; provide access to information to the

<sup>3</sup> **Eligible Expenditures:** The knowledge management grant will finance expenditures for: (i) consultants’ services, local training, workshops and seminars, and (ii) operating costs and office equipment for the implementation management of grant activities not to exceed 10% of the grant amount. **Ineligible Expenditures:** The following expenditures will be ineligible: (i) salaries for civil servants in recipient countries hired as consultants or otherwise; (ii) purchase of vehicles; (iii) foreign training and study tours; and (iv) salaries and travel of World Bank Group staff and consultants.

<sup>4</sup> The **team of consultants** will require backgrounds in the energy policy, energy project development and banking sector, as well as have masters' degrees and at least 5-10 years experience in their fields. It is recommended that the team size would not be larger than 4 persons. The team of consultants should include local experts to ensure the full use of information available in Turkey.

consultants as required; and will be given the opportunity to review the draft documents and provide feedback to the consultants as necessary.

The contact information for designated co-task managers for EBRD and IFC are as below:

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