



CARBON  
PARTNERSHIP  
FACILITY

**2011 ANNUAL REPORT**

## Table of Contents

<b>Introduction</b> .....	3
CPF Objectives .....	3
Structure of the CPF .....	3
<b>Progress Report</b> .....	4
First Tranche of the Carbon Fund .....	4
Carbon Asset Development Fund .....	4
First Tranche Pipeline .....	4
CDM Methodology Development/Innovation .....	7
CPF Meetings and Workshops .....	9
Plans for the Coming Year .....	10
<b>Financial Report</b> .....	11
<b>Annex - CPF First Tranche Pipeline Overview</b> .....	15
Brazil - Solid Waste Management Program .....	15
Vietnam - Renewable Energy Development Program (REDP ) .....	16
Morocco - Municipal Solid Waste Management Program .....	17
Jordan - Amman Green Growth Program (City-Wide Approach) .....	18
Thailand-Renewable Energy (RE) and Energy Efficiency (EE) Programs .....	19
China - Hebei Regional Biogas Program .....	20
Tanzania - Renewable Energy Program .....	21
Egypt - Wind Program .....	22

## *Introduction*

### *CPF Objectives*

The Carbon Partnership Facility (CPF) is one of the World Bank's major new carbon finance instruments for the post-2012 period. The CPF is designed to innovate in the use of the CDM, and to develop emission reductions and support their purchase on a larger scale through the provision of carbon finance to long-term investments. In order to scale up carbon finance, the CPF collaborates with governments and market participants on investment programs and sector-based interventions that are consistent with low-carbon economic growth and the sustainable development priorities of developing countries.

The Facility draws on the World Bank's financial and knowledge resources to strategically integrate carbon finance with sustainable development plans by aligning carbon finance with World Bank country assistance programs, and often linking with lending operations. It facilitates the implementation of low-carbon programs across an array of sectors and technologies - energy generation and distribution, energy efficiency, and waste management - in situations where governments need policy measures or investments.

In the current Kyoto period, the CDM has operated largely on a project-by-project basis. The CPF utilizes scaled-up, programmatic approaches, initially the CDM Programme of Activities, to enable carbon finance to support partner country initiatives that move toward low-carbon economies. It will also target areas that have not been reached effectively by CDM in the past, such as energy efficiency, and will pilot city-wide carbon finance programs.

The CPF brings together industrial country buyers and developing country sellers of emission reductions, as well as developing and donor country governments, into a partnership with shared decision making and opportunities for sharing experience and knowledge regarding carbon finance.

### *Structure of the CPF*

The Carbon Partnership Facility is comprised of two funds: the Carbon Fund (CF), which purchases emission reductions from CPF programs; and the Carbon Asset Development Fund (CADF), which funds the preparation and implementation of CPF programs. The CADF became operational in January 2009 and the First Tranche of the Carbon Fund was declared operational on May 15, 2010.

## *Progress Report*

### *First Tranche of the Carbon Fund*

As of May 15, 2011, the Carbon Fund Buyer Participants included the Government of Spain and Endesa. The Governments of Norway and Sweden each signed Buyer Participation Agreements in December 2010, and E.ON signed a Buyer Participation Agreement in April 2011, with their effectiveness conditional on amendments to the CPF Instrument to lower the minimum contribution level to €20 million for public sector entities and €10 million for private sector firms, and on changes to the governance structure of the CPF. With amendments completed, commitments to the First Tranche will equal €132.5 million.

The key objective of the First Tranche is to test the CPF model. The goal is to demonstrate the efficacy of the using the CDM Programme of Activities approach on a medium to large scale, linked to Bank operations that support partner country initiatives. This involves working closely with the Seller Participants in their role as CDM Coordinating/Managing Entities for the PoAs, building their capacity to add project activities to the program and to become engaged in management of the CDM process. New approaches, such as city-wide programs, will be tested, and new CDM methodologies in high potential areas such as energy efficiency in buildings are being pursued. The aim is to generate emission reductions that will provide benefits to both Buyer and Seller Participants.

The longer term vision for the CPF is to innovate and scale up CDM modalities at the frontier. The lessons learned from initial efforts on the First Tranche programs will set the stage for the Bank to make further constructive contributions to the design and implementation of future carbon market mechanisms.

### *Carbon Asset Development Fund*

The Carbon Asset Development Fund has four donors: Spain - Ministry of Economy and Finance, Norway - Ministry of Foreign Affairs, the European Commission and Italy – Ministry of Environment, which joined in November 2010. As of May 15, 2010, the Buyer Participant contributions to the Carbon Fund became subject to the 9 percent CADF charge, payable in three annual installments of 3 percent each.

## *First Tranche Pipeline*

As of April 15, 2011, there were six Seller Participants in the Carbon Partnership Facility:

- Fonds D'équipement Communal of Morocco (FEC), for the *Morocco Solid Waste Management Program*. The Bank has been working closely with the Government of Morocco over the last several years to support the upgrading of environmental practices in the solid waste management sector, including through two Development Policy Loans. Carbon finance has been envisaged in these operations as an incentive for landfill operators, supported by municipalities, to invest in methane capture from new landfills and during improvements to existing operations. FEC, as the Coordinating/Managing Entity (C/ME) for the Program, is managing the outreach to municipalities and landfill operators to participate in the PoA.
- Ministry of Industry and Trade of Vietnam (MoIT), for the *Vietnam Renewable Energy Program*. The Bank has provided an IDA credit to Vietnam to streamline the regulatory process for approving small scale power projects; the loan will provide long term financing to small scale hydropower developers through financial intermediaries. With domestic banks providing about 80% of project costs, carbon finance is an integral part of the financial incentives for project developers. The MoIT, as C/ME for the program, approves individual investments under the Bank loan and works closely with the participating domestic banks to facilitate participation of project developers in the PoA in conjunction with project financing.
- Caixa Economica Federal of Brazil, for the *Brazil Solid Waste Management Program*. Brazil enacted by law a new National Solid Waste Policy in 2010, encompassing a range of measures to improve practices in the sector. Caixa, the main financing source for municipalities, will play a significant role in the implementation of the law. A World Bank loan for an Integrated Solid Waste Management and Carbon Finance Program, which Caixa will administer, will channel funds to landfill operators in conjunction with the construction of sanitary landfills, and will support development of the PoA to provide carbon finance to these projects.
- Greater Amman Municipality (GAM) of Jordan, for the *Amman Green Growth Program*. GAM is in the process of developing a city-wide Green Growth Program based on the Amman master plan 2025. The Amman Green Growth Program includes potential opportunities in municipal waste, urban transport, sustainable energy and urban forestry. The Amman program breaks

new ground in the CDM as the first PoA to take a city-wide approach, which is intended to leverage the capacity of the Amman government to catalyze investments and emission reduction activities across a range of sectors within GAM's administrative purview. The program is intended to establish a model that can be replicated in cities throughout the developing world.

- Provincial Electricity Authority (PEA) of Thailand, for the *Thailand Clean Energy Program*. The Bank is collaborating with Thailand to utilize a range of climate financing instruments, including the Clean Technology Fund and carbon finance. A Bank loan with CTF co-financing is intended to provide resources to PEA to invest in the construction of small scale biomass power plants and to finance small scale street lighting energy efficiency for national highways. Separate PoAs will be developed for each of these activities, with carbon finance enhancing the pace and financial viability of the investments.
- Hebei Green Agriculture Co., for the *Hebei Regional Farm Biogas Program*. The objective of this program is to improve the local environment and human health through upgrading the animal manure management practice at about 40 farms in Hebei province. The Hebei Green Agriculture Co. will be the C/ME of the PoA, and is receiving support from the Hebei New Energy Office, a local government agency. The government will provide a grant subsidy for about 25% of capital investment, but not more than 1 million RMB, to reduce the upfront investment cost for participating farmers, who will finance the rest of the installation cost. Carbon finance will increase the incentives for farms to participate in the program and strengthen the operation and maintenance service system for the Hebei biogas sector.

As of May 15, 2011, several additional programs were under development for potential inclusion in the First Tranche pipeline, including:

- The *Tanzania Renewable Energy Program*, which will promote the implementation of small scale renewable energy, primarily hydropower, throughout the country. A Bank loan to channel funding through financial intermediaries has already been completed, together with subsequent funding to strengthen the capacity of the Rural Energy Agency (REA) to provide financial and technical assistance to potential project developers. The REA will be the Seller Participant and Coordinating/Managing Entity for the PoA, which will provide an additional source of revenues

for projects. A Revolving Fund is being established in the REA to help project developers meet an equity financing gap. Negotiations on the Seller Participation Agreement have begun.

- The *Egypt Wind Program*. The Government of Egypt is planning a wind power development program that could reach 3000MW by 2020. The Bank and CTF, together with other agencies, have provided loan financing for transmission infrastructure to evacuate power from the wind farms to be built by the private sector under a Build-Own-Operate framework. The carbon finance operation is intended to provide revenues to the Egyptian Electricity Transmission Company, the potential Seller Participant and C/ME, to defray part of the costs of the transmission infrastructure. Further preparatory work is needed before a Seller Participation Agreement is ready for consideration.

There are two Host Country Partners in the CPF:

- Government of China (National Development and Reform Commission), for the *Hebei Regional Farm Biogas Program and IGCC methodology development*; and
- Government of Indonesia (Ministry of Energy and Mineral Resources), for the *Geothermal Development Program* (subsequently dropped from the pipeline).

Additional details on the pipeline can be found in the Annex.

### ***CDM Methodology Development/Innovation***

One of the objectives of the CPF is the contribute to innovation in the use of the CDM through the development of new methodologies and approaches that support a more programmatic and scaled-up approach to emission reductions. Thus far, the CPF has been working in three areas in this respect.

#### **Development of city-wide program**

Greater Amman Municipality is in the process of developing a city-wide Green Growth Program based on the Amman master plan 2025. Based on this broad objective, the municipal authority under the direct guidance of the Mayor can identify technological interventions across all sectors, such as Bus Rapid Transit (BRT) and street-lighting by the transport department to wastewater treatment by a private operator and installation of solar water heaters by residential consumers. In order to support

the implementation of investments under the Program, the CPF is assisting Amman in the development of a programmatic approach to carbon finance that utilizes multiple approved methodologies in one PoA. Parties to the Kyoto Protocol, at the 6th meeting in Cancun in December 2010, requested the CDM Executive Board (EB) to simplify programmatic CDM to explore the possibility of allowing city-wide programs. The EB has initiated the process of preparing rules and regulations to allow city-wide, multi-sector programs and this process is expected to complete by the end of 2011, allowing cities around the world to access CDM through a city-wide program. In an effort to promote access to carbon finance at the city level, the World Bank Carbon Finance Unit published *A City-wide Approach to Carbon Finance* in 2010 to provide guidance to interested cities and practitioners.

### **Buildings EE methodology**

The Bank's Carbon Finance Unit, with CADF support, developed an EE methodology for buildings based on a modeling approach utilizing eQuest/DoE 2.2. The methodology underwent several rounds of discussions between April and October 2010. Based on these discussions, the Small Scale Working Group (SSC-WG) of the CDM EB suggested hosting a workshop for building sector practitioners to discuss the modeling approaches. In March 2011, the UNEP, UNFCCC and the Bank jointly organized a workshop that brought together building sector experts to discuss various approaches to monitor and verify energy savings in buildings. As an outcome of this workshop, the SSC-WG decided to develop a top-down methodology, using elements of the Bank's proposed methodology.

### **Development of IGCC methodology**

The CADF is supporting the development of a new CDM methodology for projects generating GHG emission reductions via substitution of grid power and municipal heat by more efficient IGCC heat & power generation. The IGCC technology also offers potentially less expensive opportunity for CO<sub>2</sub> capture (for storage) since the CO<sub>2</sub> in an IGCC plant is separated from the syngas before combustion and the technologies necessary for CO<sub>2</sub> capture and compression at an IGCC plant, are well known today. This methodology is viewed as a useful supplement to the body of existing CDM methodologies for new less GHG intensive fossil-fuel based power and combined heat production. A comprehensive assessment of baseline alternatives for grid power generation including the IGCC option could also provide interesting insights for the development of sectoral technology-based targets or intensity-based benchmarks for the power sector. The methodology development is led by Chinese experts under supervision of the Climate Change Department of the National Development and Reform Commission, the Designated National Authority of China. The methodology is using the Langfang IGCC project as an

underlying case study. The submission of the new methodology for an international review process is planned for August 2011.

### *CPF Meetings and Workshops*

The CPF is a partnership among Buyer and Seller Participants, and one of the key objectives of the partnership is to share perspectives on the challenges in developing programmatic approaches to emission reduction programs and to set key policies of the CPF together. In this context, there is also an important role for the CPF to provide capacity building to Seller Participants in engage as members of the partnership and to enable them to meet the challenges of implementing these new approaches. Over the last year, there were three CPF events:

#### **CPF Organizational Meeting**

The CPF Organizational Meeting was held on May 24, 2010 in Madrid, Spain. The Meeting provided an opportunity to launch the partnership by bringing together Buyer and Seller Participants and CADF donors. The Meeting included presentations by Seller Participants on their programs, as well as an initial discussion among Participants of the proposed CPF Pricing Approach and ERPA Term Sheet.

#### **Seller Participant Training**

A two day training session was held for Seller Participants in April 2010 to increase their familiarity with carbon markets, the proposed CPF Pricing Approach, ERPA terms and general conditions and the CPF business process.

#### **CPF Workshop on Coordinating/Managing Entities and Briefing for Participants**

A Workshop on Coordinating/Managing Entities was held on October 27, 2010 in Washington. This Workshop covered management of the commercial arrangements with the CPF and individual project activities under Programmes of Activities, as well as management of the PoA business process under the CDM. The purpose was to provide capacity building for Seller Participants to facilitate successful implementation of the CPF programs, and to provide an opportunity for sharing the perspectives of Buyer and Seller Participants on these issues. On October 28 there was a Briefing for CPF Participants which provided guidance to the CPF Team on further development of the CPF Pricing Approach and ERPA term sheet.

## *Plans for the Coming Year*

The major focus for the coming year will be achieving substantial progress on the development of the programs in the pipeline.

- The most important objective will be to maximize progress on validation and registration of programs, with a central focus on achieving registration of as many programs as possible by the end of 2012.
- Concurrently, the CPF Team will be working closely with the Seller Participants to support the addition of project activities (CPAs) to the PoAs in order to meet the emission reduction volumes set out in the Seller Participation Agreements.
- During the course of the coming year, as the preparation of a program has sufficiently matured, it will be presented to the Buyer Participants for inclusion in the First Tranche portfolio and for ERPA negotiation.
- Further capacity building will be provided to the Seller Participants, in particular to strengthen their management systems and capability to manage the CDM monitoring, verification and issuance process.
- During FY12, there will also be a concerted effort to identify additional programs for possible inclusion in the First Tranche portfolio, through the preparation and evaluation of program identification notes (PINs).

A specific objective during the first quarter of FY12 will be to reach agreement on the ERPA General Conditions, which will be presented to Buyer and Seller Participants during the Annual Meeting.

## Financial Report

The Financial Report for the 12 months ending June 30, 2011 is presented below. The report reflects the actual expenditures through end April and estimated expenditures for the last two months of the fiscal year. The Financial Report consists of the CPF Carbon Fund and Carbon Asset Development Fund (CADF).

### Carbon Fund

The pledged amount to the Carbon Fund has increased by €50 million in this fiscal year. The new pledged amount includes €20 million each from Sweden and Norway and €10 million from E.ON, which brings the total pledged amount from €100 million to €150 million. Of this total €150 million pledged amount, €47.5 million has been received into a prepaid trust fund account (€30 million received as of June 30, 2010 and €17.5 million was received in FY11). No expenditures have been disbursed by this fund.

**Table 1:**  
**Pledged and Received Amount from Participants**  
(Amounts in '000)

Participant Name	Commitment Amount in EURO	Contributions Received From Inception to June 30, 2011 in EURO	Contributions Received From Inception to June 30, 2011 (note 1) In USD	Prepaid From Inception to June 30, 2011 in EURO
Gov of Spain	47,500	1,950	2,526	47,500
Endesa	35,000	1,050	1,290	0
Gov of Sweden	20,000			
Gov of Norway	20,000			
E.ON	10,000			
	<b>132,500</b>	<b>3,000</b>	<b>3,816</b>	<b>47,500</b>

Note 1: The contribution represents the first installment (3%) of CADF charge, which was transferred to CADF fund.

### Carbon Asset Development Fund

In FY11, there was one new commitment of €2.0 million from Government of Italy. Further, a total of US \$6.6 million was received during the reporting period (US\$1.3 million from the European Commission, \$2.8 million from Italy and \$2.5 million CADF charge from Spain). As of June 30, 2011, total sources of funds are \$19.1 million, including (i) \$14.6 million from donor contributions; and (ii) \$3.8 million from the first installment (3%) of the 9% Buyer's CADF charge; and (iii) \$727k investment income. Total expenditure for FY11 is \$2.97 million, bringing the cumulative expenditures to \$5.7 million, leaving an ending balance of \$13.4 million. The Table 2 summarizes the Sources and Uses of Funds.

**Table 2**  
**CADF: Sources and Uses of Funds**  
(Amounts in '000)

Participant Name	Currency	Commitment Amount	Contribution Received July 1 - June 30 2011 (currency)	Contributions Received Inception - June 2011 (currency)	Total Contributions Inception - June 30, 2011 USD Equivalent
<b>Source of Funds</b>					
<b>Direct Contribution</b>					
NORWAY - Ministry of Foreign Affairs	NOK	19,000		19,000	2,731
Spain - Ministry of Economy & Finance	EUR	5,000		5,000	6,464
European Commission	EUR	2,000	1,000	2,000	2,593
Italy - Ministry	EUR	2,000	2,000	2,000	2,767
<b>Total Contributions (USD equivalent)</b>					<b>14,554</b>
<b>Buyers CADF charge –transferred from Carbon Fund</b>			1,950	3,000	<b>3,816</b>
<b>Investment Income</b>					<b>727</b>
<b>Total Source of Funds</b>					<b>19,097</b>
<b>Use of Funds (See Table 3)</b>					<b>5,725</b>
<b>Ending Balance</b>					<b>13,372</b>

The Table 3 below shows the total expenses incurred by the Carbon Partnership Facility for FY11 and cumulative expenditures as of June 30, 2011. The total FY11 expenditures are \$2.97 million, of which \$1.14 million (or 39%) is for specific program development costs, \$635k (21%) for business development and related costs, \$694k (23%) relates to administrative expenses and \$500k (17%) for grant disbursement to China IGCC.

**Table 3**  
**Uses of Funds**  
(Amounts in '000)

<b>Project Name</b>	<b>Cumulative Costs as of June 30, 2010</b>	<b>Expenses July - June 30, 2011</b>	<b>Expenses Inception to June 30, 2011</b>
Vietnam Renewable Energy Development	257	175	432
China Hebei Farm Livestock Waste Management	7	164	171
Thailand PEA Renewable Energy and Energy Efficiency Program	19	48	67
Tanzania Renewable Energy Program	-	51	51
Jordan Amman Green Growth Program	55	121	176
Morocco - Municipal Solid Waste Carbon Finance Program	12	229	241
Brazil Caixa Solid Waste Management	33	161	194
China CPI IGCC Program	-	25	25
Dropped Programs (Indonesia Geothermal , China Hubei , etc)	270	171	441
<b>Program Development Costs</b>	<b>653</b>	<b>1,145</b>	<b>1,798</b>
Africa Business Development and Regional Coordination	276	63	339
East Asia and the Pacific Business Development and Regional Coordination	372	80	452
Europe and Central Asia Business Development and Regional Coordination	28	76	104
Latin America and the Caribbean Business Development and Regional Coordination	191	59	250
Middle East and North Africa Business Development and Regional Coordination	227	34	261
South Asia Region Business Development Regional Coordination	56	133	189
Carbon Unit Program Development	625	161	786
Methodology Development	89	29	118
<b>Business Development and Related Costs</b>	<b>1,864</b>	<b>635</b>	<b>2,499</b>
General & Administrative Expenditures	23	405	428
Fund Development	0	140	140
Legal	211	149	360
<b>Administrative Costs</b>	<b>234</b>	<b>694</b>	<b>928</b>
<b>Total</b>	<b>2,751</b>	<b>2,474</b>	<b>5226</b>
<b>Grant disbursement to China for IGCC</b>		<b>500</b>	<b>500</b>
<b>Grand Total</b>	<b>2,751</b>	<b>2,974</b>	<b>5,725</b>

## **CADF Grants**

Grant agreements for three programs have been signed. The China CADF grant (\$1.4 million) is for the preparation of the *Regional Biogas Program*<sup>1</sup> and the preparation of a CDM methodology for Integrated Gas Combined Cycle (IGCC) power generation. As of June 30, 2011, total grant disbursement is \$500k. The Vietnam grant (\$257k) is for capacity building and some preparation expenses for the *Vietnam Renewable Energy Program*. The CADF grant for the *Morocco Solid Waste Management Program* (\$520k) is for capacity building and preparatory expenses. The *Caixa Solid Waste Management Program* and the *Amman Green Growth Program* CADF grants are at an advanced stage of preparation.

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<sup>1</sup> Note that the China *Regional Biogas Program* preparation expenses are being funded primarily through a CADF grant, while the preparatory activities for other programs are being funded by the CADF primarily through Bank expenditures.

## CPF Tranche-1 Pipeline Overview

### BRAZIL - Solid Waste Management Program

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Land Fill gas Methane capture/flaring</p> <p><b>Objective:</b> Reduce environmental and social impacts and GHG emissions from the solid waste management sector</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Caixa Economica Federal (Lender) Caixa signed Seller Participation Agreement with CPF</p> <p><b>Contract Volume (Estimated):</b> 3 million tCO<sub>2e</sub> in ER Volume + 2 million tCO<sub>2e</sub> in Options</p> <p><b>Methodology:</b> ACM0001 ver. 11.0 – Consolidated baseline and monitoring methodology for landfill gas project activities</p> <p><b>World Bank Operations/Safeguards:</b> World Bank loan to Caixa to finance landfill upgrading Country systems to be utilized for safeguards assessment of project activities</p>	<p><b>First CPA:</b> CTR Santa Rosa (6 MtCO<sub>2e</sub> between 2012-2018) - LoI signed with Caixa</p> <p><b>Additional CPAs:</b> 1. São Gonçalo (0.7 MtCO<sub>2e</sub> between 2012-2018) 2. Barra Mansa (0.24 MtCO<sub>2e</sub> between 2012-2018)</p> <p><b>Isolated Projects selling post-2012 CERs to Caixa:</b> 1. Itaoca (0.2 MtCO<sub>2e</sub> between 2012-2018) 2. Candeias (1.1 MtCO<sub>2e</sub> between 2012-2018)</p>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>The PoA Design Document and the CPA Design Document published in September 2010</li> <li>The first validation site visit by the DOE took place in October 2010</li> <li>Validation expected to conclude in 2011</li> <li><b>DNA Letter of Approval (LoA)</b> to be processed once validation is completed</li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>Registration by mid-2012</li> </ul>
	Financing	Program Status
	<ul style="list-style-type: none"> <li>World Bank loan to Caixa to finance landfill upgrading</li> <li>Caixa loans to landfill operators to be closed in conjunction with sub-ERPA signing</li> </ul>	<ul style="list-style-type: none"> <li><b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio in 2011 in May/June 2011</li> <li><b>ERPA Signing</b> in July-September 2011</li> </ul>

## CPF Tranche-1 Pipeline Overview

### VIETNAM - Renewable Energy Development Program (REDP)

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Regular scale hydropower generation (30 MW or less for each hydropower plant)</p> <p><b>Objective:</b> Increase the supply of renewable energy to the national grid</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Ministry of Industry and Trade of Socialist Republic of Vietnam (MoIT)</p> <p>Vietnam (MoIT) signed Seller Participation Agreement with CPF in December 2009</p> <p><b>Contract Volume (Estimated):</b> 2 million tCO<sub>2e</sub> in ER Volume</p> <p><b>Methodology:</b> ACM0002</p> <p><b>World Bank Operations/Safeguards:</b> Environmental Category: FI*</p> <p>* A project is classified as FI if it involves investment of Bank funds through a financial intermediary, in subprojects that may result in adverse environmental impact</p>	<p><b>CPA Identification:</b></p> <ul style="list-style-type: none"> <li>15-20 small hydropower projects with installed capacity of 200+MW will be supported by REDP loan (According to the PAD)</li> <li>10 projects with 108.7 MW installed capacity are in advance stages of getting approval and disbursement from the World Bank loan</li> </ul> <p><b>First CPA:</b> In-design and construction phase</p>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>Preparation of the 2<sup>nd</sup> response to the DOE after a few more items of evidence is collected will be underway. DOE 2<sup>nd</sup> response expected to be completed by the end of May 2011</li> <li><b>Host Country DNA Letter of Approval (LoA)</b> signed on 10 February 2011</li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>Target submission for registration set for September 2011</li> <li>Registration should be completed by early 2012</li> </ul>
	Financing	Program Status
	<ul style="list-style-type: none"> <li>World Bank lending is available to CPAs through financial intermediaries</li> </ul> <p><b>CADF Grant Agreement:</b></p> <ul style="list-style-type: none"> <li>The CADF Grant Agreement was signed on April 6, 2011.</li> </ul>	<ul style="list-style-type: none"> <li><b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio in July 2011</li> <li><b>ERPA Signing</b> is expected in September 2011</li> <li>Three projects have expressed their interest in joining the CPF program under the REDP.</li> <li>As of February 2011, MOIT has received 25 new applications with the total capacity of 342.2 MW to be considered for the REDP financing. Initial screening is being carried out to firm up the pipeline.</li> <li>Circular 58 which prevents private developers from receiving CERs under REDP has been revised and published, paving the way for MOIT to aggressively build the CPF pipeline</li> </ul>

## CPF Tranche-1 Pipeline Overview

### MOROCCO - Municipal Solid Waste Management Program

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Landfill gas (LFG) recovery, flaring and use for electrical and/or thermal energy generation</p> <p><b>Objective:</b> To improve financial sustainability and environmental practices in the municipal solid waste management sector. Carbon finance will support reforms implemented under two World Bank development policy loans (DPLs)</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Fonds d'Equipement Communal – FEC (the Moroccan Municipal Development Bank)  FEC signed Seller Participation Agreement with CPF in October 2009</p> <p><b>Contract Volume (Estimated):</b> 2 million tCO<sub>2e</sub> in ER Volume  (10 Landfill Projects in Phase 1 with ER potential of 736,000 tCO<sub>2e</sub>/year)</p> <p><b>Methodology:</b> ACM0001</p> <p><b>World Bank Operations/Safeguards:</b> No World Bank Lending. This program however, is linked to a WB Development Policy Loan to modernize the waste sector in Morocco.  Country systems are being utilized for the safeguards assessment of project activities.</p>	<p><b>First CPA:</b> 1. Greater Rabat (Oum Azza) - LoI signed with FEC - Commissioning expected in March 2012 - 1 MtCO<sub>2e</sub> between 2012-2018</p> <p><b>Additional CPAs:</b> 2. El Jedida/Moulay Abdelah - MoU signed with FEC 3. Rabat (Akreuch)* - MoU signed with FEC 4. Agadir - MoU signed with FEC 5. Marrakech – In Negotiation with FEC 6. El Hoceima – In Negotiation with FEC 7. Berkane – In Negotiation with FEC - LFG System Commissioning expected in March 2013 - 6 CPAs expected to generate 1.3 MtCO<sub>2e</sub> between 2013-2019  * Akreuch – rehabilitation of an old landfill old landfill</p> <p><b>3 Additional CPAs:</b> 1. Casablanca (0.2 MtCO<sub>2e</sub> between 2012-2018) 2. Meknès (1.1 MtCO<sub>2e</sub> between 2012-2018) 3. Tanger - LFG System Commissioning expected in March 2014 - 3 CPAs expected to generate 2.8 MtCO<sub>2e</sub> between 2014-2020</p>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>• The first round of responses to CARs and CLs is nearly completed for the PoA-DD and the first specific CPA-DD</li> <li>• Program started validation in August 2010</li> <li>• The first validation site visit by the DOE (AENOR) took place in September 2010</li> <li>• Validation is expected to conclude by July 2011</li> <li>• <b>DNA Letter of Approval (LoA)</b> has been issued</li> </ul> <p><b>Registration Status:</b></p> <ul style="list-style-type: none"> <li>• Registration by March 2012</li> </ul>
	Financing	Program Status
	<ul style="list-style-type: none"> <li>• The landfill operators will finance all CPAs in the Program. Téodem-Pizzorno, the operator of the landfill of Greater Rabat (Oum Azza), will finance the investment and operate the first CPA</li> <li>• FEC is not involved in the financing scheme and does not provide lending to the municipalities for these activities</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio is proposed for July 2011</li> <li>• <b>ERPA Signing</b> in September-October 2011, depending on completion of due diligence</li> </ul>

**CPF Tranche-1 Pipeline Overview**

**JORDAN - Amman Green Growth Program (City-Wide Approach)**

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> City-wide program</p> <p><b>Objective:</b> Pioneer and demonstrate the efficacy of the city-wide approach to carbon finance, being used for the first time by combining approved methodologies in a single PoA</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Greater Amman Municipality Greater Amman Municipality signed Seller Participation Agreement with CPF in May 2010</p> <p><b>Contract Volume (Estimated):</b> 1.5-2 million tCO<sub>2e</sub> in ER Volume</p> <p><b>Methodology:</b> Will utilize existing methodologies in a framework being developed by the CDM EB following guidance from the CMP at Cancun and initiated at a UNFCCC workshop on PoAs in May 2011.</p> <p><b>World Bank Operations/Safeguards:</b> To be determined</p>	<p><b>CPA Identification:</b> The City-wide Program will reduce GHG emissions at the city level, aggregating carbon emissions from following sectors:</p> <ul style="list-style-type: none"> <li>• Waste (plastics recycling and slaughterhouse waste to energy)</li> <li>• Energy (energy efficiency and renewable energy)</li> <li>• Transport</li> <li>• Forestry</li> </ul> <p>Energy projects could cover street lighting, solar water heaters, building energy efficiency for GAM buildings and new construction. Transport could include BRT and light rail transit.</p> <p><b>First CPA:</b> First CPA-DD in Energy Efficiency in street lighting has been prepared and submitted to the UNFCCC Executive Board. However, a BRT CPA is also under preparation given that it is advancing on the ground. Feasibility study for solar water heaters is underway as well.</p>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>• PoA-DD and first CPA-DD (energy efficiency in street lighting) have been prepared and submitted to the EB with a proposed consolidated approved methodology utilizing a multi-sectoral approach (city wide)</li> <li>• Program will be submitted for validation in September/October 2011</li> <li>• Contracting for a DOE is in progress (planned for August / Sept 2011)</li> <li>• <b>DNA Letter of Approval (LoA):</b> DNA has been officially informed of the PoA. Letter not issued yet.</li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>• To be determined depending on progress with validation; registration post-2012.</li> </ul>
	<b>Financing</b>	<b>Program Status</b>
	<ul style="list-style-type: none"> <li>• To date GAM, AFD and KFW. World Bank lending has been requested as well.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio – to be determined</li> <li>• <b>ERPA Signing</b> - To be determined</li> </ul>

## CPF Tranche-1 Pipeline Overview

### THAILAND - Renewable Energy (RE) and Energy Efficiency (EE) Programs

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Two Small Scale PoAs:</p> <ol style="list-style-type: none"> <li><b>RE</b>- Small-scale power generation using renewable biomass residue</li> <li><b>EE</b> – Small-scale street lighting energy efficiency programs</li> </ol> <p><b>Objective:</b> Increase the supply of Renewable Electricity to the national-grid and reduce nationwide energy consumption for Highway Street lighting</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Provincial Electricity Authority Energy Company (PEA-ENCOM), and wholly owned subsidiary of the Provincial Electricity Authority (PEA) which is one of the leading State-Owned-Enterprises in the Kingdom of Thailand, responsible for electricity distribution outside of the Bangkok Metropolitan area</p> <p>PEA-ENCOM signed Seller Participation Agreement with CPF in December 2010</p> <p><b>Contract Volume (Estimated):</b> 1 million tCO<sub>2e</sub> in ER Volume</p> <p><b>Methodology:</b> AMS I.D for RE PoA AMS II.L for EE PoA</p> <p><b>World Bank Operations/Safeguards:</b> Environmental Category: A – Full Assessment (Concept Stage)</p>	<p><b>CPA Identification:</b></p> <p><b>RE:</b></p> <ul style="list-style-type: none"> <li>PEA-ENCOM will develop up to 100 small biomass gasification power plants with average installed capacity of 1 MW per power plant</li> <li>Biomass residue will be sourced from 100 forest plantations owned by Forest Industry Organization (FIO). Additional agricultural waste will be available from surrounding farms (e.g., corn cobs and cassava rhizome)</li> </ul> <p><b>EE:</b></p> <ul style="list-style-type: none"> <li>The street lighting energy efficiency program will involve the replacement of around 500,000 old High Pressure Sodium (HPS) lamps with LED lamps as well as modernizing related equipments throughout national highway in Thailand</li> </ul> <p><b>First CPA:</b> In-design and pre-feasibility study phase</p>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>POA-DD and CPA-DD for both programs are being finalized and should be submitted to the DOE by May 2011, when the validation would start. Expected site visit in July 2011</li> <li>Program should complete validation in July 2012</li> <li><b>DNA Letter of Approval (LoA):</b> Expected to be granted by December 2011</li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>Complete Submission and/or Registration by December 31, 2012</li> </ul>
	<p style="text-align: center;"><b>Financing</b></p> <ul style="list-style-type: none"> <li>Equity Investment by PEA-ENCOM</li> <li>Blended Clean Technology Fund (CTF) and IBRD loan is under preparation</li> </ul>	<p style="text-align: center;"><b>Program Status</b></p> <ul style="list-style-type: none"> <li><b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio in May 2012</li> <li><b>ERPA Signing</b> in September 2012</li> </ul>

## CPF Tranche-1 Pipeline Overview

### CHINA - Hebei Regional Farm Biogas Program

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Small scale manure management program</p> <p><b>Objective:</b> Improve local environment and human health through upgrading the animal manure management practice</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Hebei Green Agriculture Co. Ltd., under the support of Hebei New Energy Office (government agency)</p> <p>Hebei Green Agriculture Co. Ltd signed Seller Participation Agreement with CPF in February 2011</p> <p><b>Contract Volume (Estimated):</b> 1.2 million tCO<sub>2e</sub> in ER Volume</p> <p><b>Methodology:</b> AMS-III.D. ver. 17 AMS-I.C. ver. 18 AMS-I.F.</p> <p><b>World Bank Operations/Safeguards:</b> No World Bank Lending/Stand-alone safeguards assessment</p>	<p><b>CPA Identification:</b></p> <ul style="list-style-type: none"> <li>About 40-50 livestock farms will participate in this PoA</li> <li>The CME has identified 40 farms that could potentially be included in the PoA</li> <li>After seeing the validation progress and the proposed eligibility criteria accepted by DOE, the CME will launch intensive marketing campaign to recruit more CPAs</li> </ul> <p><b>First CPA:</b> Feasibility Study is finalized. Construction starts after the PDD is published for GSP in May.</p>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>The program has prepared the first draft PoA-DD and CPA-DD</li> <li>PoA-DD was published on May 11, 2011</li> <li>Validation site visit is scheduled in mid-July</li> <li><b>DNA Letter of Approval (LoA):</b> Application for LoA is expected to be submitted by end of May 2011 and to be granted in three months</li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>Estimated for September 2012</li> </ul>
	Financing	Program Status
	<ul style="list-style-type: none"> <li>Chinese government will provide about 25% of grant subsidy but no more than RMB 1 million to reduce the upfront investment cost</li> <li>Participating farmers will finance the rest of the installation cost</li> </ul>	<ul style="list-style-type: none"> <li><b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio in Fall 2011</li> <li><b>ERPA Signing</b> in December 2011</li> </ul>

## CPF Tranche-1 Pipeline Overview

### TANZANIA – Renewable Energy Program

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Grid connected and Off-grid Renewable Electricity generation</p> <p><b>Objective:</b> Expand coverage of rural electrification in Tanzania, by promoting both off-grid and on-grid renewable energy projects</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> Rural Energy Agency (REA) - Government Agency that became operational in October 2007 Seller Participation Agreement discussions have been initiated with REA</p> <p><b>Contract Volume (Estimated):</b> 2.8 million tCO<sub>2e</sub> in ER Volume in first 10years (2013-2022) – ER Estimate only Power Supplied to National Grid = 50% Power supplied to Isolated Mini Grids = 50%</p> <p><b>Methodology:</b> AMS I.D / ACM0002 and AMS I.F</p> <p><b>World Bank Operations/Safeguards:</b></p> <ul style="list-style-type: none"> <li>70% of Long term debt enabled by WB TEDAP credit line of \$100 million</li> <li>All the CPAs will be subject to the environmental and social framework (ESF) adopted for the WB TEDAP project</li> </ul>	<p><b>CPA Identification:</b> All CPAs under the PoA will be renewable energy generation projects implemented by a private developer. Proposed PoA is envisaged to include primarily small scale hydropower, but also solar, bio-mass and wind.</p> <p>Project implementation to be carried out in stages over next five to six years. Installed capacity in each CPA will range between 1 MW to 15 MW, while the entire addition to the generating capacity is expected to be between 100 to 150 MW</p> <p><b>First CPA:</b> To be identified from several projects that are at advanced stage of financial closure</p>	<p><b>Validation Status :</b></p> <ul style="list-style-type: none"> <li>Validation expected to start in September 2011</li> <li>The POA-DD will be prepared in a flexible manner to accommodate all types and sizes of projects</li> <li>The technical details of the technology applied in CPAs will be comprehensively outlined in the corresponding individual CPA-DDs, once they are identified in the future</li> <li><b>DNA Letter of Approval (LoA):</b> To be determined</li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>To be determined</li> </ul>
	<b>Financing</b>	<b>Program Status</b>
	<ul style="list-style-type: none"> <li>All the projects under the program are expected to be implemented by the Private Sector</li> <li>Government of Tanzania has already put in place a strong policy foundation and several financial incentive schemes: i.e. Connection Grants from REA</li> <li>Total investment requirements associated with the program is estimated to be US\$ 262.5 million</li> <li>Financing plan includes advance payments under CPF ERPA</li> <li>Additional donor resources are being sought to help finance the equity gap until the CPF Advance Payment is received.</li> </ul>	<ul style="list-style-type: none"> <li>Expected Start Date of Project is September 2011</li> <li><b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio – Fall 2011/Winter 2012</li> <li><b>ERPA Signing:</b> To be determined</li> </ul>

## CPF Tranche-1 Pipeline Overview

### EGYPT - Wind Program

Description	CPA Implementation	Milestones
	Project Activities	CDM Status
<p><b>PoA Type:</b> Wind energy for power generation program</p> <p><b>Objective:</b> Reduce GHG emissions from power sector through scaling-up utilization of domestic renewable energy resources: Targeting 3,000 MW of wind generation implemented in phases between 2012 and 2022</p> <p><b>PoA Coordinator/Managing Entity (CME):</b> A unit to be established under the Egyptian Electricity Transmission Company (EETC) SPA with CPF in concept stage (SPA – Seller Participation Agreement)</p> <p><b>Contract Volume (Estimated):</b> 2 million tCO<sub>2e</sub> in ER Volume</p> <p><b>Methodology:</b> ACM 0002 “Consolidated methodology for grid-connected electricity generation from renewable sources”</p> <p><b>World Bank Operations/Safeguards:</b> World Bank and Clean Technology Fund (CTF) lending will finance the transmission line to evacuate the electricity generated by the wind farms. Since the wind program specifically is not part of the Bank operation, technically this will be a stand-alone CF program</p>	<p><b>First CPA:</b></p> <ul style="list-style-type: none"> <li>• First CPA is a 250 MW wind farm in the Gulf of Suez developed by private sector under a Build-Own-Operate contract with EETC</li> <li>• Competitive bidding tender process for the first CPA started in May 2009, short-listing of 10 international consortiums (IC).</li> <li>• Wind measurements started Oct. 2011 for 1 year</li> <li>• Draft RFP in fall 2011 (Oct. / Nov.)</li> <li>• Final RFP by Feb 2012</li> <li>• Contract is planned to be awarded by June 2012</li> <li>• Project commissioned planned by mid 2014</li> </ul>	<p><b>Validation Status (ongoing):</b></p> <ul style="list-style-type: none"> <li>• Local consultant have been hired for POA-DD and first CPA-DD preparation</li> <li>• 2 weeks preparation mission planned for second half of July 2011</li> <li>• PoA-DD and CPA will be drafted by September 2011</li> <li>• Validation start up planned for October / November 2011</li> <li>• Project Commissioning expected by mid 2014</li> <li>• <b>DNA Letter of Approval (LoA):</b></li> </ul> <p><b>Registration Status :</b></p> <ul style="list-style-type: none"> <li>• Estimated for 2013</li> </ul>
	<b>Financing</b>	<b>Program Status</b>
	<ul style="list-style-type: none"> <li>• Private operator is responsible for arranging the financing for the project</li> <li>• CPA will be paid from selling the electricity to the transmission company (EETC).</li> <li>• EETC will own the ERs.</li> <li>• World Bank and Clean Technology Fund (CTF) lending will finance the transmission line to evacuate the electricity generated by the wind farms</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Submission of Program to CPF Buyers</b> for inclusion in the First Tranche portfolio - to be determined</li> <li>• <b>ERPA Signing</b> – to be determined</li> <li>• <b>Political Situation</b> in Egypt has slowed progress since late January 2011</li> </ul>