



WORLD BANK CARBON FINANCE UNIT  
CARBON PARTNERSHIP FACILITY  
2012 ANNUAL MEETING

**CPF FIRST TRANCHE PORTFOLIO/PIPELINE**



# WORLD BANK CARBON FINANCE UNIT CARBON PARTNERSHIP FACILITY 2012 ANNUAL MEETING

## BRAZIL CAIXA SOLID WASTE MANAGEMENT PROGRAM

# BRAZIL INTEGRATED SOLID WASTE MANAGEMENT PROGRAM



## Implementation and Next Steps

Implementation Status	CDM Status
<ul style="list-style-type: none"><li>◆ <b>First CPA:</b> CTR Santa Rosa (6 MtCO<sub>2</sub>e between 2012-2018)<ul style="list-style-type: none"><li>- Sub-ERPA signed with Caixa in December 2011</li><li>- Landfill commissioned on 20 April, 2011</li><li>- LFG system started construction in May 2012 and is to be commissioned in October, 2012</li></ul></li><li>◆ <b>Additional CPA:</b> São Gonçalo (0.3 MtCO<sub>2</sub>e between 2015-2018)<ul style="list-style-type: none"><li>- Sub-ERPA signed with Caixa in December 2011</li><li>- Landfill to be commissioned in 2012</li><li>- LFG system to be commissioned in 2015</li></ul></li><li>◆ <b>Isolated Projects selling post-2012 CERs to Caixa:</b><ol style="list-style-type: none"><li>1. Itaoca (0.2 MtCO<sub>2</sub>e between 2012-2018)</li><li>2. Candeias (1.1 MtCO<sub>2</sub>e between 2012-2018)<ul style="list-style-type: none"><li>- Sub-ERPAs signed with Caixa in December 2011</li><li>- LFG system to be commissioned in September, 2012</li></ul></li></ol></li></ul>	<ul style="list-style-type: none"><li>◆ <b>PoA Validation Status (ongoing):</b><ul style="list-style-type: none"><li>- PoA validation concluded in 2011</li><li>- Brazilian DNA LoA was requested in January 2012 and is expected to be issued before the end of May 2012</li><li>- Submission of request for registration expected for the first week of June</li><li>- Registration estimated by September 2012</li></ul></li><li>◆ <b>Isolated Projects Registration Status:</b><ol style="list-style-type: none"><li>1. Itaoca. Registered on August 11, 2011</li><li>2. Candeias. Registered on September 29, 2011</li></ol></li></ul>
Next Steps/Timetable	
<ul style="list-style-type: none"><li>◆ Submission for registration of the PoA in June 2012</li><li>◆ Development of the pipeline</li><li>◆ Implementation of the CME systems</li></ul>	



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**MOROCCO SOLID WASTE MANAGEMENT PROGRAM**

# Morocco Municipal Solid Waste Management Program



**Contract Volume: 2 million tCO<sub>2</sub>e from 2013-2020**

## Implementation Status

### First CPA:

Greater Rabat (Oum Azza) - LoI signed with FEC. Investment by private sector participant conditional on signature of ERPA between FEC and CPF, and on submission of project for registration. 1 MtCO<sub>2</sub>e between 2012-2018.

### Additional CPAs:

The possibility of adding CPAs to the program is dependent on the terms of the ERPA between the CPF and FEC.

## CDM Status

### ◆ Validation Status:

- Program started validation in August 2010
- The first validation site visit by the DOE (AENOR) took place in September 2010.
- All CARs and CLs are closed for the PoA-DD and the first specific CPA-DD. The Program is in Technical Review by the DOE and the Final Validation Report is being drafted.
- Host Country LoA signed in July 2010.

### ◆ Registration Status:

- Target submission for registration by end-June 2012.

## Next Steps/Timetable

- ◆ **ERPA negotiations** pending revision to the CPF Pricing Approach.
- ◆ **ERPA signing** in June/July 2012 provided that an agreement is found on pricing.



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**CHINA HEBEI REGIONAL FARM BIOGAS PROGRAM**

## ◆ Program Description:

- By replacing current practice of anaerobic open lagoons with biogas digesters, the program aims to improve manure management systems in about 40 livestock farms in 11 prefectures of Hebei province in China. The generated biogas will be used to provide thermal energy and/or electricity for the farms and households nearby
- China targets installation of 8,000 biogas plants at single farm level by 2015. Through providing carbon finance incentive and applying the PoA approach, the program will support Ministry of Agriculture to establish provincial platforms in order to facilitate application of biogas digester technology among medium- large farms

## ◆ Implementation:

- ERPA will be signed with Guorun Green Agriculture Co, Ltd, a bundling agency at provincial level , who will act as program CME in charge of bundling carbon transaction

## ◆ Finance:

- Each participating farm will receive partial subsidy from provincial government covering less than 1/3 of total investment cost and no more than RMB 1 million, the rest will be financed by the CPA participants' own savings and equity

## ◆ Estimated Emission Reductions:

- 3.37 million tCO<sub>2</sub>e from over the 10-year crediting period

# China Hebei Regional Farm Biogas Program

**Contract volume: 1.2 million tCO<sub>2</sub>e**

## Implementation Status

- ◆ Construction of first CPA started after GSP date of May 11, 2011
- ◆ CPA Identification: CME has identified 40 potential farms to be included in the PoA
- ◆ The CME has signed Letters of Intent with 42 farms that could potentially be included in the PoA

## CDM Status

- ◆ **Validation Status (ongoing):**
  - The PoA-DD and CPA-DD published on UNFCCC website on May 11, 2011
  - Draft validation report received.
  - TR will be launched by mid June.
  - Submission for registration expected by end of June
- ◆ **DNA Letter of Approval (LoA):** Unilateral LoA issued by NDRC in March 2012
- ◆ **Registration Status:** Estimated for October 2012

## Next Steps/Timetable

- ◆ **Preparation of inclusion of additional two CPAs**
- ◆ **Training and implementation of CPA eligibility check and standard monitoring system**
- ◆ **ERPA Signing prospectively** in March 2013 following an agreement on pricing





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## VIETNAM RENEWABLE ENERGY PROGRAM

# Vietnam Renewable Energy Development Program (REDP)



**Contract Volume: Two million tCO<sub>2</sub>e from 2012-2020**

## Implementation Status

- ◆ The first CPA Sung Vui (18 MW) hydropower project is in the advance construction stage. The first package of the Electro-Mechanical equipment will be delivered and installed in May 2012. Commissioning process could start as soon as October 2012.
- ◆ 7 projects from the REDP pipeline have expressed their interest in joining the CPF program. 8 new projects have expressed their interest in joining the REDP/CPF bringing the total installed capacity to 200 MW and potential ERs of 440ktCO<sub>2</sub>e/year when fully commissioned.

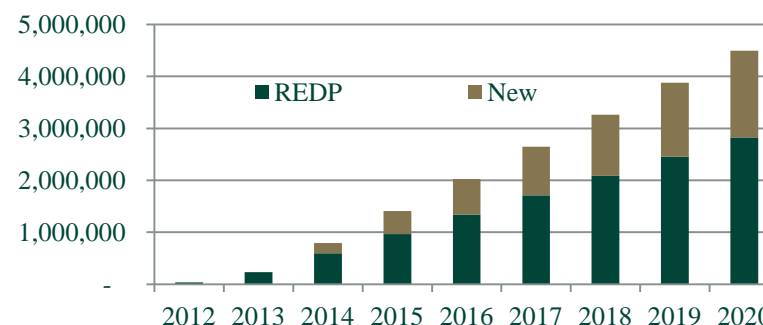
## CDM Status

- ◆ **Validation Status:**
  - The latest response was sent to the DOE on May 4, 2012 responding to the key concerns on the starting date of the first CPA
  - Agreement with the DOE to achieve a faster turn-around time has been reached.
  - Aiming to close all CARs and CLs by mid-June.
- ◆ **Registration Status:**
  - Target submission for registration set for July 2012

## Next Steps/Timetable

- ◆ **Submission of Program to CPF Buyers** for inclusion in the First Tranche portfolio in the third quarter of 2012
- ◆ **ERPA Negotiation and signing** in the fourth quarter of 2012

## Cumulative Emission Reductions at 100% of the PDD Volume



# Vietnam Renewable Energy Development Program (REDP)

Implementation Progress of the first CPA Sung Vui Hydropower, as of May 15, 2012



Power House



Access Road



Dam Site



Tree Planting



Local Employment



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**TANZANIA RENEWABLE ENERGY PROGRAM**

## Implementation and Next Steps

### Implementation Status

- REA has been very active in promoting the program – several workshops conducted
- REA has successfully mobilized \$6.5 million (from Russia) for the REA Revolving Fund that would provide upfront financing to project developers
- Has hired a consultant to develop Operational Guidelines for implementing the carbon linked equity advance scheme, which is under finalization
- REA has a dedicated team to focus on carbon finance program, and has been training its staff to ensure smooth implementation
- REA has signed the 1<sup>st</sup> CPA agreement, many in the process
- 1<sup>st</sup> CPA (10 MW hydro power project) is at financial closure stage and expected to be commissioned early 2014

### CDM Status

#### ◆ PoA Validation Status (ongoing):

- PoA package was finalized and validation initiated in November, 2011
- Validation site visit concluded in February 2012
- Validation protocol received from the DOE does not indicate any major concerns for successful registration
- Tanzania DNA has issued the Letter of No Objection to the program, based on the PIN in January 2012
- The final LoA was issued in May 2012 (revised version)
- Request for registration expected in December 2012
- Registration estimated by early 2013

#### Inclusion of the Program in CPF

- Seller Participation Agreement has been signed with REA
- Submission to Buyers for inclusion in First Tranche portfolio – Fall 2012

### Next Steps/Timetable

- ◆ Submission for registration of the PoA in December 2012
- ◆ Development of the pipeline (ongoing, inclusion of the program in the First Tranche portfolio is expected to speed up the pipeline development)
- ◆ Implementation of the CME systems (under development)



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## THAILAND ENERGY EFFICIENCY PROGRAM

# THAILAND - Energy Efficiency (EE) Programs

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## Program Highlights

- ◆ **Objective:** Reduce energy consumption for Highway Street lighting, nationwide.
- ◆ **Strategic Relevance:** The Program is strategically aligned with Thailand National Economic and Social Development Plan 2012-2016, Alternative Energy Development Plan 2008-2022, as well as the World Bank Group Country Partnership Strategy for Thailand
- ◆ **Program Overview:**
  - Energy Efficiency (EE) of National Highway Street Lighting Program : Replacement of up to 500,000 High Pressure Lamps with LED lamps
  - Carbon Finance has been an integral part of the Program design
  - Contract volume of 0.7 million tCO<sub>2</sub>e from 2013-2020
- ◆ **Scaling up potential:** The successful application of LED technology for the street lighting could lead to a wider replication in many other application such as public lighting as well as residential, commercial, and industrial application.
- ◆ **Coordinating and Managing Entity (C/ME):** Provincial Electricity Authority of Thailand , one of the largest utilities in the country is responsible for electricity distribution for all provinces except Bangkok Metropolitan, serves as C/ME

# THAILAND - Energy Efficiency (EE) Program

**Contract Volume: 0.7 million tCO<sub>2</sub>e from 2013-2020**

**CME: Provincial Electricity Authority of Thailand (PEA)**

## Implementation Status

- ◆ The program financing through PEA operating budget has been approved.
- ◆ Pre-feasibility studies are completed
- ◆ Pilot program have been approved location of the first CPA has been identified.
- ◆ Equipment testing for LED lamp was completed for supplier prequalification.
- ◆ TOR for the pilot program has been finalized.
- ◆ Consultation with stakeholder of CPA 1 is planned for the end of May 2012
- ◆ LED supplier contract should be in place in June 2012
- ◆ Installation is planned to start in October 2012 and completed in March 2013.

## CDM Status

- ◆ **Validation Status (ongoing):**
  - Site visit has been completed. The latest response was sent to the DOE in March 2012 and feedback from DOE was received. The team is preparing a response package included the latest evidence and data that were received on May 10.
  - Program should complete validation by September 2012.
  - DNA Letter of Approval (LoA): Expected to be granted by July 2012.
- ◆ **Registration Status:** Complete submission for registration by October 2012

## Next Steps/Timetable

- ◆ **Submission of Program to CPF Buyers** for inclusion in the First Tranche portfolio in Fall 2012
- ◆ **ERPA signing** in December 2012







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## AMMAN GREEN GROWTH PROGRAM

# Amman Green Growth Program



## Initial Objective

- ◆ Apply the City-wide Approach to develop a multi-sectoral PoA, grouping together investments under the Amman Green Growth Program.

## Achievements to Date and Recent Developments

### *Achievements to date*

- ◆ PoA-DD and first CPA-DD were drafted (street lighting CPA).
- ◆ CDM EB approved multi-methodology rules for PoAs to enable registration of a City-Wide PoA.
- ◆ GAM decided to analyze more options to better manage its street lighting system and improve its energy efficiency and launched a feasibility study for a solar water heating (SWH) promotion program in Amman.

### *Recent Developments*

- ◆ Due to political instability and changes at GAM's high management, development of the program has been slowed.
- ◆ Registration of a CDM PoA based on the City Wide Approach is no longer envisaged.

## Next Steps/Timetable

- ◆ GAM is still willing to develop a low carbon urban development program which would benefit from carbon finance. Support from GAM management is confirmed.
- ◆ GAM is willing to develop the program under a new market mechanism within the CPF which:
  - ◆ Offers an opportunity to develop an integrated top-down carbon crediting approach covering GHG mitigation impacts of both investments and policy interventions.
  - ◆ Is based on an integrated approach allowing a better accounting of co-benefits and externalities which addresses better the objective of efficient resources management.
  - ◆ May result in developing a framework that maximizes the leverage effect of carbon finance to mobilize other sources of international climate finance.



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## EGYPT WIND PROGRAM

# Egypt Wind Program



## Initial Objective

- ◆ Develop a PoA to support the implementation of up to 3000MW of wind power in conjunction with a World Bank financed transmission project.

## Achievements to Date and Recent Developments

### *Achievements to date*

- ◆ Competitive bidding tender process for first wind farm started May 2009; final RFP by Feb 2012; contract awarding planned by June 2012; project commissioning planned by mid 2014
- ◆ PoA-DD and CPA DD completed in April 2012
- ◆ Coordinating/Managing Unit established in the Egyptian Electricity Transmission Company (EETC)

### *Recent Developments*

- ◆ The Bank informed the Egyptian Electricity Transmission Company (EETC) and the Egyptian DNA that it would be virtually impossible for the PoA to be registered by December 31, 2012 and offered to support the development of the program as a new market mechanism pilot.
- ◆ This approach will require a higher level of coordination within the GOE and with the EETC, involving the Ministries of Environment (DNA) and other ministries such as, Foreign Affairs (UNFCCC negotiator) and the Ministry of Energy.

## Next Steps/Timetable

- ◆ The Bank will initiate contacts with several ministries to determine if there is an interest to proceed on this path.
- ◆ With their interest, the Bank will prepare an Memorandum of Understanding for the Government to become a CPF Host Country Partner and a revised SPA suited to a new market mechanism pilot program.



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## PIPELINE CALENDAR AND ASSESSMENT

# Calendar for Presentation of Programs to Buyers

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- ◆ Caixa SWM – May 2011
- ◆ Morocco SWM – December 2011
- ◆ China Hebei Biogas – December 2011
- ◆ Vietnam RE – September 2012
- ◆ Tanzania RE – Fall 2012
- ◆ Thailand Clean Energy – Fall 2012
- ◆ Amman Green Growth – to be determined
- ◆ Egypt Wind – to be determined



# CPF Pipeline -- Expected Contract Volumes

Program Name	Contract Volume (MtCO <sub>2</sub> e)			Current Delivery Estimate (MtCO <sub>2</sub> e)		
	Contract	Options	Total	Contract	Options	% PDD Volume
Vietnam: RE Program	2	0	2	2	0	50
Morocco: MSW Program	2	1	3	0.8	0	27
Brazil: Caixa SWM Program	3	2	5	3	2	29
China: Farm and Household Biogas Program	1.2	0	1.2	0.75	0	50
Thailand: Clean Energy Program	1	0	1	0	0	50
Tanzania: Renewable Energy Program	1.5	0	1.5	0	0	50
<b>Total</b>	<b>10.7</b>	<b>3</b>	<b>13.3</b>	<b>6.55</b>	<b>2</b>	<b>n/a</b>