



CDM Opportunities in Uzbekistan

8 October, 2009

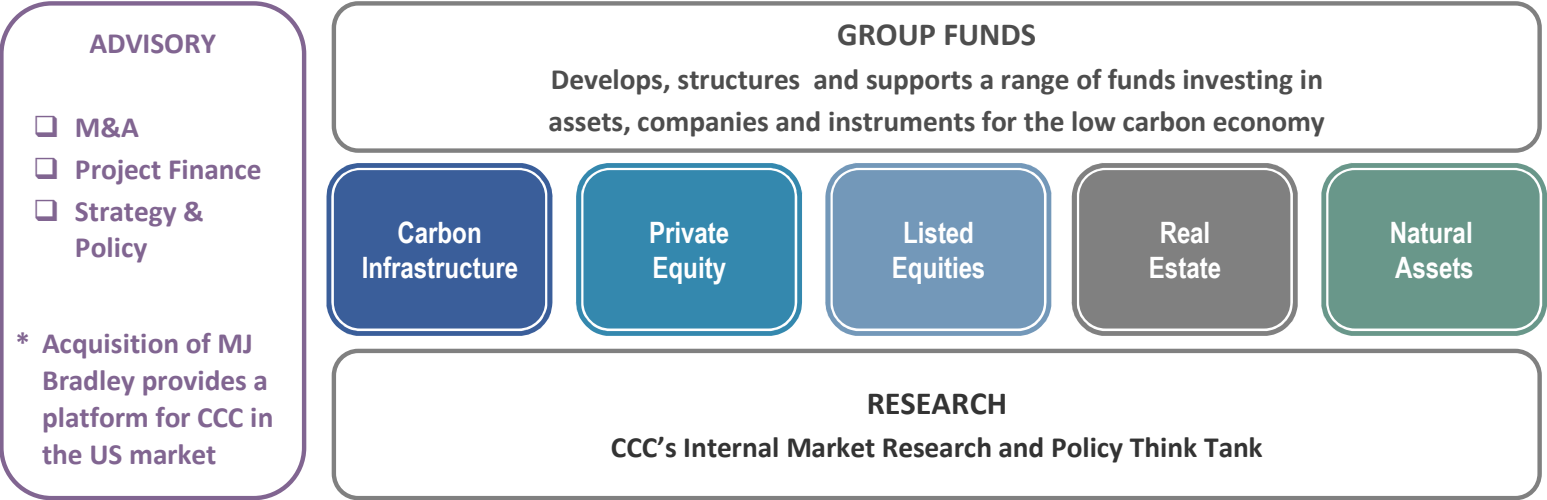
Climate Change **Capital** 

Climate Change Capital Overview

CCC cultivates integrated fund management teams that leverage CCC's proprietary analysis and networks to implement a sustainable progression of funds targeting premium returns in 5 asset groups.

Teams are supported by:

- ▶ Group Funds for strategy, structure and investor relations
- ▶ Internal research for insight on market and policy trends
- ▶ Advisory work that keeps CCC at the cutting edge of opportunities in our target markets
- ▶ Leadership that supplements knowledge, judgment and industry networks



The Climate Change Capital Carbon Funds

CCC has over US\$1 billion under management for investment in companies and projects that generate emission reduction credits. Investors in the CCC funds include two of the world's largest pension funds, a leading UK utility company and a global emerging markets bank.

- The funds act as long term partners with host countries to ensure the financed projects meet the development needs and priorities of those countries; making sure projects achieve the underlying technology transfer rational of the Clean Development Mechanism
- The funds work with proven technology providers to develop carbon assets from a range of methodologies including landfill gas; energy efficiency, destruction of industrial gases, agricultural waste, renewable energy and agricultural waste.
- CCC has built a substantial portfolio of emission reduction credits, including landfill methane gas capture, industrial gas destruction and wind farms.
- In September 2006, CCC announced the largest private sector carbon finance transaction. Working with Zhejiang Juhua Co Ltd., CCC structured a deal to destroy the equivalent of 29.5 million tonnes of carbon dioxide equivalent over a six year period.

The Kyoto Protocol

- **Requires EU, Canada, Japan (Annex 1 countries) make mandatory cuts in emissions of carbon dioxide and other gases.**
- **By 2012 EU must reduce CO2 8%; Canada 6%; Japan 6% from 1990 levels.**
- **Kyoto came into force on February 16, 2005 (90 days after Russia ratification).**
- **Developed Countries require large emitters to reduce CO2 emissions or purchase Offsets from project based emission reductions in Developing Countries.**
- **Uzbekistan has ratified the Kyoto Protocol and is active in Developing Emission Reduction Projects.**

What Does All This Mean?

- If you have a project that reduces GHGs, you may be able to “monetize” these reductions.
- These projects are “carbon assets” that bring in extra revenue each year until 2012 and possibly beyond (*Copenhagen?*).
- But, these projects must be eligible under the bureaucratic United Nations led process.
- Projects to reduce greenhouse gas emission in Uzbekistan are eligible for these credits through the Clean Development Mechanism (CDM)

Eligible Projects

Projects need to demonstrate a reduction in GHG emissions from the business as usual scenario.

- Renewable energy
- Energy efficiency
- Fuel switching
- Process changes
- Gas Flare Reduction
- Methane Fugitive Emission Reductions (Pipelines, Landfills, etc.)

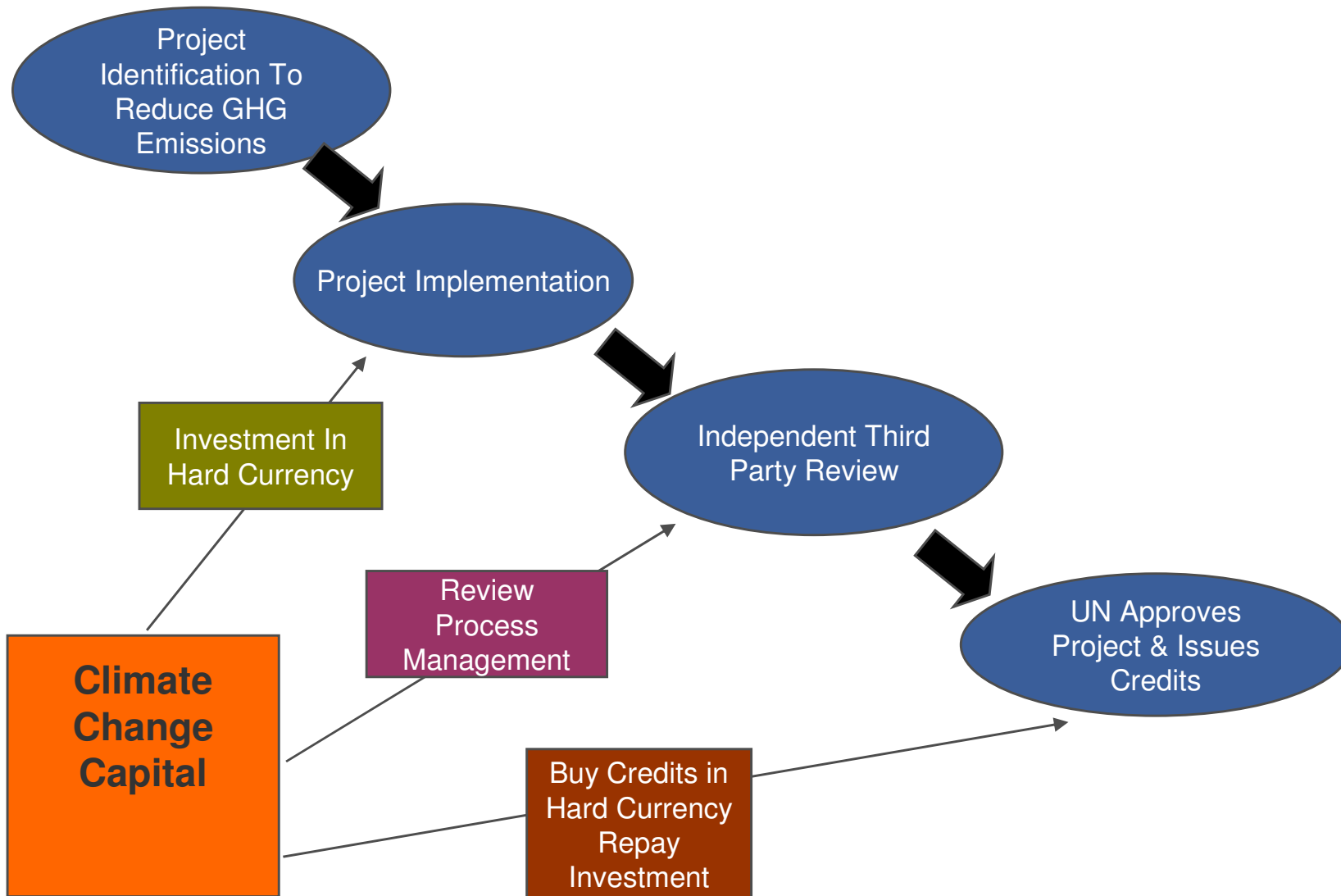
GHGs include: CO₂, CH₄, N₂O, SF₆, HFCs, PFCs.

► **Uzbekistan Has Already begun projects reducing N₂O emissions from fertilizer production and fugitive methane emission reductions from leaky above ground gas pipes.**

How to Develop a CDM Project

- Develop a baseline and monitoring plan documenting greenhouse gas reduction activity.
- Submit to the UNFCCC “regulator.”
- Have third-party validation of the baseline and verification of the monitoring.
- Uzbek Government approval required.
- CERs are issued after project is implemented and verified for one year.
- Projects deliver CERs for 10 or 21 year periods.

Typical Transaction Flow





Uzbek-CCC CDM Project Gas Pipeline Leak Reduction

Technology

- Repair of leaks in gas distribution systems in Samarqand, Sirdarya and Djizak Oblast found in surface based equipment such as pressure control stations valves, seals, etc.
- Very straightforward Process: identify leaks, measure flow rate, repair leaks and re-screen each year
 - ▶ Uses Unique advanced Monitoring Technology provided by CCC to quantify the leak rate from identified leaks.
- Gas Savings Accrue to Local Utility- UzTransgaz- Markazgaz
- CCC Trains local technicians to utilize advanced measurement devices and make repairs using advanced materials
- CCC provides advanced repair material to make repairs
- CCC works with Local staff to track progress and savings and ensure repairs continue to hold.

CCC is the only company in the world to successfully gain UN approval and implement this type of project. CCC activities in Ukraine, Georgia, China, Egypt, Algeria, China, US.

Prior to the CDM project, the gas network is typically old and in poor condition.



Repairs are made with cheap low quality materials and old equipment...



...the only way staff can actually detect a leak is by smelling it, hearing it, or spraying soap solution onto the infrastructure...



Thanks to CDM however, high tech detection equipment is used to locate leaks, such as the Gasurveyor 3-500 Leak Locating Device pictured below...



...while the High Flow Sampler can be used to measure them accurately, allowing teams to prioritize which leaks to repair



...and critical repairs made.



Contact Climate Change Capital



CCC Head Office

Climate Change Capital
3 More London Riverside
London
SE1 2AQ
United Kingdom

Tel: +44 (0)20 7939 5000

Fax: +44 (0)20 7939 5030

www.climatechange-capital.com