

**Consultation with Private Sector on Finance and Investment Flows
to address Climate Change
21 June 2007, London**

1. Potential of Carbon Markets

The aim of this session was to identify how to increase private sector participation in the current and future carbon market.

The main factors for securing initial investments in clean energy projects are country and risk driven rather than dependent on carbon markets. Carbon markets are only an additional incentive for investments. At the moment only a small amount of investment in renewable energy and energy efficiency is influenced by potential carbon credit revenues. However, the carbon market experienced a very large growth between 2005 and 2007 and this market has the potential to become very large. The EU commitment of 20% reduction in 2020 is significant when compared to the Kyoto target and thus with this alone, some growth in the market can be expected.

The current carbon market has several weaknesses and there is a number of conditions that needs to be met to ensure the realization of its full potential. Several proposed investments in low carbon projects in the energy, industrial and commercial sectors are currently being postponed or redesigned as conventional projects. Expansion of the market is constrained primarily by the absence of long term political certainty translated in stringent Greenhouse Gas (GHG) reduction targets. Market expansion can be supported by:

- Securing a demand for credits through the adoption of stringent targets and securing the participation of US and Canada in the market;
- Taking a long-term perspective (policies with 20 to 30 years time horizon). In particular to stimulate investment with sustainable development benefit. Most sustainable development projects can only be planned over longer term as their payback period can be up to 20 to 25 years;
- Strengthening existing institutions by making them more independent of the political process starting with. This would be best done in partnership with private sector players. Moving away from a system strictly designed by civil servants could ensure that it is aligned with private carbon market actors opportunities and constraints;
- Addressing issues of technology and country risks by developing risk guarantee and other relevant mechanisms;
- Increasing rate of returns by addressing issues relative to property rights.

To shift investment pattern in more challenging areas such as Africa, transaction costs will need to be reduced by the simplification of rules (without compromising robustness). The design of programmatic CDM is a useful step to reduce transaction cost and make carbon credit revenue stream more attractive. Many developing countries also have great

potential to generate GHG emission reduction and thus carbon credit through Land Use, Land Use Change and Forestry. However the current demand for these projects and methodological issues that are now limiting the potential demand for carbon credits generate through these activities need to be addressed in order to realize full mitigating potential in this sector.

To shift investment pattern towards more expensive technologies, political decisions will need to be taken to support a shift of the market equilibrium up the marginal abatement cost curve (e.g.: forcing actors to move beyond low hanging fruits, HCFC-type projects). Issues of competition between public and private investments should be looked into to insure that public investment is not crowding out private sector investment.

Greater compatibility between domestic and international markets would ensure liquidity and efficiency in the market. However, the full integration of markets is not as key as transparency and the existence of common standards and principles in each market.

Compatibility between national policies and the international framework is paramount. In particular, greater coherence between domestic energy, development and environmental policies is needed. National policies are determinant in the creation of adequate enabling environments to facilitate investment in energy efficiency and renewable energy projects.

Long-term political clarity is crucial to stimulate financial sector participation in the carbon market. Political convergence and the design of a clear and long term regulatory regime under the UNFCCC process will be key to improve clarity and give the financial sector greater confidence in the market. The UNFCCC has a guardianship role which can contribute to support the confidence of the financial sector in the carbon market. In particular, CDM Executive Board needs adequate funding and human resources. A centralized accreditation and regulatory body as the CDM EB is key for transparency and coherence on the market. In order to increase predictability of investments and transparency JI should be more aligned to CDM. There might be a role for Finance Ministries in the negotiation of a the post-2012 regime given the importance of clear and long term targets to stimulate the private financial sector involvement in the carbon market.

2. Accelerating the commercialization of new low carbon technologies

The aim of this session was to identify ways to facilitate private sector participation in financing technology R&D, demonstrations projects and initial deployment of technologies in developed and developing countries.

The speed at which new technologies can be fully deployed to markets depends on a range of factors that differs at various stage of technology development. The role and type of financial sector agents also differs at each stage.

At early stage of technology development, the risk for the private financial sector is particularly significant and thus its role is generally limited. There is no lack of capital in the market but private investment does not materialize when perceived risks are greater

than perceived returns which is typical at early R&D stage. Venture capital is characteristically supporting a relatively early stage of technology development but the volume of capital being channeled through this mean remains small and unlikely to bring about technology development at the needed pace and scale. Technology R&D is thus better placed in public bodies and large corporations that depend on innovation to keep and expand market share.

Both large corporations and public institutions can serve the crucial role of technology incubators. As public investment in energy R&D is currently going down significantly, corporations are at present the most important investors in this sector. However there is insufficient investments in clean technologies and incentives and adequate enabling environments (characterized by favorable tax regimes, intellectual property rights laws, coherent energy, development and environmental policies, adequate energy pricing schemes etc) are needed to get the corporations to invest in this sector rather than in other sectors where the expected returns are higher. In the absence of incentives for large corporations to innovate in the clean energy sector, an increase in direct public investment in R&D is needed.

In order to bring newly developed technologies to the market and enable their commercialization, the demonstration phase is key, particularly to drive down costs. However, at this stage, projects remain typically too risky to be eligible for mainstream debt financing. Private-public partnerships proved to be an efficient mechanism to accelerate commercialization of technologies. In particular, partial grants, concessional loans or risk sharing facilities from international financial institutions, development agencies and other government bodies facilitate technology testing and allows for the development of business models that can ease the transition of technologies to the market.

For some clean technologies that have recently reached early phase of deployment (e.g photovoltaic), demand currently outstrip supply. The limited supply naturally migrates to developed countries and emerging economies where the demand is the greatest and this in turn creates an additional limitation to deployment in most developing countries.

Financing in the form of venture capital, equity and loans can only be made available if there is a good prospect for large scale deployment of the new technologies. As financial sector has primarily a duty to shareholder, at any stage financial sector involvement can only be expected if strong value of deployment can be expected.

Short term, Kyoto-like schemes are not best suited to promote technology development. As the key driver for financial sector involvement in technology development is primarily the expected value of deployment, long-term political clarity and stringent target would improve the prospect for large-scale deployment of new clean technologies by raising expected returns.

It should also be kept in mind that some economical low carbon technologies currently available are not being purchased by the majority of costumers. There is scope for continuous awareness raising of costumers to promote change in purchasing behavior, which is ultimately a strong factor in the scale of deployment.

3. Financing clean energy projects in developing countries

This session aimed to identify how to increase private sector participation in financing clean energy in developing countries.

There is generally no shortage of capital for projects with good prospects. Despite the recent shift in geographical focus towards emerging economies (China, India and Brazil are now the most attractive countries for investments in renewable energy and energy efficiency), finding projects with attractive expected rate of return in most developing countries, and particularly in Africa, is difficult. There are several barriers and risks constraining the financing of less carbon intensive conventional energy, renewable energy and energy efficiency projects in developing countries. In general stand alone renewable energy projects are more difficult to implement than energy efficiency projects that can be integrated as add-ons. Typically, in the later case, little additional financing might be needed and the pay-back period would be relatively short while for stand alone projects, the issues of raising equity and debt is frequently a difficult one to solve, especially in developing countries and the pay-back period is often less than attractive.

From a financial sector perspective, financing of clean energy projects in developing countries can be enhanced by reducing transaction costs and the risks of doing business in developing countries by:

- Supporting the creation of adequate enabling environment, policy/legal frameworks at national level (e.g. favorable tax regimes, enforceable intellectual property rights and contract laws, coherent energy, development and environmental policies, attractive energy pricing schemes, etc). A strong enabling environment for the deployment of wind energy technologies has been key in placing India in forth place in terms of installed capacity;
- Supporting the development of local knowledge and awareness to the carbon market and CDM;
- Support the development of risk sharing tools;
- Simplifying procedures, in particular for small scale CDM;
- Capitalizing on the power of demonstration - one of the best ways to spur interest is to demonstrate the feasibility and profitability of less carbon intensive conventional energy, renewable energy and energy efficiency projects;
- Bundling a certain number of small scale projects together to reduce transaction cost and increase expected returns for potential investors;
- Thinking of ways to replicate the success stories / models;
- Recognizing innovations that have carbon mitigation potential.

At initial stages, a lower return on investment could potentially be acceptable but only in the presence of clear strong and long-term political commitments providing confidence in the global shift toward low carbon economy.

ANNEX I

Results from participant survey

1. All participants agree or strongly agree that the GHG market is an established instrument that will be used to address CC and will continue post 2012.
2. All participants believe there will be growth or significant growth in the GHG market in the next years, as reflected in the volumes traded, funds invested and number of market participants.
3. For the effective development of a robust, transparent and reliable carbon market
 - The majority of the participants (93.5%) believe that a clear and long-term target is crucial;
 - Many believe it is important to have a greater compatibility between domestic and international markets (60%), and to develop new carbon finance instruments and institutions (75%).
4. In terms of barriers and risks for private sector to get involved in financing technology, 59% of the participants identified issues related to return on investment as a major barrier and 44% of the participants identified issues related to payback period as a major barrier. Uncertainty about carbon revenue, lack of political clarity, size of the market, lack of risk capital and insufficient guarantee mechanisms have been identified as major barriers by a minority of participants.
5. Emission reduction programs and improvement to enable environments have been identified by the majority of participants as crucial instruments / tools to accelerate the technology cycle from R&D to commercialization. Government incentives and the financing of demonstration projects have also been identified as important or crucial by participants.
6. The majority of participants believe that the lack of enabling policy / legal frameworks is a major barrier to the financing less carbon intensive conventional energy, renewable energy and energy efficiency projects in developing countries. Lack of credit-worthy counterparties and low expected return on investment have also been identified as major or important barriers by the majority of participants.
7. The design of adequate regulatory framework has been identified as a crucial tool to overcome the barriers and risks related to the financing of clean project in developing countries. Other tools participant highlighted as important are capacity building of domestic financial institutions and project developers and the development of guarantee mechanism and other incentive schemes.

ANNEX II

List of presentations made at the Consultation with Private Sector on Finance and Investment Flows to address Climate Change

1. Presentation by Edwin Aalders (IETA)

Edwin Aalders is the facilitator of the Session 1: Carbon Market. The purpose of the presentation is giving a brief introduction of the current carbon market, and kick off the discussion among panel members.

2. Presentation by Adam Kirkman (WBCSD)

Adam Kirkman is the facilitator of the Session 2: Accelerating the commercialization of new low carbon technologies. The purpose of the presentation is giving a brief introduction of the current status of the implication of new low carbon technologies, and kick off the discussion among panel members.

3. Presentation by Eric Usher (UNEP SEFI)

Eric Usher is the facilitator of the Session 3: Financing clean energy projects in developing countries. The purpose of the presentation is giving a brief introduction of clean energy projects being financed in developing countries, and kick off the discussion among panel members.

ANNEX III

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