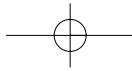


10*Carbon Facilities as a Means of
Sourcing Emission-Reduction Credits***Pedro Moura Costa; Bruce Usher; Allan Walker**

EcoSecurities; Standard Bank

As the carbon market evolves, there is an increasing need for vehicles that provide simple solutions to the compliance needs of private- and public-sector parties in Annex I countries. One of the most comprehensive of these solutions is carbon facilities that play the role of procuring, selecting and acquiring carbon credits on behalf of their investors/participants. This chapter describes three facilities that target different niches of the market.

The first one is the EcoSecurities & Standard Bank Carbon Facility, an initiative to assist governments and industry to source Joint Implementation (JI) and Clean Development Mechanism (CDM) emission reductions for compliance with the Kyoto Protocol and other emission-reduction programmes (such as the EU Emissions Trading Scheme), currently focused on projects in Central and Eastern Europe. The first entity to take advantage of this facility and commit funds for the purchase of emission reductions is the Danish Ministry of the Environment. Our second facility is 2E Carbon Access, which focuses exclusively on the development of small-scale CDM projects, primarily in the renewable-energy sector. 2E Carbon Access is a joint venture with E+Co, the leading not-for-profit provider of services and capital to developing-country clean-energy enterprises. This facility is already developing a series of projects in Central America. The third is the Austrian Small-Scale Facility, which has the objective of acquiring credits from small-scale CDM projects structured by EcoSecurities and the 2E Carbon Access Facility. This chapter describes how



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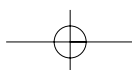
carbon facilities work and provides three case studies of the facilities described above.

INTRODUCTION

Among all environmental challenges currently facing industry, the reduction of greenhouse gas (GHG) emissions is among the most topical. Given its direct link to global climate change, how countries and industries will reduce emissions of GHGs has become an issue of significant international relevance and public interest. It is widely acknowledged that the potential impact of climate change on the global economy could be enormous. Reinsurance companies estimate that it could be in the order of hundreds of billions of dollars per year in the form of natural disasters and disruptions to agricultural cycles. The extent of these impacts provides ample justification for the introduction of drastic measures for prevention and mitigation of climate change. The targets set out by the Kyoto Protocol of the Climate Convention are only a first step in this direction, but undoubtedly any measure to limit emissions will come with a cost.

Limitations on the emissions of GHGs could lead to reductions in the levels of industrial output and economic activity. In the absence of innovation, it has been estimated that the cost of compliance to meet the targets outlined by the Kyoto Protocol could reach tens of billions of euros per year in Europe alone. Moreover, traditional policy measures such as command-and-control systems and taxation mechanisms can be difficult and expensive to administer, can result in prohibitive costs for industry and do not provide any guarantee that targets will actually be met. Regulatory systems that cap overall emissions and allow for the trading of each participant's allocation of reductions (known as cap-and-trade systems), provide flexibility for individual companies to explore the full extent of their comparative advantages and are proven to be cheaper and more effective than other approaches. It is expected that an international trading system for GHGs could significantly reduce the cost of reaching global targets while at the same time rewarding innovation and entrepreneurship.

While the Kyoto Protocol allows the use of three flexibility mechanisms (see below) for assisting Annex I parties in reaching their GHG emission reduction targets at lower costs, the project



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cycles of these mechanisms are extremely complex and uncertain. Given the complexities of this market, and the highly specialised skills required for the identification and acquisition of credits and use of the Kyoto mechanisms, it is only logical that a series of market players are outsourcing credit-procurement activities to third parties specialised in this sector. In this context, carbon facilities that aggregate intelligence, expertise, skilled personnel and international exposure, are becoming popular as a means to effectively identify, structure and deliver project-based credits for investors.

This chapter describes three new facilities that were launched between mid-2004 and mid-2005, and how they are operating.

THE CLIMATE CONVENTION AND ITS FLEXIBILITY MECHANISMS

The underlying policy initiative steering international efforts to reduce GHG emissions is the United Nations Framework Convention on Climate Change. Launched in 1992 during the United Nations Conference on Environment and Development in Rio de Janeiro, the Climate Convention created the basis for current efforts related to controlling GHG emissions. Specifically, the Convention establishes the stabilisation of GHG concentrations in the atmosphere as its main objective.

In December 1997, the Kyoto Protocol was created to further define the rules and regulations for the implementation of the targets established in the Climate Convention. The most important aspect of the Kyoto Protocol is the adoption of binding commitments by 37 developed countries and economies in transition (collectively called the Annex I countries) to reduce their GHG emissions by an average of 5.2% below the year 1990 for the years 2008–12. The commitments are differentiated by countries, with some required to reduce up to 8% below their 1990 levels (for example, the EU as a whole), while others only have to limit the growth of their emissions to 1990 levels. At the same time, the Protocol establishes the use of three “flexibility mechanisms” for facilitating the achievement of these GHG emission reduction targets. These are:

- emissions Trading, allowing the international transfer of national allotments of emission rights between Annex I countries;

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- joint Implementation (JI), the creation of emissions reduction credits undertaken through transnational investment between industrial countries and/or companies of the Annex I; and,
- the Clean Development Mechanism (CDM), which allows for the creation of Certified Emission Reduction (CER) credits from projects in developing countries and also promotes sustainable development in these countries.

While it is expected that these market mechanisms can lead to a reduction in the overall cost of compliance with the Kyoto Protocol's targets, the convoluted way in which they work creates barriers for the participation of many companies. For instance, Figure 1 shows the typical CDM project cycle, according to the latest rules. Each step of the way has its own rules and regulations, and on average a project takes a least one year from conception to registration, and CDM costs alone are in excess of €150,000.

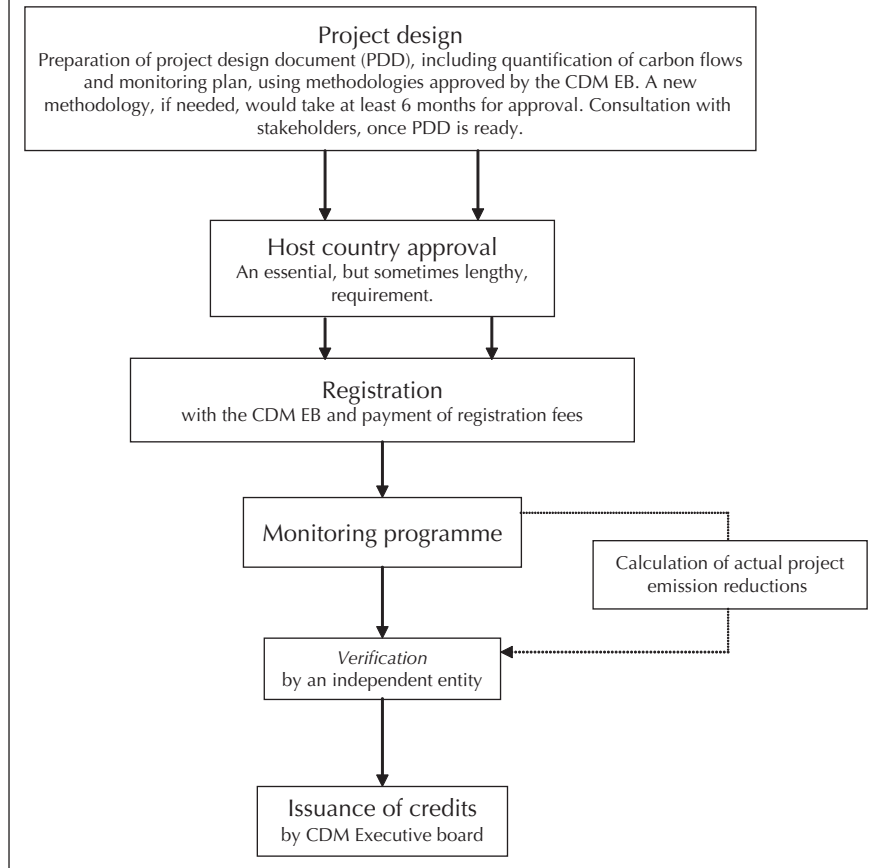
The complexities of the CDM and JI project cycles suggest that the use of carbon facilities run by specialised entities is a safer and more efficient means by which to participate in the carbon markets.

Carbon facilities as a means to accessing emission reduction credits

It is clear that the complexities related to the CDM may prevent some parties from participating in this market. Carbon facilities, therefore, are a means to enable parties to participate in the carbon market without the need for investing in building their own internal capacity. The principal advantages of participating in a carbon facility are as follows.

- *Professional management.* One of the main advantages for participants is that carbon facilities provide the services of a management team with high technical and financial expertise in this field, removing from the carbon buyers the need to understand the dynamics of this fast-moving and convoluted market.
- *Portfolio diversification.* A primary advantage of carbon facilities is that they can pool resources from multiple buyers and acquire credits from a variety of different project types (such as technologies) in various countries, thus diversifying overall risk.
- *Flexibility.* Unlike carbon funds, carbon facilities are structured to meet the individual needs of buyers and project developers.

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Figure 1 CDM project cycle

Specifically, the low costs of establishing and managing a facility, when compared with the high fixed costs of a carbon fund, allow for much greater flexibility, and for the establishment of much smaller facilities (as small as €5 million in size).

- *Reduced administrative burden and transaction costs.* Facilities manage all of the administrative functions related to project structuring, document preparation, negotiations, registration and project development, and when they manage a large portfolio for various participants there are economies of scale in the preparation of the documentation and an overall reduction in transaction costs.

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The overall combination of advantages suggests that the use of carbon facilities may be the most appropriate means for many parties to enter into this market. Panel 1 provides an example of a carbon facility established for sourcing JI credits from large scale projects.

Facilities as a means to promoting small-scale projects

One of the primary objectives of the CDM is also to promote sustainable development in developing countries. Towards this end, the CDM has created streamlined procedures for small-scale projects, which are generally considered to have proportionally greater sustainability benefits than larger projects. The rationale for streamlined procedures for small-scale projects is to provide project developers within an incentive to apply for certification of their emissions reductions, and therefore provide them with an opportunity to participate in the CDM. The definition of small-scale projects under the CDM is:

- renewable-energy project activities with a maximum output capacity equivalent of up to 15 MW;
- energy efficiency improvement project activities that reduce energy consumption by up to the equivalent of 15 GWh per year; or
- other project activities that both reduce emissions by sources and directly emit less than 15,000 tonnes of CO₂ equivalent per year.

Unfortunately, practical experience has shown that most of the volume of emissions reductions from projects participating in the CDM to date is from large-scale projects. This is despite the fact that the vast majority of renewable-energy projects in developing countries are, and will continue to be, small-scale.

The primary hurdle to CDM access is the significant time and cost required to complete the CDM process, combined with a significant risk that, despite the outlay of time and capital, the project will fail to receive CDM approval and/or will fail to find a buyer for its CERs. Specifically, the due-diligence process required to create CERs is too expensive in relation to the value of the emission reductions to be generated by many small-scale projects. As a result, most small-scale project developers have not attempted to access the CDM, and are therefore de facto excluded from the very mechanism that was established with a primary objective of supporting sustainable development.

PANEL 1 LARGE-SCALE PROJECT FACILITIES:**ECOSECURITIES & STANDARD BANK CARBON FACILITY**

The EcoSecurities & Standard Bank Carbon Facility is an initiative created to assist governments and industry to source JI and CDM emission reductions for compliance with the Kyoto Protocol and other emission-reduction programmes (such as the EU Emissions Trading Scheme). The first entity to take advantage of the facility is the Danish Ministry of the Environment. This is part of a suite of initiatives currently being developed by the government of Denmark to meet its emission-reduction objectives. Other entities from the public and private sectors, however, may also be able to take advantage of this initiative.

The facility is initially sourcing JI and CDM credits from projects in the following regions and countries:

- Balkan states* (Albania, Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia, Slovenia);
- Baltic states* (Estonia, Latvia, Lithuania);
- Central Europe* (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia); and
- Eastern Europe and Central Asia* (Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine, Uzbekistan).

In the future, or on demand from participants, the facility may expand its area of project sourcing to include a wider range of developing countries. Furthermore, participants in a facility have the possibility to specify regions, countries or technologies they want to buy from, even if they are outside the regions and countries indicated above.

The facility will buy JI credits generated from 2008 onwards, from both Track 1 and Track 2 projects, but the facility will also consider early- and late-crediting AAU transactions under the International Emissions Trading Mechanism of the Kyoto Protocol. CDM credits from the countries allowed will also be sourced.

In an initial phase, the facility has already identified more than 100 candidate projects from a wide range of technologies and locations that can be further developed to meet the requirements of the participants. Initial feedback from participants has indicated that the services provided by the facility are such that it provides a full solution to those parties looking for carbon credits. It was also noted that this is a cost-effective and reliable way to source credits, in comparison with other internal or external options available to most parties.

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Recognising this challenge, the CDM executive board in January of 2003 approved simplified procedures for small-scale projects. The simplified procedures eliminated the requirement to navigate the methodology panel, but the requirements for development of a project design document (PDD), validation, registration, monitoring and verification remain essentially the same as for large-scale projects. As a result, the small-scale procedures have not materially improved the ability for small-scale project developers to participate in the CDM. The hurdle is a shortage of both capital and expertise: small-scale project developers rarely have the financial resources or the in-house knowledge to navigate the simplified procedures of the CDM process.

A potential solution to this problem is to create carbon facilities exclusively designed for small-scale projects, providing a combination of CDM expertise and financing to cover the cost of completing the process. While the type of carbon facility for large-scale projects tends to provide advantages mainly to carbon buyers, carbon facilities for small-scale projects focus on providing an invaluable service for project developers that otherwise would not be able to enter into this market. Examples of small-scale carbon facilities can be found in Panels 2 and 3.

PANEL 2 SMALL-SCALE PROJECT FACILITIES: 2E CARBON ACCESS

E+Co, a leading investor in clean-energy projects in developing countries, analysed both the 2002 report of the Group of Eight (G8) Task Force, co-chaired by Sir Mark Moody Stuart, and the 2002 World Energy Assessment of the International Energy Agency (IEA). It concluded that, in order to meet the surging demand for energy in developing countries, a total of 12,000 off-grid energy service companies, and 500 on-grid projects will be developed over the next 10 years. Virtually all of the off-grid service companies and a substantial number of the on-grid projects will qualify as small-scale projects under the rules of the CDM, but most will be unable to access CDM financing.

2E Carbon Access is a joint venture of EcoSecurities and E+Co, the leading energy-investment company for entrepreneurs in the developing world (hence the name "2E"). 2E Carbon Access officially launched at COP 9 in Milan in December 2003.

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In its first year of operations the 2E Carbon Access facility has contracted with nine project developers, located in Honduras, Guatemala and the Philippines. As of January 2005, the facility has three validated small-scale projects. The primary lesson learned from the first year is that it is possible, despite a great deal of early scepticism, to rapidly develop and guide a small-scale project through the CDM process.

The early success of the facility can be attributed to the following.

- ❑ The 2E Carbon Access facility covers all costs of CDM project development, including validation and registration. This removes the lack of financial resources as a hurdle for small-scale project developers to participate in the CDM.
- ❑ The facility leverages the expertise and relationships of its parent companies to assist small-scale developers in navigating the CDM process, including stakeholder consultations and applying for Host Country Approval.
- ❑ The 2E Carbon Access facility has only one objective: to complete the CDM process for small-scale project developers as quickly and efficiently as possible. This focus, combined with the fact that the facility is compensated purely on a success fee basis when CERs are sold, is a key factor in the facility's success.
- ❑ Finally, and perhaps most importantly, the 2E Carbon Access facility has made a clear decision to trade off profits for greater sustainable development. Even with the streamlined procedures of the CDM, it is not economically rational to focus on small-scale projects if profit maximisation is the primary objective. The 2E Carbon Access facility was established as a for-profit entity, but it is clear from early experience that even with a successful track record the many challenges of small-scale CDM projects will prevent significant financial returns for the facility.

PANEL 3 AUSTRIAN SMALL-SCALE CARBON FACILITY

In October 2004, EcoSecurities and Kommunalkredit Public Consulting (KPC), the Austrian specialist in public consulting, firmed an agreement to acquire Certified Emissions Reductions (CERs) from small-scale projects on behalf of the Republic of Austria. KPC is responsible for the management of the Austrian JI/CDM Programme (<http://www.ji-cdm-austria.at>) and acts on behalf of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water Management in this respect.

The Austrian CDM Small-Scale Project Facility is managed by EcoSecurities and has the objective to purchase CERs from small-scale

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projects in developing countries under the Clean Development Mechanism of the Kyoto Protocol. The projects may be based on production of renewable energy, energy efficiency, fuel switching, methane capture or reduction of industrial emissions. The facility started operating in November 2004, and will be acquiring 1.25 million tonnes of CERs generated between 2006 and 2012 inclusive. It is expected that this facility will contribute substantially towards Austria's international climate obligations under the Kyoto Protocol and the respective EU agreements in a cost-effective manner, while simultaneously fulfilling Austria's desire to support sustainable development in CDM countries.

KPC acts as a partner for public-sector clients in Austria and other countries around the world. KPC, a wholly owned subsidiary of Kommunalkredit Austria, the specialist bank for the public sector in Austria, works mainly for public and quasi-public institutions, such as the Federal and Provincial governments of Austria, local authorities, associations, sovereign states, international financial institutions operating under a public-sector mandate. Its clients benefit also from the bank's level of specialisation and its knowledge of the specific requirements associated with public services. In its main fields of activity – climate and energy, water management and the rehabilitation of contaminated sites, and international consulting – Kommunalkredit Public Consulting manages support and consultancy programmes in close cooperation with its clients.

CONCLUSIONS

It is increasingly clear that the facility model is one of the most efficient mechanisms for the acquisition of CDM projects on behalf of corporate and public-sector entities. Facilities work for both small- and large-scale projects because they provide the combined benefits of flexibility, portfolio diversification, risk mitigation and specialised professional services, reducing overall costs of credit creation and procurement for its participants.

For project developers and carbon credit buyers, when considering participating in a carbon facility it is recommended that you look for the following key characteristics.

- *Flexibility.* The CDM market is new and rapidly developing, requiring flexibility from both project developers and buyers to participate. The facility model allows for maximum flexibility while retaining all of the benefits of aggregation.

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- *Diversification.* Successful carbon facilities are diversified geographically, by technology and by project type, in order to minimise the risk associated with the CDM and project development.
- *Volume.* Facilities succeed by dramatically lowering transaction costs, which means that successful facilities must be working on a minimum of five projects at any point in time to be successful.
- *Time.* The facility should be structured to work quickly and efficiently, thereby raising the prospect of a successful result, while minimising the risk of wasted time for all parties.
- *Experience.* The CDM remains a highly challenging process for creating value, and the results are binary, in that unsuccessful parties receive absolutely no credits or compensation. Therefore, it is essential that the managers of the facility have the practical experience necessary to successfully navigate the CDM and thereby improve the odds of success.

