

## Linking the EU ETS with emerging emissions trading schemes

### **1. Introduction**

A price for carbon is an important element in having the tools to combat climate change. Moving to a global price, and a global GHG market, is one of the fundamental IETA goals. This was initially envisaged to happen through Article 17 of the Kyoto Protocol, which allows for international trading between Parties.

IETA is hopeful that the UNFCCC process will continue to progress, but the world of ET is moving rapidly to a situation where a number of Domestic Emission Trading Schemes (DETS) at the corporate level are emerging, each with their own characteristics, sometime reflective of national or regional approaches and circumstances. While the EU ETS is the most advanced there has been interest to link them, and contacts to explore on how that can be accomplished have taken place. IETA has explored conditions and mechanisms for linking starting with an initial paper in 2002, which it had commissioned jointly with the IEA and EPRI.

The conclusion that was reached then, and is still valid now, is that linking of the EU ETS with other DETS is a process that will require political will, but is one that can be accomplished with relatively limited number of MUST have components that will need to be harmonized. The importance of achieving this cannot be minimized.

### **2. Rationale for Linking**

Emissions trading delivers economic efficiency by discovering and exploiting differential costs of abatement. Linking to create a larger carbon market improves the efficiency of emissions trading for two fundamental reasons. Firstly, a larger market is inherently more efficient, liquid, and competitive. Secondly, a larger market provides a broader pool and greater variety of abatement costs in which to discover opportunities for low-cost abatement.

Globally, linking allows more GHG abatement to occur with the same level of social resources, or conversely the increased efficiency can reduce the social costs of a given carbon constraint. As we contemplate more ambitious targets for 2020 reduction than those that informed the Kyoto Protocol, it becomes essential to make lowest cost a key concern.

Harmonization reduces competitive pressures – is price equivalency enough? The simplest and most effective mechanism to ensure price harmonization is a single market



Broader market linked across jurisdictions provides greater certainty by pooling regulatory risk

Expanding the market around the EU ETS will expand potential for gains from trade, reducing compliance costs for European emitters. However, there are critical possibilities that extend from the EU ETS as the largest existing market. The EU ETS has the opportunity to be the nucleus of a global carbon market, providing the potential for first mover advantage. This advantage may provide considerable for European industry. While the EU might expect to see a flow of capital outward through linking to economies with a lower initial cost for carbon, this would be compensated by an expanded market for European low emission goods and technologies.

### **3. Conditions and Limitations**

Linking requires a careful assessment of the two systems for structural compatibility along three dimensions: technical, environmental, and competitive/economic. In considering linking, it is important to remember that the more extensive the link, the greater degree of inherent reciprocal acceptance of design elements. Some elements therefore preclude or significantly complicate linking.

#### **i. Technical**

This dimension is essentially one of institutional compatibility, or the effects of differences in the definition of units and standards. In this context a ton is a ton is a critical element and MRV standards are critical for linking.

Differing registry standards or points of regulation may significantly complicate linking, even where both alternatives are valid approaches. Party status in the Kyoto Protocol is a critical technical distinction between domestic emissions trading systems. Direct linking in the first commitment period of the Kyoto Protocol can in practical terms only occur between Parties to the Protocol.

#### **ii. Environmental**

Stringency and type of targets, penalties, offsets standards, and borrowing are all elements which may produce incompatibilities that in turn complicate or limit linking. Where linking two systems may result in a net increase in overall emissions, the policy objective of at least the more stringent system is undermined, and linking may be unacceptable. This is clearly the case for a price cap/safety valve structure, and is a concern for systems using intensity targets as well.



### **iii. Competitive/Economic**

Significantly, different sectoral coverage across two systems is likely to accentuate competitive issues for the sectors in question. This will be the case unless the other policy and measures applied reasonably approximate dynamic carbon pricing, which in practical terms is difficult to envision with a static policy.

### **iv. Possible linking partners**

a. EU ETS – The EU ETS places an absolute cap on emissions from the majority of Europe’s industrial sector. Regulation is source-based with a one-year compliance time frame. The EU ETS program is the flagship Kyoto compliance program of the EU, and during Phase 2 the primary determinant of the capacity to link must necessarily be the implications under the Kyoto Protocol.

b. RGGI – The Regional Greenhouse Gas Initiative in the Northeastern part of the United States will place a source-based absolute cap on emissions from the electrical power sector in nine US states. The compliance time frame is a 3-year period to permit smoothing of compliance costs against random events such as adverse weather.

Competitive concerns are of particular importance as a sub-sovereign system, as electrical power imports are readily available from neighboring coal-intensive states.

RGGI will permit the use of UNFCCC offset credits from the CDM when the price of RGGI allowances exceeds \$10. However, this will also be accompanied by a one-year extension of the compliance period, which may raise concerns regarding the stringency of the cap in comparison to the EU ETS.

c. Canada (proposed April 2007)

The proposed Canadian system will employ intensity targets, capping emissions intensity at 18% less than 2006 by 2010, and reducing intensity by 2% every year thereafter. The program will cover all large emitting industrial sources. Unlike the EU ETS, the program will employ a baseline and credit approach, with emitters needing to hold credits of some form only for the difference between the target and actual emissions. This baseline will be measured on an annual basis. Complying firms may secure credits through firm-to-firm emissions trading, domestic offsets,



credits from the CDM (up to 10%), and units in a technology investment fund (up to 70%, declining annually thereafter)

While structurally similar to the previous proposed LFE program, the Conservative government has explicitly stated that it will not make good any Kyoto implications. Thus any linkage possible in Phase 2 is likely to be through the shared though limited usage of CDM credits.

d. Australia NETS (Proposed December 2006)

The model proposed by the Australian states will begin with coverage of the stationary power sector in 2010. Other sectors will be added as practical based on expected administration costs and efficiencies.

The most problematic element of the NETS for linking is the penalty structure that acts as a de facto price cap by failing to include any make-good provision. In the event that the market price in the EU ETS exceeded the penalty price, firms would have an incentive to sell NETS allowances into the EU and pay the non-compliance penalty, increasing total emissions across the two systems.

The NETS proposal includes the most open architecture for linking through project-based credits of any ETS in existence or proposed, through the innovative use of CER credits. While formal linking to the EU ETS would be difficult due to Kyoto implications and the penalty structure, the States recognize that any such agreement is the jurisdiction of the Federal government. Informal linking through the CDM will allow the global carbon market to function as a price ceiling for the proposed Australian system.

e. California (conceptual, MAC report, June 2007)

The regulatory system in development in California is still unclear, but the recent report of the Market Advisory Committee has proposed a multisector system regulating source emissions in a three-year compliance term, to come into force in 2012. Notably, the electrical sector would be covered by a 'first seller' model, thus preventing generators from outside California from avoiding carbon pricing. This architecture is unproven and its implications for linking are uncertain.

Critically, the MAC report recommends both the discussion of linking to the EU ETS and the acceptance of credits from the CDM as part of an emissions trading system in California. It is the explicit intention of the report to bring California into the global carbon market, seeking formal



linkages and utilizing any opportunities for informal linkages to facilitate that process.

f. Lieberman-McCain (Proposed US Federal)

It is difficult to forecast legislative developments in the United States, beyond the clear evidence that momentum toward a Federal GHG emissions trading system is building rapidly. A leading bill currently before in the Senate is considered here, but several other possibilities exist, notably the structure proposed by Senator Bingaman of New Mexico.

This bill proposes a multisector cap and trade system, to cover sources of emissions in a structure similar to the EU ETS, but with the possibility of broader coverage of the US economy.

The proposal does not include any price cap or safety valve provision, but the use of borrowing from future years may be seen as problematic for linking to systems that do not permit borrowing. However, the bill would permit the use of up to 30% allowances from other emissions trading systems such as the EU ETS, and calls for the establishment of an international project-based reductions crediting system, strongly analogous to the CDM and likely able to accept CERs.

#### **4. Mechanisms**

In a technical sense, the more design elements shared between two systems, the easier it is to link them formally through common acceptance of allowances. Certain design elements preclude full formal linking without compromising the environmental objectives of one of the programs, most notably price caps.

**i. Formal**

The ideal case of linking is where formal agreements have been negotiated to allow GHG emissions credits issued by any linked GHG program to be accepted by all linking partners. Multilateral linking, where GHG credits are fungible among many GHG mitigation programs, most completely realizes the ideal of a single shared carbon unit and delivers the maximum possible benefit from a broad carbon market.

An incremental step toward this ideal is bilateral linking, where GHG credits are fungible between two GHG mitigation programs.



A special case of formal linking is unilateral, where one GHG mitigation program unilaterally allows GHG credits from another program to count for compliance purposes, such as the proposed acceptance of CERS in the Australian States' NETS or the RGGI acceptance of CDM credits under some price conditions.

## **ii. Informal Linkage**

Where formal linkage between systems is not possible due either to substantive differences in design, or political constraints, it remains possible to have substantive linkage through informal mechanisms.

The most robust form of informal linkage is the 'common currency' model, the case where GHG mitigation programs mutually recognize a third program. This has not yet occurred between allowance markets, but the shared standards and acceptance of project-based credits such as the CERs produced by the Clean Development Mechanism have the potential to provide a connection between systems through a single freely exchangeable unit.

An example of this is the proposed Canadian system, which will be complicated to link to the EU ETS due to the use of intensity targets, but will allow for use of CERs. Unfortunately, the 10% limit on usage will mean that the linkage between the Canadian system and the EU ETS will be insufficient to drive price harmonization.

A proposed model of informal linkage would an institutions set up acting as a de facto carbon reserve bank. This would be an ambitious project that will require a strong balance sheet. Some coordination with public authorities would seem inevitable.

The weakest form of informal linkage is financial arbitrage. Market makers can provide an indirect linkage between different GHG regulatory programs on a cash basis, much as occurs in international currency markets. However, under this model, transactions costs will be relatively high, and efficiency will require large volumes. Critically, this model is least likely to deliver the carbon price harmonization necessary to ameliorate competitive concerns.

The mechanism most universally practicable at this time is the 'common currency' model described above, the construction of linkages through the shared use of CDM/JI credits. While IETA is optimistic that over time the political barriers to formal linkage will be negotiated down, this process itself may be facilitated by the growth of the carbon market through informal linkage.



As the largest and most liquid carbon market in the world, the EU ETS currently drives demand for CERs. In 2006 at least 69% of all CERs bought have been purchased by EU member states (Point Carbon, March 2007). However, an increasing number of the nascent carbon markets globally are proposing to connect to the global carbon market through the CDM. As noted, the Australian NETS will accept CER credits and be indirectly linked to the EU ETS through the CDM. The recent report of the Market Advisory Committee in California has advocated similar linkage. Both the Canadian system and the RGGI program in the Northeast of the United States have restricted access to CDM credits thus limiting the effectiveness of the link in creating price harmonization. In this regard, supplementarity restrictions are equally restricting the potential of the EU ETS as the nucleus of a global carbon market.

## **5. Linking EU ETS to CDM and JI – Opportunities and Pitfalls**

The CDM has shown tremendous growth over the last few years, CER transactions increased over 420% between the years 2004 and 2006, from 107 to 450 Mt CO<sub>2</sub>e (World Bank & IETA, State and Trends of the Carbon Market 2006; State and Trends of the Carbon Market 2007).

With this grew all the benefits that accrue for having carbon finance flows, technology transfer and engagement of developing countries. While sovereign compliance has played an important role in the growth of this market, the main driver has been the EU ETS, which has had access to CERs and ERUs.

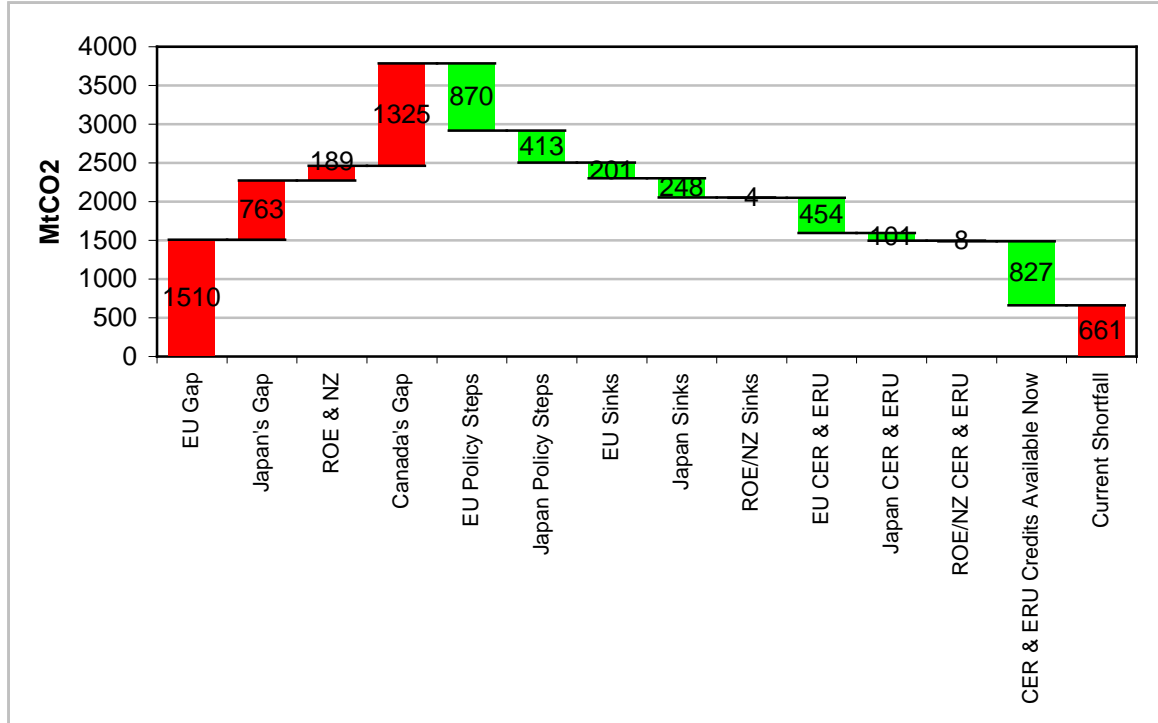
When discussing pitfalls and opportunities for linking CDM and JI to the EU ETS we must differentiate between what is in the jurisdiction of the EU and what is in UNFCCC/COP/CDM EB - some of the issues that we will highlight can be addressed through EU processes, while others are of the competence of the UN process.

### Market Perspectives

For the period 2008 –2012 the demand/supply balance is roughly in equilibrium, if one does not consider Canadian demand, especially at the sovereign level, which is not likely to materialize. The market has responded to the current demand driven by ambitions from the Kyoto Protocol and the domestic instruments that it has generated, such as the EU ETS.



Figure 1: Global supply/demand balance scenario, IETA



However, post-2012 demand for offset projects and credits can be expected to increase substantially, driven by deeper cuts, such as 20/30% to 2020 or the 50% discussed in the G8. In addition an increase demand can be expected beyond the current typical KP demand, from sources such as the voluntary market, possible US, Australian and Canadian demand and maybe other new sectors covered in the future.

Since most high volume projects, such HFCs and N2Os, will soon be cleared, under the current architecture and mindset of the CDM as a project-by-project instrument, we will require large number of projects that produce in the area of 100,000 /year.

Given this increase in demand, even if coupled with a more efficient and well resourced regulator (CDM EB and UNFCCC Sec), can the number projects required be processed in a timely and appropriate way? The current treatment of other factors, such as additionality, will also pose additional questions, if such high demand is to be addresses.

Improvements and efficiencies can be had from current mechanisms, but like in any other field a certain basic design and approach can and will only take you so far. It is clear that the current offset mechanisms where designed to meet KP type targets and we may need different approaches for to satisfy deeper cuts.



In addition, it is likely that there will be increased demand for a geographical and sectoral project balance that is currently not well addressed.

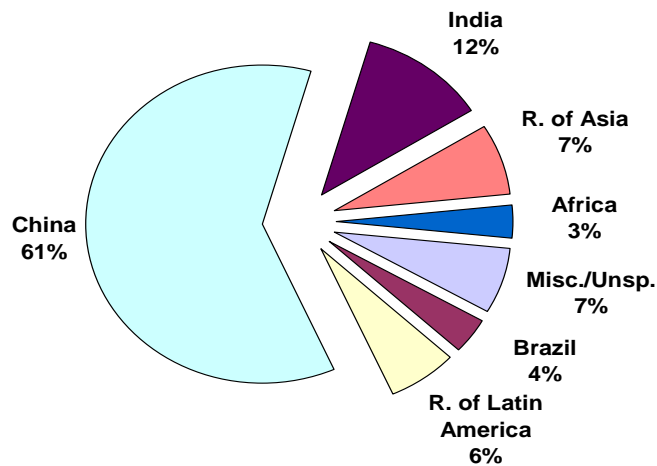


Figure 2: Share of Registered CDM Projects by Host Country, World Bank, State and Trends of the Carbon Market 2007

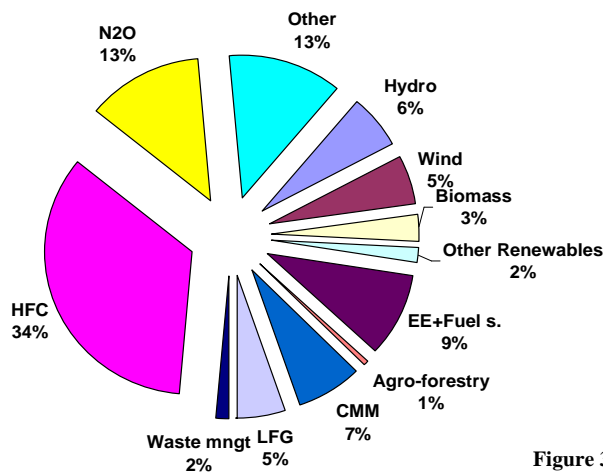


Figure 3: Share of CERs generated by Technology, World Bank, State and Trends of the Carbon Market 2007

Finally, the role of JI and AAUs in the post-2102 period is also something that needs to be reviewed thoroughly. Many of the JI countries have joined the EU ETS and the amount of AAUs that may be available post-2102, depending on negotiations, amount used in Phase 1 and economic growth, may be lower than the current situation. This must be seen in conjunction with the demand/supply equation for CDM.



All these issues need to be addressed through practical steps and recommendations on items that the EU/EC can

- implement directly, or
- develop positions and recommendations to induce changes that are under the jurisdictions of the UN

### ***Recommendations: Practical Steps***

#### **UNFCCC**

The EU should strive to ensure that leading to 2012 the CDM can move from the current project-by-project approach, which given the volumes that are envisaged may be unworkable.

Another option will be for the UNFCCC to develop new mechanisms that would be designed under different premises. First and foremost we must model the programmatic CDM in such a way that it will make a difference, and allow large number of projects that be recognized and executed in a simple manner. The current debates in the CDM EB do help, but are unlikely to meet the test that it is envisaged.

Benchmark baselines and sectoral approaches could be more appealing and hold the promise to process and deliver large number of project with greater ease. Combined with this, looking at additionality based on a benchmarking approach, such as currently examined by some sectors, could also ensure a much bigger uptake of offset projects especially by those in the multinational corporate sector.

#### **EU/EC**

The Linking Directive remains a critical element and must continue to be emphasized by the EU and the EC. Some for post 2012 EU ETS continuity, which now seems to have been finally accepted as a fact. Continued acceptance of post-2012 CERs will also be important as well the provision of support for building and maintaining the infrastructure and the regulatory machinery, even if the CDM is supposed to become self funding.

The EU needs to start a process of thinking of the amount of offset credits that it may need post-2012 and see if current mechanism can help meet that demand. It needs to think through these matters and put forward positions based on those conclusions. Are the current mechanisms sufficient ?

The inclusion of LULUCF in CDM must be seriously explored and should go ahead, while ensuring that scientific uncertainty has been addressed. This may help address the



geographical imbalance with Africa, where many projects in this category projects can be done.

The EU should also ensure the inclusion of CCS in CDM, once all technical and scientific issues have been addressed. This way, CCS, a valuable technology, will be available to developing countries, which will continue, or increase, the use of fossil fuels.

## **6. Quantitative limits: pros and cons of caps and complementarity requirements**

Following the general consensus, both Annex I and II countries will have to undertake their own share of action in order to tackle climate change. Within the Kyoto Protocol all Annex I countries are encouraged to take domestic action as part of their efforts to comply with the Kyoto targets. Politically, complementarity policies will provide both an incentive for domestic industries to take action as well as signal to those outside the scheme that real action is occurring domestically.

IETA and its members recognize the need to determine levels for supplementary. However, at the same time we would argue that such policies do weaken efforts of linking different ETS schemes and project based mechanisms, and restrict lower cost abatement activities that may occur outside of a particular ETS's jurisdiction.

IETA supports its members to undertake direct measures that reduce emissions reductions, whenever possible, within their own environment. However, IETA also sees that further restrictions on the use of emission reductions from outside a system will severely limit the system's ability to mobilise a significant amount of capital investment earmarked with this intent. That amount of capital, aimed at achieving emission reductions, could be equal to or more than the total that has been invested to date. Capital investments under any future scenario will likely require far greater investment than what has been seen thus far.

Present complementarity rules have resulted in varying compliance restrictions under the EU ETS. Complementarity levels found in NAP IIs currently vary from 0% to around 22% of the total amount of allowances surrendered by an installation to the member state. Such a variety in rules and limits will have a negative effect on the emissions market by limiting the potential of the supplying market to provide solutions to climate change.

With the increased need to take action and a growing number of activities elsewhere in developing ETSs and/or project based mechanisms, the current complementarity policies may also have to be expanded to these new programmes. Reasoning for mirroring complementarity principles in developing ETSs might be either due to the overall scope of these programmes or due to political considerations similar to those behind the



supplementarity rules of the KP. In both cases, IETA is of the opinion that such rules should not lead to prohibitive high abatement costs for industry or to a high level of complexity in order to implement supplementarity policies. Clear guidance and policy setting at EU level is thereby essential.

***Recommendation:***

Although IETA recognizes the need for certain supplementarity rules to demonstrate that member states put emphasis on achieving emission reductions domestically, IETA recommends that any such limits are set at European Level and with the intent and objective to lead to an overall abatement cost not prohibitive to the domestic industry.

**7. Qualitative restrictions (gasses, sectors and project types) on the use of offsets**

The CDM has to date demonstrated the ability to provide credible emission reductions in volumes that have been in line with the reduction commitments under the Kyoto Protocol. However, the CDM has also demonstrated that current operations are clearly leaving some sectors behind due to a perceived complexity of the mechanism and/or varying interpretations of additionality.

In order to achieve a necessary future amount of reductions, both the CDM and JI must become mechanisms that are able to capture all sectors. Moreover, new tools for testing environmental additionality will be required. Tools that are more suited to the sectors that are not significantly represented in the flexible mechanisms might be developed. IETA puts emphasis on: a) clear methods of setting baselines, b) programmatic CDM, and c) sectoral approaches.

With the approval of the first LULUCF project and an increasing number of LULUCF methodologies, the CDM has demonstrated that Afforestation & Reforestation can be a viable option to achieve emission reductions, which should play a role in the European EU ETS market. Both the transportation and construction sectors are far from living up to their expectations as CDM activities, as only one project with transportation activities has been registered till now and the construction sector has not seen any project approvals yet. Although projects involving renewable energy sources make up 60% of all projects in the CDM pipeline, certain types or renewables account only for a minimal fraction. In particular projects with solar, tidal and geothermal activities so far form less than 1% of all projects that entered the project cycle (UNEP Risoe, June 2007).



Apart from methodological issues related to the registration of projects, significant experience has been gained in the administrative processes of project registration. Companies that currently have EU ETS compliance obligations in more than one Member State and want to use CERs for compliance purposes are required to obtain a Letter of Authorisation from each corresponding Member State. This is required only if they want to receive CERs directly into a respective Member State registry.

At the same time, within JI track II, companies have to respond to a multitude of project application conditions that depend on the individual Member State's agreement with the JI host country. Not only does this increase the burden on industrial participants in a JI project, but also on the administrative body of the Member State. Some countries wanting to participate in the flexible mechanisms of the KP may not be able to handle a CDM and/or JI project based on the administrative requirements to do so.

Harmonization of the approval process within the Member States around CDM & JI projects will lower the overall participation requirements for European actors to undertake a CDM or JI project.

**Recommendation:**

IETA recommends that the EU ETS should:

1. Ensure that projects categories currently excluded by the CDM, especially LULUCF, are included in the CDM. Similarly, CCS should also be part of CDM post 2012. In principle, there is no reason why not all CDM projects in the KP should not be accepted in the CDM.
2. Explore and encourage the CDM & JI to adopt a more diverse approaches to demonstrating environmental additionality with the intent to increase participation of industries currently not significantly participating in the CDM & JI;
2. Further enhance the harmonisation of project approval among all the different Member States for both the CDM & JI.