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UNFCCC Secretariat
Martin-Luther-King-Strasse 8
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SUBMISSION TO UNFCCC ON CCS IN CDM - ADDRESSING OUTSTANDING ISSUES
Submitted by the International Emissions Trading Association (IETA)

In response to Draft Decision -/CMP.7 Paragraph 6, the International Emissions Trading Association (IETA) welcomes the opportunity to submit to the UNFCCC Secretariat our views on outstanding issues associated with modalities and procedures for carbon dioxide capture and storage in geological formations as clean development mechanism project activities, adopted in December 2011 at the seventeenth Conference of the Parties (COP17) in Durban, South Africa.

IETA welcomes the long-awaited outcome of COP17/CMP7 to adopt the modalities and procedures for Carbon Dioxide Capture and Storage (CCS) in geological formations, as Clean Development Mechanism (CDM) project activities. We further support CMP's decision to periodically review these modalities and procedures, with the first review to be carried out within five years, thereby adopting a learning-by-doing approach.

As requested, IETA's submission addresses two outstanding issues to be considered by the Conference of Parties at its eighteenth session (COP18) in Doha, Qatar. These issues, outlined in Paragraph 4 of the referenced Durban Decision, include: 1) the eligibility of CCS project activities involving transport of carbon dioxide (CO2) from one country to another, or which involve geological storage sites that are located in more than one country; and 2) the establishment of a global reserve of certified emission reduction (CER) units for CCS project activities, in addition to the reserve referred to in Paragraph 21(b) of the Draft Decision -/CMP.7[1].

SUMMARY OF IETA'S VIEWS & RECOMMENDATIONS

ISSUE	DETAILS
Trans-boundary Issues *Enable CDM eligibility*	Trans-boundary CCS projects should be eligible under the CDM, in order to encourage synergies/knowledge transfer and build enabling environments.
Trans-boundary Issues *Provide for flexibility*	Allow for flexible rules and possibly provide a menu of options for cross-border governance and collaboration.
Trans-boundary Issues *Align/leverage existing work*	Align modalities and procedures with and/or leverage from existing international conventions, frameworks, and guidelines relevant to trans-boundary CCS activities.
Trans-boundary Issues *Encourage harmonization*	Establish CCS in CDM rules for cross-border projects that encourage harmonization of regulatory approaches, permitting requirements, market issues etc. across affected host countries.
Trans-boundary Issues *Proposal for consideration?*	A proposal for consideration is to handle trans-boundary issues as and when required rather than attempting to address all M&P issues ex-ante.
Global Reserve of CERs *Unnecessary additional barrier to project investment*	Private sector stakeholders from across the project cycle urge Parties to avoid establishing a global reserve. Creating an additional reserve, on top of already agreed-upon lines of defence (e.g., 5% reserve account), would work to skew the already carefully-designed balance towards hindering, rather than enabling, the growth of viable CCS project activities in developing countries.
Global Reserve of CERs *Adverse impact to market price and supply?*	The creation of a separate global reserve could potentially have long-term adverse market supply/price impacts (the extent to which would be based on design). These potential short/long-term market and pricing impacts must be taken under serious consideration while moving forward with negotiations and technical assessments.

[1] Paragraph 21(b)

INTRODUCTION

IETA views the inclusion of CCS in the CDM as a critical bridging opportunity towards a low-carbon future in which CCS is deployed on a large-scale as part of a portfolio of mitigation options. There are real and cost-effective opportunities available now in developing countries in need of financing large-scale, transformative clean energy projects, like CCS. The CDM now provides an opportunity to establish a framework for funding using the power of the carbon market to achieve effective cost reduction and drive early CCS deployment. Such projects can help facilitate the critical pathway towards the wider deployment of CCS needed in the long term while facilitating the transfer of clean technology to developing countries. We strongly believe that incentivizing low-cost early opportunities in developing countries will position them with the required technology know-how, infrastructure and sub-surface knowledge (e.g. capture technologies, pipelines and storage potential mapping) needed for wider deployment in the future.

The UN decision to allow the inclusion of CCS in the CDM sends a positive message to the international community that CCS plays an important role in addressing climate challenges. The decision signals to business and investors that governments internationally are increasingly prepared to encourage the widespread deployment of this important mitigation option via international mechanisms and the use of innovative public-private risk-sharing arrangements.

Based on Durban outcomes and our evolving post-2012 international policy framework(s), IETA believes that mechanisms, in addition to the CDM, will be required to promote CCS on a significant scale. However, over the short-term, we feel the CDM can act as a much-needed catalyst in developing countries to help build technical understanding of CCS applications, establish domestic enabling regulatory and legislative environments, reduce technology costs, and develop the confidence needed for deployment. Importantly, the CDM now potentially represents a main means available for allowing CCS to potentially become commercially-available in certain developing countries where carbon dioxide emissions will rise most rapidly in future years.

TRANS-BOUNDARY ISSUES

> **Draft Decision -/CMP7, Paragraph 4**, the COP: *Agrees* to consider, at its eighth session: a) the eligibility of carbon dioxide capture and storage project activities which involve the transport of carbon dioxide from one country to another or which involve geological storage sites that are located in more than one country

SBSTA members are currently tasked with recommending whether or not to allow CCS projects, with trans-boundary components, to be considered as eligible CDM project activities. A decision to move in this direction would presumably open the gate to joint governance guidance and requirements while deepening collaboration between affected Designated National Authorities (DNAs).

Based on recent discussions and technical workshops, we understand there has yet to be clear agreement on allowing trans-boundary CCS projects to be CDM eligible. We understand that certain Parties have tended towards not allowing, at least initially, trans-boundary projects in the CDM due to potential cross-border and regulatory challenges in managing and governing such projects.

Several notable observations and recommendations related to trans-boundary CCS in CDM eligibility have been raised in the past. In an earlier UNFCCC experts' report, "*Implications of the Inclusion of CCS in CDM (UNFCCC EB50, Annex 1)*", authors in fact made the recommendation to restrict eligible CCS project activities to only occur within national boundaries, where there is no risk of migration, in order to avoid various problems (e.g. one country does not have a DNA or relevant permitting authority). In contrast, IEA's *Model Legal Framework (2010)* encourages the consideration of trans-boundary projects for CDM eligibility, with a view to this international decision becoming a potential driver for host developing countries to harmonize CCS-related regulatory approaches, permitting requirements, infrastructure requirements, market issues etc. Moreover, the IEA recommends that in pursuing a potential trans-boundary project, Parties will move forward by "either selecting a competent authority for one jurisdiction to oversee the project or, more likely, implementing joint regulatory responsibility for operations".

As noted in our February 2011 submission to the UNFCC on CCS in CDM project activities, **IETA believes that CCS projects crossing national boundaries should be adequately accommodated within the project boundary definition of the CDM process.**

While IETA recognizes that it may take time before domestic regulators are interested and capable of collaborating on CCS projects, we believe it is important for the UN to help begin establishing an *enabling environment* for bilateral or multilateral cooperation to occur across boundaries via CDM eligibility and the establishment of rules/guidance for such projects. We feel that bilateral and multilateral information-sharing, cooperation, and long-term coordination on CCS project activities may benefit certain CDM host countries significantly. Identifying trans-boundary CCS project activities as eligible under the CDM would arguably *allow for synergies* to be exploited and drive the *transference of knowledge* across borders. Moreover, cross-border arrangements might especially work well for some countries, aiming to *collaborate* on storage site regulation in the near future.

As discussed below, issues related to trans-boundary greenhouse gas accounting and reporting are already accurately covered by *IPCC Guidelines for Greenhouse Gas Inventories* (2006); therefore, such accounting and reporting matters should not pose barriers to the deployment of cross-border CCS project activities. In a similar vein, offshore environmental protection and control of export and trans-boundary storage is already covered by the *London Convention*, and onshore environmental impacts of trans-boundary storage is, for some Parties, already covered – or could potentially be covered in the near-term – by other international conventions. The following briefly

provides details about these existing rules, which might affect the future governance and implementation of CCS in CDM projects.

In their *Guidelines for Greenhouse Gas Inventories*, the IPCC provides robust guidance on accounting for greenhouse gas emissions involving more than one country, and these rules should be considered applicable to CDM project activities. The IPCC guidelines identify four scenarios related to the **reporting of cross-border CCS operations**, some of which we believe could be useful in developing responsible trans-boundary CCS storage and transportation guidelines within the CDM.[2]

In addition to the IPCC reporting guidance, it might also be worthwhile to point to the *London Protocol* and the *London Convention*; two multi-lateral agreements where cooperation and guidance/rule-making activities on trans-boundary CCS issues is on-going. Signatories to the former agreement, which allows for legal jurisdiction over sub-surface formations, have broadly agreed that the *London Protocol* "should not create barriers to trans-boundary transport of CO2 for CCS". To note, Parties to the *London Protocol* have requested that a scientific group re-examine CO2 Specific Guidelines regarding trans-boundary issues.

Under the *London Convention*, important work is currently being undertaken and discussed by experts and Convention Parties (CP) on considerations related to various trans-boundary considerations. These activities include the development of "revised guidelines covering both the scenario of export of CO2 (by ship or pipeline) for sequestration purposes, and the scenario of trans-boundary movement of CO2 after injection in sub-seabed geological formations". The modified guidelines, planned for a 2012 release, are expected to cover a host of relevant proposed changes, including: guidance to CPs to jointly apply guidelines; conditions around trans-boundary movement to non-CPs; multiple permitting authorities for one geological formation; originating State to characterize CO2 stream; storage State to characterize storage site and effects; and storage State to verify the monitoring and risk management arrangements.

Other international rules and conventions relevant to the CCS in CDM discussion around trans-boundary issues include, but are not limited to: 1) *EU CCS Directive*, Article 24, which addresses trans-boundary cooperation related to CCS, reads: "in cases of trans-boundary transport of CO2, trans-boundary storage sites or trans-boundary storage complexes, the competent authorities of the Member States concerned shall jointly meet the requirements of (the EU CCS) Directive and of other relevant Community legislation; 2) *UN Economic Commission for Europe* (1991), requiring trans-boundary environmental impact assessments (EIAs) for industrial activities, but not CCS; and 3) *Aarhus Convention* (1998), enabling public participation and access to trans-boundary EIAs and would include CCS.

With regard to the project boundary for a CCS project activity, IETA supports this determination being linked to site characterization and risk assessment procedures in

[2] For more information on the IPCC's four scenarios, see IPCC's *Guidelines for Greenhouse Gas inventories*

order to include all subsurface components (e.g. the CO2 storage formations) and all potential direct seepage pathways. We agree that all project boundaries, trans-boundary or otherwise, should be reviewed periodically in order to take account of deviations between the predicted behavior of CO2 in the subsurface (as determined through forward modeling) and the observed behavior (as measured through monitoring).

GLOBAL RESERVE FOR CERs

> **Decision -/CMP7, Paragraph 4**, the COP: *Agrees* to consider, at its eighth session: b) the establishment of a global reserve of certified emission reduction units for carbon dioxide capture and storage project activities, in addition to the reserve referred to in Paragraph 21(b) of the annex to this decision.

Parties are still debating the creation of an international CER reserve for CCS projects to address leakage risk, which would be established in addition to, and separate from, the project specific reserves already defined in the existing modalities and procedures, described below.

In Durban, negotiators agreed to create three separate accounts in the CDM Registry for CERs from CCS project activities: a pending account; a reserve account, where CERs are held to account for any net reversal of storage; and a cancellation account, where CERs are transferred to account for a net reversal of storage. The issuance provisions in the decision are unique in terms of addressing non-permanence, given that 5.0% of CCS-generated CERs, once issued, will be sent to a reserve account housed in the CDM Registry, with the purpose of accounting for any *net reversal of storage*[3].

Therefore, should a *net reversal of storage* (caused by seepage), occur during the CCS project's verification period, the CDM Registry Administrator must proceed to cancel, up to the amount of the net reversal of storage, the CERs issued for the CCS project activity, in three steps: first, from the reserve account; second, from the pending account; and, third, from the holding accounts of the project participants, proportional to the amount of CERs for the CCS project activity held in each holding account[4]. After cancelling issued CERs from one or more of these accounts, if there remains outstanding net reversal of storage, the CDM EB will approach the project participants to transfer – within 30 days post-notification – an amount of CERs, Assigned Amount Units (AAUs), Emission Reduction Units (ERUs), and/or Removal Units equivalent to

[3] See Paragraph 3(a) of Appendix A to the Annex. **Additional Context:** *A certification report must provide information on the amount of any net reversal of storage. The final certification report will be submitted after the monitoring of the geological storage site has been terminated and provided that there has been no reversal, may constitute a request to forward any remaining CERs in the reserve account to the registry accounts of the project participants involved. If a verification report is not submitted in the prescribed time frame and following further notification to the project participants, the CDM Registry Administrator will cancel all CERs that were issued for the CCS project activity and are being held in the CDM registry.*

[4] Paragraph 24(a)

the outstanding amount of a cancellation account of the CDM Registry, or a cancellation account of the national registry of any party.

> **Decision -/CMP7, Annex B, Paragraph 21**: Upon submission of a certification report for a verification period during the crediting period and upon finalization of the consideration of the certification report by the EB, the CDM Registry Administrator…shall promptly issue the specified quantity of CERs into the pending account of the EB in the CDM registry…Upon such issuance, the CDM Registry Administrator shall promptly:
> **Sub-Section (b):** Forward 5 per cent of the CERs issue to a reserve account of the CDM registry, established for the CCS project activity for the purpose of accounting for any net reversal of storage, as referred to in paragraph 3(a) of appendix A…

IETA generally supports the final Durban decision to include a reserve account of 5.0% of issued CERs per CCS project as required in the event of a net reversal of CO2 storage – defined a "negative mass balance during the crediting period, or any seepage after the crediting period". We recognize that, if leakage above the volume in the account occurs, additional CERs will be required to cover the remaining leakage from either the host or developed country party. This novel approach to addressing permanence (or CO2 leakage risk) upfront should reduce perceived project risk, thereby making it easier to attract CCS financing.

IETA believes that the existence of the 5.0% reserve account, along with the ability for the CDM Registry Administrator to remove issued CERs from all three accounts and, if necessary, pursue project participants to transfer issued units equivalent to any outstanding amount linked to net reversal storage, represents a robust, deep, and complete approach to effectively address leakage risk, while balancing the needs/objectives of private sector participants to undertake CCS projects. However, it is highly likely that creating an additional global reserve, on top of these already agreed-upon lines of defence, would work to skew this carefully-designed balance towards hindering, rather than enabling, the growth of viable CCS project activities in developing countries.

To this end, IETA strongly urges Parties to **avoid establishing a global reserve for CERs for CCS projects**. The proposed new mechanism – which had never been discussed during technical workshops and stakeholder dialogue related to CCS in CDM modalities & procedures, prior to the December 2011 climate talks – would simply add another burden for project participants and, depending on the reserves design, might easily pose a **significant deterrent to attracting scaled-up private sector resources into CCS projects in developing countries**.

Beyond representing an additional layer of bureaucracy and potential barrier to private sector investment in CCS project activities, the creation of a separate global reserve for CERs could potentially have long-term adverse market supply and price impacts (the extent to which would be determined by the amounts decided).

Furthermore, there is a **significant lack of information** on the design of the proposed global CER reserve. Because the design of the secondary reserve does not provide clarity on whether project developers would be eligible to recuperate their CERs (even if a project was eventually deemed satisfactory), a **dangerous moral hazard** would be created, which would threaten to undermine a project developer's incentive to ensure the long-term integrity of a project. The secondary global reserve thus becomes counter-productive – it would not achieve its goal of addressing long-term net-reversal concerns, while at the same time it would create an added and unnecessary burden for project participants and, depending on the reserves design, might pose a material deterrent to attracting scaled-up private sector resources into CCS projects in developing countries.

If Parties are committed to establishing a global CERs reserve, there are some very **basic questions** regarding mechanism design options and impacts, which must then be reviewed both immediately and openly with key experts and private stakeholders. For instance: What level of provision is required to address the scale of perceived risk? Which entities would be responsible for the administration of the global reserve, and what are the costs linked to fund administration? How would the units from the reserve be managed and eventually disbursed? Or, more importantly, would these units ever find their way back into the market, or be locked away indefinitely? These are all basic but extremely important questions to address, prior to moving forward with the proposed mechanism.

ADDITIONAL ISSUES & OBSERVATIONS

In addition to the issues laid out above, which directly respond to the request for party and stakeholder input on trans-boundary and global reserve issues, we believe it is important to take this opportunity provide the UNFCCC with the following additional observations/recommendations associated with CCS in the CDM via a business lens.

Practical next steps and outstanding issues: In order to enable CCS in the CDM, specific criteria on expertise, competencies, and independency must be developed for accreditation of Designated Operating Entities (DOEs) in the validation and verification of CCS projects. Clear requirements for project boundaries and assignment of adequate accounting for reductions and of liabilities in the Project Design Document in cases of cross-border CCS projects must also be developed. Provisions elaborated by the CMP/EB guarantee that leakage of any tonne of carbon in the atmosphere is compensated.

Institutional developed and "staged process": IETA supports the generally broad agreement that the creation of a CCS working group or panel should be established to as soon as possible to support the CDM Executive Board in both assessing and approving CCS project activities, as well as providing other types of guidance. In terms of host country capacity, procedures for evaluating host country capacity should not only be about post-closure stewardship but should also consider routine oversight during operation – as, in some cases existing domestic laws may already address issues related to CCS projects.

Transparent steps, processes, and documentation are vital: For a range of components and processes related to CCS project activities in the CDM, transparency to stakeholders is critical. With regard to long-term liability, documents indicating that a transfer of liability has been carried out appropriately may be needed.

New sectoral scope for DOE accreditation for CCS in CDM: IETA generally supports the notion that a new sectoral-type scope might be required for CCS against which DOEs could be accredited before validating and verifying CCS project activities; this seems like a necessary step. We look forward to future opportunities to regularly communicate and engage, potentially via ad hoc CDM CCS expert groups/panels, in order to help both inform and expedite the process of developing viable accreditation standards for CCS project activities.

Financial liability and mechanisms: IETA believes that financial liability for monitoring, remediation, and corrective measures pre-liability transfer can be met via a mutually-acceptable financial mechanism. The financial mechanism should depend on the credit standing of the project proponent and be capped to manage liability exposure. Financial arrangements to compensate for potential damages during the project activity or as a result of leakage prior to liability transfer are best defined under existing national legislation regarding industrial activity, which can be amended to include provisions for CCS where necessary. Such arrangements could form part of the project's domestic approval procedure with respective DNAs, which may have to lodge performance and rehabilitation bonds with local regulators. Financial liability mechanisms can also be distributed throughout the project value chain.

CCS – Risk-sharing approach opens the door to insurance products: IETA believes that insurance could play a role in managing relevant CCS in CDM liabilities. Today, insurance policies are available for CCS with respect to operational activities related to bodily injury and property damage, but not for other aspects or over the long term. Such polices could potentially be modified, expanded, or newly-created, but given today's risk and technology-related uncertainties, the basis for indemnity would be unclear and therefore might require the scope to be limited and the presence of some form of risk-sharing facility such as a government fund or cap on liability, at least in early projects.

Bilateral mechanisms to manage seepage: Mechanisms can be put in place to manage exposure on seepage from CCS projects, which would keep project risk levels down. Such a mechanism might simply be an agreement between the project proponent and the relevant national authority, prior to the start of injection, of a set allowance price or quantity to quantify such risk of seepage. Contracts would be agreed upon on a case-by-case basis for negotiating the necessary provision to cover future potential and very unlikely leakage exposure.

CONCLUSION

IETA believes that reconciling increasing world energy demand with the transition to a low-carbon future will require an unprecedented effort by the global community to develop the appropriate policy and technology responses. The effects of climate change are being felt now and a delay in achieving significant cuts in emissions will lead to increasingly severe consequences. IETA believes that CCS represents one of several important mitigation options needed to achieve the significant emissions cuts needed this century.

Although CCS deployment potential may vary across countries and regions, its use will allow for more stringent and cost-effective global emissions reductions to be available. If the deep emissions reduction required are to be achieved then all mitigation options must be enabled to be used to their full potential regardless of whether all options can be deployed in all countries. Whereas for some countries, protecting their bio sequestration capability may be the largest contribution they can make in combating climate change, for other countries with less significant bio-production, it may be their potential to permanently store large volumes of CO2 which offers the most promising option.

We hope that the above comments will provide valuable input to your further work. Please feel free to contact Katie Sullivan at sullivan@ieta.org should you have any questions about IETA's submission, or require additional input as you move forward with your work plan and activities.

Sincerely,

President & CEO
IETA