

**Submission by EPPSA**  
**Carbon dioxide capture and storage in geological formations as clean development mechanism project activities**

United Nations Framework Convention on Climate Change (UNFCCC)  
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**Preamble**

EPPSA members, who are developing the CO<sub>2</sub> capture technology and both manufacturing components for and constructing turnkey power plants, welcome COP/MOP Decision –/CMP.6 in Cancun inviting Parties to make submissions on views on the issues regarding to the Carbon dioxide capture and storage (CCS) in geological formations as clean development mechanism (CDM) project activities. Virtually all European power plants are built by, or equipped with components from, EPPSA Members.

EPPSA recalls the establishment of the Clean Development Mechanism (CDM) as one of the “Flexibility mechanisms” in the Kyoto protocol to allow industrial countries to have flexibility in meeting Greenhouse Gases (GHG) emission limits indentified in the Protocol. EPPSA commends the COP/MOP for the work and progress achieved up to this point and embraces the opportunity to submit its view on this important issue.

**Role of CCS in achieving sustainable development and meeting emission reduction targets**

Carbon Capture and Storage is recognised, both within Europe and internationally, as a significant mitigation technique for climate change. Carbon Capture and Storage – is essential if we are to cost-effectively stabilise GHG concentrations in the atmosphere at an acceptable level and meet the reduction targets by 2050. The International Energy Agency (IEA) CCS roadmaps show that a great deal needs to be accomplished in the next 10–15 years if CCS is to make a meaningful contribution to global GHG reduction efforts by 2050. In scenarios without CCS, the costs for achieving climate stabilisation in 2050 are at least 70% higher than scenarios that include CCS. It is not possible to achieve global CO<sub>2</sub> reduction targets without CCS providing 20% of the global cuts required by 2050.

EPPSA enthusiastically supports the European Council agreement of 2007 to stimulate the construction and operation of a set of CCS demonstration projects by 2015. The European Union (EU) portfolio of demonstration projects is an initiative aiming to unite public and industrial efforts in the common goal of advancing the large-scale deployment of CCS. It is considered feasible that by 2020, or soon afterwards, CCS will be functional in an Emission Trading Scheme (ETS)–driven system. The European Commission has established a strategy to support the development of these CCS demonstration projects, including the launch of a European Industrial Initiative on CCS and the co financing of large-scale demo projects through the European Energy Programme for Recovery and the EU–ETS New Entrant Reserve. Furthermore, the European Technology Platform for Zero Emission Fossil Fuel Power Plants (ZEP) was founded in 2005; one of its goals is to make CCS

commercially viable by 2020 via the EU-backed demonstration programme.

EPPSA strongly supports the inclusion of CCS in CDM as an additional initiative to further develop and deploy CCS.

- **Positive Implications of the Inclusion of CCS as CDM project activities**

CCS has a great potential as a climate change mitigation technology in the developing world. World energy demand is rising steadily and it forecast to rise 55% by 2030 mainly due to the high rates of economic growth in developing regions. IEA forecasts suggest that developing countries with large gas and coal resources will increase their energy-related CO<sub>2</sub> emissions from fossil fuel use in the next decades. Consequently, the dependence on fossil fuel based economic growth in those countries is to persist in the foreseeable future.

Inclusion of the CCS in CDM, therefore, has a great potential to enable non-Annex I countries to undertake emissions reduction activities in economically efficient manner. Moreover, inclusion of CCS in CDM would mostly benefit countries that are fossil fuel producers or users and are currently underrepresented in the CDM. In this way it would enhance the objectives of CDM and help equitable distribution of the mechanism.

In addition, CDM would promote joint learning with developing countries on deployment of CCS. Annex I countries are in a position to take a lead in developing and deploying CCS. However, acknowledging issues discussed above, it is important that in the next decade non-Annex I countries build their capacity to deploy low carbon technologies, including CCS, on a commercial scale. The extent of deployment of CCS in developing countries will depend widely on initiatives provided to undertake it. EPPSA praises for a well established and operational system to financially support GHG emission reduction activities in developing countries. CCS project in CDM could generate an additional income source to cover its investment and operating costs from the sale of Certified Emission Reductions (CER's). Hence, EPPSA is enthusiastic that CDM would provide the necessary initiative to support deployment of CCS in these countries.

### **Addressing the concerns identified in decision –/CMP.6**

EPPSA supports a commitment to address the issues identified in decision –/CMP.6.

- **Selection of the storage site**

EPPSA emphasises that the concept of a carbon sink is accepted under the CDM via other projects and the concern of liability exists for all such projects. EPPSA points that CCS has been widely used in the developing world as a method for Exhaust Gas recirculation. All scientific evidence show that CO<sub>2</sub> storage is safe provided careful site characterisation and selection.

EPPSA praises the progress achieved so far in deployment and development of CCS projects.

The world's first network of demonstration projects of CO<sub>2</sub> Capture and Storage sponsored and

coordinated by the European Commission has been launched, namely: OXY CFB 300 Compostilla in Spain; Rotterdam ROAD in The Netherlands, Hatfield in the United Kingdom, Belchatów in Poland, Jämschwalde in Germany and Porto Tolle in Italy. All six are aiming to be operational by 2015 and achieve commercial viability CCS by 2020. The projects would further prove the feasibility of a full CCS chain in power generation and other industries as well as provide evidence for the environmentally safe geological storage of CO<sub>2</sub>.

- **Methodological and legal issues**

EPPSA notes that significant amount of existing CDM projects operate under legislations and regulations that have been specifically designed for the projects concerned. EPPSA insists that the same reasoning should be applied for CCS projects under CDM. In regards to the CDM Executive Board report to CMP 5 Annex 11, systems can be designed for CCS projects that would allow emissions reductions to be measurable through proper site characterisation and selection process, procedures for operation and monitoring and seepage remediation options. Moreover, the monitoring techniques are already available for a majority of possible storage sites. EPPSA further encourages possibility of creating post crediting period monitoring and endorsement of liability mechanism.

EPPSA emphasises an urgent need for a development of national and international rules and framework for CCS projects that would address the major unresolved regulatory issues related to CCS. EPPSA recalls the EU Directive 2009/31/EC on the geological storage of CO<sub>2</sub> enforced that has established a legal framework for the environmentally safe geological storage of CO<sub>2</sub> to contribute to the fight against climate change. This CCS Directive in particular addresses the risk management associated with this technology, such as the removal of barriers to CCS in existing national legislation, the regulation of the long-term liability for CCS storage sites, the inclusion of CCS in the EU-Emissions Trading Scheme, and the improvement of communication about CCS to the public and stakeholders.

EPPSA welcomes the CCS directive and regards the inclusion of CCS under CDM projects as another step forward to establishment of a necessary regulatory framework, which could be based on the EU CCS directive, in particular in developing countries, delivering a stable and trustworthy framework for all future activities.

### **Conclusive remarks**

Considering all above, EPPSA strongly believes that CCS meets the objectives and criteria of the Clean Development Mechanism (CDM) as detailed in Article 12.5 of the Kyoto Protocol and the Marrakech Accords and should be eligible to receive credits under the CDM.

*(a) Voluntary participation approved by each Party involved;*

The potential of CCS is extensive in both Annex 1 and non-Annex 1 countries. The inclusion of CCS in CDM projects enables non-Annex I Parties to achieve sustainable development and

contributes to the ultimate objective of the Convention and assists Annex I Parties to achieve compliance with their emission reduction commitments.

*(b) Real, measurable, and long-term benefits related to the mitigation of climate change;*

Systems can be designed for CCS projects that would allow emissions reductions to be real and measurable through proper site characterisation and selection process, procedures for operation and monitoring and seepage remediation options. Existing regulations in the EU as well as precedent cases in CDM should be taken into consideration.

*(c) Reductions in emissions that are additional to any that would occur in the absence of the certified project activity.*

CCS projects fulfil the additionality criteria of the CDM and in the absence of a mechanism such as the CDM to address the additional costs of the technology the incentive to deploy CCS is significantly reduced, with CO<sub>2</sub> instead vented to atmosphere.

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*The European Power Plant Suppliers Association (EPPSA) is the voice, at European level, of companies supplying power plants, components and services. EPPSA members, located throughout Europe, represent a leading sector of technology with more than 100 000 employees and annual revenue of over €20 billion. EPPSA actively promotes technologies for highly efficient and sustainable power generation in a carbon constrained world. EPPSA believes increased investment in Research, Development and Demonstration is a key factor in driving EU competitiveness as well as ensuring affordable near zero emission power supplies.*

*Virtually all power plants in the EU are built by members of EPPSA, or equipped with their components.*

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