

Workshop Summary

A workshop entitled 'Greenhouse gas credits trade versus biomass trade – weighing the benefits', jointly organised by IEA Bioenergy Tasks 38 (GHG Balances of Biomass and Bioenergy Systems) and 40 (Sustainable International Bioenergy Trade: Securing Supply and Demand), and ENOVA, took place in Trondheim, Norway in April 2006.

Trade in biomass fuels, electricity from renewable resources, renewable certificates and CO₂ credits provide options for business and policy makers to use biomass available in other parts of the globe to reduce GHG emissions, increase renewable energy and meet increasing energy demands.

The main objective was to address the advantages and disadvantages of biomass trading possibilities, and to assess the necessary accounting rules and criteria to select the most efficient mechanisms under varying circumstances. It provided a forum for government, business and academic representatives to exchange and gain information on the status of the various biomass- carbon trading and certificate trading markets.

Session one on international biomass trade and greenhouse gas accounting covered examples of biomass trade from countries such as Norway, Canada, Belgium and the Netherlands. While Norway clearly is at the beginning of developing (inter-)national bioenergy markets, Canada on the one hand and Belgium and the Netherlands on the other have exported/ imported several 100 ktonnes of wood pellets based on mill residues over the last years, and this trend is continuing to rise. In Canada, large amounts of forest are affected by the mountain pine beetle. A case study revealed exporting wood pellets from these forests to the Netherlands for electricity production could result in net GHG emission reductions of over 200 ktonnes of CO₂ Eq per year. In the importing countries Belgium and the Netherlands, the overall sustainability of the biomass import schemes are of increasing importance. This in particular includes the overall GHG and energy balances of (imported) biomass and use. For example, in Wallonia, the number of green certificates issued for producing electricity from biomass is coupled to the GHG emissions during the production and transport of the biomass and the accounting system is embedded in a law.

Furthermore, two studies were presented evaluating physical trade of biomass from Brazil, Mozambique and Sweden to the Netherlands. Main findings were that transportation distances are of minor importance, but that reference systems in both exporting and importing countries have a major impact on the consideration physical trade vs. trade in CO₂ certificates. Also land use change (included in CDM, excluded in physical trading), accounting rules and the timeframe considered have influence on the results.

Session two focused on the use of biomass under emission trading and certificate trading schemes. In Finland the EU Emissions Trading System (EU ETS) has increased the average price of fuel and the amount of biomass available for bioenergy. The increase in price has meant that board manufacturers have reduced production and price may also impact on the pulp and paper industry indicating it is important to look at national policy to avoid such occurrences. Norway has a green certificate system whereby a unit of renewable energy (hydro, wind or biomass) generates a

separate green certificate, which can be sold independently of the electricity. Biomass is more complicated to certify than other renewable energies due to the use of renewable and non-renewable primary energy. To facilitate international trade internationally harmonised systems are required.

CDM was the focus of a number of presentations from a range of perspectives. An overview of CDM projects was presented and indicated that biomass energy projects were the most common CDM projects among renewables, with an expected installed capacity of 2511 MW, largely from cogeneration of bagasse and agricultural waste. A common theme running through presentations was the need for biomass CDM projects to contribute to local sustainable development and other local objectives eg job creation and also have a monitoring or certification system that proves the sustainability of the biomass resource for local use or international trade. International trade in biomass may be in competition with the local use of biomass.

The workshop concluded that the various trading options for biomass and emission credits produced by biomass have various pro's and con's for buyers and sellers, depending on the potentials, markets and timeframes considered. Nevertheless, trading options strongly enhance the use of biomass altogether, because supply and demand for energy, CO2 emission reduction and other benefits of biomass can be matched where this was previously not the case. Furthermore, developing proper and workable GHG accounting systems and overall sustainability evaluations (e.g. for biofuel production and trade) are needed, but could be developed in conjunction with the lessons (being) learned for CDM bio-energy projects. This is a very important field for market parties, policy makers and the teams of IEA Bioenergy Tasks 38 and 40 that will certainly be addressed in future work.

Workshop website:

www.joanneum.at/iea-bioenergy-task38/workshops/trondheim06/
www.bioenergytrade.org/

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