



T@W: Sustainable Energy Technology at Work

Promoting Sustainable Energy Technology in Carbon Markets

Summary T@W Workshop

**Carbon Expo, 3 May 2007
Cologne, Germany**

www.setatwork.eu

The world has entered a new energy era, where energy technology has a vital role to play. T@W, Sustainable Energy Technology at Work, strives at uniformed effort on addressing the EU interests in the carbon markets, by comprising EU policy goals as well as business opportunities. The basic objective of T@W is to facilitate the entry of European know-how on Sustainable Energy Technologies (SET) into emerging climate markets: the European Union Emission Trading Scheme (EU ETS) and the Clean Development Mechanism (CDM) market in Asia.

Sustainable Energy Technology at Work, a project supported by the EU's Sixth Framework Programme (FP6), is thus having as a key aim to promote sustainable energy technologies at carbon markets with focus on EU ETS and CDM markets in Asia. One way of doing so is through different arrangements, from where the Workshop at the Carbon Expo in Cologne, Germany, is one example.

The T@W Sustainable Energy Technology at Work project today consists of 13 partners from Europe and 5 partners from Asia.

Introduction

The T@W workshop, Sustainable Energy Technology at Work, took place as part of the Carbon Expo in Cologne, Germany, on 3 May 2007. The workshop presented the latest and most relevant issues regarding the development of carbon markets and the possibilities for technology transfer. Among the speakers were representatives from the International Emission Trading Association (IETA) and the European Investment Bank (EIB).

About 50 participants took part in the event. Through discussions and lectures the audience learned about new opportunities for technology transfer and carbon financing, and development trends in the Emission Trading Scheme and CDM Markets. The participants were also presented with first-hand experience from CDM projects in India and China. A brief presentation of the identified technologies needs in South East Asia partner countries was also given.

1. Welcome address, Nils Daugaard, ECNet, Denmark



Mr Daugaard informed the audience about the T@W Sustainable Energy Technology at Work project. On the EU ETS market, T@W intervenes with pilot projects at the ETS company level, business investment concepts and by exploring RTD needs. In the CDM markets in Asia, T@W intervenes with pilot CDM projects and RTD and business cooperation between Asia and EU.

2. European Strategic Energy Technology Plan (SET-Plan), José Garcia Fluxa, European Commission, Directorate-General for Energy and Transport



Mr Garcia Fluxa informed the audience about the European Energy Policy. The Energy Package for the year 2007 focuses on sustainability and the low-carbon economy, the internal market and external relations. The challenge is to balance, integrate and mutually reinforce sustainable development with competitiveness and security of supply.

New technologies, constant support and technology platforms are achievements that have already been made in the work towards a SET-Plan. In order to achieve the vision of Europe's energy future as efficient, diversified, liberalised and decarbonised, Mr Garcia Fluxa argues that the EU must act jointly and urgently. The strategic element of the SET-Plan will be to identify those technologies for which it is essential that the European Union as a whole finds a more powerful way of mobilising resources in ambitious result-oriented actions to accelerate their pathway to the market.

3. Energy technology and European Union Emission Trading Scheme (EU ETS), David Lunsford, International Emission Trading Association (IETA)



Mr Lunsford argues that carbon price has an effect on technology choice. Up until today, focus has been on efficiency, housekeeping and some fuel switching. For the period of 2008-2012 tighter allocation is likely to drive investments in efficiency. Post 2012, Mr Lunsford predicts that a solid carbon price will underline investment decisions.

It is Mr Lunsford's ambition that the EU ETS post 2012 will provide stable policy framework, which will lead to long term confidence. Predictable long-term targets will facilitate for markets to drive future investment strategies. Clean technologies will be keys to meeting the emission reductions IPCC indicates are needed. The EU ETS has the potential to be the docking station for a global market.

4. JI/CDM project development - roles of project developers, project owner, emission credit buyer and technology supplier, Sonja Frenzel, FutureCamp, Germany



Ms Frenzel made a presentation on the supply and demand for JI/CDM credits. Germany is the European country with the largest number of ERUs and CERs allowed and adopted by the EU Commission. According to Ms Frenzel's estimation of CER and ERU supply and demand until 2012, the expected volumes of CERs and ERUs will fully cover the maximum demand from EU.

Ms Frenzel further explained the JI/CDM project structure, and provided information about the Carbon finance available for a typical renewable energy JI/CDM project. Ms Frenzel also provided an overview of the different parties involved in JI/CDM projects.

5. Carbon Finance and Sustainable Technology, Peter Carter, European Investment Bank (EIB)



The main objectives of the EIB Climate Change policy are to promote low carbon technologies, to stimulate the carbon market and to help poorer countries develop an appropriate response to climate change.

EIB provides two climate change initiatives: Climate Change Financing Facility (CCFF) sets preferential terms for projects that result in a significant reduction in greenhouse gas emissions; Climate Change Technical Assistance Facility (CCTAF) aims to help promoters develop project-based carbon credit potential.

EIB also provides carbon funds and other initiatives, in order to lever

good projects. This will help identify and develop carbon credit opportunities. Through learning and scale effects, EIB manage to provide loan finance on attractive terms. EIB also provides an additional source of cash, and structured project finance. Even so, initially, some projects may need some form of public finance.

6. CDM work in India, Susanne Haefili-Hestvik, Tricorona, Sweden



Not every good project is a good CDM project, claims Ms Haefili-Hestvik. Strong due diligence and long experience with the CDM is saving costs and frustrations further down the road. Good management of the process is crucial for developing a good CDM project. Partners should have lot of resource in terms of finance, time and commitment.

After presenting the vast underlying documentary evidence required to prove a project's case, Ms Haefili-Hestvik emphasised the importance of talking about business opportunities instead of problems.

The bundled wind power project in Tamilnadu, India, is an example of a successful CDM project. 704 wind turbines owned by small wind mill sub project owners, who operate spinning mills, encouraged by their Association - Tamil Nadu Spinning Mills Association. The generated wind power (460 MW installed capacity) is used for meeting their captive needs and for exportation to the grid.

7. CDM projects in Thailand, Lars Møller, ECNet, Thailand



Sugar Mills and Palm Oil Mills in Thailand have low energy efficiency and inefficient use of bagasse and residues from CPO processing, and therefore have good potential for development into CDM Projects.

The investment cost for a local biogas plant and western gas engine is around 60 million THB. The electricity generation cost is around 1.8 THB/kWh. Simple pay back time is thus around 3 years, Mr Møller claims. If 2 Mills join forces, a 30 MW power plant can be kept in operation 6,500 hours/year with a production around 175,000 MWh/year; corresponding to a CER generation around 95,000/year. If all Palm Oil Mills in Thailand were built with modern state of the art energy production facilities there would be a residue surplus, after own consumption for processing, big enough to produce 4% of the electricity produced in Thailand in the year 2005.

Considering that Thailand has got 16 Palm Oil Mills and 50 Sugar Mills, Malaysia has got more than 200 Palm Oil Mills and Indonesia has got a lot of Palm Oil Mills, South East Asia is a good basis for a future market. Lars Møller welcomed all participants to follow the progress of the CDM project development under the T@W action and possibly supporting their CDM business and or project.

8. CDM Projects in South America, Norbert Vasen, ETA, Italy



Brazil's growing economy makes the country an interesting partner in the funding of CDM projects.

Sugar cane activities to produce fuel ethanol leave much biomass unused. Residues in field are burned (CO_2) or left to decay (CH_4). Mr Vasen reasons that by valorisation of agricultural residues a problem can become a resource. By making agro-pellets of the residues every party in the co-operative is a winner, and a lot of national advantages are to be made.

The resulting biomass is easy to store, transport and use, and therefore suitable for large scale production. The production of agro-pellets from residues is easy to replicate in Asian countries, claims Mr Vasen.

Summing up

Besides interesting discussions and the making of many new contacts, the workshop resulted in concrete proposals from technology suppliers who wish to enter the CDM market. Market actors had the opportunity to sign up for participation in further development of identified projects.

During the workshop, the Sustainable Energy Technology at Work team received an invitation from the European Investment Bank to consolidate the cooperation between EIB and T@W. T@W will now continue the work already started. In future Carbon Expos and other premiere meeting places for companies doing business in the carbon market, the Sustainable Energy Technology at Work team will share a stand with the European Investment Bank. This will be a unique opportunity for T@W to meet companies acting in the market. The T@W team sees this as a platform to communicate with high profile participants and exhibitors.

To see the slide presentations and for further information, please visit:

<http://www.setatwork.eu/events/0705carbonexpo.htm>

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