

Managing Carbon Credits and Emissions

Programme and Registration Brochure

11 September 2007

IMechE, 1 Birdcage Walk, London

www.imeche.org/events/ManagingCarbonCredits



Supported by Energy, Environment & Sustainability Group, Power Industries Division

Sponsored by

The logo for AIR PRODUCTS is located in the bottom left corner. It features the word 'AIR' in a bold, sans-serif font above the word 'PRODUCTS' in a larger, bold, sans-serif font. To the right of the text is a stylized green and white logo consisting of three horizontal bars of varying lengths, resembling a gas cylinder or a molecular structure.

Managing Carbon Credits and Emissions

The 1997 Kyoto Protocol commits industrial nations to cut back on their emissions. Under the first phase, 2005 to 2007, organisations emitting large volumes of CO₂, methane, nitrous oxide and other gases harmful to the environment have been given permits for the amount of 'greenhouse gases' they can legally discharge. In the European Union (EU) permits known as Carbon Credits are allocated under the Emissions Trading Scheme (ETS). Any organisation wishing to emit in excess of their allocated credits has to purchase credits from someone with a surplus allowance.

Phase 2 of the Protocol commits European Union countries to an 8% reduction in 'greenhouse' gas emissions from 1990 levels during 2008 to 2012.

The objective of the event is to provide a discussion forum on the operation of the carbon credit system to date and to address the following:

- How the system is working in practice
- Is it effective in its objective of challenging industry to reduce emissions?
- Will industry meet the 8% target reduction in emissions during 2008 to 2012?
- How are carbon credits shaping future mechanical engineering projects?

Benefits of Attendance

- Update on how the system is working
- Insight into government thinking
- Opportunity to compare notes with individuals from other companies
- Guidance regarding the management of carbon credits
- Ideas for potential cost savings related to reducing greenhouse gas emissions
- Question sessions and time for networking will enable delegates to seek specific help from the assembled gathering of experts.

Who Should Attend

The seminar will be of benefit to engineers, managers and senior managers associated with the oil, gas, chemical and power generation industries. It will also be of interest to younger engineers and students wishing to broaden their knowledge.

Exhibition and Sponsorship

Why not take this opportunity to display an exhibition stand, or provide inserts about your company in the delegate packs? For more information contact Taz Khatun on +44 (0)20 7973 1306 or Email t_khatun@imeche.org

Organising Committee

Organising Chairman Mr John Phillips, Global Manager, Large ASU Machinery Engineering, Air Products PLC

Mr John Armstrong, Asset Strategy and Planning Engineer, E.ON UK

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PROGRAMME

11 September 2007

09:00 Registration

09:30 Chairman's Welcome

John Phillips, Global Manager, Large ASU Machinery Engineering, Air Products PLC

John Armstrong, Asset Strategy and Planning Engineer, E.ON UK (afternoon chair)

09:40 Keynote presentation

Iain Morrow, EU Emissions Trading Scheme (ETS), Department for Business Enterprise and Regulatory Reform (BERR)

- The keynote address will provide some background to the ETS, explaining the connection with the Kyoto protocol and summarise how the system has worked to date from the government's point of view.

09:50 EU ETS - Experiences & Possible Improvements

Ajit M Patel, Energy Efficiency Technical Manager, SABIC UK Petrochemicals

- EU ETS has raised the profile of GHG emissions and the need to save energy
- EU ETS in Phase 1 by having largely free allocation of allowances, has increased the marginal cost/savings of energy by creating an additional cost/savings of CO₂ allowances, increasing the rate of return of projects saving energy, without substantially increasing the actual cost of energy
- The extremely volatile prices for the EUAs has created confusion and uncertainty in terms of the financial return of energy-saving projects
- It is essential that free allocation of allowances continues in energy-intensive industries which are subject to international competition
- Rather than allowing markets to decide the price of an EUA, a mechanism which fixes the EUA price (even though it may be high) and increases it gradually with or above inflation would provide certainty to industry for investment returns

10:20 Discussion

10:30 Green Gas or Hot Air? - An Operators View of EU ETS

Stephen Bradley, Environmental Advisor - Europe, Air Products Plc

- Impact of EU ETS on Air Products Operations - Environmental and financial performance
- How we have managed GHG and emissions trading schemes
- Issues and where do we go from here

10:50 Discussion

11:00 Morning Coffee

11:30 Emissions Trading and Carbon Footprints - A Need for a Common Accounting Approach

Robin Huttenbach, Study Manager, Petrofac Engineering Ltd

- There appears to be a disconnect between the way a trading scheme such as the European Union's accounts for emissions and methods that the engineering community may use in deciding how best to reduce the emission of green house gases (GHG)
- GHG trading systems are based on managing operating (direct) emissions and do not consider indirect emissions such as the quantity of carbon dioxide released in the manufacture or supply of assets owned by the trading entity.
- Emission allowances are commonly traded as intangible assets. The value (or liability) of such assets then arises solely from the risk that the direct emissions of carbon dioxide pose to the marginal cost of production and the corresponding income stream.
- The engineering community on the other hand might wish to consider including indirect emissions in any assessment of GHG liabilities. This 'embodied carbon' or 'energy content' would form part of an asset's carbon footprint and along with operating emissions, could then be used to compare the life cycle cost of different processes. Such a comparison may be conducted using physical or monetary units of accounts.
- Work is required to develop the methodology of carbon footprints, as well as a means for linking such footprints to the financial value of an organisation's assets. This might take the form of a separate carbon tax. The author is not sure how feasible or practical this would be, but believes such a capability is needed to create a more direct link between those responsible for the commercial performance of an organisation and those tasked with reducing the impact of its operations on the environment.

11:50 Discussion



12:00 Managing Carbon Price Risk

Alastair Hutson, Head of Risk Management Services, Utilyx

- Energy professionals, both buyers and sellers, have historically had to manage price and volume uncertainty for primary fuels and electricity. Now they have to manage carbon risk as well. Even if consumers do not have plant of over 20MW to qualify them for the EU-ETS, they will still be exposed to carbon price risk, passed through by electricity generators.
- Fortunately, the same skills and processes used for energy management are equally applicable to carbon; - targeting and monitoring, forward purchasing and sales and trading and balancing positions. The key requirement as for energy is to have a formal Risk Management Policy in place, with effective controls.
- Utilyx provides price risk management and procurement services to major UK energy users. The company is FSA regulated and can buy and sell Emissions Credits for its customers on regulated exchanges; the Climate Group of Utilyx advises on the development of new renewable projects, carbon reduction and the purchase of energy from sustainable sources.

12:20 Discussion**12:30 Lunch****13:30 Managing Carbon through CHP**

Claire Lohan, Project Development Engineer, Development and Construction, E.ON UK

- E.ON UK has signed a deal with National Grid's Grain LNG terminal that will make it's £500m 1,275MW new power station into one of the worlds largest Combined Heat and Power Plants.
- The station will be powered by three high efficiency Alstom GT26 gas turbines and will export up to 340MW of "waste" heat to National Grids nearby LNG terminal.
- The innovative CHP scheme, believed to be the first of it's kind, will result in a reduction of up to 350,000 tonnes of carbon dioxide emissions from the LNG terminal every year. An additional environmental benefit of the scheme will also see a reduction in the amount of heat discharged to the Medway.
- The CHP investment benefits from government measures designed to encourage CHP, including exemption from Climate Change Levy.

13:50 Discussion**14:00 Carbon Dioxide and Coal Fired Power Plants - Technology Alternatives to Emit and Trade**

Hans Jensen, RWE npower

- RWE npower plans to close 3.5 GWe of coal fired generation before 2015 and to replace this with power plants emitting less carbon dioxide per unit of electricity generated. Some of this new generation could be coal fired and studies are underway for two potential coal fired generation sites.
- These studies are based on more efficient coal fired power plants which will initially operate within a carbon dioxide emission trading market. However measures are to be included to make it possible to adapt these power plants to capture carbon dioxide and to transport this carbon dioxide to stores.
- This presentation looks at current technology options for carbon dioxide capture and storage, outstanding issues in today's market and technology frameworks and the work underway to improve the potential for fitting the carbon dioxide capture in the UK. This is compared to the approach being adopted by RWE Power in Germany.

14:30 Discussion**14.40 UK Government View on Future of Emissions Trading**

Iain Morrow, EU Emissions Trading Scheme (ETS), Department for Business Enterprise and Regulatory Reform (BERR)

- Stern review and the global picture
- EU ETS - UK view on progress to date, and our decisions for Phase II
- EU ETS - Commission report on feedback from industry and Governments on progress
- EU ETS - UK perspectives on the future

15:00 Discussion**15:10 Afternoon Tea****15.40 Close of Seminar**

The Programme is subject to amendment



Managing Carbon Credits and Emissions

S1266

Fax completed form back to: +44 (0)20 7222 9881

Post to: Registration S1266, IMechE, 1 Birdcage Walk, London SW1H 9JJ UK

Online booking on: www.imeche.org/events/ManagingCarbonCredits

Please complete in BLOCK CAPITALS

Surname		Date of Birth	
Title (e.g. Dr / Mr)		First Name	
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REGISTRATION FEES:

Includes attendance to the sessions, lunch, refreshments and a copy of the seminar proceedings)

	FEE	VAT	TOTAL	PAYABLE
IMechE Member	£180.00	£31.50	£211.50	<input type="text"/>
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LATE REGISTRATIONS:

After 28/08/2007 please phone (+44) 020 7973 1258 to confirm the availability of places and then fax a copy of the registration form to +44 (0)20 7222 9881

PAYMENT DETAILS:

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Cheques should be in Sterling and made payable to 'Institution of Mechanical Engineers'

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Overseas delegates may pay by credit card (see above) or by sterling draft drawn on a UK bank. NB The draft MUST accompany this form. And it is the delegate's responsibility to pay bank charges. Please note our bank details:

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Sort Code 60-40-05, Acc No 00817767.

We regret that we are unable to invoice overseas delegates.

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A B C D E

Please photocopy the reverse side if you wish to retain the full programme.

Alternatively the programme is available to view on the IMechE website at www.imeche.org/events/ManagingCarbonCredits

GENERAL INFORMATION

REGISTRATION

To register please return the completed registration form with the appropriate remittance. The reduced IMechE member rate is also available to members of the following bodies: Institution of Engineering and Technology, Energy Institute, Institution of Civil Engineers

CANCELLATIONS

For a refund of fees (less £25 + VAT admin charge), cancellations must be made at least four weeks prior to the event. Replacement delegates are welcome at any time.

VENUE

The conference will be held at IMechE, 1 Birdcage Walk, London, UK. Full details of how to reach the venue will be issued to delegates prior to the event.

ACCOMMODATION

The Corporate Team in association with the IMechE has arranged special discounted rates at local hotels for delegates. A list of hotels will be forwarded to delegates upon receipt of their registration and payment. Alternatively please contact the Corporate Team directly and quote ID number 8488.

Tel: UK only 0845 604 4060 or for international enquiries call +44 (0) 20 7592 3050

Fax: +44 (0)20 7828 6439

Email: events@corporateteam.com

Website: <http://www.corporateteam.com/events/8488ME>

SPECIAL REQUIREMENTS

Please inform Tina Churcher of any special requirements (including dietary and access).

INSURANCE

The organisers do not accept liability for any injuries or losses of any nature incurred by delegates and/or accompanying persons, nor the loss or damage to their luggage and/or personal belongings

ENQUIRIES

Please address enquiries to the relevant department:

Event enquiries:

Taz Khatun Tel: +44 (0)20 7973 1306
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 Email: t_khatun@imeche.org

Registration enquiries:

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Membership of IMechE

Substantial discounts on attending events are available to IMechE Members. For full details of becoming a member of IMechE please contact the Membership Department on 0845 226 9191 or for international enquiries call +44 (0)20 7090 1078 Fax: +44 (0)20 7090 1001

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