



Progress on EU ETS Implementation

OIES Research Seminar

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Overview



What is EU ETS?

What is being said?

What is being done?

What might happen next?



What is EU ETS?

THE EU KYOTO COMMITMENT TIMELINE

- 01 Dec 1997 EU signs Kyoto Protocol committing to reduce (CO₂e) emission of 6 greenhouse gases (GHG) 8% below 1990 levels by 2008 - 2012
- 31 May 2002 EU ratifies Kyoto Protocol
- 31 Oct 2003 EU Emissions Trading Directive enters into force
- 31 Mar 2004 EU countries to issue National Allocation Plans (NAPs) for EU ETS
- 01 Jan 2005 EU Emission Trading Scheme (EU ETS) will enter into force covering trading of GHG emission permits

EU ETS implementation is independent of Kyoto Protocol entering into force



What is EU ETS?

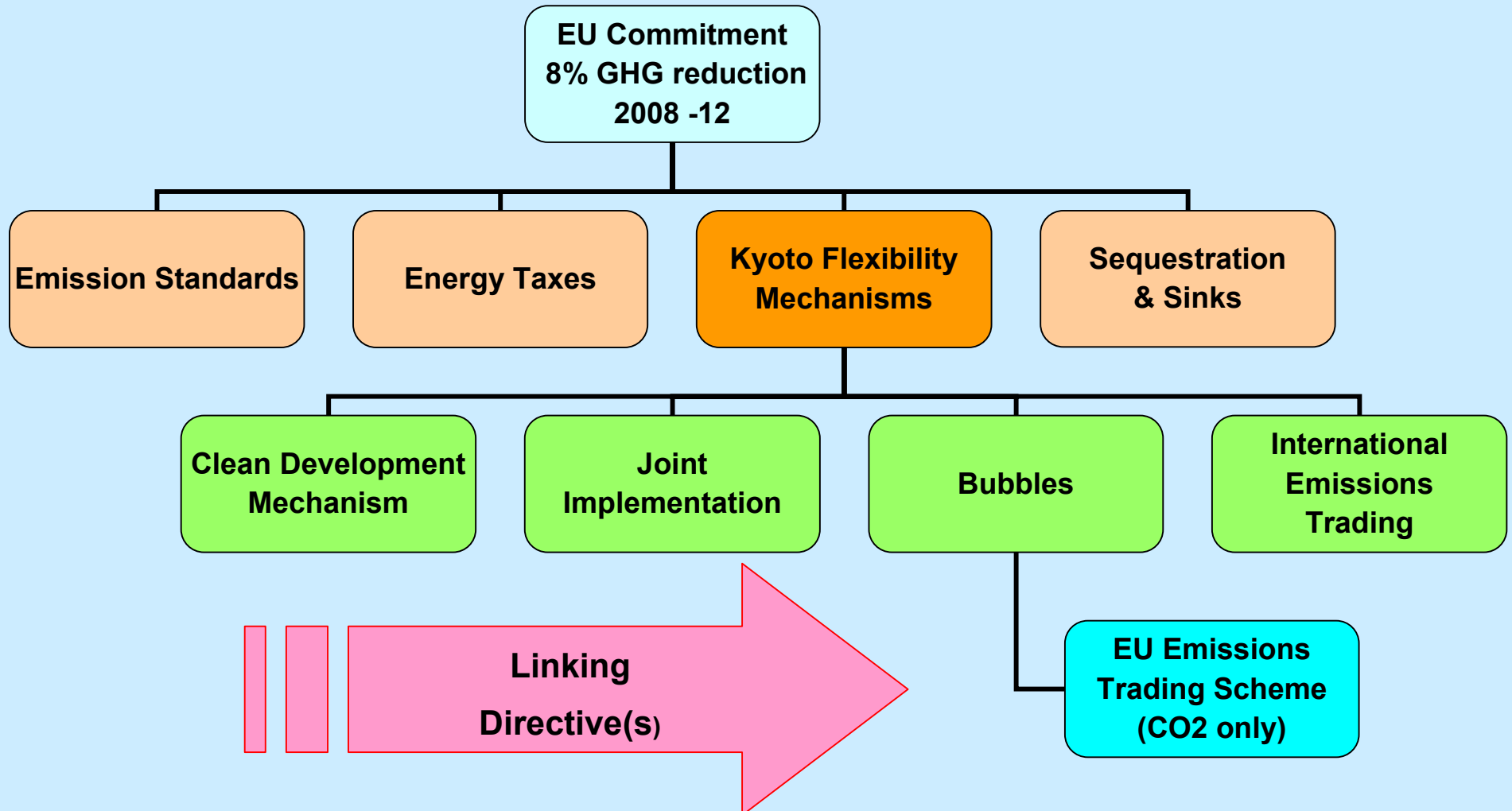
PROGRESS ON GHG ABATEMENT

Country	Kyoto Target	Emissions in 2001	Change Required by 2008 - 12
Austria	-13.0%	+ 4.8%	-17.8%
Belgium	- 7.5%	+ 0.2%	- 7.7%
Denmark	-21.0%	+ 1.8%	-22.8%
Finland	0.0%	+ 4.7%	- 4.7%
France	0.0%	+ 0.4%	- 0.4%
Germany	-21.0%	-18.3%	- 2.7%
Greece	+25.0%	+23.5%	+1.5%
Ireland	+13.0%	+31.1%	-18.1%
Italy	- 6.5%	+ 7.1%	-13.6%
Luxemburg	-28.0%	-44.2%	+16.2%
Netherlands	- 6.0%	+ 4.1%	-10.1%
Portugal	+27.0%	+36.4%	-9.4%
Spain	+15.0%	+32.1%	-17.1%
Sweden	+ 4.0%	- 3.3%	+ 7.3%
UK	-12.5%	-12.0%	- 0.5%
TOTAL	- 8.0%	- 2.3%	- 5.7%

What is EU ETS?



AVAILABLE MECHANISMS FOR ACHIEVING EU GHG REDUCTION TARGET





What is EU ETS?

EU ETS MECHANISM

1. Covers almost 50% of CO₂ emissions or around 1/3 of EU GHG total
2. Designed to allow cheaper compliance with EU Kyoto commitment
3. National governments issue CO₂ permits up to EU burden sharing cap
4. National governments must allocate (i.e. not auction) 95% of permits issued
5. Firms must be allocated or buy permits or pay fine (2005-07 €40, 2008-12 €100)
6. How permits are allocated is up to each national government to decide
7. How permits are traded is up to firms to decide

What is EU ETS?



EU ETS SECTORS COVERED

Activities	Greenhouse gases
<i>Energy activities</i>	
Combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations)	Carbon dioxide
Mineral oil refineries	Carbon dioxide
Coke ovens	Carbon dioxide
<i>Production and processing of ferrous metals</i>	
Metal ore (including sulphide ore) roasting or sintering installations	Carbon dioxide
Installations for the production of pig iron or steel (primary or secondary fusion) including continuous casting, with a capacity exceeding 2,5 tonnes per hour	Carbon dioxide
<i>Mineral industry</i>	
Installations for the production of cement clinker in rotary kilns with a production capacity exceeding 500 tonnes per day or lime in rotary kilns with a production capacity exceeding 50 tonnes per day or in other furnaces with a production capacity exceeding 50 tonnes per day	Carbon dioxide
Installations for the manufacture of glass including glass fibre with a melting capacity exceeding 20 tonnes per day	Carbon dioxide
Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain, with a production capacity exceeding 75 tonnes per day, and/or with a kiln capacity exceeding 4 m ³ and with a setting density per kiln exceeding 300 kg/m ³	Carbon dioxide
<i>Other activities</i>	
Industrial plants for the production of (a) pulp from timber or other fibrous materials	Carbon dioxide
(b) paper and board with a production capacity exceeding 20 tonnes per day	Carbon dioxide

... transport, household and other industries may be added later?

What is EU ETS?

EU ETS PRICES AT 5 MARCH 2004

	Bids		Offers		Close		Last
	Volume	Price	Price	Volume	Price	Change	Price
EU 2005	5,000 t	€11.00	€12.95	5,000 t	€12.00	- €0.85	€13.00
EU 2006	-	-	€13.50	5,000 t	-	-	€13.60
EU 2007	-	-	-	-	-	-	€14.10

- **Prices are for a permit to emit 1 tCO₂**
- **A coal fired power plant operating at 35% efficiency emits 1 tCO₂ /MWh**



What is being said?

EU INDUSTRY

Estimated annual industry cost if EU ETS increases power price of €7/MWh

European Association of Metals	€612 million
European Confederation of Iron and Steel Industries	€597 million
Confederation of European Paper Industries	€500 million
European Cement Association	€188 million
Standing Committee of the European Glass Industries	€ 60 million
European Lime Industry	€ 9 million

Power generators will gain windfalls from mandatory allocation of permits under EU ETS

- **Costs rise on 10% of generating capacity that buys permits and sets marginal price**
- Revenues rise on the 90% of generating capacity sales that receive marginal price

Source: Point Carbon 1 March 2004



What is being said?

ANDREI ILLARIANOV

“In its current form, the Kyoto Protocol places significant limitations on the economic growth of Russia ... Of course, in this current form this protocol can't be ratified.”

Source: Andrei Illarionov , Chief Economic Advisor to President Putin

What is being said?

LOYOLA de PALACIO

"We should look at other ways of achieving our goal - to reduce emissions - while maintaining the competitiveness of our industry",

Source: Loyola de Palacio, Vice President of the European Commission quoted by FT Newspaper 25 Feb 2004

"We can't go on in this uncertain situation. If Russia does not ratify, Kyoto would not take effect. We must set Russia a deadline to decide. We are talking about 2005 at the latest,"

"it should reconsider the emissions rights system,"

"We can't wait until 2007, because the moves will have happened by then or companies will have adopted strategies for carrying out those moves,"

A "fantastic system" to reduce emissions "would be simply to have a brutal recession"

"You close down industries and we will see. Of course, we will comply with everything. Of course we'll reduce emissions, but that's not what we want,"

Source: Loyola de Palacio, Vice President of the European Commission quoted by Reuters News 27 Feb 2004



What is being said?

MARGOT WALLSTRÖM

“I find it astonishing at a time when we are getting industry on board and have an active policy... politicians start to dither. Now is not the time to undermine our policy,”

“It's not helpful if colleagues start to question it,”

“If Loyola has a personal view - which I think she has - she should make a distinction between it and the EU view.”

Source: Margot Wallström, EU Commissioner for the Environment comments quoted from END Environment Daily



What is being said?

ROMANO PRODI

'We cannot and we will not back down in the fight against human induced climate change.'

“Furthermore, economic growth and climate change policies are compatible and, if action is taken at an early stage, economic gains can be made.”

Source: Romano Prodi, European Commission President quoted in *Europolitix.com* on 27 Feb 2004



What is being said?

AL-SABBAN

“We see very little chance, if any, that Russia will come on board,”

“They have decided already even though they have not announced it clearly.”

“We think that the EU will eventually accept the fact that they cannot do it alone, and even if they pretend to do that in order to continue pressuring Russia to ratify the protocol, they cannot continue for ever,”.

“They will also result in the migration of many energy-intensive industries outside Europe,”

Source: Mohammed Sorour Al-Sabban (adviser to Saudi Petroleum and Minerals Minister Ali Al-Naimi)comments On 5 Mar 2004 quoted by Arab News



What is being done?

UK DRAFT NAP (19 JAN 2004)

- Exceeds 12.5% GHG commitment with target of 16.3% for CO2 by 2010
- 46% of UK GHG emissions covered
- EU ETS will be main mechanism no mention of JI/CDM etc
- 2005 – 2007 permits allocated but not decided for 2008-12
- Power generators will carry all the burden in 2005-2007
- 5.4% reserved for new entrants (NER)
- Other sectors get historic percentage of total available permits each year
- Plants get historic percentage of sector available permits each year
- Reserved amount in the NER for CHP - **may be illegal under EU law**
- Closed plants will lose rights after 2007 - but definition of closed not clear
- Any unallocated permits will be auctioned by government
- No banking of allowance 2005-2007 to carry over to 2008-12



What is being done?

IRELAND DRAFT NAP (23 FEB 04)

- Government funded purchases of JI/CDM main reduction mechanism
- EU ETS contributes only 2-3% reduction
- 2005 – 2007 permits allocated and outline allocation for 2008-12
- 2% reserved for new entrants
- 1% will be auctioned to cover admin costs
- All sectors will be allowed to increase emissions and get 97% allocation
- No banking of allowance 2005-2007 to carry over to 2008-12



What is being done?

NETHERLANDS DRAFT NAP (23.02.04)

- Government funded purchases of JI/CDM main reduction mechanism
- 2005 – 2007 permits allocated and no plan for 2008-12 yet
- All sectors will be allowed to increase emissions and get 96% allocation
- No banking of allowance 2005-2007 to carry over to 2008-12



What is being done?

DENMARK DRAFT NAP (19 FEB 04)

- Government funded purchases of JI/CDM main reduction mechanism
- Targets a 15% reduction below forecast CO2 emissions on a BAU basis
- 2005 – 2007 permits allocated 40%, 30%, 30%
- 2-3% reserved for new entrants
- 5% will be auctioned
- Power generators will bear most of the burden but gain on price of output
- Industry will get 1998- 02 historic emissions plus some scope for growth



What is being done?

FINLAND NAP

- Relies heavily on JI/CDM
- Nuclear plant just approved – maybe to make NAP numbers stack up with EU
- EU ETS contributes only 4% reduction
- 2005-2007 permits allocated and outline allocation for 2008-12
- Power generators will only face difficulty in dry years
- Other sectors allowed to increase emissions and get near 100% allocation

What might happen next?

NAPS DEADLINE MISSED BY SOME (MANY?)

Country	Kyoto Target	NAP STATUS
Austria	-13.0%	Rough draft has been floated but industry very unhappy.
Belgium	- 7.5%	Few details. No coordination structure yet set up.
Denmark	-21.0%	DRAFT published. Falls well short of what is required.
Finland	0.0%	DRAFT published. Industry minister unhappy with Kyoto.
France	0.0%	Some details leaked. Will probably announce at last minute.
Germany	-21.0%	Environment and Economics ministers at loggerheads.
Greece	+25.0%	Will miss 31.03.04 deadline. Only began work Jan 04.
Ireland	+13.0%	DRAFT published. Relies heavily on JI/CDM
Italy	- 6.5%	Unlikely to be published. Italy seeking renegotiation.
Luxemburg	-28.0%	Has hit target already.
Netherlands	- 6.0%	DRAFT published. Relies heavily on JI/CDM
Portugal	+27.0%	Few details. Will have to follow Spanish in power sector.
Spain	+15.0%	Unlikely to be published. Spain seeking renegotiation.
Sweden	+ 4.0%	Few details. Will probably announce at last minute.
UK	-12.5%	DRAFT published. Tougher target than 12.5% commitment.

What might happen next?

BILATERAL EU-RUSSIA TALKS

WHAT RUSSIA WANTS

- Sell 'hot air credits' to maximise foreign currency earnings**
- Attract foreign direct investment and technology transfer**
- Minimise constraints on its economic growth**
- Secure buyers to meet energy production growth (esp. gas)**
- Join WTO on favourable terms to keep US out of key sectors**

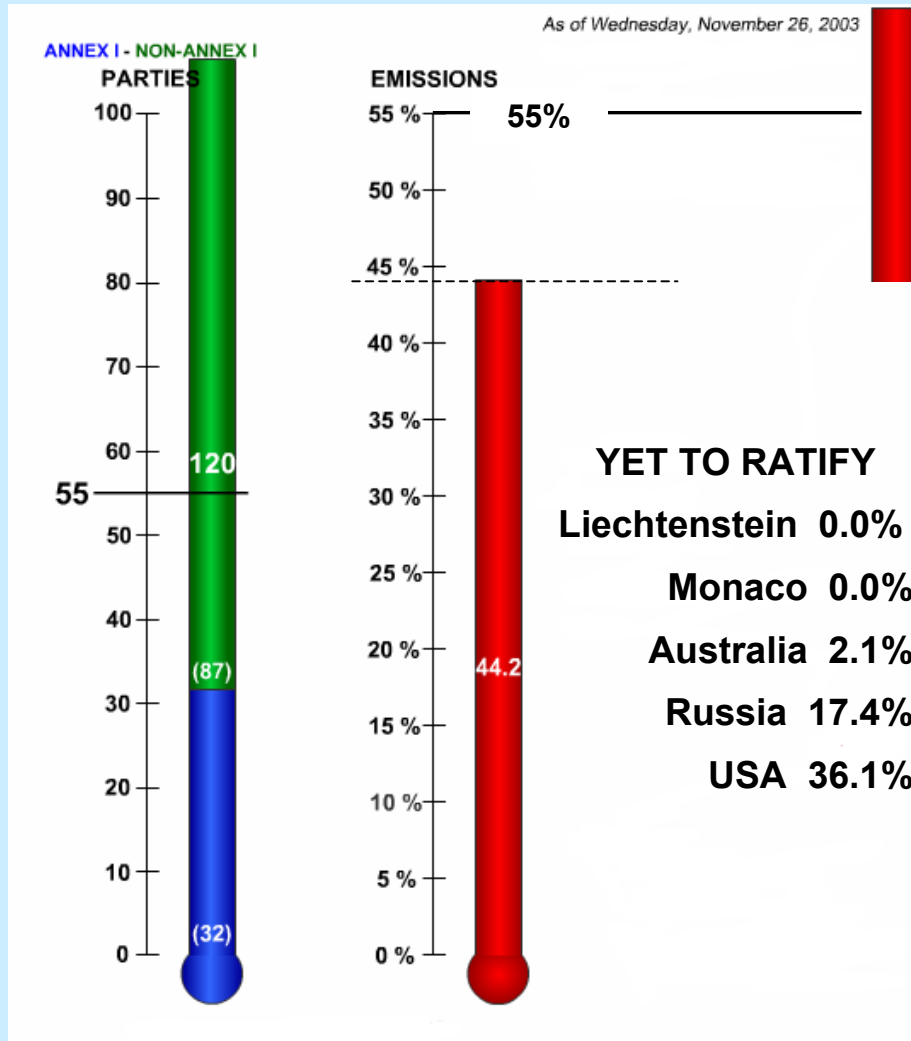
WHAT EU WANTS

- Buy 'hot air credits' to minimise cost of Kyoto compliance**
- Make investments in CDM/JI projects to minimise cost of Kyoto compliance**
- Minimise constraints on its economic growth**
- Secure suppliers to meet energy demand growth (esp. gas)**
- Use WTO to force open US markets in key sectors**

What might happen next?

RUSSIA RATIFIES KYOTO

- The rules for entry into force of the Kyoto Protocol require 55 Parties to the Convention to ratify (or approve, accept, or accede to) the Protocol, including Annex I Parties accounting for 55% of that group's carbon dioxide emissions in 1990.
- (See article 25 of the Protocol)



Source: UNFCCC



What might happen next?

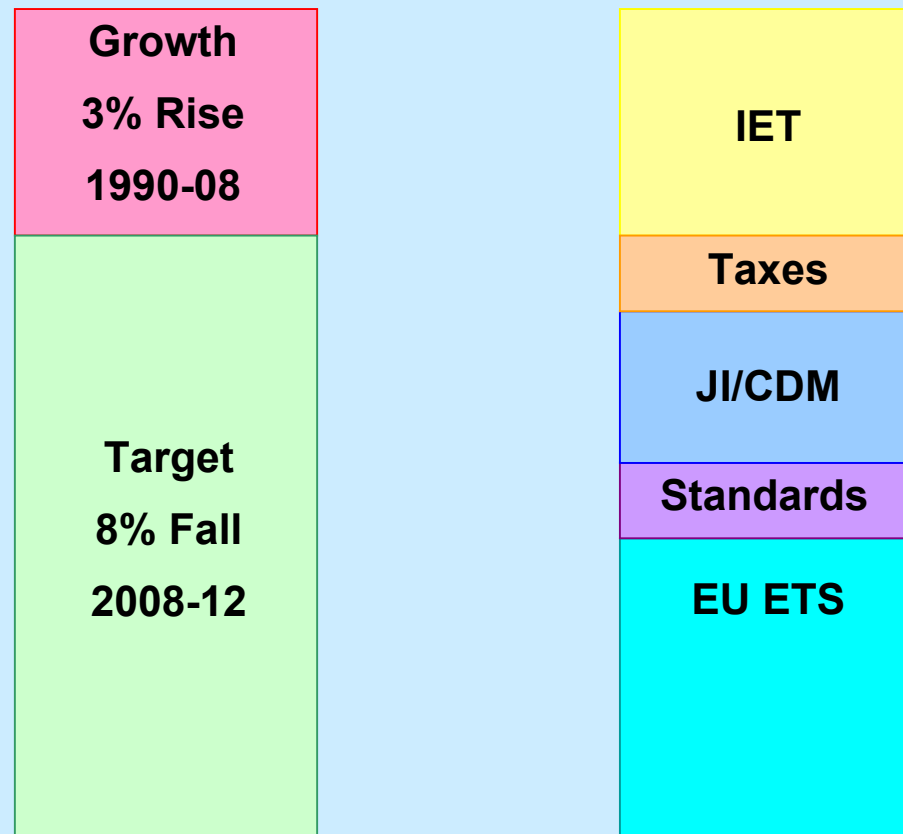
THE ARITHMETIC

Baseline EU Emissions (1990)	4198.6 MtCO₂e
Target EU Emissions (2008-12)	3862.7 MtCO₂e
Required EU Abatement (8%)	335.9 MtCO₂e
Consensus Russian 'Hot Air' (2010)	700.0 MtCO₂e



What might happen next?

EU ETS IMPLEMENTED LATE WITH RUSSIA'S HELP



Speaker

Biography

Dr. John Bower is a Senior Research Fellow at the Oxford Institute for Energy Studies (OIES), an associate research institute of Oxford University, which he joined in November 2001. His research interest is regulation and design of efficient pricing and investment mechanisms for electrical energy, transmission capacity and emissions abatement in electricity and generation fuel markets. This includes integration of cross-border and cross-commodity energy markets as well addressing issues facing developing countries in liberalising electricity markets.

Before joining the OIES, John completed his PhD at London Business School and his previous career was in the commodity industry. His experience ranges from energy trading, at Marc Rich & Co, to risk management consultancy, with Coopers & Lybrand, advising commodity traders, producers and processors in base metal, precious metal, 'softs' and energy markets. Immediately prior to his PhD he was Global Controller Metals/Commodities at Deutsche Morgan Grenfell.



Current / Forthcoming Projects

OECD Economies

- Impact and implications of EU Emissions Trading Scheme (EU ETS)
- Electricity system security (fuel availability, generation and transmission capacity)
- Future generation capacity mix (coal, gas, nuclear and renewable)

Developing/Transition Economies

- An alternative 'bottom-up' model of electricity sector reform (with Chris Hansen)

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