

CHP in Phase II of the EU ETS



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Summary

- What is EU ETS?
- Update on Phase II NAP process
- Key elements of CHP policy in Phase II
- CHP sector cap and new entrant reserve
- Treatment of CHP new entrants
- Treatment of CHP incumbents
- Practical application of incumbent allocation methodology
- Review of the EU ETS Directive



What is EU Emissions Trading Scheme?

- Cap & trade scheme
- Covers the largest CO₂ emitters in Europe
- Phase I: 2005 – 2007
- Phase II: 2008 – 2012
- National Allocation Plan for each Phase setting out how allowances are to be allocated.



Update on Phase II NAP process

- August 2006 UK NAP notified to the Commission
- Commission decisions on 14 NAPs (UK NAP approved)
- Commission scrutinising carefully to ensure scarcity in the market for Phase II
- UK Final Allocation Decision and Approved Phase II NAP notified to Commission and published 16 March 2007



What's different to Phase I?

- Separate sector for Good Quality certified CHP
- Allocation based on historic emissions 2001-2003
- Large Electricity Producer (LEP) CHPs treated as other CHP and do not receive LEP cut
- Ring-fenced portion of New Entrant Reserve
- CHP new entrants receive favourable treatment



CHP Sector cap – how was it calculated?

- CHP sector incorporates two projections:
 - “Incumbents” – business as usual (BAU) projection for existing installations
 - “BAU NER” - bottom up information on growth within the sector and the CHP BAU projection (in absence of EU ETS)
- Additional allowances added to CHP NER to account for projected growth of CHP to 2012, taking into account the incentives provided by the EU ETS



CHP New Entrant Reserve (NER)

- Contribution from CHP sector cap based on known new capacity in Phase II and CHP BAU projection
- Projected growth of CHP to 2012, taking into account the incentives provided by the EU ETS funded by 0.98% contribution from all non-CHP sectors



Treatment of CHP New Entrants (1)

- Ring-fence portion of New Entrant Reserve for exclusive use by GQ CHP
- Differential in allocation to new entrants provides incentive to installation of CHP over other technologies
 - GQ CHP 100% of benchmark
 - Equivalent boilers/generators 90%
 - LEP ~70%
 - All other new entrants 95%



Treatment of CHP New Entrants (2)

- Eligibility for allowances from CHP NER (permit variation required)
 - New GQ CHP Schemes
 - Increase in GQ CHP capacity of 5% or 10MW
 - Conversion from non-CHP to GQ CHP
- CHPQA certification of existing CHP capacity is not eligible



CHP New Entrant Benchmark (1)

- New entrant benchmarks revised for Phase II in order to simplify, standardise, and better reflect expected emissions
- Standardised factors across sectors in order to treat CHP, boilers and generators consistently and incentivise CHP as a more efficient technology



CHP New Entrant Benchmark (2)

<i>CHP technology</i>	<i>Efficiency (LHV)</i>	<i>Utilisation (% of year)</i>
Gas engine CHP	40%	48%
Back pressure ST (steam cycle only)	22%	48%
Pass out / condensing ST (steam cycle only)	22%	48%
Simple cycle gas turbine	29%	73%
Combined cycle gas turbine	40%	73%



When does the NER open?

Phase II New Entrant Reserve opens:

- 1 May 2007 – Late Phase I new entrants
- 1 August 2007 – Phase II new entrants



CHP Incumbent Allocation Methodology (AM)

- Set out in Addendum to Detailed Guide to Phase II Allocation Methodology
- Four 'types' of CHP installation:
 - Matching, fully qualified
 - Matching, partially qualified
 - Non-matching, fully qualified
 - Non-matching, partially qualified
- Calculations determine proportion of emissions in CHP sector subject to 10% threshold



Practical application of CHP AM

Key to symbols

**EU ETS
installation**

CHP Scheme

**GQ portion of
CHP Scheme**

**Non-GQ
portion of
CHP Scheme**



Practical application of CHP AM

Matching, fully qualified installations

CHP = EU ETS
QPC/TPC > 0.9

**100% of allocation
comes from CHP sector**



Practical application of CHP AM

Matching, partially qualified installations

CHP = EU ETS	
QPC/TPC = 0.65	

65% of allocation comes from CHP sector

35% from host sector

Division set out in CHP Details Table in NAP



Practical application of CHP AM

Non-matching, fully qualified installations

CHP/EU ETS = 0.7

QPC/TPC > 0.9

**70% of allocation
comes from CHP sector**

30% from host sector

**Division set out in CHP
Details Table in NAP**



Practical application of CHP AM

Non-matching, partially qualified installations

CHP/EU ETS = 0.8

QPC/TPC = 0.65

**CHP plant is 80% of
installation emissions**

65% of CHP Scheme GQ

**52% of allowances from
CHP sector**

**Division set out in CHP
Details Table in NAP**



Practical application of CHP AM

Installations falling above 90% threshold

CHP/EU ETS > 0.9

QPC/TPC > 0.9

In both cases, less than 10% of emissions come from host sector so 100% of allowances from CHP sector



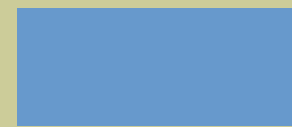
Practical application of CHP AM

Installations falling under 10% threshold

CHP/EU ETS < 0.1



QPC/TPC < 0.1



In both cases, less than 10% of emissions come from CHP sector so 100% of allowances from host sector



Review of EU ETS Directive

- Commission Review to improve function and design post 2012
- Priority areas include
 - expansion to other sectors and gases
 - the most appropriate process for setting the cap;
 - harmonised allocation methodology (including CHP);
 - linking to other schemes at national and regional level;
 - robust compliance;
 - streamlining – small emitters and harmonised definitions
- A draft legislative proposal is to be issued by the end of 2007



Further Information

- For further information please see the Detailed Guide to Phase II Allocation Methodology at:
<http://www.dti.gov.uk/energy/environment/euets/phase2/allocation/page27064.html>
- For general policy queries please email:
eu.ets@defra.gsi.gov.uk