COGEN Europe Position Paper
Contribution to the 3rd ECCP meeting (21-22 May 2007)

Executive Summary

COGEN Europe and its Members wish to contribute to the stakeholder consultation process and ECCP review of the European Emissions Trading Scheme by submitting this position paper.

The EU ETS is intended to encourage GHG reductions in the most cost-effective way.
The European cogeneration sector, which as a sector is directly affected by the European emissions trading system, offers great potential to the European economy to maintain and expand while cutting emissions[1] and as such the success of the ETS in promoting its growth ought to be a yardstick by which to measure the success of scheme.

The post-2012 phase will come with an increased impetus to diminish carbon dioxide emissions and there is little doubt this will be reflected in the new design of the ETS. COGEN Europe aims to share its vision of what the major elements of this phase-3 ETS should be, bearing in mind the characteristics of cogeneration installations and the framework set by the Cogeneration Directive (2004/8/EC).

COGEN Europe believes that the essential principles of the new scheme must be harmonisation, effectiveness, fairness and transparency while providing industry with the long-term certainty required to make long-term investments.

In the light of these guiding principles, COGEN Europe favours a ***"double benchmarking" approach*** for the next phase of ETS. As argued in this paper this approach has many benefits: it sends the right signals to operators and investors as the benchmarking methodology fairly rewards companies that have invested or will invest in energy efficiency, low carbon technologies and clean processes. In addition, this approach can be applied to both new entrants and incumbent installations.

COGEN Europe believes that the position of the Commission during and after the review phase of the ETS Directive should be to look upon cogeneration as a low carbon technology enabling the EU to meet its long-term CO_2 reduction objectives. CHP is the most efficient means for energy conversion to power and heat and thus minimises CO_2 emissions. COGEN Europe believes this should be reflected in the levels set for the benchmarks for heat and electricity production.

[1] Social cost-benefit analysis of climate change mitigation options in a European context, by J.C. Jansen and S.J.A. Bakker, ECN, December 2006,

Summary of key messages

Cap	The Commission should make its cap calculation methodology public as early as possible for the sake of predictability. The overall cap should be set at EU level, or alternatively EU-wide sectoral caps could be created.
Time periods	The time period for the post-2012 phase of the ETS needs to be extended to at least 10 years, with 20 years the preferred time horizon. Tightening of cap/benchmarks following a predetermined roadmap should be considered within the time period.
Benchmarks	The ETS should rely on hot water, steam, heat and electricity production benchmarking as a preferred alternative to grandfathering (i.e. using historical emission figures to determine the allocation). Different benchmarks could be considered, taking into account the type of fuel used (natural gas or other fuel) and the type of heat generated (warm water, process steam or process heat). [Note that the EU CHP Directive (2004/8/EC) requires the definition of benchmarks for heat and electricity production. These benchmarks were published in 2007 (2007/74/EC). These represent best practice and could be used in the benchmark setting for the ETS.]
Load factors	COGEN Europe advocates for standard load factors determined by industrial sector for new entrants for a period of one or two years (from entry in operation) and based on historical load factors for incumbent installations and former new entrant installations.
Technical evolutions	Benchmarks need to be set for extended periods of time but must be reassessed regularly in order to take technological progress into account. The fuel-specific benchmarks could gradually converge towards an indicative common benchmark.
New Entrants Reserve	New Entrants Reserves should be maintained and harmonised for as long as there are free allowances to incumbents, in order to maintain the ability of new entrants to compete fairly with incumbents. The NER should be designed to encourage CHP over separate production of electricity and heat.
Auctioning	Allocation rather than auctioning should continue to be the norm until there is an international trading scheme with global burden sharing.
Auction Revenue Recycling	Any generated revenue should be used to fund high efficiency cogeneration, energy efficiency and renewable energy projects, based on a common European approach and redistribution methodology.

Discussion

Cap-setting

The European Commission has taken a much more active role in setting upper limits to national caps for the second phase of the ETS (2008-2012).
Recognising the key role the Commission will play in the future and supporting the drive for increased harmonisation, COGEN Europe urges the Commission to make its cap calculation methodology public as early as possible in order to give industrial operators and project developers the visibility and predictability necessary.
In addition COGEN Europe supports the drive for increased harmonisation. In order to ensure consistency and avoid competitive distortions across the EU, the overall cap should be set at EU level, or alternatively EU-wide sectoral caps could be created[2].
These approaches are consistent with the drive towards allocation methodologies based on harmonised benchmarking.

Allocation methodology

COGEN Europe urges the Commission to promote clean and efficient electricity and industrial production by basing the EUA allocation methodology on double benchmarking (for electricity and hot water/steam).
This double-benchmarking approach is well suited solution for industrial activities such as on-site cogeneration and district heating, or industrial applications requiring the production of useful heat.
Long-term allocation predictability also has to be addressed as investors require appropriate investment signals and visibility over a 10-year period at the minimum. Benchmarks should be updated on a predetermined time table, based on best commercially demonstrated and economically justified technologies and must be based on actual operational performance, with regular revisions of benchmarks a key component for increased regulatory certainty, together with a long-term indicative emission-factor target value.

The need for double benchmarking

The ETS should rely on hot water, steam, heat and electricity production benchmarking as a preferred alternative to grandfathering (i.e. using historical emission figures to determine the allocation).
This method is much fairer as it rewards the cleanest technologies and processes whereas grandfathering has an inbuilt perverse disincentive effect, especially if stakeholders view the future as more constrained than the present (which is the case in the ETS), as it does not distinguish between electricity and heat production from clean and efficient technologies and processes and production from obsolete plants with low efficiencies.

The allocation methodology would then be based on the following equation:

Capacity of plant * benchmark(s) * standard load factor[3] = number of allowances

[2] Allows for shielding specific sectors from effects of allocation methodology in other sectors. With harmonised double-benchmarking, this would require to set sector-specific compliance factors.

Heat and electricity benchmarks should be expressed in terms of kg CO_2 per unit of heat and electricity (typically MWh). It is important to note that benchmarking power and hot water/steam production does not imply the benchmarking of industrial processes[4], which would prove a long and complex matter.

Different benchmarks could be considered for security of supply and political acceptability considerations, taking into account the type of fuel used (natural gas or other fuel) and the type of heat generated (warm water, process steam or heat).

Many countries already successfully implement such an approach (e.g. Germany, Italy).
Benchmarking, besides being a straightforward way of promoting efficient generation, is also easily applicable in other non-ETS countries that wish to develop an emissions trading scheme. The flexibility allowed by benchmarking is of high value as the EU attempts to create a global carbon scheme.

In the case of both electricity and heat production benchmarks provide the right incentives for improving transformation efficiencies and process efficiencies as the extra cost of steam or electricity production due to 'downstream' process inefficiencies is much greater than the value of EUAs. In addition, the efficiency of heat use is beyond outside the scope of the ETS as it is covered y the Cogeneration Directive 2004/8/EC and the Buildings Directive.

Evolution of benchmarks (to take technical progress into consideration)

Benchmarks need to be set for extended periods of time –consistent with investors' time horizons- and must be reassessed on a pre-determined basis in order to take technological progress into account.
Benchmark corrections should gradually converge towards a common benchmark, independent of the type of fuel (and hence also of technology).

Predictability is a key issue here and an indicate value for the revised benchmarks and a future indicative long-term unique benchmark would be welcome, as this would give investments in transformation efficiency (such as cogeneration) the necessary visibility.

Special attention to standard load factors

In a benchmarking system, special attention has to be given to the setting of the standard load/duration factor.
This factor must be as close as possible to real future operational durations in order to minimise artificial over/under-allocation effects.
This issue is especially acute for new entrant installations, as incumbent installations can use historical load/operational data as a basis for the allocation calculation, augmented by a growth factor.

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[3] For existing installations, an alternative to a standard load factor is to rely on past operational data, although plant breakdowns or adverse seasonal effects (for example) are limitations to this approach.
[4] Benchmarking industrial processes as a whole is complex. It is however possible to add a third benchmark for simple heat production (i.e. not hot water/steam) based on the fuel used.

The United Kingdom has used a standard load factor for new entrant cogeneration installations based on the operational figures for existing cogeneration installations: this results in severe under-allocation for cogeneration new entrants in many industries (refineries for example) while generating large overallocation for installations destined to run on a fraction of the year. This type of situation must be avoided.

Germany on the other hand has differentiated between host sectors and has thus come up with default load factors for new entrants that are much closer to real operational loads, and hence minimizes allocation distortions.
Therefore, COGEN Europe advocates for standard load factors determined by industrial sector for new entrants and based on historical load factors for incumbent installations[5].

Auctioning: cogeneration installations belong to the industrial sector

The fact that cogeneration installations are included in industrial sites (or district heating schemes providing heat and hot water to residential consumers) implies that cogeneration installations ought to be treated as industrial combustion installations.
A second element to take into consideration is that cogeneration operators do not hold diversified electricity generation portfolios that allow them to pass-through the price of emissions allowances CO_2 allowance price in the price of electricity from cogeneration. Indeed, cogeneration plant operators are often undiversified operators and hence are structurally at a disadvantage compared to large utilities with diversified generation portfolios (such as wind or nuclear that fall outside the scope of the ETS).
The cost pass-through capability of carbon dioxide allowances for hot water, heat and steam is very limited[6], implying that the concerns over international competitiveness are vindicated, while auctioning of allowances would create competitive distortions within the heat generation sector as many boiler installations would fall outside the scope of the ETS (as they would often be under the 20 MWth input threshold) while high efficiency cogeneration installations achieving primary energy savings and supplying a similar heat load would have to purchase allowances. Moreover, pass-through of EUA cost is moreover impossible in those Member States in which cogeneration installations operate in a regulated tariff environment (as in France).

Auctioning: at EU or national level?

COGEN Europe does not feel that auctioning at EU-level is a necessity for the post-2012 period, provided auction revenues are recycled according to a common methodology.
In addition, should the post-2012 scheme include partial auctioning for industry, the share of EUAs to be auctioned should be harmonised for the industrial sectors throughout the EU.

[5] The reference period should be calculated as a rolling reference period and should be designed in such a way as to prevent operators receiving full allowances in the case of a partial closure.
[6] *EU ETS Review – Report on International Competitiveness*, McKinsey & Company, Ecofys, December 2006.

Recycling of the auction revenue

Auctioning of allowances will generate large amounts of auctioning revenue. This revenue ought to be re-injected in the European power and industrial sectors in order to maintain the competitiveness of the European economy. In line with the spirit of the Energy and Climate package of 10th January 2007 and reflecting the priorities of the Spring 2007 European Council, ***the generated revenue should be used to fund high efficiency cogeneration, energy efficiency and renewable energy projects.*** The manner in which the supervision of the distribution of funds is to take place should be determined by the European Commission although Member States could have some leeway provided they use a ***common European approach and redistribution methodology.***

While several years in the future, this issue is of prime importance and deserves the full attention of the Commission as the appropriate vehicle for implementing revenue recycling does not yet exist. Therefore it will be of major importance to make explicit reference in the revised ETS directive to the limited number of uses these funds can be put to.

Part of the funds could be earmarked to finance energy research in the framework of European R&D programmes such as the Framework Programme for Research and Technological Development.