Oktober 2007

EURACOAL
European Association for Coal and Lignite
AISBL

Emissions Trading

Energy and Environmental Policy: Two Sides of the Same Coin

Preparing the 2012 – 2020 Period

EURACOAL Opinion

The European coal industry supports the European Commission, European Parliament and Member State initiatives aiming at an integrated climate protection and energy strategy. Coal contributes to a large extent to security of supply in Europe and throughout the world. A balanced EU energy mix is the right approach to manage risk. Because of the EU's increasing dependence on imports, protection of coal resources and access to deposits are vital. Coal and coal utilisation create wealth and employment on a large scale in many European regions.

With the clean coal approach, coal can play an important role in sustainable development. Europe can take the lead in technology development and deployment if the framework is market-oriented and geared to efficiency. As there is much scope for decisions that can either promote or harm the coal sector, EURACOAL calls for a thorough discussion of the following:

A. Security of supply and affordable prices for electric power
B. The need to combine energy and environmental objectives
C. The design of the Emissions Trading Scheme
D. The coal industry's approach: Benchmark and Load Factors
E. Does Europe give an example major coal users can follow?

A. Security of supply and affordable prices for electric power

Coal has developed into the N° 1 energy on the increase world wide because of its secure availability, its liquid supply and competitive prices. The 31 % increase of world coal consumption over the last six years up to 4,4 Billion tce says it all (Figure 1). Further increase is expected. In an international context, the issue is therefore not *if* coal will be used but

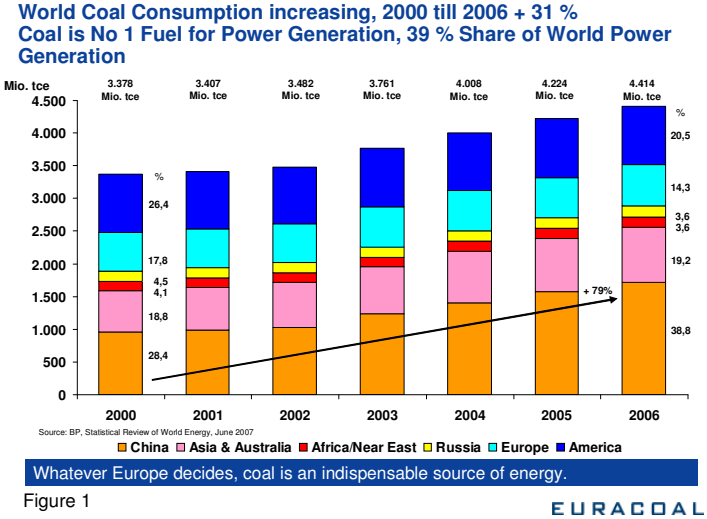


Figure 1

only *how* will it be used (Figure 2). Behind China and the USA, the European Union is the third largest coal consumer, however covering only about 10 % of the world market.

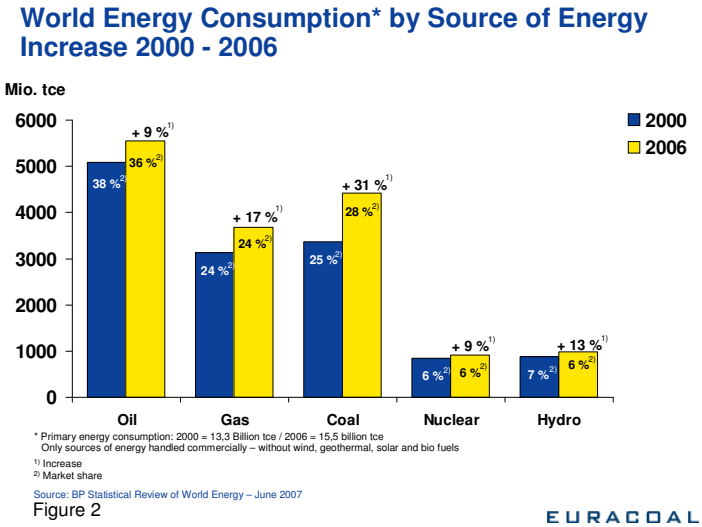


Figure 2

For the EU-27 it can be assumed that in 2020 renewables will cover almost a quarter of electricity production. Nuclear may provide another quarter. About two quarters will be shared between coal and gas. Coal contributes a lot to making sufficient energy available in Europe at any time today and also in the long term. Tight gas supplies may occur in the short, mid and long term. In any case, gas is needed in households and the economy will urgently rely on coal-fired power stations.

The EU institutions should therefore positively support Member States who decide to have a considerable share of domestic, but also imported, coal in their energy mix and provide room for diverse routes to meet the current and future burden sharing objectives.

The coal industry welcomes an open European electricity market because coal's secure availability and competitive strength can become effective in this context. The coal industry endorses market-based instruments to achieve CO_2 reductions. The design of the European CO_2 Emissions Trading Scheme should stimulate competition between different fuels and technologies, lead to more efficiency in a balanced energy mix which is different from state to state, back innovative generation techniques and support the introduction of Carbon Capture and Storage (CCS).

B. The need to combine energy and environmental policy objectives

In the European coal industry's opinion, two aspects are of major significance in connection with this. The technology for coal mining and utilization must be addressed as well as the environmental policy instruments.

Under the "Clean Coal" heading, a step-by-step approach exists, making coal-fired power generation more and more efficient and reducing emissions of SO_2, NO_X, dust. CCS stands for a technology path that is expected to make coal-fired power generation possible with very little CO_2 emissions -on a commercial scale after 2020. Europeans should try to develop these technologies and transfer them to third countries. EURACOAL therefore sincerely greets the EU initiatives relating to these issues.

With Emissions Trading, the EU has established an instrument that, depending on how it is implemented, can become a heavy burden or stimulate productive research. Emissions Trading can deliver the desired result, i.e. the affordable reduction of CO_2 emissions without threatening the short and long term security of energy supply. Because there is wide scope for decision, the right direction must be taken now when reviewing the EU Directive for the third period after 2012. In addition to environmental policy, Emissions Trading is also clearly an issue concerning energy and in-

dustrial policy. In order to achieve security of supply, it should be designed so that it supports coal to a certain extent.

C. The design of the Emissions Trading Scheme

Europe has the opportunity to bring the major world regions together on this issue, if the future development of the Emissions Trading Scheme can become exemplary. The criterion for acceptance in different Member States and especially in the world at large will be if the ETS leads to more efficiency in a balanced energy mix, does not disrupt the liquidity of markets, backs investment, reduces CO_2 at minimum cost and supports the introduction of Carbon Capture.

Europe has gained unique experience with market-based instruments during the first period 2005 - 2007. This was used to optimize the design of the second period. Nevertheless, the procedure can be described as trial and error, there is still potential for learning and improvement. To date, no other region in the world has implemented a comparable system. There is vast opportunity to get other stakeholders on board if Europe provides an example of good regulation that is attractive to follow. Europe should evaluate the opinions and interests of all states which rely on coal.

D. The coal industry's approach: Benchmark and Load Factors

In the context of the National Allocation Plans for the period 2008 till 2012, some Member States have opted for a benchmark system. This would combine product-oriented emission limits, geared towards advanced technology, with load factors typically obtained from specific technical installations or industrial sectors. This approach makes sense. The required security for investments can be established if a decrease of the benchmarks is considered only gradually over time and in accordance with further improvements of available technologies and actual emissions. The implementation of a benchmark system should be established for longer periods of time, at least till 2020. The allocation of certificates on the basis of a benchmark corresponding to the average emissions of a specific category of installations leads noticeably, with the same load factors, to allocations above requirement for new plants and to a clear under-allocation for old installations. A strong drive to invest would occur but operating old installations would remain possible, although production would become more expensive (Figures 3).

A benchmark system is flexible and design can be geared to specific objectives.

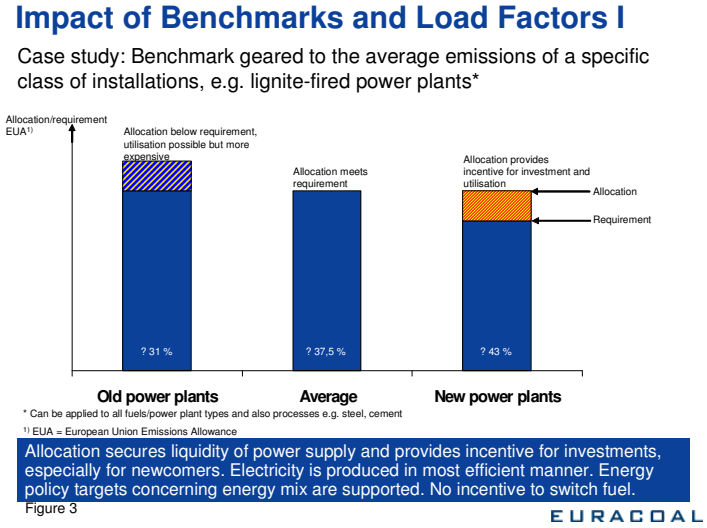
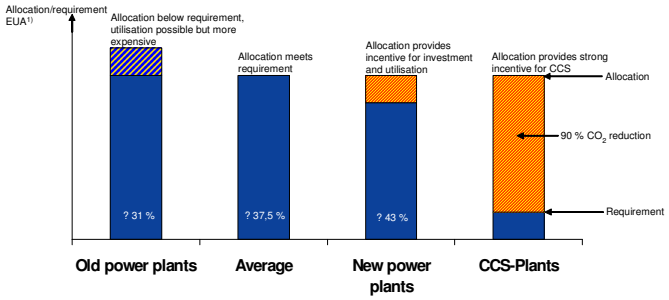


Figure 3

An important question is whether the design of the ETS paves the way to phase in Carbon Capture technology. A benchmark system can provide a long-lasting solution if a CCS plant has fuel-specific benchmark allocations and sector-specific Load Factor (Figure 4).

Impact of Benchmarks and Load Factors II

Case study: Benchmark geared to the average emissions of a specific class of installations and introduction of CCS



1) EUA = European Union Emissions Allowance

Allocation secures liquidity of power supply and provides incentive to develop workable large-scale CCS solutions as quickly as possible.

Figure 4

EURACOAL

If a state does not want to allocate all emission rights without payment, a hybrid system can be established. The share of auctioning can be fixed by the lawmaker. But a rising share of auctioning reduces the incentive for operators to invest. If money is taken from the operators of fossil fuel power plants it should be spent for research and development or to expand CCS plants, CO_2 transportation and storage infrastructure (Figure 5).

To provide an additional contribution to balance the CO_2 budget, it is possible for states to introduce a compliance factor which forces operators to buy CO_2 emission rights on the EU market or to introduce JI/CDM emission rights.

Impact of Benchmarks and Load Factors III

Appropriate Allocation of CO_2 emission allowances.

- Fuel specific Benchmark to create a level playing-field across EU.
- Load Factors can be determined statistically for different sectors and for specific types of installation, fair and need-oriented quantities.
- Load Factors can represent the energy policy targets of Member States, e.g. who want to keep a certain fuel.
- Balance between Member State and Sector CO_2 budget can be reached by a Compliance Factor.
- Hybrid system possible. Emission allowance can be allocated for free or partly auctioned. But auctioning reduces incentive for investment.

Allocation on the base of Benchmark and Load Factors is transparent, long term oriented, easy to handle, correspond to Member States' energy policy priorities and provide incentive for investment in advanced power plant technology.

Figure 5

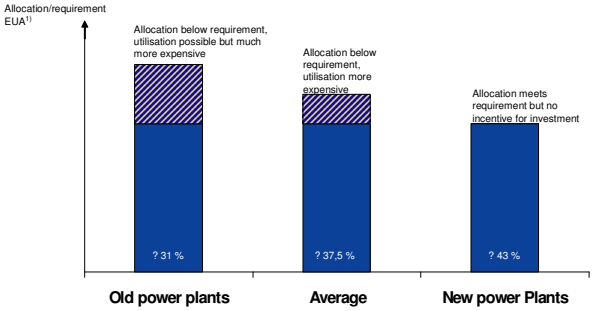
EURACOAL

The few aspects discussed prove that a system based on Benchmarks and Load Factors is an transparent and appropriate allocation procedure.

Not all aspects of a Benchmark/Load Factor system can be covered in this paper. However, all possible options now have to be assessed: do they have notable disadvantages and are they acceptable to Member States or outside the EU? An example which would be counterproductive is illustrated by Figure 6.

Impact of Benchmarks and Load Factors IV

Case study: Benchmark geared to the emissions of new installations, e.g. lignite-fired power plants.



1) EUA = European Union Emissions Allowance

Allocation creates a structural CO_2 deficit. Liquidity of power supply clearly limited. Balance of demand and supply only possible with JI/CDM, no incentive for investments.

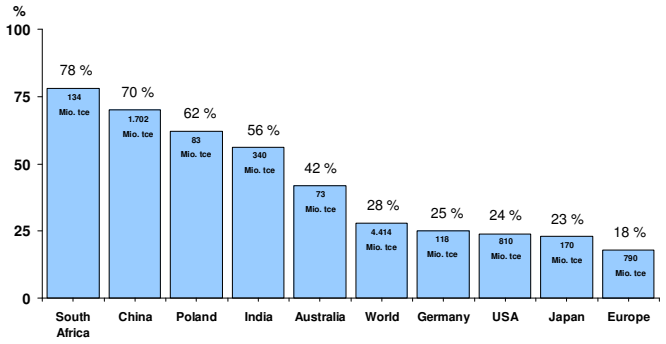
Figure 6

EURACOAL

E. Does Europe give an example major coal users can follow?

These few explanations already demonstrate that a benchmark system could adapt to the different circumstances in the long term and comply with EU energy and environmental policy objectives. A benchmark procedure is transparent and takes into account the principle of proportionality. Like with any other allocation system, formal questions such as data management will be solved once there is a consensus on the principles. Member States have scope for action because they decide on the details of the benchmark and the load factors. An EU Directive or international agreement could then focus on basic principles. A consensus on this seems possible.

Share of Coal in Energy Consumption* 2006



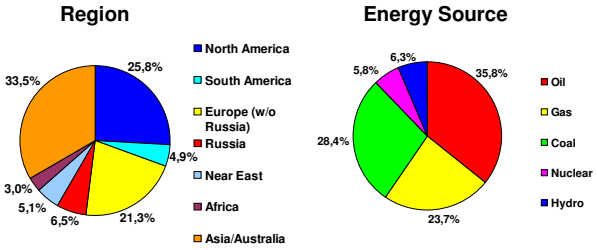
* Only sources of energy handled commercially – without wood, peat and animal waste and also without wind, geothermal, solar and bio fuels

Source: BP, Statistical Review of World Energy, June 2007

Figure 7

EURACOAL

World Energy Consumption * 2006 = 15,5 billion tce



* Only sources of energy handled commercially – without wood, peat and animal waste and also without wind, geothermal, solar and bio fuels

Source: BP Statistical Review of World Energy June 2007

Figure 8

EURACOAL

The counter-proposal to the suggested procedure is the much-debated auctioning of certificates. The more certificates are auctioned, the more auctioning resembles a tax on CO_2. A tax on CO_2 is however more a punishment than an incentive and in the long-term it would stifle coal. A price of € 15/t of CO_2 would correspond more or less to the cost of the fuel for coal-fired power generation. This pushes the price of electricity up and burdens the consumer. It is difficult to imagine that Emissions Trading would become a successful model on the basis of auctioning, because it would negate vital interests of states that depend to a large extent on coal. This holds true worldwide (Figures 7 and 8).

* * * * *

18. Oktober 2007

Avenue de Tervueren 168 Bte 11 ■ B-1150 Brussels ■ Belgium
Tel. +32 (0) 2 775 31 70 ■ Fax +32 (0) 2 771 41 04 ■ e-mail euracoal@euracoal.org
www.euracoal.org