

*Reforming the EU Emissions Trading  
Scheme in the light of experience during  
the pilot phase*

Response to the Department of the Environment, Heritage and Local  
Government's consultation call.

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## **1. Introduction:**

In its invitation to stakeholders to take part in a public consultation on the shares of national greenhouse gas emissions that should be allocated to the various sectors during the 2008-2012 phase of the EU's Emissions Trading Scheme, the Department of Environment, Heritage and Local Government said that the two consultancy firms it had engaged had been asked to recommend the "most economically efficient apportionment of Ireland's Assigned Amount Units" between those sections of the economy involved in emissions trading and those who were not. It specifically invited comments on the measures proposed by the consultants and on the operation of the emissions trading system to date. This paper will comment on both areas, beginning with the latter.

## **1. Experience to date**

In September this year, the Energy Research Centre of the Netherlands (ECN) released a report<sup>1</sup> "CO<sub>2</sub> Price Dynamics: The Implications of EU Emissions Trading for the Price of Electricity" which analysed the effect that the free allocation of emission allowances had had on the price of electricity in Belgium, France, Germany and the Netherlands. It found that, although the emissions allowances had been issued to companies without charge, the fact that they could be traded and were in short supply gave them a market value and that a significant part of this market value was being passed to the consumer through higher power prices. The electricity producers had increased their profits as a result. The report concluded that the free allocation of emission allowances was a highly questionable policy option for a variety of reasons and suggested that auctioning allowances might be better.

It would be hard to find an economist to whom these findings came as a shock. In *Feasta Review* issue 2 (November 2004) we wrote:

Quite why the EU insisted on the permits being given away is unclear, as no economist, conventional or otherwise, would recommend that course. Presumably, naïve politicians thought that, if the permits were given out rather than sold, it would enable electricity and cement to be cheaper. Not so. The fact is that the permits will acquire a market value if the industries covered by the scheme increase their output faster than they restrict their greenhouse emissions. And once the permits can be sold, firms will factor in the price they could have obtained by selling them as the cost of using them in their production process. In other words, even though the necessary permits came free, the price of electricity and cement will still go up by just as much as would have been the case if the permits had been sold to them by the state. The only difference is that the companies receiving the permits make a big windfall gain, while the state will not have the revenue it will need to compensate the less-well-off for the higher prices they will have to pay. Fortunately, this scheme runs for only three years and there is

some chance – not a big one because it has already been announced that 90% of the permits will be given away in the next three-year period – of changing it after that.

The free permits constitute a massive subsidy to the industries concerned. John Fitz Gerald of the ESRI, in a strong attack<sup>2</sup> on the arrangement, estimates that they would be worth €1,350 million if the price being put on the right to emit a tonne of CO<sub>2</sub> rises to €20. This is money lost to Irish residents. Moreover, the fact that it has been announced that the permits will be given away next time encourages the owners of polluting plants to keep them open so that they can benefit from the subsidy again. If the plants had had to buy the permits, however, the dirtiest ones would have had to close.

The permits will also encourage the construction of more fossil-fuel power plants rather than the development of renewable energy sources. This is because, although wind farms will benefit from the higher electricity prices that will result from the permit scheme, so will the promoters of, say, new gas-fired power stations, because they will be given the permits they require to buy their fuel. This will, effectively, reduce the costs of constructing their new power station. “For a new combined cycle gas turbine electricity generator, the subsidy in the period 2005-2012 could amount to at least 50% of the capital cost of the new plant” Fitz Gerald says.

The Dutch study<sup>3</sup> confirms Professor Fitz Gerald’s analysis:

A free allocation of emission allowances to new investments in generation capacity implies a lump-sum subsidy to the fixed costs of particularly fossil-fuel power production, leading to negative or perverse capacity and production outcomes from an environmental or social efficiency point of view. These outcomes can be avoided by abolishing grandfathering to new investments. This would also abolish the price-neutralising effect of grandfathering, which may enlarge the net first effect of passing through carbon costs to power prices and, hence, augment the internalisation of external costs and the resulting environmental efficiency of emissions trading. On the other hand, enlarging the net price-increasing effect of grandfathering implies that windfall profits due to ET-induced price changes may be higher while windfall profits due to free allocated allowances remain the same. Therefore, abolishing grandfathering to new investments addresses the problem of encouraging perverse investments in generation capacity, but it does not deal with the issue of windfall profits (while it may even enlarge these profits).

Another serious problem with the present ETS is its administrative inefficiency. Every country has far more users of fossil fuels, and therefore greenhouse gas emitters, than it does fossil fuel producers or importers. It would therefore have made a great deal more sense to have adopted a system that required fossil fuel suppliers to acquire emissions allowances rather than the consumers.

The conclusion to be drawn from this is that the ETS is not set up in an

economically-efficient way and, now that the predictions of economic theory have been shown by the Dutch study to be borne out in practice, the free distribution of emissions allowances should be discontinued for the 2008-12 period.

### **1. A better method of allocation**

If the free allocation of emissions allowances is discontinued, what method should take its place? The Dutch study suggested that they should be auctioned by the governments of the member states. At present, each member state is allowed to auction, at the maximum, 5 percent of its allowances during the first trading period (2005-07) and 10 percent during the second (2008-12). Under Directive 2003/87/EC establishing the ETS, all the remainder have to be given away free to the operators of specified types of installation.

Auctioning all the allowances would have exactly the same effect on energy prices and the prices of other goods as giving them away and would also raise much more revenue for the state than can be expected to come from the increase in corporate profits taxes on the companies windfall gains. Part of the extra revenue could be used to increase social welfare payments to shield the less well-off from the direct and indirect consequences of the higher energy prices that result from either method of allocation. Administrative efficiency could be greater, too because it would be possible for the fossil fuel suppliers to be required to bid for the allowances rather than having the fossil fuel users doing so.

An alternative to the auction approach would be for a country to give all its national allowance to its citizens on an equal per capita basis in the form of Transferable Energy Quotas, or TEQs. The recipients would sell their TEQ allocation to banks and post offices as soon as they received them, just as if they were a foreign currency. The price they would get would depend on how the European economy was doing and, thus, on the strength of the European demand for fossil energy. Businesses importing coal, gas and oil, or buying these fuels from producers within the EU would have to buy enough TEQs from the banks to cover the emissions their purchases would release when burned. They would hand the TEQs they bought over to Customs for imports or to EU producers for EU-produced fuels and a corps of inspectors would be maintained to ensure that the amount of fuel delivered by EU producers was in accordance with the TEQs received.

Obviously, the price the fossil energy purchasers paid for the TEQs would need to be passed on to their customers so, for example, when someone was buying petrol, they would have to pay the price of the fuel plus additional amount that the necessity to buy TEQs had added to it. Overall, though, the economic effect and the resulting energy and product prices would be exactly the same as if allowances were auctioned except that the system would be revenue neutral as far as ordinary people are concerned – the average person could expect to receive as much for their TEQ as the extra he or she had to pay for the products they bought, while the energy-frugal person would be better-off at the expense of the more energy-profligate individual. The sale of allowances would, however, constitute a tax. It would not be revenue neutral for the public.

Giving the allowances to the public would also lay the foundations for

the implementation of the leading proposal for reducing greenhouse emissions at a global level in the face of climate change. If any agreement is reached at all through the UN framework, this will almost certainly be a version of Contraction and Convergence. Under the version favoured by Feasta, this involves the total tonnage of greenhouse gases that can be released without running too great a risk of changing the world's climate catastrophically being shared on an equal per capita basis among everyone on Earth. Each year, each person would receive their allowance which they would sell, exactly as set out above. The allowances, which would decline year by year, would not go to governments because the right to emit is a human right rather than a national one. Compatibility with international efforts to limit climate change is expressly mentioned as an objective by Directive 2003/87/EC.

<sup>1</sup> HYPERLINK "<http://www.ecn.nl/docs/library/report/2005/c05081.pdf>"  
<http://www.ecn.nl/docs/library/report/2005/c05081.pdf>

<sup>2</sup> ‘An Expensive Way to Combat Global Warming: Reform Needed in the EU Emissions Trading Regime’, special article in the ESRI’s *Quarterly Economic Commentary*, April, 2004. Can be downloaded from [http://www.esri.ie/pdf/QEC0404\\_FitzGerald.pdf](http://www.esri.ie/pdf/QEC0404_FitzGerald.pdf)

<sup>3</sup> Page 95