

Dublin ENTRACTE Conference – Ellerman et al. September 2013

Title of the session : *Overview of ETS Performance*

Richard Baron, OECD Round Table on Sustainable Development – speaking in his personal capacity.

“Thank you,

I have structured my comments in two broad categories.

First on the question of the ETS and what Christian refers to as overlapping policies. Others, in California for example, call them ‘complementary’ policies.

And secondly, I have some questions and remarks on the governance that Christian proposes for the EU ETS.

[But first a remark on what Christian said about the EU ETS not playing its role: It is not 100% true. Those that are short on the market are, I am sure, happy to have cheap allowances available to comply with goals that would otherwise be more costly to meet

So first on the EU ETS and overlapping policies.

My starting point, and frame for my comments: the end goal is complete decarbonisation of our energy use, starting with the power sector. So we are looking at a world with a fundamentally different energy supply and technology mix. And to make it happen will require some re-thinking of policies and institutions, beyond the implementation of a better ETS. I will come back to this later.

The second point I’d like to make, which may not be agreed by all, is that there is now theoretical work that argues that a carbon price alone is not the least-cost policy instrument to reach a low-carbon development, when some mitigation technologies could see their costs reduced through targeted policy instruments, and this will help mitigate costs in the longer-run. This dynamic effect is very important [and well understood in the context of this project].

And let me do away with a more fundamental point: carbon pricing instruments are least-cost in theory, assuming that underlying markets contain no significant market failures and barriers that prevent responding to the price signal. I do not believe we are in this perfect setting, and so looking at these barriers, for instance in the adoption of more energy efficient

equipment, is theoretically justified. And also politically as consumers are not ready to be exposed to higher prices of energy unless they can effectively reduce their consumption of that energy.

When it comes to the big push for Renewables, the policy should be considered from the view point of the other argument, i.e. the need to bring their costs down. We have seen radical cost reductions, for instance in photovoltaic. The valid question is whether we applied the least-cost measures to get there, and the answer tends to be no.

On a per ton of CO₂-saved basis, governments overspent, their FIT were not well designed, they should have planned for a possible evolution of the equipment cost and capture those gains. Instead the policy costs exploded and policies had to be adjusted radically. This stop-and-go is never good. But the overall approach of complementing the ETS with dedicated energy efficiency and renewables is economically valid, and entirely justified by at least some work coming out of the economic theory.

Now some argue (see CEOs from large European utilities in the Financial Times recently) that alternative, low-CO₂ technologies will soon be able to compete with fossil-based generation technologies. So, then, that part of the package will soon be obsolete?

The picture is not that simple.

A first, rather easy argument to make against this view, is that the CO₂ price is hardly stable, and neither is the electricity price as a consequence, so before investors come back to RE, we may have to wait a while. They got used to the stability and comfortable returns provided by the feed-in-tariffs, and have been burned by the retro-active changes in policies. It will take a high steady electricity prices to give them confidence that variable renewables are a good proposition again.

But there is a more fundamental problem. It turns out that under current electricity market arrangements, at one point, the price of CO₂ is of limited use to help low-carbon technologies. Why? Because most low-carbon technologies operate with near zero or very low marginal costs. So under a marginal cost pricing electricity market, they bid near zero. The trouble is that they are also highly capital intensive, so they need a high electricity price to be able to recoup that investment.

You must have heard about episodes, in Germany, Denmark, and I believe in Ireland as well, of zero or negative electricity prices. As we move towards a 30%, 50% to 90% decarbonisation of the generation mix, zero prices may become very, very common. And the price of CO₂, in the price of electricity will be less and less visible because there will be

fewer and fewer power sources that release CO₂ and make that high CO₂ cost visible on the wholesale electricity market.

In other words, under current electricity market arrangements, the CO₂ price can help establish the competitiveness of carbon-free sources, but once these have taken a higher market share, it is a more dodgy proposition: which investor will spend large amounts of capital on the expectations that, a few dozens of hours a year, a high CO₂ price will drive the electricity price high enough to cover its costs?

Now we should not blame the EU ETS for this. But just to alert you that there is a much larger question around the organisation of electricity markets that has to be addressed sooner rather than later. For information, there is a lot of attention among electricity regulation specialists these days on the way Brazil is managing its electricity market, through auctions for long-term power supply (wind turbine projects won against natural gas plants recently, because the natural gas plants can't afford to secure a steady and competitive gas price 10-20 years ahead, while there is not much uncertainty in the price of electricity from wind once your capital cost is secured [and you have made the necessary assessment of the resource]).

So we may be in a situation where low-carbon, high-capital cost technologies need some support now and for some years to bring them down the learning curve. Then the price of CO₂ can take over, as it will push electricity prices up and 'lift all boats'.

In the longer run, however, under current electricity market arrangements, we would need some other form of support for these technologies, even if their levelised cost of generation is competitive with the CO₂-emitting plants. A better outcome may be a re-organisation of how electricity generation technologies compete for electricity supply, hopefully to allow the CO₂ price to play its part. I predict this is not the last time that the climate policy community will hear about this issue.

Now let me turn to comments that relate more specifically to Christian's presentation and proposal for an independent carbon market authority (ICMA)

As Denny Ellerman will remember from his early work on the US SO₂ allowances program, a low price is a good thing. In principle it is a good thing because it means the economic cost of reaching the environmental target is lower than expected. The allowance market is not a

stock market, its success should not be measured by the rise and height of its price, but by how cost-effectively it drives emission reductions.

Of course, this doesn't hold completely true for the EU ETS here and now. Primarily because the underlying emission goal is not in line with the global ambition on mitigation. And because the dynamic effects of the low price may make future reductions more difficult. But the basic assumption should remain: an ETS is to help minimise the cost, keeping a high price *per se* is not a sound principle.

But if we were fully satisfied with the whole emission envelope – which is largely what matters for the greenhouse gas effect – would we be having this discussion about ETS reform at all?

Christian and Raphael's proposal for a new governance of the ETS, which is meant to 'ensure the credibility of the constraint over time' seems to go beyond just the question of the overall constraint.

- And maybe my basic assumption that once we set the right target, “nothing else matters”, is illusory, because we really cannot set the target once and for all.
- Why not?
- Because the target will be affected by linking, for instance. On the other hand, the whole experience with Kyoto offsets (CERs mostly) has left some deep marks in EU's climate policy, and one wonders whether the same mistakes will be made again.
- And we also see that linking is never a definitive, certain arrangement, because partners' policy stance on this issue do change (see Australia).

Back to Christian and Raphael's proposal for a new governance of the EU ETS.

You indicate the need to manage structural weaknesses and interactions between instruments – but are you proposing that the ICMA has control over policies other than the ETS itself?

You also indicate there is “No need for price floor or price collar”. I can see very well how the decision to intervene on price would be depending on context, and that a fixed price cap or floor may be ill-advised. Prices may be high, but if they are high elsewhere as well, and if the economy is in a boom, then the economy can afford to engage in more expensive mitigation and the price should reflect that. So agree to a price cap today, and you may miss an opportunity for the price signal to play its fuller role down the line, with limited negative effects on the economy.

But is there not a risk that “someone” will try to play the market to cause an intervention from the Authority? I am not an expert in how traders may speculate or attack currencies, shares or commodities, but if it could be done on a currency as significant as the British Pound, I am sure EU allowances could be a target of market manipulation (we are talking much smaller amounts of money), and then it’s worth wondering whether the existence of an authority that would jump in to minimise or support prices would encourage such speculation or the other way around. It’s a question to the traders; they have for years indicated that price floors or caps would lead to more not less speculative behaviour and I have not yet understood what they meant. In any event, we must constantly ask ourselves: what is the worst case scenario, and work out what this implies under this or that market arrangement.

Then a question about linking: how can an ICMA retain control of market conditions once others have linked with the EU ETS? Is the suggestion that such authorities should be pooled eventually? Will the principles applying to the EU ICMA be acceptable to others, and will the ICMA be equipped to keep that role w/o additional reserves?

In closing, I think that the economists community should step up to say: we do need a package. The simple message of a single price to deal with this is not undisputed by the economic discipline.

Second, there are also major energy policy design issues that will make or break the effectiveness of the price signal; they must be researched as well, they are not just ‘side issues’.

On the idea of a proper authority to govern the EU ETS, we’ll readily agree that we can’t predict the surprises we have seen occur in the last few years. It would be very useful to look at worst-case scenarios, including to start imagining what such an authority would do in these circumstances.

Thank you again.