

Carbon Tax: Still the Best Way Forward for Climate Policy

The price of carbon dioxide emission permits in the EU Emissions Trading System (ETS) has fallen precipitously – from highs of €29 per tonne of CO₂ in July 2008 to €4 per tonne of CO₂ in March 2013. This has caused concern among environmentalists, which is peculiar. The emission targets are being met. The costs of compliance are low. We should rejoice.

Environmental regulators have only half-heartedly accepted the advice of environmental economists. Incentive-conform regulation, such as tradable emission permits, has now been accepted as a valid policy instrument. However, basic notions of public policy continue to be ignored. The number of instruments should equal the number of problems.¹ Yet, climate policy is a jumble of taxes, tradable permits, subsidies, mandates and direct regulation. Homogenous externalities require a uniform price.² Yet, there are seven markets for emission permits, each with their own price, and two more will be added over the next two years. Stock pollutants are better regulated by price instruments than by quantity instruments,³ yet permit markets are the instrument of choice. All this makes greenhouse gas emission reduction more expensive than need be.

A key characteristic of any market is that prices may go down as well as up. Models of optimal climate policy (however defined) show carbon prices that steadily increase over time, much like a scarcity rent.⁴ Perhaps some observers were confused by this and thought that permit prices could only rise. Not so. Emission targets were set at a time when policy makers still believed in their own promise to make Europe the most competitive and dynamic economy in the world by 2010. We got the Great Recession and the eurozone crisis instead. Economic growth and hence emissions growth is thus much lower than expected. There is an oversupply of emission permits. The price is low. That is what markets do.

Regulators can do three things to support the price of permits. They can introduce fewer permits, expropriate existing permits or buy them back. The last option is out of the question because European governments have no money to spare. The second option would run into legal difficulties. The first is opposed by member states who prefer their energy to be cheap. So the European Union has decided to postpone the auctioning of new permits. If auctions are delayed rather than cancelled, then the impact on the price should be minimal – and that is indeed the observed response of the market.

1 J. Tinbergen: *On the Theory of Economic Policy*, Amsterdam 1952, North Holland.

2 W.J. Baumol: *On Taxation and the Control of Externalities*, in: *American Economic Review*, Vol. 62, No.3, 1972, pp. 307-322.

3 M.L. Weitzman: *Prices vs. Quantities*, in: *Review of Economic Studies*, Vol. 41, No. 4, 1974, pp. 477-491.

4 See W.D. Nordhaus: *An Optimal Transition Path for Controlling Greenhouse Gases*, in: *Science*, Vol. 258, 1992, pp. 1315-1319; T.M.L. Wigley, R.G. Richels, J.A. Edmonds: *Economic and Environmental Choices in the Stabilization of Atmospheric CO₂ Concentrations*, in: *Nature*, Vol. 379, 1996, pp. 240-243; H. Hotelling: *The Economics of Exhaustible Resources*, in: *Journal of Political Economy*, Vol. 39, No. 2, 1931, pp. 137-175.

Delayed auctions do affect regulatory certainty.⁵ Regulators have once again demonstrated that the rules are not quite what is written on paper. Regulatory certainty is important, because the energy sector is characterised by long-lived capital and abundant regulation of market power and externalities. Furthermore, innovators are invited to take a punt on a market for renewable energies that, at the moment, exists by regulatory fiat only.

In this regard, a carbon tax would also be preferred to a permit market. And as most European governments need additional tax revenue, this may be the right time to fold the permit market and switch to – perhaps coordinated rather than harmonised – carbon taxes instead.

There are other issues with the EU ETS. Permit allocation by member states invited over-allocation. Differences in VAT treatment of permits invited carousel fraud. Insufficient security of registries invited hacking. These issues may be disregarded as teething problems, and they have been solved, but there is anecdotal evidence of the exclusion of critical opinions during the design phase of the EU ETS and of undue political interference.

The problems with the EU ETS do not end there. Three member states (Lithuania, Romania, Slovakia) have been censured by the Secretariat of the UN Framework Convention on Climate Change for irregularities with regard to emissions monitoring. Permit sellers are liable for the validity of the permits. Enforcement is in the hands of the member states. If permits were buyer-beware, the market would differentiate between permits issued in countries with a strong emission monitoring and enforcement regime and permits issued elsewhere. As there is seller-beware liability, permit buyers only have to declare that they accidentally bought a fraudulent permit. There are no sanctions for the buyer.

The seller of the fraudulent permit – that is, a company that sold part of its emission permits but did not correspondingly reduce its emissions – should be prosecuted by the authorities of its country of residence. The implication is that enforcement throughout the EU is as weak as it is in the weakest member state.

It is hard to estimate how weak. We know that three member states did not properly monitor their emissions. We know that one member state had a convicted fraudster for prime minister. We know that organised crime has penetrated the government in two member states. We know that two member states routinely falsified their data on milk and olive production. We know that one member state falsified the data on its gross domestic product. To date, there has been no evidence that member states have falsified their emissions data. Absence of evidence is no evidence of absence, however. With permit prices as low as they are, there is little incentive to defraud the EU ETS.

It would therefore be better to replace the EU ETS with a carbon tax. Earlier attempts to introduce an EU-wide carbon tax failed because people tried to introduce a harmonised tax. A uniform tax would indeed be best, but coordinated unilateral taxes that are roughly equal would not be that bad. Two of the member states that are most against tax harmonisation, Ireland and the United Kingdom, have carbon taxes already, as do a number of other member states. With public finances as they are, this may be the right time to again push for a carbon tax.

Richard S.J. Tol, University of Sussex, Brighton, UK; and Vrije Universiteit, Amsterdam, the Netherlands.

⁵ V.H. Hoffmann: EU ETS and Investment Decisions: The Case of the German Electricity Industry, in: *European Management Journal*, Vol. 25, No. 6, 2007, pp. 464-474; E.R. Larsen, D.W. Bunn: Deregulation in electricity: Understanding strategic and regulatory risk, in: *Journal of the Operational Research Society*, Vol. 50, No. 4, 1999, pp. 337-344.