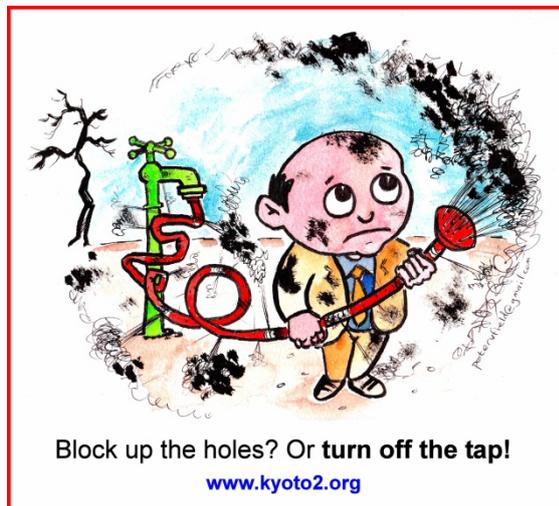


Turn off greenhouse gases at source

If we are looking after sheep, it's easier to keep them in a field with the gate shut than to let them escape and try to round them up later. It is also simpler, cheaper and more effective to control fossil carbon 'upstream'—at those relatively few places where coal, oil and gas come out of the ground, or where their flow is concentrated—than to control emissions 'downstream' at the much larger number of emissions producing businesses or individuals. Likewise for other industrial greenhouse gases (iGHGs).



That is the central idea in new proposals for reforming the EU's Emissions Trading System—which may also serve as a model for any country or region that may be considering introducing a cap-and-trade system to control its iGHG emissions.

In the reformed system, it would not be necessary to issue allowances to emissions-producing businesses in the EU. Instead, permits would be required to extract coal, oil or gas from the ground within the EU, or to import them. Tradable permits would be auctioned, and the numbers issued each year would be progressively reduced.

Some people may say of the EU ETS: “If it ain't broke, don't fix it”. But it most certainly is broke: its impact on emissions has been minute; it is vulnerable to fraud; and its main effect has been to transfer hundreds of billions of euros from electricity consumers to generators, for no environmental gain. Only with upstream reform can the EU ETS deliver the cuts in emissions that are now urgently needed, and remove a major distortion in energy markets.

Although about 12,000 industrial sites fall within the scheme, more than 50% of emissions—from homes, cars, small businesses and so on—are not covered. Over-allocation of allowances and giving them away for nothing has led to many ills: windfall profits; a price for emissions too low to stimulate low-carbon investments; and little incentive for businesses, households or individuals to reduce their emissions.

And the ability within the EU ETS to 'offset' emissions under the Kyoto Protocol's Clean Development Mechanism (CDM) brings with it complexity and serious problems including a lack of 'additionality' (by funding projects that would have gone ahead anyway), perverse incentives, spurious accounting, and fraud. While the CDM has produced some good carbon reduction projects, its overwhelming effect has been negative and it has proceeded with seriously inadequate oversight and regulation.

Issuing permits for the extraction or import of fossil fuels instead of allowances to emissions-producing businesses would be a relatively simple change that would solve the problems just described. In one step, the scheme would cover 100% of emissions of fossil carbon within the EU, instead of less than 50% as things are now. All the emissions from smaller sources, which are a headache for the present downstream system, would be covered automatically.

With the relative simplicity of controlling fossil carbon at source, with numbers of permits being determined in the light of climate science, and with the auctioning of permits instead of free allowances, politically-motivated excess allocations would disappear and the price of fossil carbon would rise much closer to its proper level. But just to be sure we can set a reserve price in the permits auction: at a level high enough to reflect the environmental damage caused by carbon emissions, and to drive long-term investment in low-carbon technologies.

This reformed system would also put an end to the allocations of free allowances / permits issued to existing emissions producing businesses—a system known as ‘grandfathering’. This grandfathering has the effect of favouring incumbents over new entrants into a market sector, and of handsomely rewarding the biggest polluters—the very opposite of the ‘polluter pays’ principle. The reforms we propose would also create a self-contained carbon market incapable of being undermined by the seriously flawed Clean Development Mechanism.

A problem with any kind of rationing system that is applied within a region like the EU is that it may put businesses within the region at a commercial disadvantage compared with businesses in other regions with less stringent controls. This is especially true of businesses making high-emissions products such as steel or cement. In such cases there may be ‘leakage’ of industries to other regions. Worries about those kinds of problem are the main reason why, in the EU, many allowances have been and still are given away for nothing.

In the ‘upstream’ proposals, problems of competition and leakage are overcome, firstly, by requiring permits not only for imports into the EU of coal, oil and gas but also for other products to reflect the fossil carbon that is used in their production, and, secondly, by giving credits for

exports at the same rates as the corresponding categories of imports. These kinds of ‘border levelling’ measures could be added to the EU ETS as it is now—but there are considerable advantages if border levelling is combined with upstream reform.

Of course, the need for border-levelling measures would diminish if other regions were to adopt compatible systems of upstream controls. That in itself would be an encouragement for other countries and regions to adopt the upstream approach—with a reformed EU ETS providing a model for how things can be done and demonstrating the advantages of upstream controls. Thus upstream reform of the EU ETS could snowball into a global system of upstream controls on emissions of CO₂ and other industrial greenhouse gases.

There would be several advantages in such a global system, in addition to those already mentioned. With controls applied at the level of coal mines, oil wells and gas wells, there would be no need for legally binding national targets for reductions in emissions. And the problem of how to account for the fossil carbon that is ‘embedded’ in imported products, sometimes called the problem of ‘import emissions’, would be effortlessly solved.

More importantly, elimination of legally binding national targets would do away with all the beggar-thy-neighbour complexity and horse-trading of international negotiations over what those targets should be. And it would also do away with the difficulties of putting whole countries in the dock and enforcing penalties if they fail to meet their targets. In general, it is very much easier to ensure that the operators of coal mines, oil wells and gas wells play by the rules. Of course, there would still be a place for national initiatives for cutting emissions, but without confrontations.

With controls on fossil carbon applied at source, there would be no need for special

A fuller account of these proposals is in *‘Upstream’ reform of the EU Emission Trading System* which may be downloaded via a link from www.k2support.org.

arrangements for two important and fast growing emissions sectors: international aviation and shipping. The operators of planes and ships would simply buy their permit-paid fuel in the normal way, with a suitable uplift for aviation fuel to account for the additional impacts of non-carbon emissions—like high altitude steam and nitrous oxide from jet engines.

Overall, an upstream system would give us greater simplicity and lower costs in administration, fewer anomalies, a smoother path for negotiations, and fewer opportunities for fraud. There would be much more effective control over emissions, driving innovation and the development of an efficient low carbon economy in Europe and the rest of the world.

A further advantage is that significant funds would be raised. Applied globally, upstream carbon controls could easily raise \$1 trillion per year, funds that should be allocated to accelerating the renewable energy revolution that is already under way, and especially in poor countries, and for the benefit of poor people. The additional resulting supply of clean energy would help to reduce the price of both permits and energy, essential to long term economic and political acceptability.

One criticism of this upstream approach is that it would not be universally accepted. For example, it would be opposed by countries with large reserves of fossil fuels, especially carbon-heavy fuels like coal and tar sands. The criticism is accepted, subject to one proviso: that the same must apply to any system that will be effective, for the great bulk of these carbon-heavy fuels must remain in the ground if climate objectives are to be met. And in fact, the refusal of major fossil fuel producing countries to join in will not be fatal. As renewable energy is more widely deployed, and its price falls, fossil fuels will be left in the ground because there's no profit in digging them out. And ultimately, everyone stands to benefit from

climate stability, from cheap renewable energy, and from the global prosperity it will bring.

Let's get the snowball rolling!

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