Climate policy picks the wrong target

By Hans-Werner Sinn

The chief goal of European environmental policy is to curb fossil energy consumption. Governments are busily promoting alternative energy, improved building insulation and more efficient cars. These programmes cost billions – and probably achieve the exact opposite of what policymakers intend: the global extraction of coal, gas and oil shoots up instead of sinking.

The explanation is simple. Green measures that herald a gradual tightening of policy over the coming decades exert a stronger downward pressure on future prices than on current ones. The owners of oil and gas fields react by pulling forward production. That is the green paradox: efforts to reduce carbon emissions in the future have the effect of accelerating climate change now.

The lesson is that environmental policy must shift its focus from fossil fuel demand to its supply. Instead of mulling over for the thousandth time which technical fixes could be applied to reduce CO2 emissions, we should turn to the core question of how to induce resource owners to leave more carbon underground.

Aside from useful but limited afforestation efforts, there are only two ways to curb the accumulation of CO2 in the atmosphere and slow down global warming. We must either temporarily refrain from extracting carbon, or stuff it back into the ground after harvesting its energy. All the technical and political initiatives to tackle the greenhouse effect must recognise this fundamental truth.

Burying carbon is easier said than done. The process of capturing CO2 from a chimney and turning it into a liquid consumes a third of the energy generated by burning the fuel in the first place. On top of that, the amount of storage volume required would be gigantic, as each carbon atom is joined by two oxygen atoms upon combustion – and they all need to be stored. Carbon captured from anthracite coal would occupy five times as much space underground as the coal itself; in the case of crude oil, three times the volume would be needed.

According to estimates by the Intergovernmental Panel on Climate Change, the earth’s depleted coal mines, oil and gas deposits, and natural caves will offer room for barely a 10th of the CO2 that would be generated by all the recoverable carbon resources. For that reason, if we are to curb climate change, carbon extraction rates must be reduced.

Yet politics so far exhibits not the slightest glimmer of thinking in this direction. Even science does not address the issue. Mathematical models of long-term fossil fuel extraction do not concern themselves with the climate. Climate models, in turn, do not concern themselves with the extraction of such resources. Only recently have scientists started to analyse both aspects jointly.

The silence of politicians on how to slow down fossil fuel extraction smacks of denial. Gesture politics go a long way towards soothing green-tinged souls (and firming up business for the environmental industries), but whether they actually achieve anything appears to be of no interest.

Indeed, nothing is being achieved that helps our climate. The massive efforts of the Europeans have not been able to reduce aggregate emissions of CO2. In fact, they have not even caused a tiny dip in the rising emissions curve.
The beneficiary of Europe’s policy is not the climate, but the rest of the world. As environmental policies are expected to exert increasing downward pressure on the world market prices for fossil fuels, and hence to reduce the capital gains on stocks kept underground, resource owners have felt compelled to extract their stocks faster than they would have done otherwise. This has been music to the ears of Americans, Chinese and all the other environmental sinners, who have profited from the resulting lower energy prices and raised their consumption by more than Europeans have reduced theirs.

Some like to pin their hopes on a different effect: that green policies will eventually push the price of fossil fuels in the world market below the extraction costs, making extraction unprofitable. This hope is baseless, however, because, as with old Rembrandts, resource prices are driven by scarcity and have always been much higher than extraction costs.

That is the case even now, in the midst of the dramatic fall in prices triggered by the current economic crisis. With oil prices at around $70 a barrel, extraction costs in the Arabian Gulf, including exploration, amount to between $1 and $1.50 a barrel. Even the extraction of Canadian tar sands costs no more than $15 a barrel.

Fossil fuel prices will steadily increase over time as resources become scarcer; simultaneously, extraction costs will rise as the good fields are exhausted. An environmental policy based upon pushing prices below production costs would need a very big hammer indeed. Marginal measures such as those currently in force are, and will be, plainly insufficient for that purpose.

To be effective, environmental policy has two options: either it uses the tax system to make it unattractive for resource owners to convert their fossil fuel wealth into financial investments, or it creates a seamless consumer cartel through the establishment of a global emissions trading system. The emissions trading system would effectively put a cap on worldwide fossil fuel consumption, thereby achieving the desired slowdown in extraction rates. Furthermore, part of the proceeds would be diverted from resource owners’ pockets to the national treasuries of the countries selling emissions certificates.

Anything else is mere bragging.

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