

45 – Fixing Long-term Price Paths for Fossil Energy – the Optimal Incentive for Limiting Global Warming

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Neither carbon taxes nor emission trading schemes can ensure that the costs of emitting greenhouse gases, in particular CO₂, will steadily rise. This is so because the effective emission costs for households and enterprises consist of the *overall price* of the good the use of which causes emissions as a *by-product*. If, e.g., global fossil energy prices decline faster than a carbon tax or the emission permit price rises, then the final good and its use become cheaper. The paper documents the extent of and the main reasons for the instability of fossil energy prices as well as of CO₂ emission prices (including the role of “technical trading”). Due to this instability, carbon taxes and trading schemes cannot anchor the *long-term expectation* that the effective emission costs will *rise continuously*. Such an expectation, however, is a prerequisite for steadily growing investments in energy efficiency and/or renewable energy because their profits mainly consist of the saved fossil energy costs (“opportunity profits”).

This paper presents an alternative approach taking the EU as example: The EU sets a path of steadily rising prices (e.g., by 5% per year) of crude oil, coal and natural gas by skimming off the difference between the EU target price and the respective world market price through a monthly adjusted quantity tax. Instead of the prices of fossil raw materials, the (implicit) quantity tax should fluctuate (mitigated by a buffer fund). In this way, the uncertainty about future price developments of crude oil, coal and natural gas and, hence, of the effective emission costs would be eliminated. Firms and households could calculate the profitability of investments in avoiding carbon emissions. Expected profits would be the higher the earlier the investments are made. At the same time, such a tax would ensure a uniform EU carbon price in all sectors. Given the size of the EU import bill for fossil energy, the amount of potential receipts of such an implicit and flexible CO₂ tax would be (very) huge. Part of the revenues could be used for large-scale projects like the thermal refurbishment of the entire building stock in the EU or the creation of a trans-European network for high-speed trains, another part should offset the burden of energy price increases on low-income groups.

This proposal and its impact would mitigate not just global warming but also the economic and social effects of the (post-)Corona crisis.

Biographical note

Stephan Schulmeister: Senior Fellow at the Austrian Institute of Economic Research 1972 to 2012. Visiting scholar at New York University, Wissenschaftszentrum Berlin, University of New Hampshire, International Monetary Fund. Key area of research: Instability of financial markets and its impact on the real economy.