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Energy taxes and cost-effective climate policy

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Energy products like coal, natural gas, oil and electricity are heavily taxed in Denmark. Most products – biomass being the exception – are subject to an energy tax, and fossil fuels pay in addition a CO_2 tax as well as other environmental taxes. There is no mastermind by the system and the purpose of the energy tax is particular unclear: is it fiscal, environmental, security of supply or something else?

For this reason, the Danish Council on Climate Change recommends a fundamental reform of the Danish energy taxation system. A new system must be based on an underlying policy goal in a consistent manner. In the Council's view, climate and CO_2 considerations constitute this goal, and it can be achieved cost-effectively by a uniform CO_2 tax, most likely of larger magnitude than today.

However, if the policy makers are concerned about global CO_2 emissions rather than just domestic emissions, the tax system must consider carbon leakage. This is of particular importance in the current electricity market that exhibits substantial cross border trading. Thus, the Council's proposal includes a tax discount to the Danish producers of fossil-based electricity, which is counterbalanced by a consumer tax on electricity. In that way, also the CO_2 content of imported electricity can be taxed.

The special case of electricity points to a more general principle. When there is no risk of carbon leakage, CO_2 should be taxed where the emissions occur. But the higher the leakage risk, the more of the tax burden should be shifted from the emitting production to the consumption of the final product.

The Council's proposal for tax reform was presented in the paper *Fremtidens Grønne Afgifter* (in Danish) which can be found on the Council's website, *www.klimaraadet.dk*. The taxation principles are based on a yet unpublished working paper by the Council's chairman, Peter Birch Sørensen.