

According to the calculations, emissions of CO₂ from mobile sources in households were reduced by 2 to 3 per cent per year as a result of the CO₂-tax. This corresponds to an annual reduction of between 94 and 119 thousand tonnes of CO₂.

Process emissions (from industrial processes) account for about 20 per cent of the total emissions of CO₂. Sources of energy used in industrial processes have been exempted from both the CO₂-tax and the basic tax. The changes in CO₂-emissions and the CO₂-intensity from 1988 to 1993 were small.

Emissions of CO₂ from the petroleum sector (consisting of stationary emissions, mobile emissions and process emissions) accounted for more than 20 per cent of the total emissions of CO₂ in 1993. The CO₂-intensity decreased by more than 15 per cent from 1990 to 1992, but increased by 3 per cent from 1992 to 1993. According to ECON (1994) (ECON stands for Centre for Economic Analyses) the emissions relative to the production in this sector were reduced by about 1.5 per cent as a result of measures introduced because of the CO₂-tax.

The CO₂-intensity for transport in the production sectors was reduced as a consequence of changes in the energy intensity, the composition of the transport oils and, in particular, the sector structure. The analysis is based on a period of only 4 years, and the results would have been more robust if the period of analysis had been longer. The analysis of the mobile sources of emissions has uncovered a need to collect better physical data. The data base is not good enough because the methods of calculation have been changed, and do not provide comparable series of figures over time. The chosen sector grouping was too aggregated to enable the changes in CO₂-intensity to be decomposed satisfactorily. If the sectors are not sufficiently homogenous, changes in structure within an aggregated sector can give results that are interpreted to be changes in the energy intensity. However, even if the sector grouping had been good enough to identify what were changes in structure and what were changes of another kind, it would still have been difficult to state how large a share of the change in the different components could be attributed to the CO₂-tax.

Sea transport and air transport are to a large degree exempted from CO₂-tax. Nevertheless, the reduction in CO₂-emissions is larger for these particular forms of transport than for other forms. The fishing fleet made a large contribution to the total reduction in CO₂-intensity in transport from 1988 to 1992, in spite of the fact that oil for coastal fishing is exempted from the CO₂-tax. The changes in emissions took place independent of the tax, and were a result of a strong growth in the aquaculture industry along with a decrease in traditional fishing.

Changes in the sector structure, energy intensity and composition of the energy sources are all important factors affecting changes in the emissions of CO₂. A CO₂-tax influences profitability in different industries in different ways, depending on to what degree the industries are dependent on oil and are energy-efficient. Thus the tax can cause changes in the sector structure. The CO₂-tax could also serve to speed up advances in technology, leading to an improvement in energy-efficiency. Furthermore, a CO₂-tax raises the price of oil relative to other sources of energy, so that households and industrial enterprises both substitute oil with other energy sources, if possible. Thus, changes in the sector structure, energy intensity and composition of energy sources can be a result of the CO₂-tax, but may also be due to a number of other factors such as trade conditions, the replacement of out-dated and energy-