# CO2 reduction through tax restructuring - company cars and private cars in general

#### Intro

The Danish taxation of cars has in many ways brought Denmark in front in terms of providing an energy efficient car fleet – for the benefit of social as well as private economy and for the environment. But much more can be achieved, and improvements are necessary in order to stay in front internationally – and in order to achieve real CO<sub>2</sub>-reduction that is not outweighed by growing traffic.

# **Registration tax**

The Danish Registration tax as it exists today – since the reform in 2007 - has to a great extent proved to be effective. Together with Portugal, Denmark already in 2010 reached the EU goal for 2015 that new cars on an average must release below 130 g CO2/km, see figure 1 and 2. But the reduction of the emission per car is to some extent outweighed by an increase in the number of cars. Through the same reform of the registration tax small energy efficient cars became cheaper to buy. The reform also lead to a large loss of revenue for the state (although a large part of the revenue lost since 2007 is due to increased use of leasing of new cars).

The registration tax is differentiated, with a dividing line at 16 km/liter for gasoline- og 18 km/liter for diesel cars. This corresponds to app. 150 g CO<sub>2</sub>/km for both gasoline and diesel cars. Cars less effective than the dividing line are "punished" with an extra registration tax of 1,000 DKK (134 Euro) per km that it runs shorter than the limit. Cars more effective than the dividing line get a reduction of 4,000 DKK (538 Euro) per km that it runs longer than the limit. This dividing line is today very outdated – when the average for new cars is below 130 g/CO<sub>2</sub> per km. This, together with the imbalance between the "punishment" and the reward, has lead to the large loss of revenue and to the increase of car sales.

Before last election in September 2011 the two Danish parties, the Socialists (social democrats - S) and the Socialist Peoples Party (SF) proposed to raise the "punishment" as well as the "reward" from the 1.000 og 4.000 DKK/km respectively to both 6,000 DKK (806 Euro), below as well as above the dividing line – and to push the dividing line upwards.

Today S and SF are in government together with the Social-liberal party. In their government declaration (October 2011) they only say that it must be cheaper to buy an energy efficient car — without saying that it must be more expensive to buy an inefficient car. Therefore we fear that they might repeat the mistake from the former government in 2007 — and again increase car sales and create a new loss of revenue for the state.

Danish registration tax has a strong carrot (540 Euro per km/l) and a weak stick! (130 Euro per km/l), while Norway, Netherlands, and Portugal has a much stronger "stick" for the inefficient cars, see figure 3.

Registration tax influences the number of cars, and – if it is differentiated – also the fuel economy of the cars

The Ecological Council supports increase of the tax on the least efficient cars to 6,000 DKK per km (806 Euro). But we do not recommend further decrease of the tax on the more efficient cars – this should be kept on 4.000 DKK per km (540 Euro). We propose this to avoid a further increase in the total sales of cars that would follow a tax reduction for the more efficient cars. And secondly to avoid a loss of revenue for the state that would follow a changed pattern of new-sold cars and a lower consumption of diesel and gasoline. Besides, in the light of the increased average fuel consumption the dividing line should also be moved by for instance 3 km's, to 19 km per liter for gasoline and 21 km per liter for diesel – corresponding to app. 126 g CO<sub>2</sub> per km for both.

# Electric cars and plug-in hybrids

We also need a tax reduction for the best plug-in hybrid cars, meaning those with the longest range of the battery, so-called serial hybrids – like the Opel Ampera, which has a range of 40-80 km's, depending on how you drive and how much electric equipment you use in the car. On the other hand a parallel hybrid, like the Toyota Prius plug-in only has a range of 10-15 km's and should therefore have a much lower tax reduction.

Finally, we propose the Danish tax exemption for electric cars to continue, also after 2015 (where it stops according to the present decision) - not permanently, but until there are 100,000 electric cars on the roads, corresponding to app. 5% of the total car Danish car fleet.

#### Ownership tax

The Danish car ownership tax is also differentiated according to the fuel consumption of the car. You might consider to change a minor part of the registration tax into a higher ownership tax – in order to increase the incentive to scrap old inefficient cars. Old cars pollute much more than new cars. You often hear that Denmark has a very old car fleet because of the high registration tax. But this is a myth. The average age of cars is high, app. 9 years – but it is the same in countries with a very low registration tax (Finland) – or even with no registration tax (Sweden).

### **Company car taxation**

In Denmark 35-40% of the total sales of new cars are company cars – while less than 10% of the total car fleet, because many of the company cars are sold for private use after few years, see figure 4. The Danish taxation of company cars – called "free car" – is an income tax, where you try to assess the value of having a free car from your employer that you can also use in your spare time. Often you get a free car instead of a higher salary. Because of lower taxation, you can get a company car cheaper than if you would buy the same car on your own. In this way it contributes to a distorted car taxing system. Today a "free car" is taxed by 25% of the value up till 300,000 DKK (40,000 Euro). Above this the tax is only 20%. To reduce the distortion we propose that the tax should be 25% below as well as above the limit. Besides this, the taxation of private car driving in a company car is independent of the number of km's you drive. This gives an incentive to drive longer. Better models should be considered. If you register the number of km's you drive for the work place, you could subtract this from the total number of km's. Then you could tax private driving without having to directly register the number of km's you drive privately. A test should be carried out, with electronic registration of company car driving. This

could provide experience that could lead to a taxation of the actual use of the company cars. This would probably require a sealed odometer, in order to avoid fraud – like we have sealed electric meters at home.

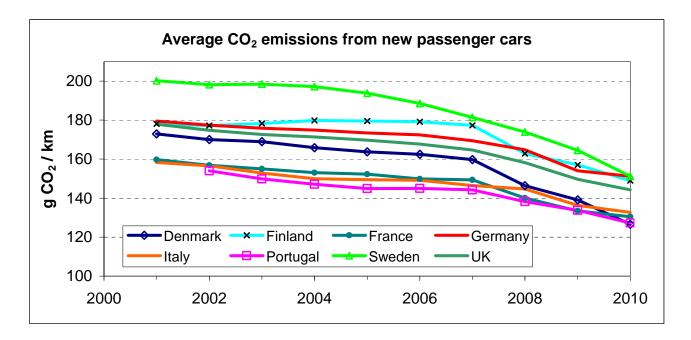


Figure 1: Average CO2-emission from new cars in selected EU member states, 2000-2010

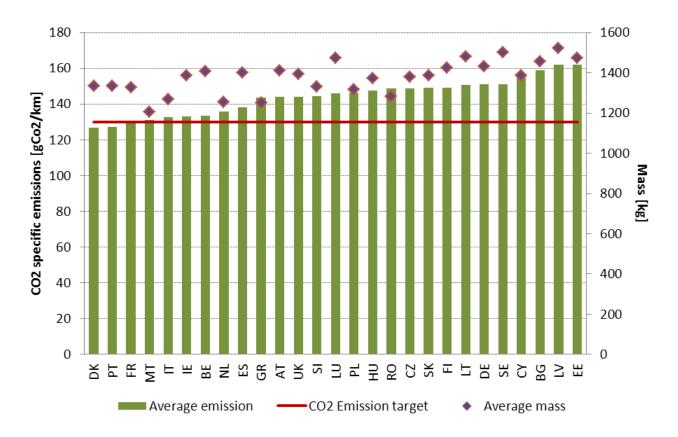


Figure 2: Average CO2-emission and weight of new cars in EU member states, 2010

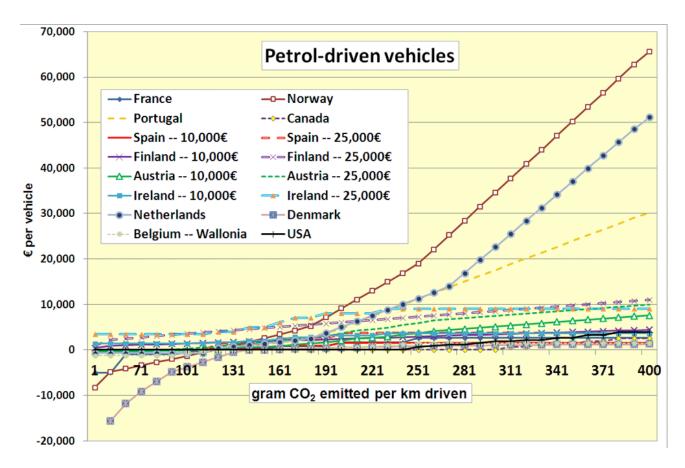


Figure 3: Differentiation of registration taxes in EU countries, diesel cars. The picture is the same for gasoline cars

Figure 4: Company cars in 2007-08, as share of the total number of cars in four Nordic countries - of a) sales of new cars, b) total car fleet

	Salg	Bestand	År
Danmark	38 %	7,2 %	2007-08
Finland	*) 25 %		
Island			
Norge	32 %	11,3 %	Salg: 2008
			Bestand: 2006
Sverige **)	35-40 %	6 %	2007