

## ‘After Tesla Debacle, Denmark Reconsiders Electric Car Subsidies’

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Denmark may be open to financial incentives to buy electric cars after seeing a **dramatic drop in sales** of non-polluting vehicles, according to Prime Minister Lars Lokke Rasmussen.

“We have **tax incentives** for electric cars, and you could **discuss if they should be bigger**. I will not exclude that,” Rasmussen said in an interview in Copenhagen. Any new incentives would be announced along with a government plan to boost clean-energy consumption after the summer, he said.

Danish sales of electric vehicles have fallen dramatically -- from nearly 5,000 in 2015 to -- around 700 in 2017

since Rasmussen’s center-right government phased out subsidies

such

as those offered in Norway and Germany. The development decimated sales of Tesla, whose Model S once dominated the local market.

With diesel having fallen out of favor across Europe in the wake of the Volkswagen scandal, Denmark is now **debating** which vehicle types to **promote and which to discourage**.

The **government has come under fire** for its indiscriminate cuts to **registration taxes**, which have **eroded incentives** to buy green vehicles rather than those powered by fossil-fuels. Denmark has no car industry of its own and has one of the **highest import duties in the world**.

Adding to pressure on the government, the opposition Social Democrats grabbed the limelight last week by announcing **plans to ban the sale of diesel vehicles** by 2030, if they win elections due to be held by June 2019.

Poster Child

**Rasmussen’s government on Thursday unveiled plans to consolidate its reputation as a poster child for clean energy by announcing 12 billion kroner (\$2 billion) in funds earmarked to help it go fossil-free by 2050.**

The **proposals** include an **800 megawatt offshore wind park**, which would be one of the **world’s biggest**, investments in bio-gas and a government tender that pitches different green technologies to compete on producing the cheapest electricity.

At the same time, Denmark is **reducing subsidies on renewable energy**, arguing that the technology is almost ready to stand on its own feet.

We’ve now reached a stage where “we can **continue to build capacity** without necessarily investing taxpayers’ money,” Rasmussen told Bloomberg. “This is the first time in Danish history that we can go green and cheaper at the same time.”

Denmark is home to the world's biggest wind turbine maker, Vestas Wind Systems A/S, and Orsted A/S, the largest operator of offshore wind parks.

The government is also hoping that lowering taxes on electricity will encourage more people to ditch home heating based on fossil fuels. Last year, 43 percent of Denmark's electricity consumption came from wind energy, a world record, with the ratio set to increase over the coming years.

Rasmussen said the goal is to make the economy greener and less vulnerable to swings in commodities market. "That's why we're proposing to cut taxes on electricity, to raise demand and ensure that green energy is more competitive versus fossil fuels."

## Commentary 1

This article refers to the issue of whether or not Denmark should increase the size of their tax incentives for electrical cars. The 'Danish sales of electric vehicles have fallen dramatically' as a result of cancellation of subsidies of such capacity. After the fall in demand of diesel vehicles, Denmark is now questioning how to encourage electrical vehicles.

Subsidies are the lumpsum amount of money paid by the government to firms, to encourage the production of a particular good, to reduce market price or to increase the incomes of producers. Taxes are the compulsory amount of money people must pay the government for provision of public services to society, often in the form of a levy on expenditure.

*Diagram 1- Danish sales of electric cars*

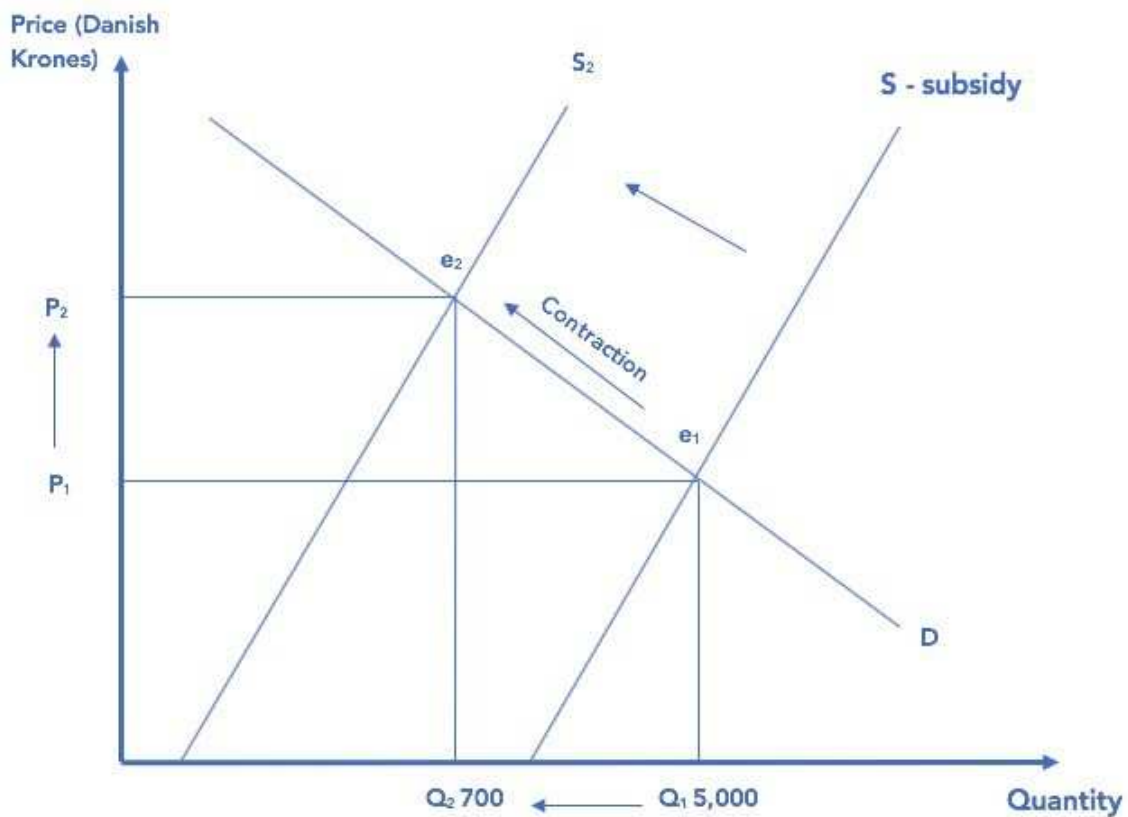


Diagram 1 demonstrates the discontinuation of Denmark's subsidies on electric vehicles. The initial equilibrium point with the subsidy is determined by  $e_1$ , the intersection of  $Q_1$ (5,000)

and  $P_1$ , on supply curve, S-subsidy. As the government chooses to cut out subsidies, there will be a parallel shift of the supply curve to the left, to  $Q_2$  at 700 units, from S-subsidy to  $S_2$ , giving rise to new equilibrium  $e_2$  at higher price  $P_2$ . At each price, the producer is now willing to supply less output, since it will be more expensive to produce, and the price received by producers decreases. The value of the subsidy is demonstrated by the vertical distance between S-subsidy and  $S_2$ . This policy will lead to a significant rise in price.

The main stakeholders of these scenarios are the producers of electric vehicles who will suffer greatly as a result of the discontinuation of Denmark's subsidies. They will experience a fall in revenue because of the rise in average cost of production, since there will be the additional burden of the cost that was once covered by the subsidy.

The workers will be affected in a similar way; because of an increase in total cost of production, it is likely that producers will decrease the wages of workers with the aim of reducing total cost. Alternatively, in the long run, the firm will choose to fire a number of employees with the aim to cut costs. Moreover, as a result of the downsizing of the firm, the productive capacity will decrease, suggesting that the firm will stand to lose even more.

Consumers will be at a loss as a result of the increase in price for the goods.

The main advantage of the discontinuation of the subsidy, is that the government will stand to benefit, since the burden of the price of the subsidy will now be relieved. Society will gain from this since there may be increased expenditure on healthcare or education, which benefits the general public. However, society may also lose since consumption of electric cars will reduce, leading to a negative effect on the environment.

Foreign producers stand to benefit since it will be easier for them to compete with domestic producers, whose prices are now significantly higher, because of cancelled subsidy.

The other issue addressed by the article, is the question whether Denmark should make changes to the market for electric cars: "tax incentives for electric cars."

Diagram 2- increasing tax incentives for electric cars

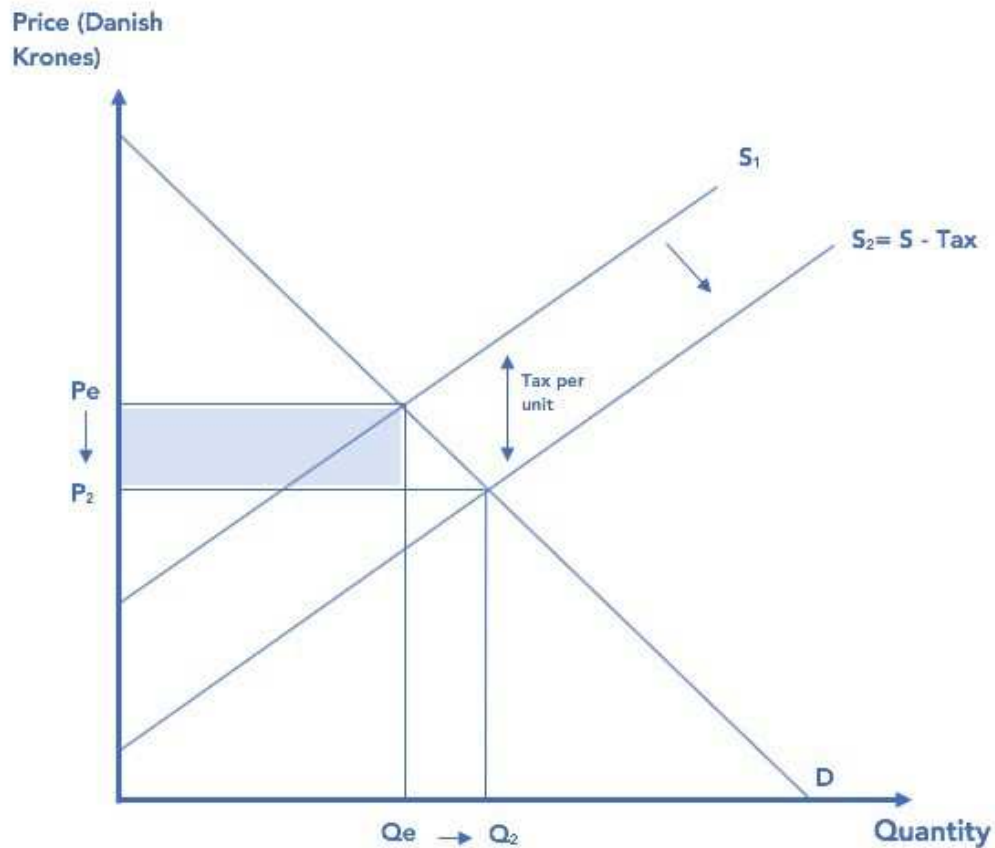


Diagram 2 demonstrates the possible impact of the decrease in taxation,  $S_1 \rightarrow S_2$ , where the distance between the two curves demonstrates the value of Tax per unit. The equilibrium before the added tax is represented by the intersection of  $D$  and  $S_1$ , at  $Q_e - P_e$ . As the tax incentive increases, equilibrium rises to point of intersection of  $Q_2$  and  $P_2$  where the supply curve shifts to the right resulting in a fall in price  $P_1 \rightarrow P_2$ , and quantity purchased increasing to  $Q_2$ .

Increasing tax incentives can be beneficial for producers, as they will have more real income that they will be able to spend on the production of electric cars. This is because the cost of production decreases. Second of all, the consumers stand to benefit, since the price of the electric cars will be cheaper. Furthermore, society as a whole will stand to benefit as well, since it will have a positive effect on the environment, since less diesel cars will be used.

However, the government will stand to lose, since tax revenue will decrease as incentives rise. The opportunity cost of this will be substantial, and this could also negatively affect society in the long term as expenditures on public goods may decrease. This is because the money that the government would have received from the taxes could have been spent on education or healthcare, which would benefit society.

**Word Count: 750**