



## **PetrolPlaza Scandinavian Special. Sweden: The land of biofuels**

**Sweden has become a world leader in renewable fuels. Around 15% of all fuel sold is some kind of biofuel, which in some cases allows for a 90% reduction of greenhouse emissions. We speak with Swedish industry experts to find out more. Watch our video interviews on the link below.**

The use of renewable fuels in our transport system has increased in range and usage across the world. Ethanol has experienced an incredible surge in recent times, and other alternatives such as biodiesel and biogas gain more presence by the day. In these terms, Sweden is now at the forefront of the development and usage of renewable fuels.

Sweden has set itself the ambitious target of becoming fossil fuel independent by 2030. In 2015, around 15% of the fuel in the Swedish market was some kind of biofuel: Five percent ethanol, and 10% biodiesel and biogas, according to the Swedish Petroleum & Biofuels Institute (SPBI).

"Sweden wants to become the first fossil fuel-independent country," says Ulf Svahn, Managing Director at SPBI. "The country wants to push green policies, from politicians, as an industry, and as a society."

The new focus goes back to June 2006, when a commission appointed by the former Government of Sweden published a report entitled 'Making Sweden an Oil-Free Society', which outlined the reasons and steps to be taken towards a greener society. Eight years later, in 2014, Sweden managed to get two-thirds of its electricity generation capacity from clean and low-carbon sources, according to Bloomberg.

**[Watch the interviews from PetrolPlaza TV here](#)**

Sweden has started to use Hydrotreated Vegetable Oil (HVO) to make renewable diesel, which allows for a greenhouse reduction of 90% compared to regular diesel. Preem, Sweden's largest fuel company – accounting for over 50% of the refinery capacity – uses residues from forestry products, mainly from the pulp industry in the form of crude tall oil, to make HVO.

"It is a very efficient way to reduce greenhouse emissions. In Scandinavia we have the opportunity to use the forest in a sustainable way," says Sören Erikson, Preem. "The response from the users has been great because we are making ordinary diesel. It works for any car. You cannot tell the

difference.”

Preem is targeting 2.5 million tons per year of production capacity for forest-residue-based renewable fuel. Starting to use lignin as a source for HVO in the near future would be one of the ways to increase production capacity.

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According to all the interviewees, the European Union directives are limiting what Sweden can achieve in this direction. Due to a conflict with the EU, Sweden has had to leave the tax exemption system that saw the usage of biofuels rise in such a rapid manner. The EU has also put a ceiling of 7% on biofuels based on food materials.

While many view a bet on alternative fuels as an extra cost for the industry, especially in the context of collapsed oil prices, Eriksson explains that it actually works the other way around. “Using more renewables does not affect the economy (growth). It is actually the opposite. We have created many jobs because of this,” says Eriksson.

The government also took strong initiatives that saw the use of ethanol in vehicles augment significantly. After a number of policies, in 2011 there were 1,740 pumps and 222,000 ethanol cars on the streets of Sweden, according to Sekab.

For Anders Norén, from the Swedish car manufacturing association, Bil Sweden, the way forward is to improve the efficiency of vehicles, continue the rapid development of biofuels, and invest in other systems such as electric and fuel cell vehicles.

While huge steps have been taken, the Swedish government is showing no signs of reducing its efforts to be free from fossil fuel. During this year the country will be investing 4.5 billion kronor (\$546 million) in climate-protection measures, reported Bloomberg.

The fuel retailing industry itself is at a healthy stage with over 2,500 gas stations. Statoil and QKQ8 lead the market with more than 700 sites each, with the former undergoing a major overhaul in May 2016 as it switches to the brand Circle K. Preem, Sheel and ST1 all have significant fuel station networks across the country.

*Written by Oscar Smith Diamante*

The following companies have participated in PetrolPlaza’s Scandinavia Special with their own articles: [SGB](#) and [Elaflex](#) with product news; [Franklin Fueling Systems](#), [Tatsuno](#) and [Bever](#) with case studies; and [Afriso Ema Ab](#) and [Mcd](#) on our buyer’s guide. Click on the names to access the pages.