

Toast delivered by Arthur G. Sutsch at the occasion of the Rolls-Royce Enthusiasts' Club Annual Rally 2008 Dinner

June 21, 2008

Lady Chairman, dear friends and enthusiasts of the marques

It is a great honour for the chairman of the RREC Swiss Section to be asked to speak to you at this Annual Rally dinner 2008.

I remember David Baines' wonderful article in our bulletin some years ago, namely Sir Charles Rolls' speech at "The Church Society for the Promotion of Kindness to Animals" on January 13th, 1903. The situation then was this: the automobile in England was termed an "infernal machine", the flagman was abolished only 25 years before then. In this speech, Charles Rolls spoke about the terrible conditions of the working horse and advocated the use of the automobile instead, listing its advantages.

If I listen to people today, the terms used are different because of the change of the language as a whole, but the criticism against the automobile is about the same. These circles forget that about 13% of our working population in central Europe is working in one way or the other for the automobile industry.

The latest addition to the craze is the CO₂ question and climate change. Its consequences: the up-rising of bio-fuels, i.e. man-made fuels in the form of bio-diesel and ethanol additives to our internal combustion engine fuels (E5, E10, E15, etc.).

On both, let me pass a few brief comments that may surprise you. Are you ready for some unknown facts? Which ones would you like to hear first, the serious or the more funny ones?

Let us start with the seemingly funny ones first:

Did you know, that:

- the "exhaust fumes" (to use an automotive term) of a single cow correspond to about 18'000 km (12'000 miles) driving of a small car per year in terms of CO₂ production?
- the production of one kg (roughly two pounds) of beef produces 36 kg of CO₂ , or roughly a drive of 250 km / 150 miles?
- the production of CO₂ per annum of a vegetarian human being corresponds to less than one tonne of CO₂, while a meat-eating person produces about 1.82 tonnes of CO₂. All you vegetarians rise! You are the real CO₂ heroes!

The less funny facts are these:

The so-called 'bio-fuel additive' or more chemically precise 'ethanol' is an alcohol. Alcohol is known to reduce lubrication when applied to metal, this increases friction of moving parts, which in turn makes them become hot. As of today, only a handful and only the latest engines produced can cope with ethanol. Our engines in

the cars we drive will see the end within a few petrol tanks with this added 'bio-fuel' in ten to twenty percent quantity!

But things get worse: the production of ethanol as a bio-fuel in the developing countries is about the most counter-productive thing we can do to our planet: did you know that the production of one litre of ethanol requires 3'000 to 4'000 litres (about 900 to 1'000 gallons) of water?

Our problem in the emerging and developing countries is not the production of CO₂, it is the shortage of fossil water resources! The production of 10 – 20% addition of ethanol to our fuel will require 2'000 cubic kilometres of water – a space of 2'000 km long by 1 km wide by 1 km high or about 500 cubic miles – 500 miles long by one mile high and one mile wide.

As if this were not enough, the ecological balance for bio-ethanol is even worse: the production of one litre of bio-ethanol produces way more CO₂ than it can ever save!

Not to worry, we then will produce bio-diesel. This is even worse! The production of one litre of bio-diesel requires 9'000 litres of water, or double to triple that of ethanol. Now you only need to multiply and we end up with a devastating balance to our planet.

As if this were not bad enough, the production of bio-diesel requires enormous surface areas. Where do they exist? In countries like Brazil and Indonesia where burning down the forests causes more than a hundred-fold production of CO₂ than it can ever save, disregard the water resource question altogether.

I do not even want to touch upon the question of planting crops for food instead of man-made fuels, we hear about this controversy almost every day now. Rising food prices are the result.

Studies by internationally renowned institutions that produce these figures are more complex and difficult to read, and are less attractive to the media. It just shows that the debate about our mobility has many facets and these have to be treated with a higher degree of differentiation than is the case today.

This really only leaves the comment of the astrophysicist in me: throughout the past 4 billion years there have been climate changes off and on. The large climate changes have been always caused by a cosmic catastrophe like an asteroid hitting the earth or by sudden or gradual changing energy output of our sun. We all know about the extinction of the dinosaurs and the ice ages.

To put it into non-scientific terms: if our sun coughs, we will all run around like roasted peanuts in about 10 minutes. No wonder: the equivalent of two million hydrogen bomb explosions per second for the past four billion years never run smoothly: the increase of the energy output of our sun by only 0.6 % will cause the planet Earth to dry out completely.

Let us enjoy the time of the (relatively) quiet sun!

In this sense, let me thank you for the opportunity to bring you some insights into the complex matter of the automobile being the so-called major contributor to our problems on Earth and may I ask you to raise your glass and offer this toast

TO THE CLUB !