

## Stop combustion!

"BMW announce the all-new V8 combustion engine in summer 2018"

I've just read this announcement on LinkedIn. The person who initiated the mind-changing Chevy Volt/Opel Ampera hybrid car, and who is now responsible for the large cars at BMW, emphasized his endorsement of this combustion engine by his "Like" comment. A brilliant engineer, formerly a mastermind of future technologies, now (has to?) 'like' an engine of a type that epitomizes the dead-cat bounce of a moribund technology prior to its final collapse. GM, the company he left before joining BMW, used his vehicle to totally change the internal mind-set with regard to electric drive. GM is a huge lumbering ship, so it needs time until the overall outcome can be demonstrated: I predict they will be the first of the traditional carmakers to sell nothing but electrically-driven cars. The Bolt is just the vanguard. And never forget: the Chinese are learning fast and adapting even faster. They could even overtake Japanese and Korean carmakers. But where are the automobile inventors?

The yesterday men leading the German "premium" car brands continue to waste engineering energy on developing new combustion engines. This only feeds the needs of Trumpish old men who prefer their own fun over the survival of human life on our planet. Helplessly laughing at the "mad" engineer Elon Musk, who had the balls to strictly and consistently place full emphasis on the right drivetrain that can drive a vehicle without carbon oxidation. He even solved the re-fuelling problem by investing in a dedicated network of charging stations, while the Germans continued to sleep/turn a blind eye. None of the "world-leading" premium carmakers understood or wanted to take the risk of a technology change, faithfully following the (stupid) marketing rule: never be first-to-market, as you then take all the risk – they all wanted to be "first follower". They anxiously stuck their heads firmly into the ground (like that famous ostrich) waiting for the day for the typhoon to be over. Those heads will stall the rest of the bird because the typhoon will have blown it away. Have fun running without feet!

Unlike Trumpish-old-men-babble, the acceleration of global warming has already begun and by several powers. Already it is so far advanced that even if we were to decide to stop burning carbon today, it can no longer be halted or even reversed. Other than during (gradual) natural climate changes, the living species does not have enough time to adapt their genetic programming quickly enough – so there is no chance of surviving for more than a few human generations. It's no longer 5 minutes to 12, it's already past midnight. But with an immediate and committed halt to the burning of fossil fuels we could perhaps decelerate the rise in temperature, giving us more time to invent solutions and so extending human life for a few more generations to come. Currently, the short-term future looks like this: through the melting of the "eternal" ice, the sea level will rise leaving much less land where all the coastal dwellers will have to migrate to. As the land heats up, more deserts will be created from where people will be forced to flee – a migration causing greater human density... At the same time, the human population continues to grow. It's going to get very crowded on our planet! We need no prophet to predict what will happen: half of us will die of thirst after they have first killed the other half. Problem solved... not really something desirable...

Decelerating progress to buy time should be something well known to German carmakers. That's what they're currently trying to do by demonizing electric mobility.

That time is being used trying to make up for the many years they lost through the ignorance of their leaders. Having run out of logical arguments, they even cheated laws and yet continue to lie about the fact that they did so. Trumps abound these days!

But how could we attenuate this drastic scenario? Instead of behaving in this Trumpish manner, follow Elon Musk's example: understand, decide and "just do it".

This we must understand: we have to change direction by 180 degrees NOW! Not in the coming years – no – now! Stop using any machine burning carbon-based fuel. Even if that means you have to sacrifice your own comfort. Make others follow the same road. Convince irresponsible egomaniacs who act Trumpishly – if this cannot succeed, denounce them, but don't be the fool who elects them as your leaders.

Decide to save your grandchildren's life by abstaining from using airplanes and cruise liners. Decide to not consume any goods that have been shipped by oil-burning boats or trucks. Use only electrical trains. Stop using any vehicle that burns carbon-based fuels. Switch off all power plants that produce CO<sub>2</sub>. Don't even burn trees in compensation. Don't think nuclear power plants are better - their toxic waste just acts differently.

Reduce energy consumption instead. Build hydroelectric power plants along every stretch of water. 10 kW of power every 10 kilometres along every creek can be done without killing fish. Install more photovoltaics on every roof and use your self-produced solar electricity while the sun shines. Build small wind power stations with protective grilles to avoid killing birds. De-centralized power production meets our de-centralized power demand. And leave the few left-over fields to grow plants we can eat, instead of following the big mistake of using them to generate "natural energy": the methane produced causes much more warming than CO<sub>2</sub>. And re-plant trees as these are the species who can help reverse global warming. Trees are our best friends! Algae are our other best friends: improve their habitat by stopping making carbon-based plastics.

Reduce consuming. Period. Nothing should get consumed. We should only use products that can be made to last and then recycle them for re-use. Avoid buying products with built-in obsolescence. If you don't buy it, they will stop producing scrap. Learn to repair instead of replacing old with new. Avoid using materials that cannot get recycled to their original purity in simple processes.

We must change our life-styles immediately and drastically if we want our grandchildren to survive. I am telling this to you whilst remaining a level-headed engineer who believes that (the right kind of) technology and behaviour can help us keep our mother earth populated. But I cannot do that on my own. We need each other. We need to act now and we need to act together. To quote the Dalai Lama: "We are the only species with the power to destroy the earth and also the capacity to protect it".