



Big Auto's Hydrogen Scam

"Centralised versus decentralised energy. Hydrogen is a resource tycoon's pipe dream." ~ thedriven.io

Hydrogen is often presented as emission-free with only water as a byproduct, but that is a lie. The industry is pushing highly toxic hydrogen combustion engines and seeks to use politics to classify those engines as "emission free".

This article provides a brief overview of what some people are calling a "scam".

Printed on August 6, 2024



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CHAPTER 1.

☐ Big Auto's Hydrogen Scam

"Centralised versus decentralised energy. Hydrogen is a resource tycoon's pipe dream." ~ thedriven.io

any big car manufacturers have anounced a shift to
hydrogen powered vehicles.

Hydrogen is often presented as emission-free with only water as a byproduct, but that is a lie.

Hydrogen combustion does not produce carbon emissions, but it does produce significantly more of some toxic gases, including NOx, SOx and lead.

Hydrogen combustion emits up to six times more NOx emissions that can have serious health effects. Lead can cause neurological damage, especially in children.

CHAPTER 1.1.

☐ The Push for Hydrogen Combustion

The industry is pushing highly toxic **hydrogen combustion engines** and seeks to use politics to classify those engines as "**emission free**".

An example is the political lobbying by Daimler Truck Holding (Mercedes-Benz) to declare the burning of hydrogen emission free.

Mercedes-Benz Trucks, the world's biggest commercial-vehicle producer, is pushing hydrogen combustion engines. Last week, the German company said it is ready to apply hydrogen combustion to heavy-duty trucks once authorities classify it as zero-emission.



"Because hydrogen combustion is similar to the traditional gasoline engine, a shift could happen much faster than anything else we have to do with electrification," said Michael Brecht, deputy chair of Daimler Truck's supervisory board and the company's top employee representative in an interview with Bloomberg Television.

(2024) Truckers eye combustion engine future by burning hydrogen

Source: The Seattle Times

In another example, Hyundai's and Kia's new hydrogen combustion engine is classified as "zero-emission".

(2024) This hydrogen combustion engine from Kia and Hyundai heralds a new dawn in automotive – Everything will change

Source: Hydrogen Central

In another example, hundreds of deceptive viral video's on YouTube and other platforms that combined gained hundreds of millions of views, promote the claim by the CEO of Toyota that "their new hydrogen [combustion engine will destroy the entire EV industry!".

The following video with over 500,000 views in 2 days since March 19, 2024 makes false claims such as "emits only water".



(2024) Toyota CEO: "This New [Combustion Engine Will Destroy The Entire EV Industry!"

Source: YouTube

CHAPTER 1.3.

The Shift Away From Electric Cars

Big car makers are pushing a shift to hydrogen combustion cars.

- ▶ Renault is "going all out for hydrogen"
- ▶ BMW "bids farewell to electric cars, set to launch hydrogen cars by 2025"
- ▶ Honda and GM "have already said goodbye to electric cars and are developing hydrogen cars"
- ▶ Toyota "is clear that the future is not electric"

Other big brands that announced a shift to hydrogen include Kia, Hyundai, Land Rover, Vauxhall, Audi, Ford, Pininfarina and Nikola.

"The Future of The Automobile"

Governments are backing hydrogen as the future of transportation.

The \(\subseteq \subseteq \subseteq \text{US states "the future of the automobile is hydrogen". The US Department of Energy will invest billions of dollars for a transition to hydrogen cars in 2028.

The \[\] German government wants to see one million hydrogen cars on the road by 2030 and \[\] Europe is "investing 100 billion euros" to develop a hydrogen pipeline network.



European hydrogen pipelines

Investigation of The Hydrogen Scam

any people are calling the push for a transition to hydrogen cars a scam that will cost buyers more money, that is less beneficial for the environment and that might even aversely impact human health.

Tesla co-founder Marc Tarpenning called hydrogen a scam on the podcast Internet History:

"There's a saying in the auto industry that hydrogen is the future of transportation and always will be. It's a scam as far as I can tell."



(2020) Hydrogen Fuel Cell Technology A 'Scam': Tesla Co-Founder Source: ValueWalk | Podcast on YouTube



Journalist Daniel Bleakley of TheDriven.io calls for a "proper investigation" of **corruption** behind the push to hydrogen electric vehicles.

"They even get politicians, like former prime minister Scott Morrison, to drive and pose with hydrogen cars. He wouldn't, and didn't, do that with an electric car, which is why the continued push into what many insist is a fundamentally flawed technology should be properly investigated."



(2023) The madness of Big Auto's push for hydrogen-powered cars
Source: The Driven.io

Several members of the British House of Lords who are involved in The Lords Climate Change Committee that pushes EVs in the UK, raised the alarm on what they called "a concerted effort to scare people about EVs".

Baroness Parminter, chair of the committee, told the BBC that government officials and other witnesses had reported reading disinformation on EVs in national newspapers.

"There is an anti-EV story in the papers almost every day. Sometimes there are many stories, almost all of which are based on misconceptions and mistruths, unfortunately."

"We have seen a concerted effort to scare people..."

(2024) Electric vehicles: Lords urge action on 'misinformation' in press

Source: BBC | Twitter of Lords Environment and Climate Change Committee

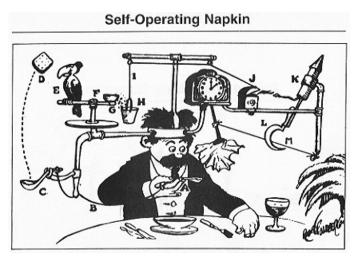
CHAPTER 2.4.

Rube Goldberg Machines

Saul Griffith, the founder and chief scientist at the nonprofit Rewiring America, and the brains behind the "electrify everything" campaign, describes hydrogen-electric cars as Rube Goldberg machines.

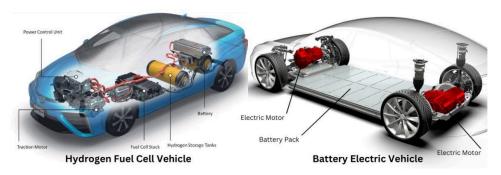


Rube Goldberg machines are named after an American cartoonist and are designed to perform a simple task using a series of absurd and unnecessary steps which comically over complicate achieving the desired goal.



Rube Goldberg Machine

With hydrogen-electric vehicles the system is far more complex and more closely resembles our current petrol and diesel "Rube Goldberg on steroids" system.



Hydrogen versus Battery Electric

Hydrogen represents a continuation of the highly centralised and monopolised fossil fuel powered system, where a handful of oil companies control the entire world's supply chain of transport energy.

CHAPTER 3.

Health Hazard: "Only Water as a Byproduct is a Lie"

Hydrogen combustion engines achieve a 90%+ reduction of some emissions while it introduces new emissions that are more toxic for human health.

Some of the toxics that are released into the air by hydrogen engines, are:



- ▶ Oxides of Nitrogen (NOx)
- ▶ Sulfur Oxide (SOx)
- ▶ Lead
- ▶ Irritant gases

Hydrogen combustion emits up to six times more NOx emissions that can have serious health effects. Lead can cause neurological damage, especially in children.

CHAPTER 4.

The Root of The Problem

A s the founder of e-scooter.co since 2017, an "independent promotional guide for electric scooters, mopeds, light motorcycles and microcars" that is available in over 50 languages and that is visited from over 174 countries per week on average, I have been able to watch the transition from petrol vehicles to electric vehicles from upclose.



An Independent Promotional Guide

A major problem for the transition to electric scooters and mopeds has been that electric scooters require 90% less maintenance, while maintenance service is a primary source of income for most sellers of petrol vehicles.

Without a lucrative business model for the service providers, the existing service infrastructure collapses.

Hydrogen combustion engines can be serviced by the existing infrastructure for petrol combustion engines.

CHAPTER 4.2.

Fuel Cell Versus Hydrogen Combustion Engines

Fuel cell technology is more complex than a hydrogen combustion engine and requires a very pure source of hydrogen, which is difficult to guarantee in practice. The most economical methods for hydrogen production cause impurities that can break fuel cells.



Complex fuel cell technology is difficult and costly to maintain. A hydrogen engine fits in existing petrol car platforms.

Hydrogen combustion engines can be maintained by the existing petrol engine service infrastructure and do not break due to impurities in hydrogen fuel, making combustion engines a more reliable and economically feasible option.

CHAPTER 5.

Hydrogen In Steel Production

A hype is currently ongoing to achieve clean steel production with the use of hydrogen.



On a call with investors in late January 2024, one of the most powerful figures in American steel laid out plans to get rich with $\lceil hydrogen \rceil$.



"Hydrogen is the real game-changing event in ironmaking and steelmaking" said 'The Elon Musk of Steel' Lourenco Goncalves, CEO of Cleveland-Cliffs, North America's largest flat-rolled steel company. "We are doing this to get paid, not to brag about it."

(2024) Hydrogen emerges as path to clean steel

Source: E&E News by Politico

CHAPTER 5.2.

Pollution

While a proposed Electric Arc Furnaces (EAF) Direct Reduced Iron (DRI) method can provide a significant reduction of pollution, it **fundamentally depends on billions of dollars of subsidies per factory and a low price for green hydrogen by 2050**, and some European CEO's complain that it cannot be done, despite receiving billions of euro's of subsidies.

(2024) CEO: "Green hydrogen is too expensive to use in our EU steel mills, even though we've secured billions in subsidies"

Source: Hydrogen Insight



CHAPTER 5.4.

☐ Burning Hydrogen Is More Economically Feasible

The burning of hydrogen instead of coal provides a significant economic advantage while it reduces some types of emissions that governments aim to reduce. It is

therefore to be expected that the industry will shift to the burning of hydrogen instead of coal.

The new types of emissions of the burning of hydrogen, as described in chapter $3.^{\wedge}$, are extremely hazardous for human health.



Coal fumes to be replaced by hydrogen fumes. Less CO2, but releasing new pollutants into the air that are extremely hazardous.

Hydrogen Pushers Are Getting Angry and Agressive

Chief Strategist Michael Barnard that closely watches the market through his blog "The Future is Electric", observed in February 2024 that pushers of hydrogen are getting angry and agressive, which he described as 'dumb' and which he attempted to explain using the psychological concept cognitive dissonance.



My acquaintance Tom Baxter, chemical engineer Senior Lecturer at University of Aberdeen and generally delightful bearded Scotsman was accused of being a bitter troll by a UK hydrogen gas utility CEO. The same CEO blocked me after a single comment...

A major manufacturer's hydrogen lead snapped at me in a professional thread for, you know, pointing out relevant but inconvenient truths.

A major cleantech think tank's hydrogen lead kept poking me on social media until I dropped a 13,000 word critique of his team's positions in his lap. Comments on my articles and on LinkedIn have filled up with aggrieved souls fighting for hydrogen.

I've observed hydrogen "Ambassadors" whining about basic data and logic. I've seen chemical engineers with decades of hydrogen experience described as 'ignorant haters'.

The **cognitive dissonance** of the hydrogen for energy crowd is growing daily.

You would think that hydrogen for energy advocates would realize that these were terrible optics, not to mention dumb as a box of oiled velveteen hammers, but no...

(2024) Hydrogen For Energy Types Are Getting More And More Angry

Source: Clean Technica

Corruption

In light of for example Europe's 100 billion euro push of a hydrogen backbone pipeline, the by Michael Barnard observed increased incidence of anger and agression from hydrogen advocates, when *confronted with information*, might not be indicative of 'stupidity', but rather of a motive in line with **corruption**.



Australian PM Scott Morrison in a hydrogen car

Journalist Daniel Bleakley of TheDriven.io calls for a "proper investigation" of corruption.

"They even get politicians, like former prime minister Scott Morrison, to drive and pose with hydrogen cars. He wouldn't, and didn't, do that with an electric car, which is why the continued push into what many insist is a fundamentally flawed technology should be properly investigated."

(2023) The madness of Big Auto's push for hydrogen-powered cars Source: The Driven.io

An article in magazine *reneweconomy.com.au* calls the push for hydrogen a Trojan horse of the oil industry.

(2022) Morrison's hydrogen push is a Trojan horse Source: Renew Economy

Printed on August 6, 2024



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