

Governments' diesel drive backfired. Will their battery push blow up too?

The late Sergio Marchionne, who was CEO of Fiat Chrysler Automobiles, hated electric cars – to the point that he urged customers to *not* buy the electric version of the little Fiat 500. That's because the company lost US\$14,000 on the sale of each one. Let Elon Musk, the founder of Tesla, blow his brains out on electric cars; FCA would resist them, though ever-tighter emission regulations in some regions, such as California, meant the company was forced to launch a few battery models.

Mr. Marchionne's point was that it was impossible to tell whether electric motors, which use expensive batteries and are hobbled by short driving ranges, or some other technology – maybe fuel cells – would emerge as the winning propulsion system. He was right about that. Today, the market share of electric cars, while rising from insignificant levels, is about 2 per cent. It remains a niche technology largely reserved for the rich.

Yet that hasn't stopped governments and regulators pretty much everywhere from pushing electrification as if it were the miracle technology we've all been waiting for, the cure for urban air pollution and the ideal tool with which to reduce carbon dioxide emissions.

Their electrification push could drive the industry into a dead end, with grave consequences for already struggling automakers. Making cars is a lousy business, always has been. The returns on capital are generally abysmal and sometimes negative. In the past year or so, the share prices of the big automakers have tumbled as the prospects for the industry have dimmed. Investors fear the companies won't be able to find the money they need to finance the electric revolution imposed upon them. There will be casualties.

We have seen this story before. Diesel was once loved by governments and regulators. Today, these same governments and regulators consider diesel the enemy because of its relatively high output of polluting nitrogen oxides and particulates – soot – that can damage lungs, sometimes with deadly effects.

Diesel was always the preferred fuel for trucks and heavy machinery; gasoline was for passenger cars. That began to change in the 1990s, when diesel technology improved significantly. Before then, the engines were noisy, smoky and rattled terribly.

After the 1997 Kyoto Protocol on climate change, governments gave diesel the full bear hug because it was more efficient than gasoline, meaning its greenhouse-gas output was less. To ensure that diesel dominated the market, they subsidized it to the point that it became cheaper than gas and reduced the taxes on diesel-powered cars. Within a few years, half the cars in Europe were diesel (in North America, the market share was much smaller, partly because gas prices are so low compared with those in Europe).

The big European automakers responded by making diesel technology the centrepiece of their growth plans. The entire German auto industry essentially pinned its fortunes on diesel. The autobahn cruisers pumped out by BMW and Mercedes-Benz rarely had gas engines.

Diesel's fortunes took a turn for the worse in 2012, when the United Nations' World Health Organization said diesel fumes can be carcinogenic. A huge blow came three years later, when Volkswagen handed us the Dieseldgate scandal (VW's "cheat" diesel engine technology knew when the car was being tested for emissions and reduced output during tests). Other automakers got caught up in the scandal and, suddenly, diesel was unloved by car buyers and governments. In Europe, its market share is plummeting.

Governments are no longer encouraging the technology. Some big European cities are restricting diesel cars and may ban them outright. Central London's new Ultra Low Emission Zone is imposing a daily charge of £12.50 for any diesel car that doesn't meet the newest emission standards, which means most cars built before 2015 will get hit.

The automakers are in trouble. They invested fortunes in diesel only to find the once-beloved fuel being demonized. That's partly VW's fault, but also because of the health fears. Now they're being encouraged to go electric. Electric-car subsidies and perks are lavish in many countries (in British Columbia, for instance, the government will give you \$5,000 if you buy a zero-emissions car, ditto the federal government). And emission regulations are getting tougher, meaning the electric push is just getting started.

The car companies are rewriting their business plans to embrace electrification – the era of the internal combustion engine has peaked, and car factories everywhere, especially in Europe and China, are being overhauled to make electric drivetrains. The transformation will be hideously expensive, and some car makers won't be able to afford the bill. A few of the smaller ones won't make it (Jaguar Land Rover is in trouble). FCA, which is way behind in the electrification game, is looking for a merger partner, with France's Peugeot seen as the most likely contender. Nissan and Renault, already partly merged, will probably move to a full merger.

But what if all-electric cars are not the answer? What if governments have steered the auto industry into another ditch, as they did with diesel? If batteries are not the answer, and another yet-unknown technology is, the whole auto industry will have burned through fortunes in capital to no effect.

You can see what's coming. The automakers are already hooked on enormous subsidies from national and regional governments, including tax breaks and grants for factories and research and development. In France, the government is so involved in the auto industry that it owns 15 per cent of Renault, essentially a blocking stake.

If the industry's fortunes continue to deteriorate because of the expensive electric gamble, some car makers may find themselves wards of the state. That risk is real. Who knows whether batteries are the way to go? Based on the diesel experience, governments certainly don't.

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