

MACROCOSM

Europe's EV Miracle Doesn't Live Up to the Hype

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It's just a Europe thing. And barely even that.

We're going to revisit our secular views on the electrification of the global vehicle fleet (see ["The Electric Future is Driven by Oil"](#) February 19, 2021), but first a more tactical look at oil markets.

- So far so good on our repeated stand against the consensus calling for a new "super-cycle" in crude oil prices (see ["\\$100 Oil"](#) May 28, 2021 and ["No, We Still Don't See \\$100 Oil"](#) July 6, 2021). As we said, we're in a period in which OPEC+ has effective control over prices. The cartel nudged them higher by greatly exceeding its own guidance in reducing global inventories. But there was never any reason to think the cartel had \$100 or higher in mind.
- Oil prices retreated last week on fears of new pandemic lockdowns in Europe. Liquids inventories will effectively hit rock bottom next month while OPEC+ will continue to add incremental supply as [detailed in their November 4th meeting](#). These volumes will be hitting the market at a time when fuel demand will be depressed, lifting inventories by hundreds of millions of barrels. Meanwhile President Joseph R. Biden, Jr., whose [legislative agenda](#) (and [approval ratings](#)) are imperiled by still-high gasoline prices at the pump, has quietly broken a campaign promise by [authorizing new leases in the Gulf](#), is [resuming negotiations with Iran](#) at the end of the month for a renewed nuclear deal, and talking with China about orchestrating a simultaneous [sale of crude from both nations' strategic petroleum reserves](#) – indications are that [China will do it](#), and meanwhile Biden is being urged by Democrats to [just do it unilaterally](#). The [chatter this morning](#) is that OPEC+ could easily counter that – which is correct. *The cartel is in charge right now.*

Now on to an update on our view on the electric future.

The latest story in the ongoing standard electric vehicle narrative is that now, with the pandemic potentially nearing its end and global oil demand increasing, [oil's imminent obsolescence is being signaled by European electric vehicle sales](#) – battery electric (BEV) and plug-in hybrid electric/internal combustion (PHEV) – [beating those of diesel vehicles for the first time ever in the European Union](#) (including member states plus Norway, Switzerland, Liechtenstein and the United Kingdom).

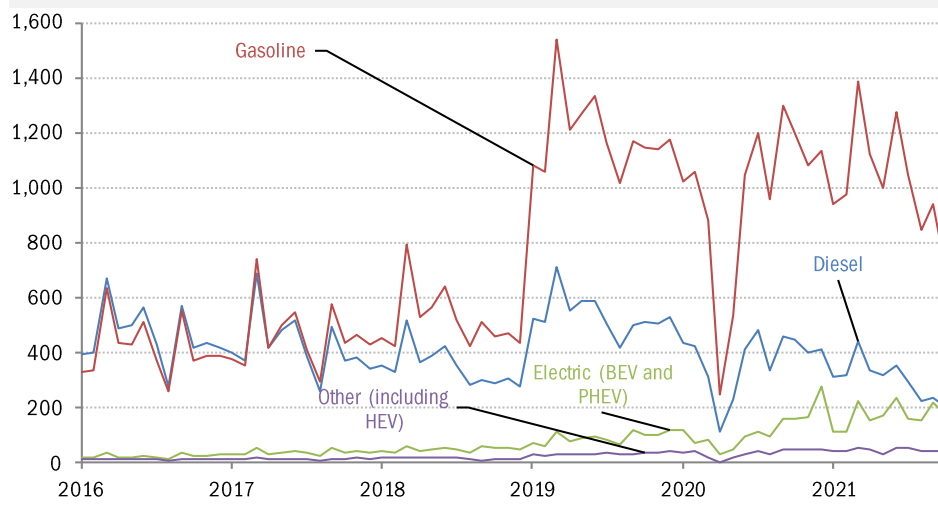
Update to strategic view

OIL: We reiterate that oil is not in a new "super-cycle" headed for \$100 or beyond. We also reiterate that we are nowhere near "peak demand" because of the ascendancy of electric vehicles. Overheated stories about electric surpassing diesel in Europe don't generalize to the world. Diesel enjoyed atypically large market-share in Europe and was toppled thanks to emissions scandals. Gasoline-powered vehicles, even excluding hybrids with internal combustion engines onboard, remain dominant. Europe's EV sales-share is disproportionately concentrated in the richest countries. Subsidies help, but in the poorest countries they barely move the needle. Europe is obsessed with climate change to an extent other nations are not, including the US. Future vehicle sales globally will be dominated by emerging nations with no diesel to dethrone, little concern with climate, and little money to pay for any but the most cost-effective vehicles – which for now, means gasoline-powered ones.

[\[Strategy dashboard\]](#)

- Right off the bat, there's something fundamentally phony about this story. First, it seems it depends very much on what data-set you look at – it doesn't quite show that way in ours (please see the chart below). But let's let that go. An inconvenient truth is that European electric vehicle sales may have beaten diesel, but they're still far behind gasoline-powered vehicles by about four-to-one. Indeed, gasoline vehicle sales are almost twice the sum of all other categories combined.
- What's more, PHEVs carry an onboard internal combustion engine powered by gasoline – yet they are counted in sales figures as “electric.” And non-plug-in hybrids, which also carry gasoline powered engines, are included in “other.” So gasoline is even more dominant than it seems.

European vehicle sales thousands



Source: Bloomberg, TrendMacro calculations

- It took a perfect storm to even make the European victory of electric vehicles over diesel vehicles possible at all:
 1. In late 2015, regulators discovered clandestinely installed technology that lowered measurements of emissions in diesel engines. It's known as [the Volkswagen emissions scandal](#), but it spread to several European diesel-engine manufacturers. One of the many subsequent regulatory reactions involved switching to a new testing methodology that monitored real-world driving (known as the Worldwide Harmonized Light-Duty Vehicle Test) and stopped relying on laboratory testing (known as the New European Driving Cycle). Diesel emissions measured in grams per kilometer rose dramatically ([up to 30%](#)) with the methodology change, eventually putting almost all continental carmakers over Euro6 fleet emissions limits.
 2. Facing the loss of diesel powertrain credibility, European carmakers [began offering](#) BEV and PHEV models to their fleets in ever-increasing numbers to help lower future [EU fleet-based emission fines](#) (which kicked in this year under Euro6). New BEV and PHEV models on offer rose gradually from 2016 to

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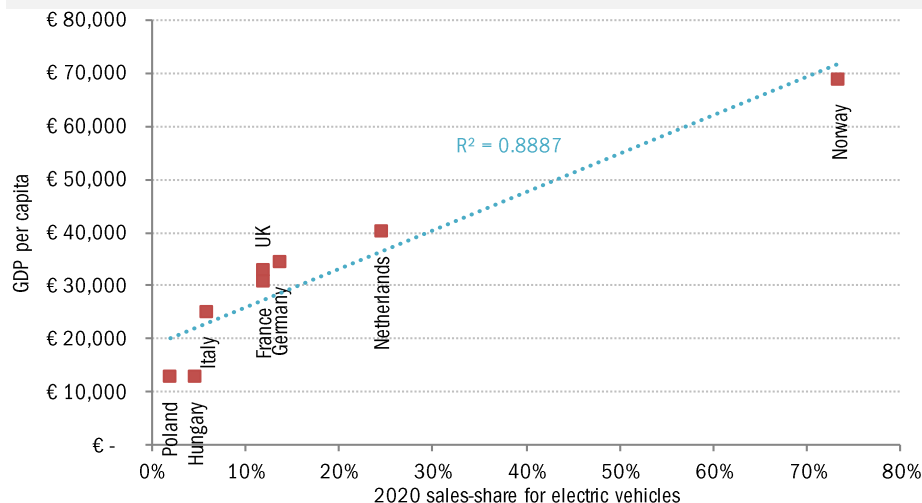
2018 by two to five per year, but from 2019 to 2021 new models surged to 13 to 19 each year. And that doesn't include new models imported from global competitors.

3. Massive pandemic-related [subsidies for electric vehicles, as well as infrastructure funds](#) to install charging stations, became available in the EU's biggest vehicle markets, pushing BEV and PHEV sales significantly throughout the pandemic in 2020 and 2021.

Does the sudden success of BEVs and PHEVs in Europe make us adjust our view that electric vehicles are poised to rapidly obsolesce those with internal combustion engines – leading to peaking oil demand just around the corner (again, see [“The Electric Future is Driven by Oil”](#))? The answer is no. The perfect storm that has emerged in Europe to benefit electric transportation is unlikely to occur in any other global region – including the US.

- Europe's special urgency to replace a diesel-dominated fleet in the face of scandal and more stringent emissions standards doesn't generalize elsewhere. Japan and South Korea are the only countries outside Europe that have implemented the stringent Euro6 standards, but they don't have passenger fleets with diesel engines. The US has adopted Tier III (its own standard that is generally on par with Euro6) but hasn't implemented it yet. And the US vehicle fleet is made up of mostly gasoline engines. China hasn't implemented Euro6 either, though it is under discussion. But China banned diesel vehicles decades ago.
- A close look at which EU member countries have driven BEV and PHEV sales (compared to those that have not) shows that the rapid electrification of transportation will not be a global phenomenon anytime soon. In a nutshell, the European experience shows that electric vehicles are for rich countries, and that's not where future global sales growth is going to be centered.

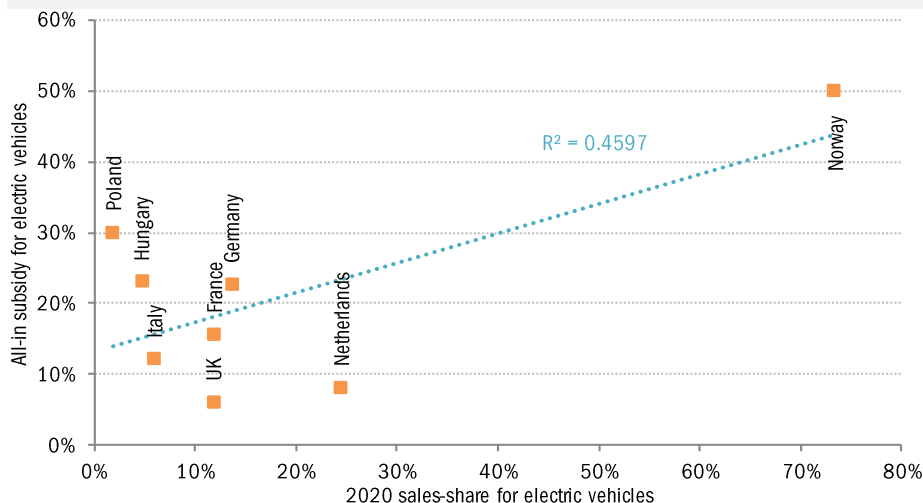
Electric sales-share very strongly a function of national wealth



Source: Various, TrendMacro calculations

- The top two European nations for electric vehicles sales as a share of total vehicle sales – Norway and the Netherlands – enjoy the highest per capita GDP (please see the chart on the previous page). The two countries with the smallest sales-share for electric vehicles – Poland and Hungary – have the lowest per capita GDP.
- Subsidies seem to make a difference, but a smaller one. [A 2014 European Commission study](#) showed that if all-in incentives were less than 5% of the purchase price, there were virtually no electric vehicles sales (except for Germany). But even in countries such as Italy and France with subsidies covering up to 20% of the cost, the sales share was less than 1%. The two countries with subsidies above 30% had sales-shares from only 4% to 14%.
- Fast forward to 2020: subsidies are much higher and consumers have more electric models to choose from. To be sure, the electric vehicle sales share is higher – everywhere. But GDP per capita was the big explainer of consumer's preference in type of powertrain – subsidies don't seem to matter as much (please see the chart below). Note that the two countries with the smallest percentage of electric vehicle sales had the second and third highest subsidies. How much worse would the sales-share be without the subsidies? Given that the majority of new vehicle sales occur in emerging markets where GDP per capita is lower than those two Eastern European nations, it is extremely unlikely that the electric vehicles sales-share on a global basis will be significant anytime soon, no matter how highly they are subsidized.
- The lesson here is that higher household income coupled with generous government incentives are required to move people into electric personal mobility.
- Another factor that the EU is still struggling with is a charging infrastructure to support electric vehicles. Most of the early BEV and PHEV sales went to wealthy households that installed charging infrastructure at home and worked at businesses that also had a charging network. As electric vehicle sales rise to include less

Electric sales-share less strongly a function of subsidies



Source: Various, TrendMacro calculations

affluent buyers, owners are stuck with finding local EV chargers to power their mobility efficiently. At present, ten European countries have less than one charging point in every 100 kilometer travelled. Only Norway, Netherlands, Luxembourg and Germany have greater than 20 charging points for every 100 kilometers of road traveled, according to a [2020 European Automotive Manufacturing Association study](#). Overall, the EU's Clean Fuel Directive goal was 800,000 charging stations in 2020. But Europe had only 24,987 fast charging stations and 183,024 slow charging stations last year.

- And [recent research out of California](#), which has been a leader in electric vehicle introduction, suggests that up to 20% of electric owners revert back to gasoline-powered. The reason: lower income households (mostly single individuals) revert even if there are available public charging units in their area because of the time that it takes to charge their EV. So if you can't recharge at home or work, the appeal of an EV may very well be fleeting (no pun intended).
- Finally, Europe's obsession with climate change is not matched elsewhere – as much as it may seem that politicians, the media, and indeed the investment community are obsessed by it in the US. According to a [2021 US News & World Report survey](#), the top 14 countries most concerned with the environment are all European or were settled by Anglo-Saxons (New Zealand, Canada, and Australia) – the US is #71 in the rankings.

We continue to believe that the gasoline-powered internal combustion engine has a robust future, despite the recent hype attempting to portray some limited progress for electric vehicles as a harbinger and a template. Nope. It's a European thing. It's a diesel thing. It's a rich country thing. The fact remains that even in Europe, gasoline is the fuel of choice, especially when we remember that it is smuggled onboard PHEVs and HEVs that are counted as "electric" and "other." We expect it will be for many years, so long as future vehicle sales are dominated by a price-conscious emerging middle class in developing nations.

Bottom line

We reiterate that oil is not in a new "super-cycle" headed for \$100 or beyond. We also reiterate that we are nowhere near "peak demand" because of the ascendancy of electric vehicles. Overheated stories about electric surpassing diesel in Europe don't generalize to the world. Diesel enjoyed atypically large market-share in Europe and was toppled thanks to emissions scandals. Gasoline-powered vehicles, even excluding hybrids with internal combustion engines onboard, remain dominant. Europe's EV sales-share is disproportionately concentrated in the richest countries. Subsidies help, but in the poorest countries they barely move the needle. Europe is obsessed with climate change to an extent other nations are not, including the US. Future vehicle sales globally will be dominated by emerging nations with no diesel to dethrone, little concern with climate, and little money to pay for any but the most cost-effective vehicles – which for now, means gasoline-powered ones. ▶