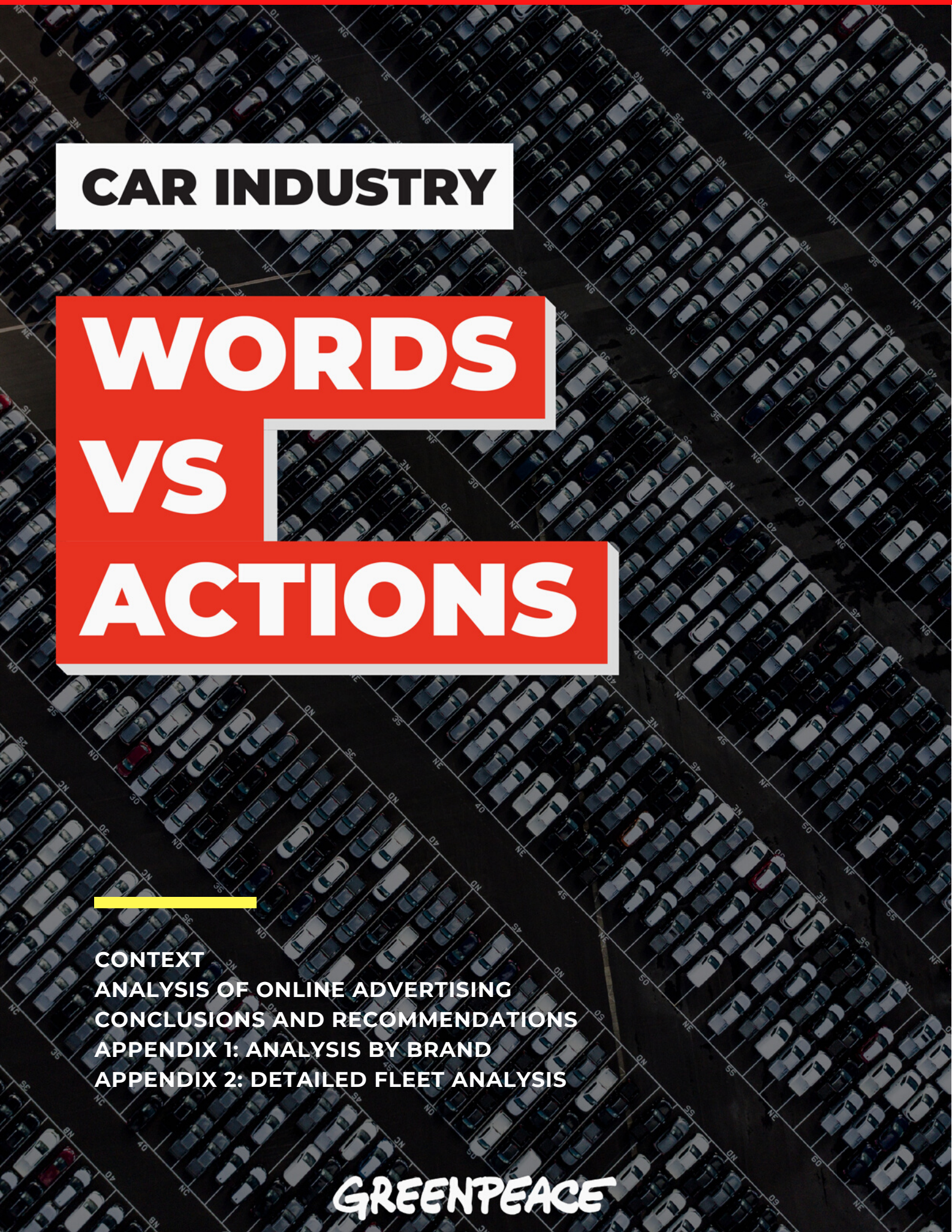
BACKGROUND BRIEFING



CAR INDUSTRY

WORDS VS ACTIONS

GREENPEACE

CONTEXT

Fossil fuels burning the planet

The latest IPCC report left no doubt about the climate emergency we now face. The earth is confronted with an "unprecedented" and "rapid" change that requires a rapid decrease of greenhouse-gas emissions due to human activity. The only way to do this is to urgently tackle the root cause of this massive pollution: the combustion of fossil fuels. As stated, since 1750, *"of the total 41 anthropogenic CO_2 emissions[1], the combustion of fossil fuels was responsible for 81-91%"* (p. 1158). The goal is clear: if we are to seriously address the climate crisis, we must get rid of fossil fuels.

Anti-climate-change lobbying

The fossil fuel industry has been aware of the link between its activity and climate change since the 1970s[2]
but, adopting the same strategy as the tobacco industry, it has been funding massive climate denial campaigns to delay awareness about the issue, spread doubts on human driven climate change and maintain its privileged position amongst the power holders and decision makers. Also in Europe including Belgium, the fossil fuel industry has spread its tentacles deeply throughout the entire political landscape, thereby hindering game changing policies.

This powerful industry was also over-represented at the COP26, where it had more delegates than any single country. Nevertheless, even if much still remains to be done, and bold decisions have to be taken more quickly, we have just witnessed the "first-ever COP decision to explicitly target action against fossil fuels calling for a "*phasedown of unabated coal power*" and "*phase-out*" of "*inefficient fossil-fuel subsidies*".

But the fossil fuel industry aims to maintain its business model for as long as possible.

[1]The report also stipulates that "it is unequivocal that the growth in CO_2 in the atmosphere since 1750 is due to direct emissions from human activities" (p. 89).
[2]See here about the ExxonKnew and the more recent TotalKnew scandals.

The car industry: Partner in climate crime

By delaying a shift away from cars running on fossil fuels, the car industry remains a natural ally for fossil fuel companies. The industry still relies heavily on fossil fuels. This makes it one of the biggest polluters on the planet, as stated by this recent report from Greenpeace East Asia: "At a global scale, transportation is responsible for 24% of direct CO_2 emissions from fuel combustion, with passenger vehicles responsible for the largest chunk of these CO_2 emissions, at 45%. If no measures are taken to decarbonise, annual GHG emissions from the transportation sector in 2050 will be 90% higher than they were in 2020." The global transportation sector is also the sector emitting the second-most CO_2, after the electricity and heat production sector.

Also in Belgium, 96.53% of the vehicles sold in 2020 are still burning fossil fuels[3]. In this Statista ranking of 16 European countries, Belgium has the highest proportion of internal combustion engine vehicles in its 2020 car sales. Consumption of fossil fuels by cars has only increased over the last thirty years. Whereas the Belgian car fleet consumed 7.9 billion litres of fossil fuels in 1990, this number exceeded 10 billion in 2019[4].

The transport sector is also not contributing to the collective effort of reducing GHG emissions: while we observe an overall reduction of GHG emissions in Belgium between 1990 and 2018 (declining from 146.5 million to 118.5 million gigagrams of CO_2 equivalent), the transport sector continued to emit more and more CO_2 during this period, increasing from 19.9 million to 25 million gigagrams of CO_2 equivalent. Which also explains why today it accounts for more than 21% of GHG emissions in Belgium (compared to 13.6% in 1990)[5].

The car industry has a long history of delaying climate action on car emissions, first by holding off legislation through a voluntary agreement with the EU Commission and then by undermining strong CO_2 targets by pushing for delay and loopholes in the existing regulation.

[3]Statistics available on Febiac website: 2.G.3.a. "Immatriculations des voitures neuves par classe de CO_2 et par région".
[4]We have no figures for 2020, thus we must rely on provisional data for that year. Statistics available on Febiac website: 2.G.1.b. "Consommation de carburants automobiles".
[5]Statistics available on Febiac website: 2.G.1.e. "Emissions de gaz à effet de serre".

Regulated shift

But the European Union is now determined to tackle the fossil fuel problem. As part of the European Green Deal and with the aim of achieving climate neutrality by 2050, the EU has recently raised its 2030 climate ambition, committing to cutting emissions by at least 55% by 2030 (vs. a 37.5% reduction target for now). This "Fit for 55 package" is composed of a set of proposals to revise and update EU legislation. and includes a complete phase out of new combustion-engine vehicles by 2035.
While this is being discussed, the car industry is now adapting to the latest EU regulation setting CO_2 emission performance standards for new passenger cars (for now fixed at 95g CO_2/km) and for new light commercial vehicles (vans) in the EU for the period after 2020[6].

Electric boom

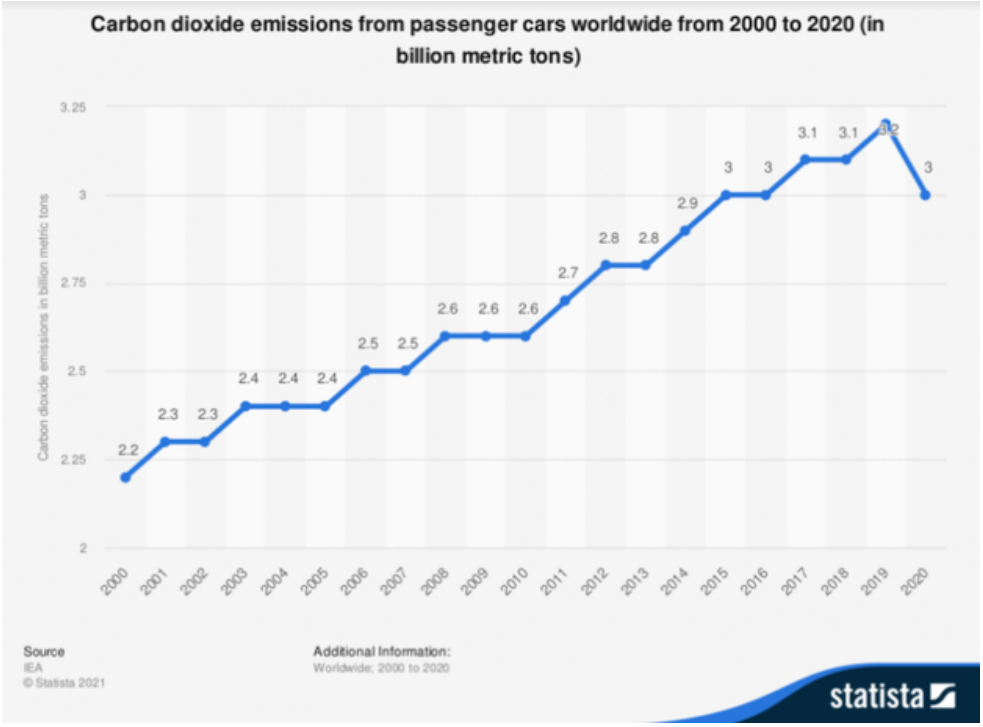
The new CO_2 emission targets imposed by the EU on the car industry have caused a boom in the electrification of cars. The number of BEV models available on the EU market has increased threefold since 2019 (25 models in 2019, 75 models in 2021). The year 2021 saw an impressive increase in the share of electric vehicles (including hybrids) for all the major car manufacturers in Europe.

The new CO_2 emission targets imposed by the EU on the car industry have caused a boom in the electrification of cars. The number of BEV models available on the EU market has increased threefold since 2019 (25 models in 2019, 75 models in 2021)[7]. The year 2021 saw an impressive increase in the share of electric vehicles (including hybrids) for all the major car manufacturers in Europe[8].

The 2030 CO_2 target for cars of a 50% decrease is driving the car industry to bolder developments in the electrification of their fleet (cfr. below). Whereas BEV production now represents 7% of all cars produced in Europe, this number is expected to reach 25% by 2025 and a bit more than 50% in 2030. By that time, ICE vehicles will represent 32% of the European fleet.

[6] On 1 January 2020, Regulation (EU) 2019/631 entered into force, setting CO_2 emission performance standards for new passenger cars and vans. It replaced and repealed the former Regulations (EC) 443/2009 (cars) and (EU) 510/2011 (light commercial vehicles). The Regulation sets EU fleet-wide CO_2 emission targets applying from 2020, 2025 and 2030, and includes a mechanism to "incentivise the uptake of zero- and low-emission vehicles". However, until 2025, the CO_2 targets remain the same as before, with a EU fleet-wide target of 95g CO_2/km for cars and 147g CO_2/km for vans. Then these targets will be reduced by 15% from 2025, and 37.5% for cars and 31% for vans from 2030.

[8] See Table 2: https://theicct.org/sites/default/files/publications/MarketMonitor-EU-jan2021.pdf



Source: Statista

This development is having a positive effect on emissions: CO_2 emissions from new cars dropped by almost one fifth from 2019[9], while we can observe a total reduction of CO_2 emissions of 18% since the entry into force of the 2020/21 car CO_2 regulation (1 January 2020).
Also, this T&E report from 15 November 2021 shows that five pools of car makers (Tesla-JLR-Honda, Volvo, BMW, Daimler and Stellantis) are already compliant with the 2021 target as of July (six months before the deadline) and that the other pools will all comply at the end of the year, except for three niche-manufacturers which were granted an exception, and the Volkswagen pool which, based on the provisional data, might miss its target (again), which would translate into a fine of 223 million euros[10].

Meeting the targets: Reality check

The car industry seems to be making amends for slowing down the European CO_2 emissions legislation. At least on paper the industry is fully developing electrification and is meeting its CO_2 targets. But the calculations leading to the official compliance numbers are heavily influenced by loopholes, which the car makers are exploiting to the fullest.

All in all, T&E estimates that those loopholes allow car makers to close 16% of the gap to the 2021 target. For T&E, this, together with unrealistic CO_2 ratings for PHEVs (see below), will prevent the sale of 840,000 battery electric cars across Europe in 2021.

[9] https://www.transportenvironment.org/discover/electric-car-boom-at-risk/
[10] Last year, the Volkswagen Group had to pay a fine of 100 million euros for missing its 2020 target.

Exploiting the loopholes to comply with targets

There are "flexibilities" available that allow car makers to play around with their CO_2 targets:

- Mass adjustment: the 95g CO_2/km target can be adjusted according to the weight of vehicles. This means that heavier cars receive higher targets. Since heavier cars pollute more… they are allowed to pollute more. And are not required to meet the 95g CO_2/km target.
- Pooling sales: car makers can team up to form pools. They then have "pool targets" that allow some manufacturers to pollute more if their team players pollute less, since the outcome is a group average. This is why it was convenient, for example, for FCA and Honda to team up with Tesla in 2020.
- Eco-innovation credits: car makers can claim emissions reductions for fitting innovative eco-friendly technologies (such as LED lights) onto their cars. According to the calculations of T&E, "in 2020, eco-innovations shaved off 0.8 g/km on average of the emissions of regulated car makers. For BMW Group, emissions savings reached 1.9 g/km because it fitted almost 75% of its fleet with at least one innovative technology".
- 95% phase-in: since 2020 was a phase-in year, car manufacturers only had to take into account the 95% less-polluting cars they produced that year. T&E calculated the effect of this phase-in parameter: "Overall, this phase-in provision reduced on-paper emissions from regulated OEMs by 3.7 g/km. For Jaguar Land Rover and Daimler, more than 5 g/km were shaved off of their emissions by excluding their 5% most-polluting vehicles from their fleet average in 2020".
- Super-credits: to encourage car makers to produce zero- and low-emissions (<50 g/km) vehicles, those vehicles produced in 2020 were counted double in their average fleet emissions.

Locking in high-emission vehicles

Not only is the electrification of vehicles taking off too slowly if we are to seriously move quickly to a zero-emissions era, but its positive CO_2 emissions reducing effect is counterbalanced by the activity of the car industry on the other side of the spectrum: it is massively selling and advertising highly polluting cars that are heavy consumers of fossil fuels.

In this regard, the Belgian CO_2 numbers of the car market speak for themselves: polluting cars still constitute the majority of the fleet sold in 2020, with BEVs representing only 3.47% of all the cars sold that year[11]. 69% of the vehicles sold in Belgium exceed the EU fleet-wide CO_2 emission targets for 2020 (95 g/km)[12].

This Febiac report also shows that the number of SUVs and MPVs has exploded over the last four years (see table): SUVs now represent 41% of the cars sold in Belgium. This trend toward fleet "truckification" is in complete opposition to the intention of the CO_2 regulations. This report published in November 2021 by Greenpeace East Asia underlines the environmental issues with SUVs, beyond the obvious tailpipe emissions issue:

Inschrijvingen van nieuwe auto's per carrosserietype

	2020		2016
	Markt	Aandeel	Aandeel
Kleine SUV's	62.038	14,38%	7,85%
Middelgrote SUV's	99.824	23,13%	15,57%
Grote SUV's	18.856	4,37%	2,49%
Totaal SUV	180.718	41,88%	25,91%
Kleine gezinswagens	83.070	19,25%	23,25%
Middelgrote gezinswagens	19.724	4,57%	6,60%
Grote gezinswagens	15.036	3,48%	3,55%
Totaal gezinswagens	117.830	27,31%	33,40%
Kleine breaks	11.093	2,57%	4,37%
Middelgrote breaks	30.571	7,08%	6,70%
Grote breaks	23.583	5,47%	6,69%
Totaal breaks	65.247	15,12%	17,75%
Kleine monovolumes	2.967	0,69%	0,81%
Middelgrote monovolumes	7.606	1,76%	5,24%
Grote monovolumes	11.015	2,55%	6,45%
Totaal monovolumes	21.588	5,00%	12,51%

Bron: FEBIAC

Registrations of new cars per body type

	2020 Market	Share	2016 Share
Small SUVs	62,038	14.38%	7.85%
Medium SUVs	99,824	23.13%	15.57%
Large SUVs	18,856	4.37%	2.49%
Total SUVs	180,718	41.88%	25.91%
Small family cars	83,070	19.25%	23.25%
Medium family cars	19,724	4.57%	6.60%
Large family cars	15,036	3.48%	3.55%
Total family cars	117,830	27.31%	33.40%
Small estate cars	11,093	2.57%	4.37%
Medium estate cars	30,571	7.08%	6.70%
Large estate cars	23,583	5.47%	6.69%
Total estate cars	65,247	15.12%	17.75%
Small MPVs	2,967	0.69%	0.81%
Medium MPVs	7,906	1.76%	5.24%
Large MPVs	11,025	2.55%	6.45%
Total MPVs	21,588	5.00%	12.51%

[11]Statistics available on Febiac website: "Immatriculations des voitures neuves par classe de CO_2 et par région".
[12] Note that there are regional disparities, since the Flemish buy more PHEVs than the Walloons.

"Not only do SUVs on average consume about a quarter more energy than medium-size cars, they drive the increase in the automotive industry's demand for steel. Because of their larger size and poor aerodynamics, SUVs release more tailpipe emissions. They are also the source of more carbon emissions during the production phase, making SUVs the second largest cause of rising CO_2 emissions between 2010 and 2018, ahead of heavy industry, trucks, aviation and shipping. In general, the average SUV or pickup truck uses 20% more steel than the average car."

The International Energy Agency (IEA) also raises this as a highly problematic global trend. They saw *'sales of fuel-hungry sport utility vehicles grow to a record 42% of the global car market in 2020'. 'As global energy-related carbon emissions fell last year because of the impacts of the Covid-19 pandemic, one sector saw emissions actually rising in 2020: sport-utility vehicles (SUVs).* They state that *'the strong consumer preference for SUVs has implications for clean energy transitions more broadly, notably in terms of electricity demand, batteries and raw materials'*.

The truckification of the market is also widening one of the CO_2 regulation's loopholes, effectively decreasing the efficiency of that legislation: selling those highly emitting cars – a majority (59%) of which is constituted by SUVs – increases the fleet mass of the car makers, which allows them to raise their emissions target and move away from the intention of the EU regulation.

But car makers have no interest in reversing this trend. The Stellantis Annual Report gives clear insight into the reasons why the car industry is still investing considerably in SUVs and other large ICE vehicles, stating that such vehicles have "historically been more profitable on a per vehicle basis than smaller vehicles" (p. 54). Stellantis also argues that "newly introduced internal-combustion models are generally more profitable than older models" and that it remains important to fill the market with new ICE cars, specifically non "fuel-efficient vehicles", since fuel-efficient vehicles have a "lower profitability per unit". It continues, expressing concerns about the CO_2 regulations that might harm it, considering that BEVs are less profitable than ICE vehicles. It is also concerned about a potential decrease in the demand for SUVs in North America, since its "profitability (there) is particularly dependent on demand for pickup trucks and larger SUVs", with these vehicles accounting for 72% of the vehicles it sells there (p. 94). But it is confident that the "dependence on pickup trucks and larger SUVs in North America is expected to continue". In Europe, Stellantis is worried "hybrid cars might be replaced by fully electric cars sooner than expected", hybrids being more profitable than BEVs. Finally, BEVs are also problematic for Stellantis, since "vehicle electrification may negatively affect after-sales revenues because electric vehicles are expected to require fewer repairs" (p. 99).

[13] "The cost of complying with tightening regulatory requirements could negatively impact our profitability. Vehicle models that are equipped with electric or PHEV engines tend to be less profitable than those equipped with internal combustion engines, with the significant costs of batteries largely accounting for this differential. Although battery prices are expected to gradually decline in the coming years and are partially offset in some cases by government subsidies and tax exemptions, we expect that in the near term the profitability of vehicles equipped with electric or PHEV engines will continue to lag behind those equipped with internal-combustion engines."

ANALYSIS OF ONLINE ADVERTISING

This also explains why most car makers still heavily promote the most profitable polluting cars: before proceeding with the less profitable and regulation-driven electrification of their fleet, they intend to boost their sales revenues with climate-harmful yet financially lucrative bigger models. Business is business. This is also reflected in our analysis of their marketing.

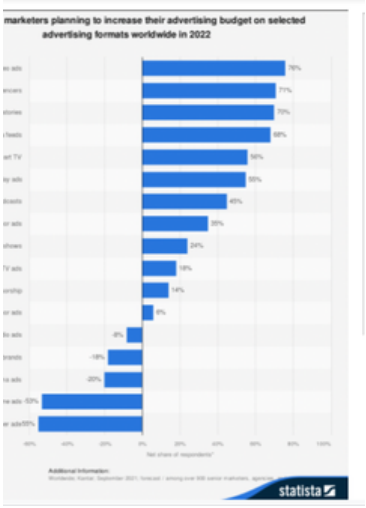
Methodology

We analysed the advertisements of the 7 biggest shareholders (52.56%) on the Belgian car market: Volkswagen (11%), Peugeot (7.5%), Opel (7.3%), BMW (7.3%), Renault (6.84%), Mercedes (6.84%) and Ford (6.80%).

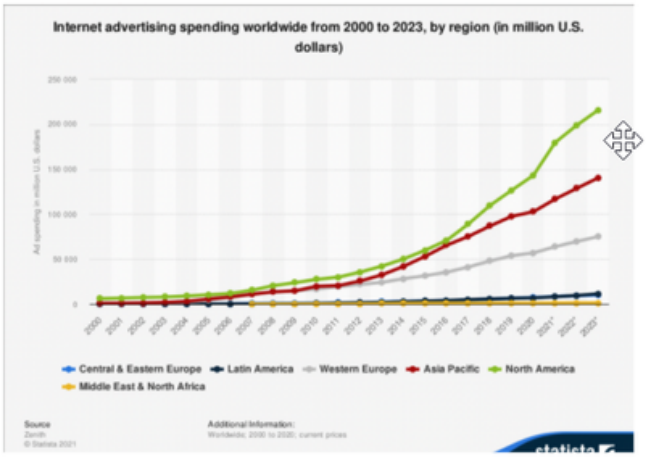
We focus on online advertisements, available in the Facebook Ad Library[14], since this kind of advertisement is by far the most privileged by the industry (see graph). As stated in this Statista analysis about the advertising industry, "the generally observed trend is that internet ad spend has already overtaken other media, leaving even TV advertising behind. According to market projections, the internet will continue to command larger shares of investments, a trend which will be reinforced by the coronavirus pandemic repercussions." (See Graph 1) This trend translates into an accelerating increase of online advertising spendings over the last 15 years, also in Western Europe (see Graph 2).

[14]This includes the ads published on Instagram.

Graph 1: Advertising budget according to advertising format



Graph 2: Internet advertising spending worldwide by region



Our analysis takes into account all the advertisements published by the seven brands in our sample on Facebook and Instagram in Belgium over the last three months (October, November, December). That counts for 686 ads in total. Even with cancellation of the Brussels Motorshow, consumers are being bombarded by car ads and special sale conditions during this period. These ads expose the current priorities of the car industry.

We evaluate how "**eco-friendly**" and **coherent** the advertising strategy of our sample is.

By "**eco-friendly**", we mean: are car makers promoting zero-emissions solutions (BEVs) or are they promoting technologies that still rely on fossil fuels (ICE vehicles and hybrids)? And if ICE vehicles, how polluting are the promoted vehicles, i.e.: what are the average CO_2 emissions of the ICE cars they are putting forward?

By "**coherent**", we mean: how does the promotion of zero emissions vehicles compensate for the polluting models they are trying to sell? Assuming that the advertising policy of the car makers is 100% efficient and they are effectively selling all the models they are promoting, what would be the average emissions of their fleet? This indicates if the car manufacturers have a coherent advertising strategy: are they promoting the technologies that will allow them to reach their EU-imposed CO_2 targets and their self-imposed goals (declarations about the future electrification of their fleet, cfr. below). See Sidebar 2 for the details of our calculations. Also see Appendix 1 and 2 for the calculations and detailed analysis by car maker.

Methodology

To address the questions in our original hypothesis, we had to make several calculations.

When ads were promoting ICE cars that also have a zero- and low-emission vehicle (ZLEV) version, we counted those ads as ICE car ads because that is what was being explicitly promoted.

To calculate the **CO_2 emissions of the ICE cars**, we used different sources. When the data was not available on the website of the car makers, we calculated the average CO_2 emissions by model (which you can find here or here)[15]. We then analysed that average by weight in the ads' basket, to calculate the overall ICE fleet average.

Example: there are 30 different versions of the Polo model. We calculated the average of all of these versions to arrive at the emissions of the average Polo. Then, if the Polo represents 50% of all the ICE cars advertised by Volkswagen, the emissions of the Polo also count as 50% of the average emissions of the ICE cars promoted by Volkswagen.

[15] Note that this can vary considerably for certain models such as the Peugeot 3008, which ranges from 122 g to 177 g/km, depending on the car's options.

We compared these emissions with the **EU CO_2 targets** by car manufacturer (sometimes as part of pools). There, we had to work with the 2020 targets since the 2021 targets had not yet been published[16].

We also calculated the **average fleet emissions**: for each brand, we counted the average emissions for all the ICE vehicles, the average emissions for all the hybrid vehicles, the zero emissions for the BEVs, summed everything together and then divided this by the number of ads. This allows us to calculate the average emissions of the advertised fleet.

Example of Volkswagen:
27 ads promote BEVs. Average (tailpipe) emissions of those cars: 0 g/km
8 ads promote hybrids. *Average emissions of those cars: 42 g/km*
119 ads promote ICE cars. Average emissions of those cars: 162 g/km
—> (27 x 0 + 8 x 42 + 119 x 162)/154 = 127,5 g/km are the average CO_2 emissions of the promoted fleet.

However, this average has to be taken with a grain of salt, since the declared emissions of the hybrid vehicles have to be revised (see Sidebar 3). According to this T&E analysis, PHEVs would emit 72% less than ICE vehicles according to WLTP measurements, but would be only "37% less on the road" (p 27). In order to make a real-world estimate based on NEDC emissions of PHEVs, these would have to be multiplied by 2.8 (value from Section 4 of this ICCT study) and NEDC emissions by around 1.35 (from the first figure in the summary of this ICCT study). We included these calculations in separate sections (Appendix 2).

[16]The 2021 targets shouldn't differ much from the 2020 targets though, since the mass adjustment factor allowing a revision of the these shouldn't be drastically different.

Hybrids: A false solution

Plug-in hybrid electric vehicles (PHEVs) are a false solution. Their motors don't allow them to drive in zero-emission mode under all circumstances. T&E commissioned a report from Emissions Analytics, which showed that "when not charged, PHEVs are not any better and sometimes worse than conventional ICEs, with CO_2 emissions up to eight times higher than the official figures. When the engine is used to both power the car and charge the hybrid battery for later use, as much as 12 times the official CO_2 value can be emitted. Their zero emission range, which is key to delivering substantial CO_2 reductions on the road, can also decrease drastically, due to low powered e-motors fitted, by up to 76% when tested with higher loads, during motorway driving or dynamic driving conditions. This means that it can be difficult to drive these vehicles without the internal combustion engine even when starting the journey with a fully charged battery." And their autonomy is half of what is officially declared. T&E concludes: "Car makers are building suboptimal PHEVs, with limited e-power and battery capacity, to benefit from regulatory incentives for low-emission vehicles while failing to deliver the expected CO_2 reductions on the road."

Although the 2030 production forecast of the major car makers in Europe shows that the share of BEVs is expected to be 48%, and PHEVs 11%, some groups such as BMW and Stellantis will still rely heavily on PHEVs. They would be the largest PHEV producers in 2030, followed by Daimler and VW. "Volvo and Ford are expected to rely far less on PHEVs since they are targeting a high level of fully electric cars."

1. *Green ambitions*

Looking at the declarations of the brands in our sample regarding their future electrification, Mercedes is part of the group (Daimler) that is going to proportionally invest the most in zero emissions technology, allocating 45% of its annual sales revenue to the big shift. Then follow Ford (32%), Peugeot & Opel (28%) and Renault (23%). Volkswagen closes this ranking with only 16% of its annual sales revenue going to electrification.

The absolute ambitions regarding electrification of the fleet do not change this ranking radically (see Table 1): Mercedes relinquishes first place to Peugeot & Opel, while Renault and Volkswagen still follow each other. The biggest change concerns Ford: even though it is the brand planning to invest the most in electrification, it has a very low overall ambition since it is still expecting to sell a majority (60%) of fossil-fuel consuming cars. BMW enters the ranking here, achieving third place on the podium, with a bold public pronouncement: it will be 90% electric by 2030.

Table 1. Absolute ambitions regarding electrification

Classification	Group	Ambitions
1	Peugeot & Opel	100% electric by 2025 and 2028 respectively
1 a	Mercedes	100% electric by 2030
3	BMW	90% electric by 2030
4	Renault	65% electric by 2025
5	Volkswagen	60% electric by 2030
6	Ford	40% electric by 2030

2. Keeping the fossil-fuel industry afloat

These bold ambitions don't really translate into a marketing strategy that would drive these brands to achieve their targets. Indeed, except for Mercedes and Opel, all of the brands in our sample are **still massively promoting cars relying on fossil fuels** (see Table 2). Ford has yet to even start its green offensive: it is not promoting BEVs at all and is only promoting fossil-fuel consuming cars (ICE vehicles and hybrids). Peugeot and Volkswagen are also not proactively promoting the big shift: only respectively 13,5% and 17,5% of their advertising is for BEVs. Opel is moving towards a 50/50 ratio. Mercedes is the only brand predominantly advocating for the electric transition, with 61% of its ads in favour of BEVs.

Table 2. Ads promoting fossil-fuel consuming cars vs. BEVs

Ranking	Brand	% of ads for fossil-fuelled cars	% of ads for BEVs
1	Ford	100%	0%
2	Peugeot	86,5%	13,5%
3	Volkswagen	82,5%	17,5%
4	Renault	78%	22%
5	BMW	77%	23%
6	Opel	50%	50%
7	Mercedes	39%	61%

Volkswagen and BMW are not even pretending to promote so-called alternative solutions (which are in fact false solutions), since 78% of their advertisements promote **fully fossil-fuelled cars** (ICE), while the other brands have a minority of such vehicles in their advertised fleet (see Table 3).

Table 3. Advertisements for 100% fossil-fuelled cars (ICE)

Ranking	Brand	% of ads for ICE vehicles
1	Volkswagen	77%
2	BMW	73%
3	Renault	44%
4	Peugeot	41,5%
5	Ford	41%
6	Opel	26%
7	Mercedes	24%

All in all, except for Mercedes and Opel, all the brands in our sample are dragging their feet. All keep the fossil fuel industry afloat as being the main provider (Volkswagen and BMW) or a key provider of the technology that will enable the promoted cars to actually hit (and pollute) the road. Some of these brands also encourage their potential customers to buy **heavily polluting cars.**

3. *Pushing for polluting cars*

The brand promoting cars that are the most polluting (see Table 4) is by far BMW, with an average CO_2 emissions for its ICE cars of 205 g/km. Then comes Volkswagen with an average of 162 g/km, Ford with an average of 158 g/km, Mercedes with an average of 154 g/km, Peugeot with an average of 132 g/km and Renault with an average of 130 g/km. Thus the advertised ICE fleet of all these brands consists of **high-emitters** (defined as emitting more than 130 g/km). Only Opel is promoting less polluting ICE cars.

Table 4. Average emissions of the promoted ICE cars

Ranking	Brand	Average CO_2 g/lm of promoted ICE cars
1	BMW	205
2	Volkswagen	162
3	Ford	158
4	Mercedes	154
5	Peugeot	132
6	Renault	130
7	Opel	118,5

Still, even if the ICE cars promoted by Opel are not high-emitters, they emit much **more** CO_2 than what is allowed according to the European **CO_2 targets** for the pool it is in (see Table 5). Here again, BMW is at the bottom of the class: the ICE cars it promotes exceed the target by 99%. Volkswagen and Ford also exceed their targets considerably. This parameter is worse for BMW and Volkswagen, since they both still massively promote ICE cars and barely compensate with less polluting cars.

Table 5. Emissions of the promoted ICE cars vs. 2020 CO_2 targets

Ranking	Company	Average CO_2 g/km of promoted ICE cars	Compared with their 2020 CO_2 target
1	BMW	205	+99%
2	Volkswagen	162	+67%
3	Ford	158	+56%
4	Mercedes	154	+51%
5	Peugeot	132	+43%
6	Renault	130	+41%
7	Opel	118,5	+34%

4. Compensating with false solutions and loopholes

Even considering the ZLEVs BMW and Volkswagen promote when calculating the emissions of their entire fleet, these brands still exceed their targets by far (see Table 6).
Not only are they pushing high-emitting ICE cars, but they also are not investing in **ZLEV** advertising: while Volkswagen is the second biggest producer of PHEVs worldwide, they represent only 5,5% of its promoted cars (see Table 7). BMW is advertising only 4% of PHEVs. This is also not in line with the 2030 production forecast, which shows that BMW would be the largest PHEV producer in Europe and would also have the highest PHEV share in its electric fleet. So both BMW and Volkswagen, while investing in this deficient technology, are making little room for it in their marketing strategy (one model each). Focussing mainly on **profitable high-emitting ICE cars**, however, they allocate a small part of their advertising to BEVs (23% for BMW and 17,5% for Volkswagen), which in the end lowers the average emissions of their promoted fleet, but not enough to meet their CO_2 targets.

BMW is the car maker with a promotion strategy least aligned with its **CO_2 targets**: if it truly was to sell only its advertised cars – and removing the effect of loopholes – it would exceed its target by 47% (see table 6). BMW is not in a pool, which means it is not even relying on partners to lower average emissions in order to achieve its targets. Volkswagen is following the same trend: it is also advertising cars emitting much more CO_2 than what its pool is allowed to emit. Maybe it is trusting its team players to do the job? Or both BMW and Volkswagen are relying on the super-credits **loophole** to artificially boost their results by almost doubling their ZLEVs.

Table 6. Average emissions of the promoted fleet vs. 2020 CO_2 targets

Ranking	Brand	Emissions of overall advertised fleet vs. 2020 CO_2 target
1	BMW	47% higher
2	Volkswagen	31% higher
3	Ford	-
4	Renault	16% higher
5	Peugeot	24% higher
6	Opel	58% higher
7	Mercedes	59% higher

The other brands in our sample, which all promote ICE vehicles that are much more polluting than allowed by their CO_2 targets, manage to stay below these targets in their overall advertised fleet. This is because they are promoting **false solutions (hybrids)** that still rely on fossil fuels but keep the emissions average artificially low with truncated figures. Ford is the brand promoting false solutions the most, with 59% of its ads going to hybrid vehicles (see Table 7). This allows the brand to hypothetically just meet its CO_2 target, while on the other hand being third highest in the ranking of high-emitters.
Then come Peugeot and Renault, with respectively 45% and 34% of their ads for hybrids. For Peugeot, this technology also represents the majority of the ads it is placing on Belgian social media.

Mercedes and Opel have the lowest overall emissions average because they are also dedicating the majority of their ads mainly to **truly zero emissions vehicles** (BEVs: respectively 61% and 50%) and only partially to false solutions (hybrids: respectively 15% and 24%), which means that the largest part of their promoted fleet is composed of ZLEVs: 76% for Mercedes and 74% for Opel.

Table 7. Brands promoting hybrids

Classification	Group	% of ads for hybrids
1	Ford	59%
2	Peugeot	45%
3	Renault	34%
4	Opel	24%
5	Mercedes	15%
6	Volkswagen	5,5%
7	BMW	4%

5. Words vs. actions

When we confront the marketing strategy of the car makers in our sample with their declared intentions regarding their electric shift, we can assess who is already walking the talk and who is engaged in greenwashing.

Of course, the deadline for their shift is not today (some are aiming at the 2025 CO_2 target shift, others at the 2030 CO_2 target shift). But we can nevertheless assign them a coherence rate and check whether these brands are already on their way to the big move. This coherence rate is calculated by taking their declared target as a 100% reference point. Example: If Volkswagen aims to sell a 60% electric fleet by 2030, but is promoting only 17,5% of BEVs today, its coherence rate is 29%. That number represents how much of its target Volkswagen is achieving through its advertising strategy.

Mercedes is the most coherent while also among the most ambitious in its electrification goals.
Not only is its group (Daimler) aiming at 100% fleet electrification, it also emerges from the ranking as the brand planning to invest the most in the development of that technology (see Table 9 in background briefing). In the coherence rate ranking (see Table 5), it scores first, since it is adopting a marketing strategy that could hypothetically help it achieve 61% of its target already today.

Opel arrives second in our coherence ranking, as its marketing strategy would help it achieve already today 50% of its ambitious electrification target.

BMW and Peugeot are far behind their bold ambitions: while they announced respective electric fleet targets of 90% and 100% (placing them amongst the most ambitious car makers in this regard), including an investment worth one third of their annual sales revenue in technological improvements, their communications strategies do not seem to be aimed at getting people to actually buy their BEV models.

Renault, Volkswagen and Ford also have a low coherence rate, but they weren't ambitious to start with.
Even after announcing a heavy investment in electrification, **Ford** still has a very low electrification ambition of 40% of its fleet. In our sample, it does not advertise BEVs.

This is also the case for **Renault and Volkswagen**: after Ford, they are the brands with the weakest electrification ambitions, with respectively a 65% and a 60% fleet electrification goal and low investments (the lowests in our sample). This aligns with their relatively poor marketing priority for BEVs: only 22% and 17,5% of their ads in our sample.

Table 8. Coherence of the car makers regarding their electrification targets

Classification	Group	Electrification ambitions	Advertisements promoting BEVs	Coherence rate
1	Mercedes	100%	61%	61%
2	Opel	100%	50%	50%
3	Renault	65%	22%	34%
4	Volkswagen	60%	17,5%	29%
5	BMW	90%	23%	26%
6	Peugeot	100%	13,5%	13,5%
7	Ford	40%	0%	0%

Table 9. Proportion of announced investments in electrification with regards to annual sales revenues

Ranking	Brand	% of annual sales revenues
1	Mercedes (Daimler Group)	45%
2	Ford	32%
3	BMW	30%
4	Peugeot & Opel (Stellantis Group)	28%
5	Renault (Renault Group)	23%
6	Volkswagen (Volkswagen Group)	16%

6. *Status quo*

A look at the state of the **market today** also indicates who in our sample is forward looking in its advertising, and who is maintaining the status quo.

Mercedes is the brand with the **most ambitious marketing strategy**. Its sales figures today are not the most climate-friendly : we see that its group (Daimler) is ranked third in fleet electrification (6%, see Table 10) and Mercedes is the brand with the highest share of high-emitters (44.1%, see Table 11) and the highest average fleet emissions (see Table 1).
In its marketing strategy though, **Mercedes** is moving fast in the direction of **change**. It is the brand promoting the most BEVs, with a majority of its advertisements (61%) promoting this **zero-emissions** technology. And if it still advertises ICE cars (24%), which are high-emitters, in the end, the average emissions of the promoted cars is so low that it is a **ZLEV fleet**.

Peugeot & Opel, part of the same group (Stellantis), are advocating for **change** in their promotion strategy. But the evolution they are pushing for doesn't have the same impact on the climate.
In their sales figures, they have mixed results. They are part of the group with one of the worst fleet electrification results today (penultimate in ranking), but overall they have very few (1.7%) high-emitters and relatively low average fleet emissions (last in both rankings).

The change **Peugeot** is moving towards with its marketing strategy isn't ambitious regarding climate impact. The majority of Peugeot's advertisements promote ZLEVs (58,5%). But its strategy is still embedded in the **fossil fuel system**, since many of the ZLEVs it is advertising are **hybrids** (45%). In our sample, together with Ford, it is also the brand that allocates the majority of its ads to this false solution.

Opel is more ambitious than Peugeot in its marketing strategy. Half of its promotions are pushing for real zero-emissions vehicles (BEVs, 50% of its ads). But it is also advertising false solutions (hybrids, 24% of its ads) and fully fossil fueled cars (ICE cars, 26% of its ads), which however are not high-emitters.

The other brands in our sample are **promoting the status quo**.

In our sample, **Renault** is the brand with the most favourable **sales figures in the direction of a car industry less harmful to the climate**. The brand is part of the group with the highest percentage of BEVs in its fleet (9%), also having few high-emitters and scoring well on its average fleet emissions (penultimate in both rankings).

But Renault is amongst the brands promoting ICE cars the most (third in ranking, see table 3). And if a majority of its advertised cars in our sample are ZLEVs (56%), it is mainly pushing for hybrids (34%), which are a false solution and still rely on fossil fuel consumption, while also being more polluting than officially reported. In the ICE car segment, Renault is also advertising high-emitters.

Looking at the sales figures today, **Volkswagen** is neutral in our ranking: it is part of the group with the second highest percentage of BEVs in its fleet (7%), is doing relatively well with high-emitters and with its average fleet emissions (4th in both rankings).
BMW is amongst the weakest in fleet electrification today (5%), has a large share of high-emitters (2nd in ranking) and scores poorly on its average fleet emissions (3rd in ranking).
Ford is in last place, being part of the group that developed its BEV fleet the least (2%), while also selling highly polluting cars (3rd in ranking), for high overall average fleet emissions (2nd in ranking).

These three brands have the most obvious **conservative marketing strategies. BMW and Volkswagen** are massively promoting ICE cars (respectively 73% and 77% of their ads), which are so polluting that even when taking into account the ZLEVs they also have in their portfolio, they exceed their CO_2 targets by far. **Ford** is not doing much better: it is not promoting any BEVs and is trying to market **highly polluting ICE cars**. Indeed, after BMW and Volkswagen, it is the car maker pushing for the most polluting cars. It manages to keep its average emissions down by promoting false solutions. In our sample, it is the brand pushing the most for **hybridisation**.

But we cannot really say that Ford is misleading people about its climate-friendly attitude: it is the car maker in our sample that declared the least ambitious electrification target and the only one publicly saying it will still sell a majority of ICE cars even after the 2030 deadline.
BMW and Volkswagen, on the other hand, have a **very ambiguous public discourse**. BMW was one of the brands with the boldest ambition: it will develop 9 new electric cars by 2025, will sell 2 million BEVs by then and will have a 90% electric fleet in 2030. These public announcements are not reflected in BMW's marketing strategy, which instead aggressively promotes cars harmful to the climate.

Volkswagen is also misleading in its communication. Within the **Volkswagen Group**, with its ambition to be the number one player in the electric field, Volkswagen could make the group's communication look like **greenwashing**. The sales figures are relatively favourable to the group. Regarding the future, T&E assessed its electrification's production plan as being the most realistic regarding its objectives. But the Volkswagen brand is still promoting only 17,5% of BEVs *and* is the second worst brand, after BMW, in promoting the **most polluting cars**. On the other hand, Volkswagen is also the group proportionally investing the least in its electric shift (16% of its annual sales revenue) and the one with the least ambitious target after Ford (60% of the fleet electric by 2030). Volkswagen's overall attitude to electrification is not completely incoherent. But what could be misleading in its public communication strategy is the fact that the group declares that it aims to be number one in the electric market. This isn't untrue *per se*. According to the 2030 production forecast, Volkswagen will reach that goal. But this bold statement is not necessarily representative of a proactive climate-friendly engagement. It is rather a **profitability move**. Volkswagen does not want to lose control over the electric market and wants to have it both ways, selling electric cars but also very profitable high-emitters.

Table 10. Percentage of the fleet being BEV in 2020

Classification	Brand	Sales numbers in 2020: Percentage of the fleet being BEV
1	Renault	Renault pool (with Nissan and Mitsubishi): 9%
2	Volkswagen	Volkswagen pool: 7%
3	Mercedes	Daimler Group: 6%
4	BMW	BMW Group: 5%
5	Peugeot & Opel	PSA Group: 4%
6	Ford	Ford-Volvo pool: 2%

Table 11. Market share of high-emitters in 2020 (>130 g CO_2/km)

Classification	Group	% of the fleet being high-emitters
1	Mercedes (Daimler)	44,1%
2	BMW	29,3%
3	Ford	26,7%
4	Volkswagen (Group)	24,5%
5	Renault (Group	13,8%
6	Peugeot & Opel (Stellantis)	1,7%

Table 12. European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet

Classification	European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet
1	Mercedes (Daimler)
2	Ford
3	BMW
4	Volkswagen
5	Renault
6	Peugeot & Opel (PSA)

CONCLUSIONS AND RECOMMENDATIONS

Car manufacturers have had **decades of warnings** about the need to change their business models and transition away from petrol and diesel. As long as these companies rely on petrol and diesel cars, the few electric cars they sell simply serve to give their brands a "green sheen". Or even worse, to offset the rising emissions in their fleet due to increased sales of SUVs and other high-polluting vehicles. **Most car companies want to continue to sell as many petrol and diesel cars as they can, for as long as they can**.

Regulation-driven long-term ambitions of car manufacturers cannot conceal their present **priorities**: selling as many **lucrative polluting cars** as possible before binding CO_2 regulations will no longer allow such. The car industry has a long history of delaying climate action. Now it is finally being forced to shift away from fossil fuels, but the pace of this transition is much too slow to be aligned with the global temperature goal of 1.5˚C. This half-hearted approach also risks jeopardising a planned and just transition for workers in the automotive industry.

This analysis confirms that car manufacturers are dragging their feet, with loopholes and a marketing strategy that aims to **prolong sales of fossil fuelled vehicles as long as possible**, and especially the most polluting ones (highest profit margins).

In the light of the climate crisis, it is **irresponsible** to continue to bombard consumers with adverts for cars that will continue to spew GHG into the atmosphere for at least a decade to come. In order to keep the 1.5˚C target alive, we need **quick action**.

We can no longer allow the car industry to portray themselves as part of the solution to the climate crisis while still selling polluting vehicles powered by fossil fuels. We cannot continue to allow producers of fossil fuels or fossil-fuel products to bombard consumers with greenwashed advertising that prolongs the status quo for the sake of their own profits.

With a European Citizen Initiative, Greenpeace and dozens of other NGOs are asking for an **advertising and sponsorship ban for companies that sell fossil fuels or products**. In order to advertise, companies should be required to get in line with the objectives in the Paris climate agreement.

Policymakers in Belgium should not wait for Europe, but should follow the examples of cities and countries that are already taking steps to ban fossil fuel propaganda. In France, the new climate law takes a first step in this direction by banning advertisements for fossil fuels. In Amsterdam and Den Haag, fossil fuel ads have been banned from public bus stops.

APPENDIX 1 - ANALYSIS BY BRAND

Volkswagen

Green ambitions

The Volkswagen Group announced that 60% of its fleet will be electric by 2030. By 2025, the group intends to be number one in electric vehicles. It will invest 35 billion euros in electric vehicles[17]. That is 16% of its annual sales revenue[18].

Vs. sales ambitions

77% of the models promoted by Volkswagen on social media are **ICE vehicles**, while only 17,5% are BEVs. Note that although the Volkswagen Group is the second largest producer of PHEVs at global level, only 5,5% of the cars advertised by the Volkswagen brand on social media in Belgium are hybrids. Thus **82,5%** of the vehicles promoted by Volkswagen still rely on **fossil fuels**.

In our sample, the Volkswagen Group is not the one with the greatest number of polluting cars on the European market. It is actually number four in that ranking, with a 24.5% market share of high-emitters in 2020 (>130 g CO_2/km) (see Table 11). It is also number four in the European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet (see Table 12).

However, the Volkswagen brand is promoting **highly polluting cars** on social media, with average emissions of 162 g/km for the promoted ICE cars, making it a **high-emitter fleet**. The average CO_2 emissions of the VW promoted **ICE cars** are also **67% higher than the 2020** Volkswagen pool target.

Even balancing the average emissions of the promoted cars by taking into account the zero- and low-emission vehicles (ZLEVs), the CO_2 emissions of the models promoted by Volkswagen on social media are **31% higher than the pool's target**.

Volkswagen is obviously not planning to be the one to lower the pool's average.

154 ads
BEV: 27 ads. 17,5%
Hybrids: 8 ads. 5,5%
ICE: 119 ads. 77%
Average CO_2 emissions of ICE cars: 162 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 219 g/km
Average CO_2 emissions of hybrids: 42 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 117.6 g/km
Average CO_2 emissions of the promoted fleet: 127,5 g/km
CO_2 target of the VW pool (Volkswagen Group with MG-Saic as well as e.Go, LEVC, and Aiways) in 2020: 97 g/km
Emissions of advertised ICE cars vs. 2020 CO_2 target: 53% higher (162 - 97 = 65/97 = 67%)
Emissions of overall advertised fleet vs. 2020 CO_2 target: 23% higher (127,5 - 97 = 30,5/97 = 31%)

[17]https://www.volkswagen-newsroom.com/en/press-releases/volkswagen-group-raises-investments-in-future-technologies-to-eur-73-billion-6607
https://europe.autonews.com/automakers/vw-targets-electric-car-lead-2025-platform-push
[18] Annual sales revenue of the Volkswagen Group in 2020: € 222 884 000 000

APPENDIX 1 - ANALYSIS BY BRAND

Peugeot

Green ambitions

Peugeot announced it will be 100% electric by 2025[19]. Peugeot is part of the Stellantis Group, which will invest 25 billion euros in electrification. That is 28% of its annual sales revenue[20].

Vs. sales ambitions

86,5% of the models promoted by Peugeot on social media rely on **fossil fuels**: **ICE vehicles** (41,5%) or **false solutions** (hybrids: 45%). This leaves 13,5% to BEVs.
In our sample, Peugeot (grouped with Opel) is the brand selling the least number of high-emitting cars on the European market, with a market share for high-emitters of 1.7% in 2020 (>130 g CO_2/km) (see Table 11). It is also last in the European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet (see Table 12).

However, Peugeot **still advertises highly polluting cars**, with average emissions of 132 g/km for the promoted ICE cars, making it a **high-emitter fleet**. The average CO_2 emissions of the Peugeot promoted ICE cars are also **43% higher than the 2020** PSA-Opel target.

However, balancing the average emissions of the promoted cars by taking into account the ZLEVs, the CO_2 emissions of the models promoted by Peugeot on social media remain low, even **24% lower** than the PSA-Opel target.
This optimistic result must be taken with a grain of salt, however, since 45% of this statistic relies on hybrid vehicles. Our calculations are based on the NEDC values for the hybrids promoted by Peugeot, which are on average 34.16 g/km. A real-world estimate of this would bring that number up to 95,65 g/km, which would yield a completely different result.

96 ads
BEV. 13 ads. 13,5%
Hybrids: 43 ads. 45%
ICE: 40 ads. 41,5%
Average CO_2 emissions of ICE cars: 132 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 178,2 g/km
Average CO_2 emissions of hybrids: 34.16 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 95,65 g/km
Average CO_2 emissions of the promoted fleet: 70 g/km
CO_2 target of PSA-Opel in 2020: 92 g/km
Emissions of advertised ICE cars vs. 2020 CO_2 target: 43% higher
Emissions of overall advertised fleet vs. 2020 CO_2 target: 24% lower

[19] https://www.autoplus.fr/peugeot/peugeot-gamme-100-electrique-2025-533640.html#item=1
[20] Annual sales revenue Stellantis Group in 2020: € 86 676 000 000

APPENDIX 1 - ANALYSIS BY BRAND

Opel

Green ambitions

Opel announced it will be 100% electric by 2028 [21]. Opel is part of the Stellantis group, which will invest 25 billion euros in electrification. That is 28% of its annual sales revenue[22].

Vs. sales ambitions

50% of the models promoted by Opel on social media are **BEVs**. Which leaves **50%** for **fossil fuel** consuming cars: 24% for hybrids and 26% for ICE vehicles. Its promoted ICE vehicles are not high-emitters, as their emissions average is of 118,5 g/km (high-emitters emit more than 130g/km). They still emit 29% more CO_2 than is allowed by the PSA-Opel target for 2020 though.

But the large share Opel gives to BEVs in its advertising campaign brings the average emissions of the promoted fleet down to 39 g/km, making it an **overall ZLEV fleet**. If Opel was to sell all its promoted cars in the proportions of their presence on Belgian social media, it would be **58% under its EU CO_2 targets**.

The marketing attitude of Opel is also **aligned with its sales numbers**. Indeed, in our sample, Opel (grouped with Peugeot) is the brand selling the least number of high-emitting cars on the European market, with a market share for high-emitters of 1.7% in 2020 (>130 g CO_2/km) (see Table 11). It is also penultimate in the European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet (see Table 12).

80 ads
BEV. 40 ads. 50%
Hybrids: 19 ads. 24%
ICE: 21 ads. 26%
Average CO_2 emissions of ICE cars: 118,5 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 160 g/km
Average CO_2 emissions of hybrids: 34 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 95.2 g/km
Average CO_2 emissions of the promoted fleet: 39 g/km
CO_2 target of PSA-Opel in 2020: 92 g/km
Emissions of the advertised ICE car vs. 2020 CO_2 target: 29% higher
Emissions of overall advertised fleet vs. 2020 CO_2 target: 58% lower

[21] https://www.moniteurautomobile.be/actu-auto/marche/opel-electrique-2028.html
[22] Annual sales revenue Stellantis Group in 2020: € 86 676 000 000

APPENDIX 1 - ANALYSIS BY BRAND

BMW

Green ambitions

BMW announced that 90% of its fleet will be electric by 2030. Between 2021-2025, it will invest 30 billion euros in electrification and (other) technology (not only specifically with regard to electrification, but also in general technology). It will develop 9 new electric cars by 2025 and aims to sell 2 million BEVs by 2025[23]. The share allocated to technological improvements here represents 30% of the annual sales revenues of the BMW Group[24].

Vs. sales ambitions

77% of the models promoted by BMW on social media are **fossil fuel consuming vehicles**, while only 23% are BEVs.

In our sample, BMW comes in second as the brand selling the most high-emitters in 2020, with a market-share of 29.3% (see Table 11). It is also third in the European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet (see Table 12). In its advertising policy, it is the car maker promoting the **highest polluting cars** on social media, with average emissions of 205 g/km for the promoted ICE cars, making it a **high-emitter fleet**. The average CO_2 emissions of the BMW promoted **ICE cars** are also **99% higher than the 2020** BMW target.

Even balancing the average emissions of the promoted cars by taking into account the **ZLEV**, the CO_2 emissions of the models promoted by BMW on social media are 47**% higher** than the brand's target.

48 ads
BEV: 11 ads. 23%
Hybrids: 2 ads. 4%
ICE: 35 ads. 73%
Average CO_2 emissions of ICE cars: 205 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 277 g/km
Average CO_2 emissions of hybrids: 27 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 75,6
Average CO_2 emissions of the promoted fleet: 151 g/km
CO_2 target for BMW (no pool) in 2020: 103 g/km
Emissions of advertised ICE cars vs. 2020 CO_2 target: 99% higher
Emissions of overall advertised fleet vs. 2020 CO_2 target: 47% higher

[23]https://www.bmwgroup.com/content/dam/grpw/websites/bmwgroup_com/ir/downloads/en/2021/bericht/BMW-Group-Bericht-2020-EN.pdf and https://www.bmwblog.com/2020/03/18/bmw-to-invest-30-billion-euros-by-2025-in-ev-autonomous-driving-tech/

[24] Annual sales revenue BMW Group in 2020: € 98 990 000 000

APPENDIX 1 - ANALYSIS BY BRAND

Renault

Green ambitions

The Renault Group announced that 65% of its fleet will be electric by 2025. 10 billion euros will be invested in electrification by 2025 and 10 new electric models will be developed by then [25]. The investment in electrification represents 23% of the annual sales revenue of the Renault Group[26].

Vs. sales ambitions

The **majority** (78%) of the ads of Renault on Belgian social media promote cars relying on **fossil fuels**: 44% of these are internal combustion engine vehicles (ICE cars), while 34**%** are hybrid. This leaves 22% of ads promoting zero emissions cars.

Out of the 10 ICE models promoted by Renault, 6 are high-emitters (one of these is a SUV). This large proportion **does not match the actual sales numbers** of Renault. Indeed, in our sample, of the brands selling the most high-emitting cars on the European market, Renault is ranked second to last with a market share of high-emitters of 13.8% in 2020 (see Table 11). It is also penultimate in the European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet (see Table 12).

However, taking into account the high-emitters, the average CO_2 emissions of the ICE cars promoted by Renault is **41% higher than the 2020** R-N-M target.
Balancing the average emissions of the promoted cars, however, by taking into account the **zero- and low-emission vehicles**, the CO_2 emissions of the models promoted by Renault on social media remain low, even **16% lower** than the R-N-M pool's target.
This optimistic result must be taken with a grain of salt, however, since 34% of this statistic relies on hybrid vehicles. Our calculations are based on the NEDC values for the hybrids promoted by Renault, which are on average 59 g/km. A real-world estimate of this would bring that number up to 165 g/km, which would yield a completely different result. It must also be noted that Renault is promoting **large hybrids** (the largest of our sample).

128 ads
BEV. 29 ads. 22%
Hybrids: 43 ads. 34%
ICE: 56 ads. 44%
Average CO_2 emissions of ICE cars: 130 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 175,5 g/km
Average CO_2 emissions of hybrids: 59 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 165 g/km
Average CO_2 emissions of the promoted fleet: 77 g/km
CO_2 target for Renault (pool with Nissan and Mitsubishi) in 2020: 92 g/km
Emissions of advertised ICE cars vs. 2020 CO_2 target: 41% higher
Emissions of overall advertised fleet vs. 2020 CO_2 target: 16% lower

[25]**https://www.bfmtv.com/auto/voitures-electriques-et-hybrides/d-ici-cinq-ans-renault-va-investir-dix-milliards-d-euros-dans-l-electrification_AN-202106300199.html and**
https://www.automobile-magazine.fr/voitures-electriques/article/30178-groupe-renault-10-nouveaux-modeles-electriques-dici-2025 and https://www.largus.fr/actualite-automobile/renault-eways-le-losange-detaille-sa-strategie-sur-lelectrique-10659395.html
[26]Annual sales revenue of the Renault Group in 2020: € 43 474 000 000

APPENDIX 1 - ANALYSIS BY BRAND

Mercedes

Green ambitions

Mercedes is part of the Daimler Group. The Daimler Group announced that it will invest 70 billion euros in electrification between 2021 and 2025. Starting in 2025, Mercedes itself will invest only in electrification, to become 100% electric by 2030 "on the markets allowing it"[27].

The announced investments in electrification represent 45% of the annual sales revenues of Daimler in 2020[28].

Vs. sales ambitions

In our sample, the Daimler Group sells the greatest number of polluting cars, with a market share of high-emitters in 2020 of 44.1% (see Table 11), and has the highest average CO_2 emissions for its 2019 fleet (see Table 12). On social media, however, Mercedes is the company promoting **BEVs** the most, with **61%** of ads promoting this technology. This leaves a **minority** of advertisements (39%) still promoting technologies relying on **fossil fuels** (24% full ICE vehicles, 15% hybrids).

But the ICE cars it promotes are **highly polluting**, with average emissions of 154 g/km, making it a **high-emitter fleet**, exceeding Daimler's CO_2 target by 51%. But this is largely compensated for by a **vast majority** of ads (76%) promoting **ZLEVs**, which brings the average CO_2 emissions of the promoted fleet to 59% below Daimler's target.

68 ads
BEV. 42 ads. 61%
Hybrids: 10 ads. 15%
ICE: 16 ads. 24%
Average CO_2 emissions of ICE cars: 154 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 208 g/km
Average CO_2 emissions of hybrids: 38.7 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 108.36 g/km
Average CO_2 emissions of the promoted fleet: 42 g/km
CO_2 target for the Daimler Group (no pool) in 2020: 102 g/km
Emissions of advertised ICE cars vs. 2020 CO_2 target: 51% higher
Emissions of overall advertised fleet vs. 2020 CO_2 target: 59% lower

[27]https://www.automobile-propre.com/breves/cette-somme-hallucinante-que-daimler-va-investir-pour-la-voiture-electrique/ and https://www.largus.fr/actualite-automobile/mercedes-un-modele-tout-electrique-a-chaque-niveau-de-gamme-des-2025-10676407.html and https://www.nytimes.com/2021/07/22/business/mercedes-benz-electric-vehicles.html

[28]Annual sales revenues of the Daimler Group in 2020: € 154 309 000 000

APPENDIX 1 - ANALYSIS BY BRAND

Ford

Green ambitions

The Ford Group announced it will be investing $ 30 billion in electrification by 2025, aiming at a 40% electric fleet by 2030[29]. This investment represents 32% of the annual sales revenues of the Ford Group in 2020[30].

Vs. sales ambitions

Ford is **not promoting BEVs** on social media. Thus, **all the advertised models are cars that use fossil fuels**: **ICE vehicles** (41%) or **false solutions** (hybrids: 59**%**).

In our sample, of the brands selling the greatest number of high-emitting cars on the European market, Ford is ranked third with a market share of high-emitters of 26.7% in 2020 (see Table 11). In our sample, it is also second in the European ranking of car makers with the highest average CO_2 emissions for their 2019 fleet (see Table 12).

Not only is Ford advertising climate harmful technologies, it is also promoting **highly polluting cars,** with average emissions of 158 g/km for the promoted ICE cars, making it a **high-emitter fleet**. The average CO_2 emissions of the ICE cars promoted by Ford are also **56% higher than the 2020** Ford-Volvo target.

But balancing the average emissions of the promoted cars by taking into account the **low emissions vehicles (hybrid)**, the CO_2 emissions of the models promoted by Ford on social media exactly meet the pool's target.

This passable result must be taken with a grain of salt, however, since 59% of this statistic relies on hybrid vehicles. Our calculations are based on the NEDC values for the hybrids promoted by Ford, which are on average 47.6 g/km. A real-world estimate of this would bring that number up to 133.28 g/km, which would yield a completely different result.

112 ads
BEV. 0 ads. 0%
Hybrids: 66 ads. 59%
ICE: 46 ads. 41%
Average CO_2 emissions of ICE cars: 158 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 213 g/km
Average CO_2 emissions of hybrids: 47.6 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 133.28 g/km
Average CO_2 emissions of the promoted fleet: 101 g/km
CO_2 target for Ford (pool with Volvo) in 2020: 101 g/km
Emissions of advertised ICE cars vs. 2020 CO_2 target: 56% higher
Emissions of overall advertised fleet vs. 2020 CO_2 target: achieving the target

[29]https://www.chargedfleet.com/10144380/ford-outlines-ev-tech-and-customer-growth-strategy#:~:text=Ford%20will%20focus%20on%20its,including%20development%20of%20IonBoost%20batteries .

[30] Annual sales revenues of the Ford Group in 2020: $ 94 368 893 000

APPENDIX 2 - DETAILED FLEET ANALYSIS

VW

154 ads
BEV: 27 ads. 17,5%
Hybrids: 8 ads. 5,5%
ICE: 119 ads. 77%
Average CO_2 emissions of ICE cars: 162 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 219 g/km
Average CO_2 emissions of hybrids: 42 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 117.6 g/km
Average CO_2 emissions of the promoted fleet: 127,5 g/km

ID. 4 GTX: BEV
October: 7 ads
November: 5 ads
December: 6 ads
—> 18 x 0 = 0

ID. 3: BEV
October: 3 ads
November: 4 ads
December: 2 ads
—> 9 x 0 = 0

Polo: Medium ICE
October: 4 ads
November: 6 ads
December: 2 ads
Average emissions: 125 g/km
12 x 125 = 1500

T-Cross: SUV ICE:
October: 4 ads
November: 6 ads
December: 1 ad
Average emissions: 133 g/km
11 x 133 = 1463

T-Roc: SUV ICE:
October: 4 ads
November: 0 ads
December: 0 ads
Average emissions: 140.25 g/km
4 x 140.25 = 561

Golf: Medium ICE:
October: 7 ads
November: 8 ads
December: 2 ads
Average emissions: 152 g/km
17 x 152 = 2584

Caddy: Large ICE:
October: 5 ads
November: 13 ads
Average emissions all models: 155 g/km
18 x 155 = 2790

Taigo:
Small SUV ICE:
October: 1 ad
November: 0 ads
December: 10 ads
(Also called Nivus): Average emissions: 157 g/km
11 x 157 = 1727

Tiguan: SUV ICE:
October: 4 ads
November: 8 ads
December: 2 ads
Average emissions: 164 g/km
14 x 164 = 2296

Passat: Large ICE:
October: 4 ads
November: 4 ads
December: 2 ads
Average emissions: 175 g/km
10 x 175 = 1750

California 6.1: Large ICE:
October: 2 ads
November: 20 ads
Average emissions all models: 211 g/km
22 x 211 = 4642

Multivan eHybrid:
October: 0 ads
November: 8 ads
Average emissions: 42 g/km
8 x 42 = 336

Slogans:
Tiguan (SUV): "Oubliez la routine et allez à l'essentiel, réinventez la route"
T-Roc (SUV): "Affirmez votre caractère"
T-Cross (SUV): "Pour être qui je veux"
—> SUV = liberty
California = 100% in nature

APPENDIX 2 - DETAILED FLEET ANALYSIS

Peugeot

96 ads

13,5% (13) ads zero emissions (BEV)
45% (43) ads for hybrids
41,5% (40) ads for ICE cars
Average CO_2 emissions of ICE cars: 132 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 178,2 g/km
Average CO_2 emissions of hybrids: 34.16 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 95.65 g/km
Average CO_2 emissions of the promoted fleet: 70 g/km

E-208: BEV
October: 2 ads
December: 1 ad
3 x 0 = 0

E-partner: BEV
October: 1 ad
1 x 0 = 0

E-rifter: BEV
October: 2 ads
November: 4 ads
6 x 0 = 0

E-2008: BEV
October: 2 ads
December: 1 ad
3 x 0= 0

Peugeot 308SW: hybrid.
October: 4 ads
November: 13 ads
December: 16 ads
Emissions: 33 g/km
33 x 33 = 1089

508 SW plug in: hybrid.
October: 2 ads
November: 1 ad
December: 2 ads
Emissions: 38 g/km
5 x 38 = 190

3008 plug in: hybrid.
October: 3 ads
November: 2 ads
Emissions: 38 g/km
5 x 38 = 190

208: Medium ICE.
October: 3 ads
November: 6 ads
December: 6 ads
Average emissions: 122.5 g/km
122.5 x 15 = 1837.5

308: large ICE.
October: 0 ads
December: 1
Average emissions: 125.5 g/km
1 x 125,5 = 125,5

2008: SUV.
October: 3 ads
November: 4 ads
December: 5 ads
Average emissions: 127.5 g/km
12 x 127.5 = 1530

508: large ICE.
October: 2 ads
November: 1 ad
December: 2 ads
Average emissions: 142 g/km
5 x 142 = 710

3008: SUV.
October: 1 ad
December: 3 ads
Average emissions: 149.5 g/km
4 x 149.5 = 598

5008: SUV.
October: 1 ad
December: 2 ads
Average emissions: 154.5 g/km
3x154.5 = 463,5

APPENDIX 2 - DETAILED FLEET ANALYSIS

Opel

80 ads
BEV. 40 ads. 50%
Hybrids: 19 ads. 24%
ICE: 21 ads. 26%
Average CO_2 emissions of ICE cars: 118,5 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 160 g/km
Average CO_2 emissions of hybrids: 34 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 95.2 g/km
Average CO_2 emissions of the promoted fleet: 39 g/km

Models:
Combo-e: BEV
November: 6 ads
December: 2 ads
8 x 0 = 0

Corsa-e: BEV
October: 1 ad
November: 8 ads
December: 4 ads
13x0=0

Mokka-e: BEV
October: 1 ad
November: 6 ads
December: 4 ads
11x0=0

Zafira-e: BEV
November: 6 ads
December: 2 ads
8x0=0

Astra Plug-in Hybrid
November: 4 ads
December: 10 ads
Emissions: 34 g/km
14 x 34 = 476

Grandland Plug-in Hybrid
November: 2 ads
December: 3 ads
Emissions: 34 g/km
5 x 34 = 170

Grandland
November: 8 ads
December: 3 ads
Emissions: 123 g/km
11 x 123 = 1353

Crossland
December: 2 ads
Emissions: 110g/km
2x110=220

Insignia
December: 2 ads
Emissions: 156g/km
2x156=312

Mokka
December: 2 ads
Emissions: 105g/km
2x105=210

Corsa
December: 2 ads
Emissions: 97g/km
2x97=194

Astra
December: 2 ads
Emissions: 100g/km
2x100=200

APPENDIX 2 - DETAILED FLEET ANALYSIS

BMW

48 ads
BEV. 11 ads. 23%
Hybrids: 2 ads. 4%
ICE: 35 ads. 73%
Average CO_2 emissions of ICE cars: 205 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 277 g/km
Average CO_2 emissions of hybrids: 27 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 75,6
Average CO_2 emissions of the promoted fleet: 151 g/km

Source regarding emissions

iX: BEV:
October: 2 ads
November: 4 ads
6x0=0

iX3: BEV:
October: 2 ads
December: 2 ads
4x0=0

i3: BEV:
October: 1 ad
1x0=0

X5 Plug-in Hybrid
December: 2 ads
Emissions: 27g/km
2x27=54

1: Large ICE:
October: 2 ads
December: 2 ads
Average emissions: 172.5 g/km
4 x 172.5 = 690

2: large ICE:
October: 2 ads
Average emissions: 192.5 g/km
2 x 192.5 = 385

6 Gran Turismo: Large ICE:
October: 1 ad
Average emissions: 194 g/km
194

4: large ICE:
October: 2 ads
November: 1 ad
December: 2 ads
Average emissions: 152.5 g/km. Some models: 197.5 g/km
5 x 152.5 = 762,5

X1: SUV:
October: 1 ad
Average emissions: 153 g/km
153

X2: SUV:
October: 2 ads
Average emissions: depending on the model: 165.5 g/km or 177.7 g/km (average: 171.6)
2 x 171.6 = 343.2

Z4: Large ICE:
October: 2 ads
Average emissions: 182 g/km
2 x 182 = 364

X3: SUV:
October: 1 ad
Average emissions: depending on the model: 183.5 g/km or 208 g/km (average: 195.75)
195.75

X4: Large ICE:
October: 1 ad
Average emissions: 204 g/km
204

X5: Large ICE:
October: 1 ad
Average emissions: 224 g/km
224

3: Large ICE:
October: 2 ads
Average emissions: 224 g/km
2 x 224 = 448

7: large ICE:
October: 1 ad
Average emissions: 246.5 g/km
246.5

8: Large ICE:
October: 4 ads
Average emissions: 247 g/km
4 x 247 = 988

5: large ICE:
October: 3 ads
Average emissions: 254 g/km
3 x 254 = 762

X6: Large ICE:
October: 1 ad
Average emissions: 265.5 g/km
265.5

X7: SUV:
October: 4 ads
No source on BMW website. Info here
Average emissions: 240 g/km. But CO_2 BMW X7 M50I increases to 294 g/km
4 x 240 = 960

APPENDIX 2 - DETAILED FLEET ANALYSIS

Renault

128 ads
BEV. 29 ads. 22%
Hybrids: 43 ads. 34%
ICE: 56 ads. 44%
Average CO_2 emissions of ICE cars: 130 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 175,5 g/km
Average CO_2 emissions of hybrids: 59 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 165 g/km
Average CO_2 emissions of the promoted fleet: 77 g/km

Sources
Models

Megane E-Tech: BEV.
October: 6 ads
November: 2 ads
December: 1 ad
8x0=0

Zoe: BEV
October: 2 ads
December: 8 ads
10x0=0

Twingo BEV
October: 5 ads
November: 2 ads
December: 4 ads
11x0=0

Clio E-tech: hybrid.
October: 3 ads
December: 8 ads
Emissions: 83 g/km
11 x 83 = 913

Captur E-Tech: hybrid.
October: 5 ads
November: 2 ads
December: 6 ads
Emissions: 34 g/km
13 x 34 = 442

egane Grandtour hybrid: Hybrid.
October: 2 ads
November: 1 ad
December: 4 ads
Emissions: 30 g/km
7 x 30 = 210

Arkana hybrid
November: 4 ads
December: 8 ads
Emissions: 80 g/km
12 x 80 = 960

Clio
December: 4 ads
Average emissions: 124g/km
4x124=496

M
Scenic
December: 4 ads
Average emissions: 145g/km
4x145=580

Grand Scenic: ICE
November: 2 ads
December: 4 ads
Emissions: 129 g/km
6 x 129 = 774

Express Van: ICE
November: 2 ads
December: 4 ads
Emissions: 131.62 g/km
6 x 131.62 = 789,72

Megane: ICE
November: 4 ads
December: 2 ads
Emissions: 113 g/km
6 x 113 = 678

Megane Grandtour: ICE
October: 4 ads
December: 6 ads
Average emissions: 113 g/km
10 x 113 = 1130

Captur: SUV ICE
October: 3 ads
November: 5 ads
December: 2 ads
Average emissions: 134 g/km
10 x 134 = 1340

Kadjar
December: 4 ads
Average emissions: 135g/km
4x135=540

Koleos
December: 4 ads
Average emissions: 150g/km
4x150=600

Espace
December: 2 ads
Average emissions: 190g/km
2x190=380

APPENDIX 2 - DETAILED FLEET ANALYSIS

Mercedes

68 ads
BEV. 42 ads. 61%
Hybrids: 10 ads. 15%
ICE: 16 ads. 24%
Average CO_2 emissions of ICE cars: 154 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 208 g/km
Average CO_2 emissions of hybrids: 38.7 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 108.36 g/km
Average CO_2 emissions of the promoted fleet: 42 g/km

Models

EQA: BEV
December: 2 ads
2x0=0

EQS: BEV
October: 17 ads
November: 2 ads
December: 5 ads
24x0=0

EQB: BEV
December: 16
16x0=0

Class C Plug-in Hybrid
November: 6 ads
December: 4 ads
Emissions: 38.7 g/km
10x38.7 = 387

Class C Berline
November: 4 ads
Emissions: 148.5 g/km
4 x 148.5 = 594

Class C Estate
November: 4 ads
Emissions: 152 g/km
4 x 152 = 608

Class E Berline
November: 4 ads
Emissions: 152 g/km
4 x 152 = 608

Class E Estate
November: 4 ads
Emissions: 163 g/km
4 x 163 = 652

APPENDIX 2 - DETAILED FLEET ANALYSIS

Ford

112 ads
BEV. 0 ads. 0%
Hybrids: 66 ads. 59%
ICE: 46 ads. 41%
Average CO_2 emissions of ICE cars: 158 g/km
Real-world estimate of the ICE cars' emissions (x 1.35): 213 g/km
Average CO_2 emissions of hybrids: 47.6 g/km
Real-world estimate of the hybrids' emissions (x 2.8): 133.28 g/km
Average CO_2 emissions of the promoted fleet: 101 g/km

Sources:

Puma hybrid:
November: 12 ads
December: 20 ads
Emissions: 98 g/km
32 x 98 = 3136

Kuga plug-in: Hybrid.
October: 14 ads
November: 14 ads
December: 6 ads
Average emissions: 26 g/km
34 x 26 = 884

Kuga:
October: 8 ads.
December: 5 ads
Average emissions: 134 g/km
13 x 134 = 1742

Ranger: SUV
October: 4 ads
November: 6 ads
December: 2 ads
Average emissions: 229 g/km
12 x 229 = 2748

Transit:
November: 4 ads
Emissions: 175 g/km
4 x 175 = 700

Puma: SUV.
October: 7 ads
November: 6 ads
December: 4 ads
No figures on the website. Here some info about 2020: 118 g/km. Here other numbers: 128 g/km
Average emissions: 122 g/km
17 x 122 = 2074

GROUPS

VOLKSWAGEN

Ford

LINCOLN

Audi

SEAT | CUPRA

ŠKODA

BENTLEY

BUGATTI

PORSCHE

DUCATI

Commercial Vehicles

SCANIA

MAN

BMW GROUP

MINI

ROLLS-ROYCE MOTOR CARS LTD

DAIMLER

Mercedes-Benz

MAYBACH

smart

BMW GROUP

MINI

ROLLS-ROYCE MOTOR CARS LTD

Renault

Dacia

Alpine

Renault Samsung Motors

Lada