

## Auto Environment Guide 2022: Media Briefing

As the climate crisis intensifies, the global auto industry faces growing pressure to end its reliance on the internal combustion engine. Unprecedented heat waves, wildfires, flooding, and biodiversity loss are signs that it is long past time for the auto industry to move beyond fossil fuels.

Governments and consumers have become increasingly aware of the danger that fossil fuel vehicles pose. Worldwide, in 2021, the sale of zero-emission vehicles<sup>1</sup> more than doubled for the first time in a decade.<sup>2</sup> The EU, Canada, and California have taken steps to ban the sale of new combustion engine vehicles by 2035, and Norway and the UK are working toward 2025 and 2030, respectively.<sup>3</sup> In China, the world's largest auto market, battery electric vehicles comprised 11% of auto sales in 2021, compared to just 6% the previous year.<sup>4</sup>

However, traditional automakers have been relatively slow to embrace zero-emission vehicles across major markets. In particular, automakers Toyota, Nissan and Honda have made little progress toward increasing the portion of zero-emission vehicles on the road. In 2021, 499 out of every 500 vehicles that Toyota sold were powered by fossil fuels.<sup>5</sup> Even General Motors and Mercedes-Benz, which lead the decarbonisation efforts among the world's biggest automakers, have not transitioned to zero-emission vehicles at a pace that aligns with Paris Agreement goals.<sup>6</sup>

Greenpeace East Asia's Auto Environment Guide 2022 tracks decarbonization efforts by the world's ten largest automakers. Automakers were scored based on their performance in three categories: (1) internal combustion engine phase-out, (2) supply chain decarbonisation, and (3) resource reduction and efficiency. The intention of this report is to provide an overview of how automakers are performing in the transition to zero-emission vehicles and to identify areas for improvement.

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<sup>1</sup>A zero-emission vehicle (ZEV) is an electric car that does not produce exhaust emissions of pollutants or carbon when it operates. In this report, BEVs and FCEVs are regarded as ZEVs, while PHEVs are not.

<sup>2</sup> Source: Greenpeace East Asia analysis of MarkLines data

<sup>3</sup> Erin Eunseo Choi, "South Korea's New President Must Keep His Pledge for a Bold Switch to Electric Vehicles," *South China Morning Post*, May 11, 2022, [accessed August 31, 2022]  
<https://www.scmp.com/comment/opinion/article/3177143/south-koreas-new-president-must-keep-his-pledge-bold-switch>

<sup>4</sup> "工业和信息化部举行2021年汽车工业发展情况新闻发布会" [Ministry of Industry and Information Technology holds press conference on automobile industry development in 2021], *The Ministry of Industry and Information Technology of the People's Republic of China*, January 13, 2022,  
[https://www.miit.gov.cn/gzcy/zbft/art/2022/art\\_c1be7ff778bd42c28ffde666d93328ad.html](https://www.miit.gov.cn/gzcy/zbft/art/2022/art_c1be7ff778bd42c28ffde666d93328ad.html).

<sup>5</sup> Source: Greenpeace East Asia analysis of MarkLines data

<sup>6</sup> "Deutsche Umwelthilfe (DUH) v. Mercedes-Benz AG," *climatecasechart.com*, [accessed August 31, 2022].  
<http://climatecasechart.com/non-us-case/deutsche-umwelthilfe-duh-v-mercedes-benz-ag/>.

## Key Findings

**Global sales of zero-emission vehicles more than doubled in 2021, the biggest increase in a decade.** However, progress has been uneven across automakers and geographies.

**Toyota received the lowest score in the ranking for the second year in a row.** Zero-emission vehicles comprised just 0.18% of Toyota's total sales in 2021, compared to 8.18% for General Motors and 6.69% for Renault.<sup>7</sup> Toyota also lags in supply chain decarbonisation.

**Nissan and Honda both fell three places compared to last year's ranking** due to their slow transition to zero-emission vehicles and weak climate targets. In 2021, zero-emission vehicles comprised just 0.35% of Honda's total vehicle sales.<sup>8</sup> Nissan's combustion engine vehicle phase-out plan and zero-emission vehicle sales growth rate were the weakest among the world's largest automakers.<sup>9</sup>

#Rank (↑ # or ↓ #)*	Company	Overall score (out of 100)	2021 ZEV sales %	Phase-out of ICE vehicles	Supply chain decarbonisati on	Resource reduction and efficiency	Deductions
1	General Motors	38.5	8.18%	24.98	14	0.5	-1.0
2 (↑5)	Mercedes-Benz	37.0	3.82%	21.03	14	3	-1.0
3 (↓1)	Volkswagen	33.3	5.21%	20.76	12	1	-0.5
4 (↑4)	Ford	23.5	1.40%	15.47	8	0.5	-0.5
5 (↓1)	Hyundai-Kia	22.3	3.49%	11.85	11	0.5	-1.0
6 (↓3)	Renault	20.3	6.69%	14.27	6	0.5	-0.5
7 (↑2)	Stellantis	19.3	2.86%	13.81	6	0.5	-1.0
8 (↓3)	Nissan	13.4	2.20%	6.41	5	2.5	-0.5
9 (↓3)	Honda	12.8	0.35%	9.78	3	0.5	-0.5
10	Toyota	10.0	0.18%	7.48	3	0.5	-1.0

\*indicates the change of place from Auto Environmental Guide 2021

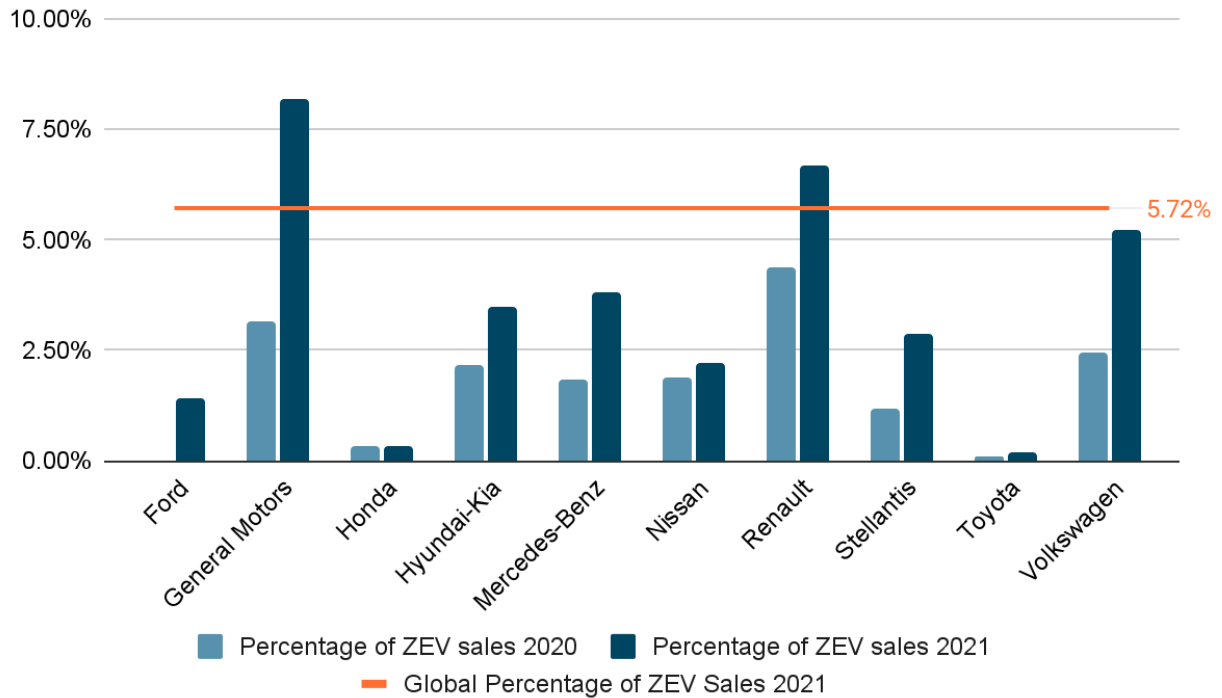
<sup>7</sup> Source: Greenpeace East Asia analysis of MarkLines data

<sup>8</sup> Source: Greenpeace East Asia analysis of MarkLines data

<sup>9</sup> Based on Greenpeace East Asia evaluation of ICE phase out plans from primary sources. Growth rates are analyzed from MarkLines data.

**General Motors and Mercedes-Benz received the top scores in this year’s ranking.** Nonetheless, both companies continue to sell fossil fuel vehicles at a rate that is not aligned with Paris Agreement goals.<sup>10</sup>

**Hyundai-Kia has fallen from fourth to fifth place** in large part due the company’s lackluster combustion engine vehicle phase-out. Hyundai-Kia’s steel decarbonisation plan received high marks, but its benefits were offset by an SUV-intensive business strategy, which drives steel consumption. Hyundai-Kia’s SUV sales rose from 33% in 2018 to 49% in 2021, the highest among all ranked automakers.<sup>11</sup>



*Global sales of zero-emission vehicles (ZEVs) as a percentage of total sales by each automaker in 2020 and 2021 (Source: Greenpeace analysis of MarkLines data).*

<sup>10</sup> Mercedes-Benz has been sued in Germany for its lack of 1.5C compatible corporate strategy. “Deutsche Umwelthilfe (DUH) v. Mercedes-Benz AG,” climatecasechart.com, [accessed August 31, 2022]. <http://climatecasechart.com/non-us-case/deutsche-umwelthilfe-duh-v-mercedes-benz-ag/>.

<sup>11</sup> Source: Greenpeace East Asia analysis of MarkLines data

## Industry Trends

**None of the world's ten biggest car manufacturers exceeded 9% zero-emission vehicle sales in 2021.**<sup>12</sup>

The world's largest automakers are not moving away from fossil fuels at a rate sufficient to ensure that the Earth remains within a 1.5°C global annual average temperature rise.

**Major auto companies have relied heavily on the Chinese market to increase sales of zero-emission vehicles.** During the first half of 2022, the vast majority of zero-emission vehicle sales by General Motors and Honda occurred in China, at 96% and 83%, respectively. For the same period, zero-emission vehicles comprised a mere 3% of General Motors' sales in the United States and 2% of Honda's sales in Japan.<sup>13</sup>

**Automakers have not issued sufficient commitments to decarbonise steel and upstream materials.**

None of the ten ranked automakers have set decarbonisation targets specifically for steel.

**Sales of carbon-intensive sports utility vehicles (SUVs) are on the rise.** SUVs accounted for 46% of the global market share of private cars in 2021, up from 42% in the previous year.<sup>14</sup> SUVs consume on average approximately one quarter more energy than medium-size cars and contribute substantially to the auto industry's demand for steel.<sup>15</sup>

**Negative climate lobbying remains a major barrier to the zero-emission vehicle transition.** In particular, Toyota continues to engage in negative climate lobbying in Japan and abroad, despite protests from investors. In June 2022, Toyota lobbied Japan's government to ensure that hybrids, which burn fossil fuels, would be counted equally in terms of climate benefits alongside zero-emission vehicles.<sup>16</sup>

**Zero-emission vehicle sales in the US remained low in 2021 for nearly all ranked automakers.** The zero-emission vehicle sales rate remained below 5% for General Motors, Honda, Mercedes-Benz, and Stellantis in the US in 2021.<sup>17</sup>

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<sup>12</sup> Source: Greenpeace East Asia analysis of MarkLines data

<sup>13</sup> Source: Greenpeace East Asia analysis of MarkLines data

<sup>14</sup> Laura Cozzi and Apostolos Petropoulos, "Global SUV sales set another record in 2021, setting back efforts to reduce emissions," *International Energy Agency (IEA)*, December 21, 2021, <https://www.iea.org/commentaries/global-suv-sales-set-another-record-in-2021-setting-back-efforts-to-reduce-emissions>.

<sup>15</sup> Merle Groneweg and Benjamin Gehrs, VWs Größenwahn - Wie Volkswagens SUV-Strategie den Klimaschutz untergräbt [VW's megalomania - How Volkswagen's SUV strategy undermines climate protection], (Berlin: Greenpeace Germany, 2021), [https://www.greenpeace.de/publikationen/S03561\\_Report\\_SUV\\_Final.pdf](https://www.greenpeace.de/publikationen/S03561_Report_SUV_Final.pdf).

<sup>16</sup> Makiki Yamazaki, "Exclusive: After pressure from Toyota chief, Japan emphasized support for hybrids," *Reuters*, June 24, 2022, [accessed August 31, 2022] <https://www.reuters.com/business/autos-transportation/exclusive-japan-emphasised-hybrids-policy-document-after-lawmaker-cited-lobbying-2022-06-24/>

<sup>17</sup> Source: Greenpeace East Asia analysis of MarkLines data

## Scoring Criteria

This report evaluates the performance of the world's ten largest automakers, based on 2021 sales as measured by Marklines, retrieved in July 2022.<sup>18</sup>

Companies were ranked according to their performance on the **phase-out of ICE vehicles (77%)**, **supply chain decarbonisation (18%)**, and **resource reduction and efficiency (5%)**. The three categories are weighted according to life cycle emissions. An additional ranking scheme for the deduction of points due to violations or misconduct was also included.

A detailed breakdown of the scoring criteria is available in Section 2 of the report.

## Recommendations

Greenpeace recommends that automakers take the following actions to decarbonise the transport sector:

### 1. Accelerate the phase-out of internal combustion engines

Automakers must end the sale of combustion engine vehicles in Europe by 2028 and in their primary markets (the US, China, Korea, and Japan) before 2030.

### 2. Promote renewable energy charging and resource reduction

Automakers should promote renewable energy charging and build the capacity required to reuse and recycle batteries.

### 3. Fast-track steel decarbonisation

Automakers must audit and disclose the carbon footprint of their materials, commit to the purchase of low-carbon steel, set steel carbon reduction targets, produce fewer SUVs, and invest in the development of zero-carbon steel.

### 4. Ensure a just transition

Automakers and policymakers must engage early and often with workers, unions and other stakeholders. It is critical that auto workers have a leading voice in the transition to zero-emission vehicles and that their economic, social and physical well-being are protected.

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<sup>18</sup> Sales data for joint ventures have only been included when the company owns more than a 50% share of the joint venture, except for joint ventures in China where foreign companies were not permitted to hold over 50% stakes.

## **5. Rethink mobility and reduce private car ownership**

A zero-carbon mobility future entails fewer private cars, more efficient public transport systems, car sharing options, the redesign of cities to make space for walking and cycling, and less travel. Automakers need to reconsider their business model, which is currently based on the sale of vehicles at an ever-increasing pace, and governments should devise strategies to steer the world towards a zero-emission future.