



Lead the Charge

The Race to Cleaner Automotive Supply Chains

A comparative analysis of automaker performance in building equitable, sustainable and fossil-fuel free supply chains

2024 LEADERBOARD REPORT

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This is the second annual Leaderboard on automotive supply chains, published by Lead the Charge. The Leaderboard evaluates 18 of the world's leading automakers on their efforts to eliminate emissions, environmental harms, and human rights violations from their supply chains. This report summarizes and analyzes the key findings from the Leaderboard, highlighting progress and gaps, calling out leaders and laggards, and identifying challenges and opportunities for the year ahead. The full dataset of the Leaderboard, together with additional data on individual company performance, can be found on the Lead the Charge [website](#).

CHAPTER 001

Executive Summary



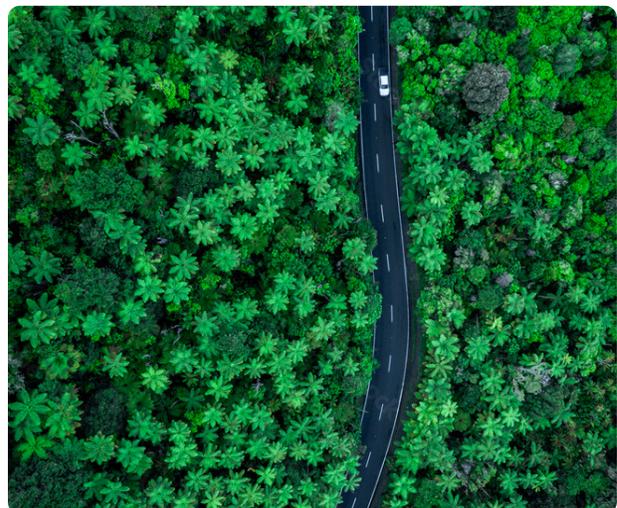
This report is based on an analysis of the second edition of the [Lead the Charge Leaderboard](#), which assessed 18 of the world's leading automakers against over 80 indicators that evaluate their efforts to eliminate emissions, environmental harms, and human rights violations from their supply chains. The Leaderboard aims to establish a new expectation – and competitive advantage – for what it means to produce a truly clean car. Not just an electric vehicle (EV), but an EV with an equitable, fossil-free and environmentally sustainable supply chain.

The leaderboard covers two main aspects of company policies and practices: those focused on building *fossil-free and environmentally sustainable supply chains*, and those focused on ensuring respect for *human rights and responsible sourcing* throughout their supply chains. Companies are given a percentage score enabling an assessment of both how close each automaker is to the scorecard's expectations of what constitutes a clean car, as well as comparisons between automakers. The Lead the Charge Leaderboard is in its second year, meaning company progress can also be tracked.

This year's analysis shows that **the industry is making progress: all but one of the companies included within the first Leaderboard evaluation saw an improvement in their performance this year.** In particular, noteworthy progress has been made on driving demand for fossil-free steel and undertaking human rights due diligence.

U.S. automakers are making the fastest progress, led by Tesla, which shot up in the rankings from #9 to #3 in just one year – the biggest increase across all the automakers by a significant margin. Moreover, individual companies are fully meeting the performance criteria of most of the indicators, laying down the challenge for the rest to catch up.

However, progress by the industry as a whole is lackluster when compared to the scale of the challenge ahead. **Average scores overall were just 19%, and no company scored over 50%** against the total number of indicators. Moreover, one third of the automakers evaluated still haven't taken concrete action on steel and aluminum decarbonization, whilst **average scores across the indicators on responsible transition mineral sourcing, Indigenous Peoples' rights and workers' rights have risen by just 2 percentage points**, with 11 out of the 18 automakers continuing to score 0% on Indigenous Peoples rights.



Main Findings



Ford has taken the top spot from **Mercedes** this year, with an overall score of 42%. Ford increased its 2023 score by 9 percentage points, resulting in a 2 percentage point lead over Mercedes (40%).



Tesla (35%) came third and was the biggest improver within the year, increasing its score by 21 percentage points and moving from ninth to third position. The pure-play EV manufacturer was the only company to make improvements across all eight of the indicator categories.



GM also made noticeable progress (a 7% improvement overall) and has moved mainly on the fossil-free and environmentally sustainable supply chain indicators, particularly with regard to setting targets and securing offtakes for low-carbon steel and aluminum.

With notable improvements from US automakers coupled with inertia from some European automakers (particularly VW, Renault and Volvo), **this year saw US auto companies overtaking their European peers:** scoring 31% on average compared to 28% (European automakers scored an average of 26% last year, and US automakers 21%). If relative improvements are replicated next year, other European automakers risk being overtaken by peers like GM and Geely that are making faster progress.

There was **solid progress on steel and, to a slightly lesser extent, aluminum decarbonization**, especially in the US (Tesla, Ford and GM). However, on these indicators, US automakers remain behind their European peers, while East Asian automakers still lag further behind.



Toyota and **Honda** continue to be the climate laggards of the auto industry, failing on both the EV transition, as well as on supply chain decarbonization. However, **Kia** and **Nissan** were not much further ahead and have barely made any progress over their 2023 performance. Moreover, all four automakers also score low on human rights and responsible sourcing.

Advances in EU legislation appear to be having an impact on the due diligence practices of automakers, with the average score in the General human rights subsection rising by 6%. Particularly notable was the improved performance by Chinese automakers that want to expand exports to the EU market: three Chinese automakers (Geely, BYD and GAC) all went from 0% on human rights and responsible sourcing to scoring on several indicators in the general human rights due diligence and transition minerals sections. Geely is by far the strongest performer - increasing its score to 16% in the general human rights due diligence section.

Automakers are failing to take adequate action to ensure a just transition across their supply chains: during 2023, over 70% of automakers made no progress on Indigenous Peoples' rights and nearly half of automakers made no progress on workers' rights.

Overall no automaker has crossed the halfway mark towards building an equitable, sustainable and fossil-free supply chain. However, **meaningful improvements are attainable by automakers by matching the best practice of their peers**. Over half the indicators are fully met by at least one company. Adding up the highest scores achieved by any company for each indicator results in a score of over 70%. Automakers can therefore achieve radical improvements simply by matching the best practice of their peers across different areas.

Fossil-free and Environmentally Sustainable Supply Chains

Companies scored, on average, just 16% on efforts to make their supply chains fossil-free and environmentally sustainable (lower than the average across the scorecard). This represents a 5 percentage point increase over the industry-wide average score in the 2023 Leaderboard.

Mercedes-Benz

The top performers were **Volvo** and **Mercedes**, each scoring 36%: more than double the industry wide average.

VOLVO

Volvo continues to be significantly ahead of other companies in its approach to decarbonizing the steel and aluminum used in its vehicles. The Swedish automaker scored 42% against these indicators, compared to an industry-wide average of just 11%.

Although it maintained its top spot, **Volvo** made little progress overall. Failure to make future improvements will leave Volvo's lead vulnerable to the continued progress of other automakers. For example, Volvo's score difference with Mercedes on these indicators is now less than 1%, with **Tesla** and **Ford** also rapidly closing the gap with Volvo.

The three German automakers analyzed (**BMW**, **Mercedes** and **Volkswagen**) achieved the highest scores in the General environment section, outperforming across the baseline indicators.

T E S L A

Tesla is now leading the industry on scope 3 emissions disclosure, becoming the first automaker to provide disaggregated scope 3 emissions for its steel, aluminum and battery supply chains. Thanks to these improvements, and others, Tesla has ascended to third place in the fossil-free and environmentally sustainable section with a score of 31%.

2024 saw notable progress on steel and, to a slightly lesser extent, aluminum decarbonization - with average scores rising by 5 and 4 percentage points respectively. In the 2023 edition of the Leaderboard, the majority of automakers (61%) scored 0% on steel, while 78% scored less than 10%. In 2024, this situation has been reversed: **now, automakers scoring 0% and less than 10% on steel are in the minority** (33% and 39% of automakers respectively). This suggests that pressure from civil society, investors and regulators over the past year has been successful in transforming auto steel decarbonization from a marginal issue for the auto industry into a mainstream one.

Tesla and **Mercedes** are the industry leaders within the battery section, scoring 33% and 32% respectively. **Renault** also improved notably within the battery indicators (up 13 percentage points), driven by a new business unit developing closed loop battery recycling and a new purchasing agreement for low-carbon cobalt.

Human Rights And Responsible Sourcing

The **average score within the human rights section was a mere 21%**, rising by only 3 percentage points compared to 2023.



Overall, **Ford** topped the automakers with 54%, followed by **Mercedes** with 44%, and **Tesla** with 39%. Ford and Mercedes retained their rankings from 2023, while Tesla displaced Stellantis (scoring 37%) for the third spot.



Scores within the baseline assessment of human rights due diligence (the "General" subsection) were the highest of any sub-section across the whole scorecard, with **Stellantis** performing strongest (76%).

Ford scored particularly well for its approach to responsible transition mineral sourcing, scoring 86%: the highest score for a single subsection across the Leaderboard. **Tesla**, meanwhile, achieved a score increase of 31% for this issue, the largest score improvement within a single subsection. However, such progress was not widespread: average scores against these indicators rose by a meager 2 percentage points.

Automakers are **largely ignoring risks to Indigenous Peoples in their supply chains and are failing to take action to uphold their rights**. For the second year in a row, company progress remained abysmal in the Indigenous rights subsection: the average score was just 4%, an increase of 1 percentage point over the year. This means that this subsection continues to receive the lowest average score of all, but also was also the issue where automakers made the least progress: of those scored in both years, 13 of the 16 automakers saw no improvement at all. One bright spot was Tesla, which introduced a full requirement on Free, Prior and Informed Consent in its responsible sourcing policy, and disclosed risks to Indigenous rights specifically in its due diligence disclosure of salient human rights risk.

Companies are also mostly failing to take action on workers' rights in their supply chains. Industry-wide, automakers scored 19% on their efforts to ensure their suppliers respect workers' rights. Ford and Mercedes were the only automakers to score over 50% against these indicators. Overall, there have been negligible net improvements: with an average score increase of 3 percentage points and nearly half of automakers making no progress at all.

Only three automakers have made commitments to ensure workers are paid a living wage: Ford and Mercedes have general commitments to a living wage and BMW has introduced it as a requirement in its supplier code of conduct. However, no company defines what is meant by a "living wage."

Scores from the 2024 Edition of the Lead the Charge Leaderboard

RANK	AUTOMAKER	FOSSIL FREE AND ENVIRONMENTALLY SUSTAINABLE SUPPLY CHAINS	HUMAN RIGHTS AND RESPONSIBLE SOURCING	OVERALL LEADERBOARD SCORE
01		29%	54%	42%
02	Mercedes-Benz	36%	44%	40%
03	TESLA	31%	39%	35%
04	VOLVO	36%	27%	32%
05	 STELLANTIS	16%	37%	27%
06		25%	26%	26%
07		17%	31%	24%
08		19%	26%	22%
09	RENAULT	17%	21%	19%
10	HYUNDAI	12%	18%	15%
11	NISSAN	12%	15%	13%
12	GEELY	15%	6%	10%
13	KIA	7%	9%	8%
14	HONDA	4%	11%	8%
15		5%	9%	7%
16		1%	5%	4%
17	GAC	3%	1%	2%
18		2%	0%	1%

About Lead the Charge



What is Lead the Charge?

Lead the Charge is a diverse network of local, national, and global civil society organizations calling on automakers to radically transform their supply chains so that they are free of fossil fuels, environmental harms and human rights abuses.

Network members work across multiple geographies and issues, with expertise in climate, environmental justice, human rights, Indigenous rights, heavy industry, ESG and more.

Our vision is an automotive industry where all vehicles are made:

01 — Equitably

Respecting and advancing the rights of Indigenous Peoples, workers, and local communities throughout the supply chain.

02 — Sustainably

Preserving and restoring environmental health and biodiversity across supply chains, while reducing primary resource demand through efficient resource use and increased recycled content.

03 — Fossil Free

100% electric and made with a fossil fuel-free supply chain.

What is the Lead the Charge Leaderboard?

The Lead the Charge Leaderboard, published annually and now in its second edition, evaluates the progress of 18 of the world's leading automakers towards this vision of building equitable, sustainable and fossil-free supply chains. As vehicle production shifts to electric vehicles (EVs) to reduce greenhouse gas emissions, the Lead the Charge Leaderboard aims to establish a new expectation for what is meant by "clean car". This means not just zero tailpipe emissions, but EVs with a just, equitable, fossil-free and environmentally sustainable supply chain.

A clean car is thus defined as having:

- a fossil-free supply chain that also has the lowest possible negative impact on human health, biodiversity, resource depletion, and ecosystem resilience; and
- a supply chain throughout which the rights of Indigenous Peoples, workers, and local communities are respected.

This definition, and the Leaderboard itself, was developed following a review of existing benchmarking initiatives, reporting standards, best practice supply chain initiatives and legislative requirements in the two of the largest EV markets (EU and United States). The indicators were aligned to international norms and widely recognized standards, such as the UN Guiding Principles on Business and Human Rights, the Task Force on Climate-Related Financial Disclosures, Global Reporting Initiative, the International Energy Agency, and EU Taxonomy. Following their drafting, stakeholders were consulted on the proposed indicators which were subsequently refined. [See the methodology document for a more detailed explanation of the Leaderboard development.](#)

Structure of the Leaderboard

The Leaderboard is designed to give companies a score out of 100%. This enables an analysis of relative performance between automakers and of how close or far companies are to meeting the expectations within the scorecard.

The Leaderboard is divided into two main sections: fossil-free and environmentally sustainable supply chains, and human rights and responsible sourcing.

Within each of these there are four subsections, representing different supply chain issue areas, which are outlined in the box below.

LEADERBOARD SECTIONS

Fossil-free and Environmentally Sustainable supply chains (climate and environment):

- Fossil-Free and Environmentally Sustainable Supply Chains (General)
- Fossil-Free and Environmentally Sustainable Steel
- Fossil-Free and Environmentally Sustainable Aluminum
- Fossil-Free and Environmentally Sustainable Batteries
 - Climate Lobbying (applied as a multiplier to total scores in this section)

Human Rights & Responsible Sourcing:

- Respect for Human Rights (General)
- Responsible Sourcing of Transition Minerals
- Respect for Indigenous Rights and Free Prior and Informed Consent
- Respect for Workers' Rights

The General indicators within both themes provide a baseline score, assessing automakers' general efforts to address human rights, emissions, and other environmental impacts across their supply chains. The other subsections provide a more focused analysis of their efforts to address specific issues in their supply chains.

Each of the subsections within the two themes of the Leaderboard follow the same indicator structure. Within the fossil-free and environmentally sustainable supply chain section, the indicators of each subsection are shaped around a SBTi report on supply chains which, although focused on emissions, provides a relevant framework for wider environmental impacts.¹ Within the human rights and responsible sourcing section, the indicator design is shaped around UN Guiding Principles.²

In order to reward automakers' progress towards the delivery of clean vehicles, the scoring is intentionally weighted towards implementation indicators. These framings and weightings are set out on the following page.

CLIMATE AND ENVIRONMENT

INDICATOR CATEGORIES	% WEIGHTING
Disclose	100%
Target setting & progress	150%
Supply chain levers	200%

HUMAN RIGHTS AND RESPONSIBLE SOURCING

INDICATOR CATEGORIES	% WEIGHTING
Commit	100%
Identify	150%
Prevent, Mitigate and Account	200%
Remedy	200%

Within the Leaderboard, some indicators award points for participation in third party accreditation or certification schemes, commonly used by automakers as part of their environmental and human rights due diligence. Given the range of such schemes,³ a point modifier was developed (see box on page 40) to account for the disparity with regards to their robustness and effectiveness, with points being modified progressively downwards for schemes that fail to meet multiple criteria for effective governance and auditing. This analysis of third party schemes has also been [published as a standalone briefing](#).

Within the fossil-free and environmentally sustainable supply chains section, climate policy lobbying is also considered as an additional factor, reflecting the important role automakers can play advocating for, rather than against, government efforts to raise standards and create a race to the top. As such, the Leaderboard includes a weighting that modifies automakers' overall scores in this section according to their ratings in InfluenceMap's evaluations of automakers' climate lobbying policies and practices.⁴

The indicators and score weightings provide the framework for assessing the automakers. Company policies and activities were then analyzed, which was limited to reviewing official company disclosures as opposed to press releases, media or third-party reports. This focus on company disclosures was

adopted to ensure the analysis was based on official company policy and reporting that had received board level sign-off, as well as to encourage greater transparency in the industry.

A more detailed description of the methodology including changes that have been made this year can be found in [Automaker Supply Chain Leaderboard - Methodology document](#). The appendix to the report also outlines the scorecard's individual indicators.

METHODOLOGY UPDATES FOR THE SECOND EDITION OF THE LEADERBOARD

Best practices for clean and equitable battery electric vehicle (BEV) supply chains are constantly developing. As such, a number of minor adjustments to the assessment framework were incorporated into the 2024 edition of the Leaderboard. Some of the more material changes are described below:

Fossil-free and Environmentally Sustainable Supply Chains

- Definitions of "low-carbon" steel and aluminum have been equalized to align with the First Movers Coalition (FMC)⁵ and, in the case of steel, the IEA.
- Precision added with regards to the differentiation between pre- and post-consumer scrap for the steel and aluminum recycling indicators. Achieving full points is contingent on the inclusion of post-consumer scrap within closed-loop processes.
- Disaggregated indicators that include scoring criteria related to industry certification schemes, in order to allow for the application of the aforementioned point modifier.
- Indicators on battery recycling expanded to account for different methods of recycling batteries.
- Explicit reference made to smaller batteries as a way to score points within the indicator related to reducing demand for minerals.

Human rights

- Multi-stakeholder initiatives other than IRMA no longer meet the threshold required to score under the mining supplier audit indicator. Research highlighted that currently only the IRMA audit standard can be considered robust enough to qualify.

Which companies are we looking at?

The companies assessed within the Leaderboard were selected because they are the largest producers of BEVs within specific regions, or are the largest global automakers. As such, the Leaderboard is focused on companies that are, or could be, leading the transition to electric vehicles and who can therefore play a pivotal role in creating a race to the top on EV supply chain practices.

The companies selected are listed below. R-N-M Alliance sales data includes both Renault and Nissan, which were evaluated individually in the scorecard owing to them having largely separate operations,

policies and reporting (the alliance also includes Mitsubishi, which was not included in this year's scorecard as it constituted a slim share of the alliance's total EV sales). For the same reason Hyundai and Kia were evaluated separately in the scorecard despite having combined sales data.

All automakers were contacted before publication to provide the results and the opportunity for discussion, questions, clarifications, and feedback. All feedback received was reviewed, and where pertinent, incorporated into the final Leaderboard scores and this resulting report.

Automakers included within the analysis:

OEM	BEV Sales	Total Vehicle Sales	BEV %	Headquartered Country
BMW Group	165,303	1,286,153	13%	Germany
BYD	711,556	1,474,077	48%	China
Ford	43,570	1,763,257	2%	United States
GAC	265,391	439,253	60%	China
Geely Auto Group	172,105	690,161	25%	China
GM	311,070	2,597,538	12%	United States
Honda Motor	9,334	1,777,932	1%	Japan
Hyundai Motor (inc. Hyundai and Kia)	191,560	2,584,073	7%	South Korea
Mercedes-Benz Group	138,207	1,264,493	11%	Germany
R-N-M Alliance (inc. Renault and Nissan)	152,517	2,302,027	7%	France/Japan
SAIC	60,351	180,917	33%	China
Stellantis	151,236	2,416,540	6%	Netherlands
Tesla Inc.	945,119	945,119	100%	United States
Toyota Motor Corp.	46,821	4,111,313	1%	Japan
VW Group	370,513	4,145,279	9%	Germany
Volvo Car Group	88,156	378,671	23%	Sweden

Source: EV-Volumes OEM Share tracker. All figures are YTD up to and including July 2023. Data covers passenger vehicles only and covers Europe, China, South Korea, Japan, and USA and Canada.

CASE STUDY

The importance of equitable, sustainable and fossil-free automotive supply chains: a case study on nickel mining and processing in Indonesia

Written by [Mighty Earth](#), [Earthworks](#), [Climate Rights International](#), [Rainforest Foundation Norway](#)

Indonesia produces 48.8% of the world's nickel, a quantity expected to grow further as demand for electric vehicles increases. With rising demand, companies are turning to lower-grade laterite nickel which must be processed into higher-quality, battery grade nickel, a process which can produce as much as twice the carbon emissions of the industry average. While electric vehicles are a necessary piece of solving the climate crisis, the nickel industry must improve extractive and processing practices to protect the people and biodiversity of Indonesia.

Links to Deforestation and Biodiversity Destruction

In an [analysis of 329 nickel mining concessions](#), Mighty Earth found associated operations have driven up to 378,970 acres of deforestation in Indonesia since 2000. Of the top nickel deforesters, many are clearing land in High Carbon Stock forest and Key Biodiversity Areas, and over 1.2 million acres of forest are at risk inside nickel concessions in Indonesia. Sulawesi, a biodiversity hotspot, contains 3.7 million acres of forested, mineral-rich land and 36% of these acres are occupied by nickel concessions. As mines operate in ecologically valuable rainforest and easily disrupted island ecosystems, nickel mining poses significant biodiversity risks to Indonesia, which would impact its forests' ability to act as a carbon sink.

Increased Emissions & Captive Coal

Mining and refining yields high emissions due to fossil fuel use and land use change. Because Indonesian laterite nickel ore is low-quality, processing it into battery grade nickel is carbon intensive, with roughly two to five times more emissions than processing sulfide nickel ore mined in temperate countries, like Canada and Russia.

Nickel industrial parks are largely dependent on captive coal, meaning coal is burned solely to feed

industrial operations and does not connect to the country's electricity grid. As more nickel smelting facilities are built, more captive coal plants are being built in Indonesia. Continued use of captive coal plants in nickel mining will lead to Indonesia's ranking as one of the world's biggest emitters. Coal consumption in Indonesia increased 33% from 2021 to 2022, contributing to a 20.3% increase in the country's greenhouse gas emissions in just one year. The Indonesia Morowali Industrial Park alone has as much coal power capacity as [Pakistan or Mexico](#). Environmental groups are [advocating](#) for the early retirement of coal-fired power plants in Indonesia, including captive coal plants, in order to mitigate climate impacts.

Toxic Waste and Harms to Communities

The Indonesian nickel industry is increasingly turning to High Pressure Acid Leaching (HPAL), a toxic process that leaves behind a massive amount of waste. In some cases, this waste is dumped directly into rivers, lakes, and oceans, through a process known as submarine tailings disposal. Toxic runoff from mining and smelting operations contaminates drinking water for communities who rely on nearby aquifers and rivers. In Sulawesi, water pollution from the Indonesia Morowali Industrial Park reduces available fish, impacting the community's livelihoods. On Halmahera Island, drinking water for local communities is threatened by excessive pollution from companies like [PT Weda Bay Nickel](#). While Indonesian environmental laws should protect against pollution of this sort, [Climate Rights International](#) highlights that the laws lack sufficient enforcement while the national government prioritizes industrial development over environmental protection. The Indonesian government is currently barring nickel companies from dumping waste into the sea, but their on-land storage alternative may not be safer.

Tailings facilities are used to house leftover waste from the mining process. If tailings are not stored properly, facility failures can be catastrophic, exemplified by a 2019 mine tailings dam collapse in Brazil which killed 272 people. At these facilities, pollution and dust increase health risks, such as tuberculosis and respiratory infections, in nearby communities. In 2022, coal-fired power plants in Indonesia were responsible for 10,500 deaths and \$7.4 billion USD in health costs.

Ongoing Violations of Indigenous Peoples' Rights

Nickel mining and refining in Indonesia poses significant threats to the rights of Indigenous Peoples, including the right to provide Free, Prior, and Informed Consent (FPIC). For example, the Hongana Manyawa, an uncontacted tribe, is threatened by nickel mining as their customary territory was non-consensually granted by the Indonesian government to mining companies who are encroaching on their land. The traditional livelihood of the Hongana Manyawa tribe is dependent on the forest, and any contact from outsiders threatens their health and safety due to the risk of violence and a lack of common immunity from disease.

Future of Nickel Mining in Indonesia

The Indonesian nickel mining industry threatens land and people via economic incentives that drive deforestation, systemic corruption, and legal amnesty for problematic mining practices in protected forest areas. Moreover, the Indonesian nickel industry currently operates without traceability and transparency; there is no production data or traceability for individual mines or standards for producer disclosure.

Environmental groups and US government officials are pushing for strong social, environmental and labor protections in the Indonesian nickel mining industry. In October 2023, a bipartisan letter from U.S. Senators warned against a potential critical minerals agreement (CMA) with Indonesia, citing concerns over labor and community protections, biodiversity impacts, and CO2 emissions. Indonesian civil society groups and US NGOs also released letters expressing concerns about a CMA, pushing for binding environmental and social safeguards in any agreement to expand access to nickel or other critical minerals.

Guidelines and standards, such as the Initiative for Responsible Mining Assurance, exist to help mines adopt best practices. Transport & Environment recommends dedicated biodiversity conservation practices, in addition to dry stacking as a form of tailings management. Earthworks' "Safety First: Guidelines for Responsible Mine Tailings Management" include recommendations that ban dangerous tailings facilities, bolster safety regulations and adopt comprehensive evacuation and emergency plans.

Climate Rights International's "Nickel Unearthed" report documents human rights and environmental abuses related to nickel mining and smelting in North Maluku, and provides recommendations, focused on protecting the environment, climate, and human rights, to mining and smelting companies, the Indonesian government, EV companies, and foreign governments.

The Indonesian government and companies sourcing Indonesian nickel must ensure that people, forests, biodiversity, and the climate are not devastated by harmful mining and processing practices.



A nickel mine on Indonesia's Kabaena Island by Ian Morse

Leaderboard Findings

The Lead the Charge Leaderboard assesses the world's leading EV makers on their efforts to eliminate emissions, environmental harms, and human rights violations from their supply chains. Disclosures from the 18 automakers selected were analyzed and assessed against the scorecard's criteria outlined in the [accompanying methodology](#). The results from this assessment are presented below and can also be found on the [Lead the Charge website](#).

Overall scores and changes from 2023

This year saw some real advances. Apart from Volkswagen, all companies included within the first Leaderboard evaluation saw an improvement in their score this year. This meant that, for those scored in both years, automakers saw their average score improve by a quarter of what they achieved previously, rising from 16% to 20%.

However, this pace of change will need to be significantly accelerated if the auto industry is to successfully rise to the challenge ahead. No company achieved a total score over 50%, and the average score across all automakers was just 19%. Companies' average score was slightly higher for human rights and responsible sourcing (21%) than for fossil free and environmentally sustainable supply chains (16%).

Better performance is possible. The 2024 Leaderboard saw a change in the top performing automaker: Ford, with a score of 42%, displaced Mercedes (with 40%) from the top spot. Ford continues to be the industry leader of the human rights section and also increased its ranking on the climate and environmental indicators from fifth to fourth place. Mercedes, meanwhile, continues to perform well across the two sections - finishing second in both.



Lead the Charge Leaderboard

RANK	AUTOMAKER	FOSSIL FREE AND ENVIRONMENTALLY SUSTAINABLE SUPPLY CHAINS	HUMAN RIGHTS AND RESPONSIBLE SOURCING	OVERALL LEADERBOARD SCORE
01		29%	54%	42%
02	Mercedes-Benz	36%	44%	40%
03	TESLA	31%	39%	35%
04	VOLVO	36%	27%	32%
05	 STELLANTIS	16%	37%	27%
06		25%	26%	26%
07		17%	31%	24%
08		19%	26%	22%
09	RENAULT	17%	21%	19%
10	HYUNDAI	12%	18%	15%
11	NISSAN	12%	15%	13%
12	GEELY	15%	6%	10%
13	KIA	7%	9%	8%
14	HONDA	4%	11%	8%
15		5%	9%	7%
16		1%	5%	4%
17	GAC	3%	1%	2%
18		2%	0%	1%

Tesla was the big improver of the year. The EV manufacturer increased its Leaderboard performance by 21 percentage points, moving Tesla's ranking from ninth last year into the top three this year. Tesla's improvements demonstrate what other automakers can achieve with more dedicated effort. Tesla improved across all eight subsections of the Leaderboard — the only automaker to do so — with changes most noticeable in the fossil free and environmentally sustainable supply chains section (up 20 percentage points and boosted a further 20% due to Tesla's positive climate lobbying record).

A significant factor in this was Tesla going from the minority of automakers not disclosing its scope 3 supply chain emissions at all last year to becoming the only company to disclose disaggregated supply chain emissions by steel, aluminum and battery production this year. The company also made important improvements within the responsible transition mineral sourcing subsection (up 29 percentage points). In addition, Tesla has a revised requirement on Indigenous Peoples' right to Free, Prior and Informed Consent (FPIC) in its responsible sourcing policy, and now discloses specific, albeit insufficient, information on the risks to Indigenous Peoples' rights that it has identified through its broader human rights due diligence assessment of human rights risks in its supply chain.

Ford (up 9 percentage points overall) was the second biggest improver of the year, followed closely by GM (up 7 percentage points). Both automakers achieved notable improvements in each of the fossil-free and environmentally sustainable supply chains subsections. Particularly prominent was the progress they made against the steel and aluminum indicators: both automakers are now members of the First Movers Coalition's groups on steel and aluminum, and have accordingly made commitments to use a proportion of low-carbon steel and aluminum by 2030. Both companies also backed these stated commitments by signing offtake agreements for low-carbon steel, while also making improvements with regards to steel and aluminum recycling. Together with Tesla, these US automakers improved their performance on steel and aluminum considerably: achieving an average score increase of 19 percentage points against these indicators, compared to an average increase of just 1 percentage point that was attained by the remaining fifteen automakers against the same indicators.

These improvements resulted in Ford claiming the top spot from Mercedes, with Tesla displacing Volvo for third place. Mercedes and Volvo did enhance their overall performance, increasing their scores by 3 and 2 percentage points respectively, but it was not enough to retain their 2023 positions.



Following Volvo in the rankings are three additional European automakers: Stellantis, Volkswagen and BMW. These companies all achieved scores around one quarter to one third of the total points available. Stellantis and BMW improved their performance over last year, but Volkswagen did not, resulting in the German automaker falling from fourth to sixth place in the rankings.

Although not a top performer nor seeing a big shift in its overall score, it is noteworthy that Renault did see its score within the battery subsection rise by 13 percentage points, since it established a new circular economy business unit developing closed loop battery recycling and signed a new purchasing agreement for low-carbon cobalt.

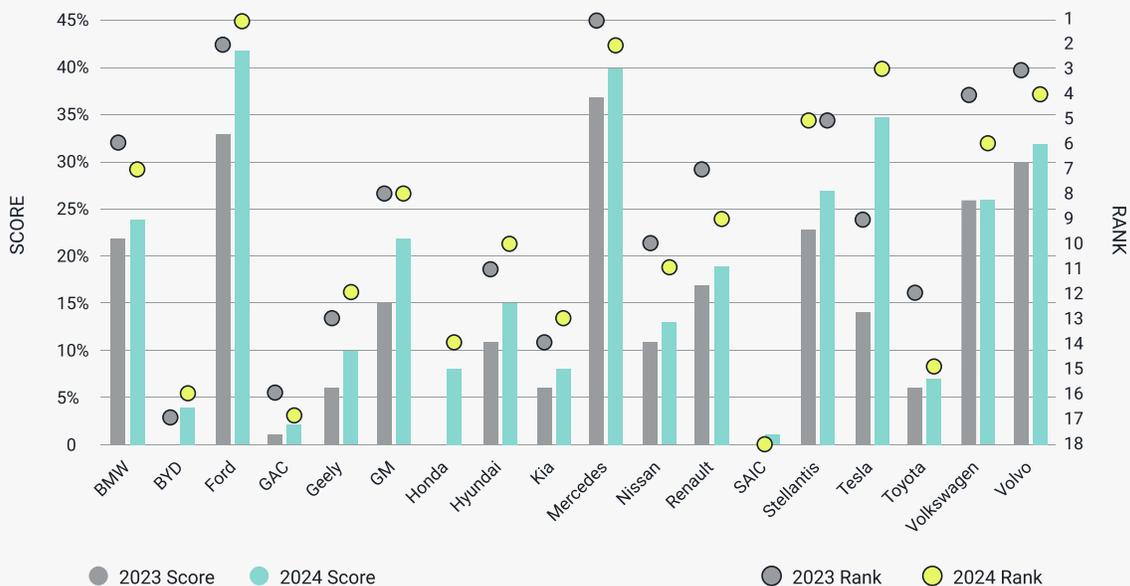
Japanese and South Korean companies trailed their US and European peers, with overall scores averaging around the 10% mark. Honda and Toyota are not only the worst performers of the Leaderboard when it comes to the transition to EVs (see table in the “Which companies are we looking at?” section above), but are also poor performers when it comes to decarbonizing their supply chains and ensuring respect for human rights. In fact, Toyota was the only company that did not achieve a score increase

across any of the four subsections of the fossil-free and environmentally sustainable supply chains section of the Leaderboard. Toyota’s lack of progress within the year saw its ranking drop from 12 to 15.

The Leaderboard includes Chinese manufacturers that are making significant progress on the transition to electric vehicles but provide relatively little disclosure on the management of environmental and social issues and risks in their supply chains. These companies have scope to rapidly improve their disclosures, policies and practices to close the gap with their competitors, especially as they seek to enter and expand their presence in other markets. For example, BYD is one of the automakers leading the transition to EVs but performs poorly when it comes to clean and equitable supply chains.

Indeed, Geely showed this year that considerable improvements can be achieved. The automaker, already leading the East Asian automakers in the fossil-free and environmentally sustainable supply chains section, achieved the largest score increase in the headline human rights subsection (16 percentage points) and was the second strongest improver across all the human rights indicators (after Tesla).

Figure 1 – Scores and ranks in 2023 and 2024



Performance by individual automakers varies within and between each section. For example, Ford ranked in fourth place in the fossil free and environmentally sustainable supply chains section but was first for human rights and responsible sourcing, performing particularly well on its approach to transition minerals, for which it scored 86%. Conversely, Volvo was ahead of all other automakers in its approach to fossil free and environmentally sustainable supply chains but did less well, ranking sixth, for its approach to human rights and responsible sourcing. These differences are explored in more detail in the following section of this report.

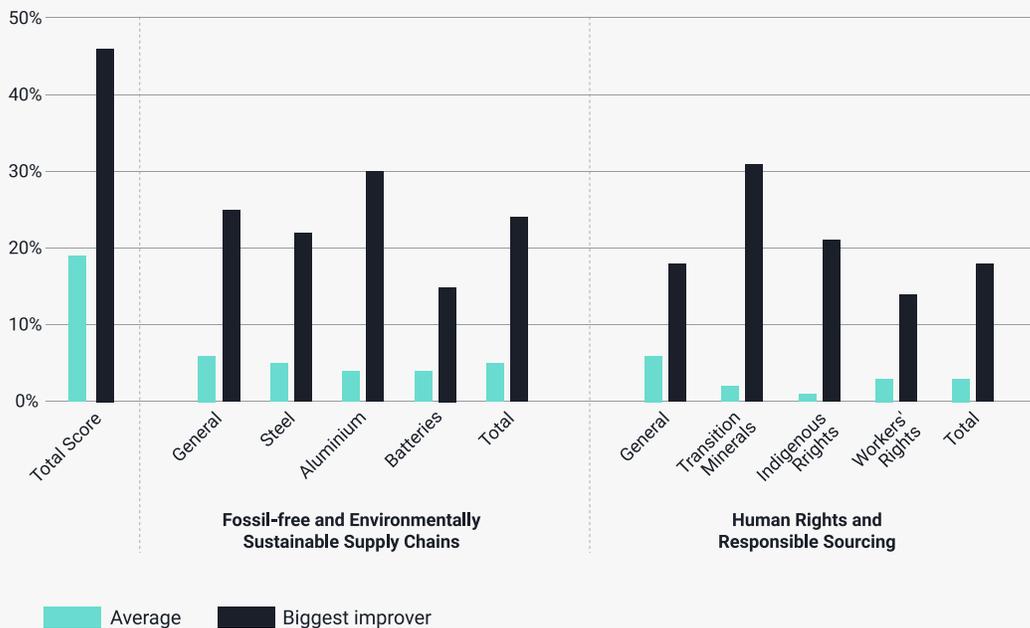
Such statistics indicate that there is significant scope for improvement by companies. Indeed, over half of the indicators saw at least one automaker score full points. In addition, if an automaker met the best-in-class standards (i.e. the highest score attained across all automakers) against each of the indicators they would achieve an overall score of over 70%. This demonstrates that automakers can achieve radical improvements simply by matching the best practice of their peers across different areas. Such opportunities are the focus of the “Where is there room for improvement?” section of the report.

Within the fossil free and environmentally sustainable supply chains section, there were steady and consistent improvements of around 4-6 percentage points across the steel, aluminum, battery and general indicators. Across these sections major advances were made by the biggest improving automakers – ranging between 15 to 30 percentage points.

In addition to the aforementioned progress made on steel and aluminum decarbonization, closed-loop battery recycling was another area of improvement this year. BMW, Geely, GM, Mercedes, Renault, Tesla and Volkswagen all made progress in developing or establishing closed loop recycling processes for battery minerals. Meanwhile, Chinese automakers BYD and GAC saw progress in bringing to market new lithium-ion battery technologies that do not use cobalt or nickel.

Automakers also made notable progress in the “General” human rights subsection, which provides a baseline assessment of automakers’ efforts to address human rights risks and impacts within their supply chains. The average score of this subsection rose by 6 percentage points, driven in part by improvements made by Tesla, Geely, Stellantis, BMW and BYD - all of which increased their scores between 9 and 18 percentage points.

Figure 2 – Percentage point change by section



However, there was noticeably less progress within the human rights section on responsible transition mineral sourcing, Indigenous Peoples' rights and workers' rights. The average scores against these indicators rose by 2, 1 and 3 percentage points respectively. Particularly concerning is the lack of progress on Indigenous Peoples' rights, already the subsection with the lowest average score. Thirteen companies demonstrated no improvement at all on this issue, resulting in an average score across all automakers of just 4%. This is clearly an issue that must be prioritized by the auto industry moving forward.

Finally, even when companies have made progress on their human rights due diligence policies and practices, important gaps remain with regards to their effective implementation. For example, Tesla achieved additional points this year in the workers' rights subsection for updating its human rights policy with explicit commitments to the Five ILO Principles (previously freedom of association and the elimination of discrimination were omitted). But in 2023, Tesla was criticized for not respecting workers' rights to collective bargaining in Sweden.

Similarly, Hyundai scored additional points in this section for including some workers' rights issues in its saliency assessment of human rights risks. However, these actions fall far short of the comprehen-

sive changes that are required after child labor was documented throughout Hyundai's supply chain in Alabama. Indeed, Hyundai was criticized by labor groups in Georgia and Alabama in 2023 for multiple allegations regarding workers' rights abuses in its supply chain in the US, and called on the company to implement third party monitoring of its suppliers and sign a community benefits agreement with local communities. To date, these demands have gone unanswered.

A similar picture emerges on transition minerals and Indigenous rights. For example, despite Ford's industry leading approach to the responsible sourcing of transition minerals and the significant improvements that Tesla made in this area during 2023, both companies (together with Volkswagen) were identified by Climate Rights International (CRI) as downstream buyers of the nickel processed in the IWIP facility in Indonesia, which CRI linked to a series of human rights and environmental abuses. GM, meanwhile, is one of the few companies with an explicit requirement for its suppliers to respect Indigenous Peoples' right to Free, Prior and Informed Consent. However, the automaker has come under criticism for not taking action on this requirement when allegations were made against Lithium Americas' Thacker Pass mine for failing to respect FPIC (see box on page 50).



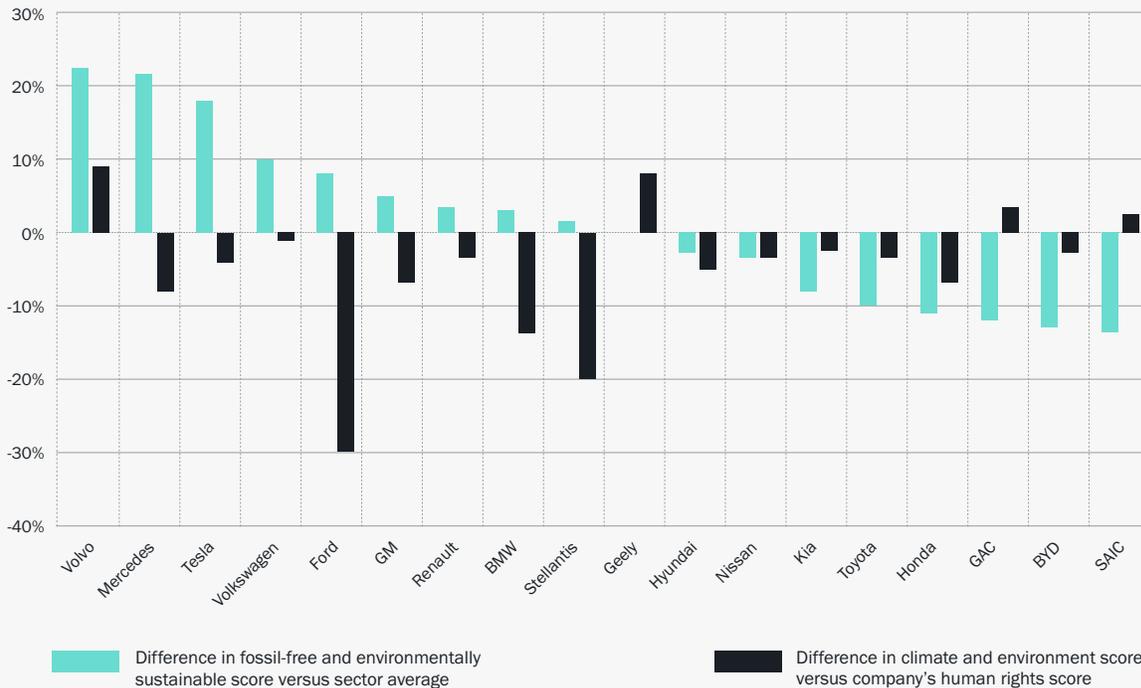
Who leads where? Fossil-free and Environmentally Sustainable Supply Chains

With a total score of 36%, Volvo was the top performer in the fossil-free and environmentally sustainable section, outperforming its overall leaderboard position of fourth place. Volvo was very closely followed by Mercedes. The assessment shows that Mercedes would have attained the top spot had it received a better rating on climate lobbying from InfluenceMap.

Ford finished in fourth in the fossil-free and environmentally sustainable section, though the score difference compared to being top-ranked in the human rights section was marked: 29% compared to 53%, respectively. Stellantis also had a wide divide with a 21 percentage point gap between the two sections, performing much better on human rights and responsible sourcing than fossil-free and environmentally sustainable. Overall, most companies' scores were lower for the fossil-free and environmentally sustainable section.



Figure 3 — Differences in fossil-free and environmentally sustainable supply chain scores

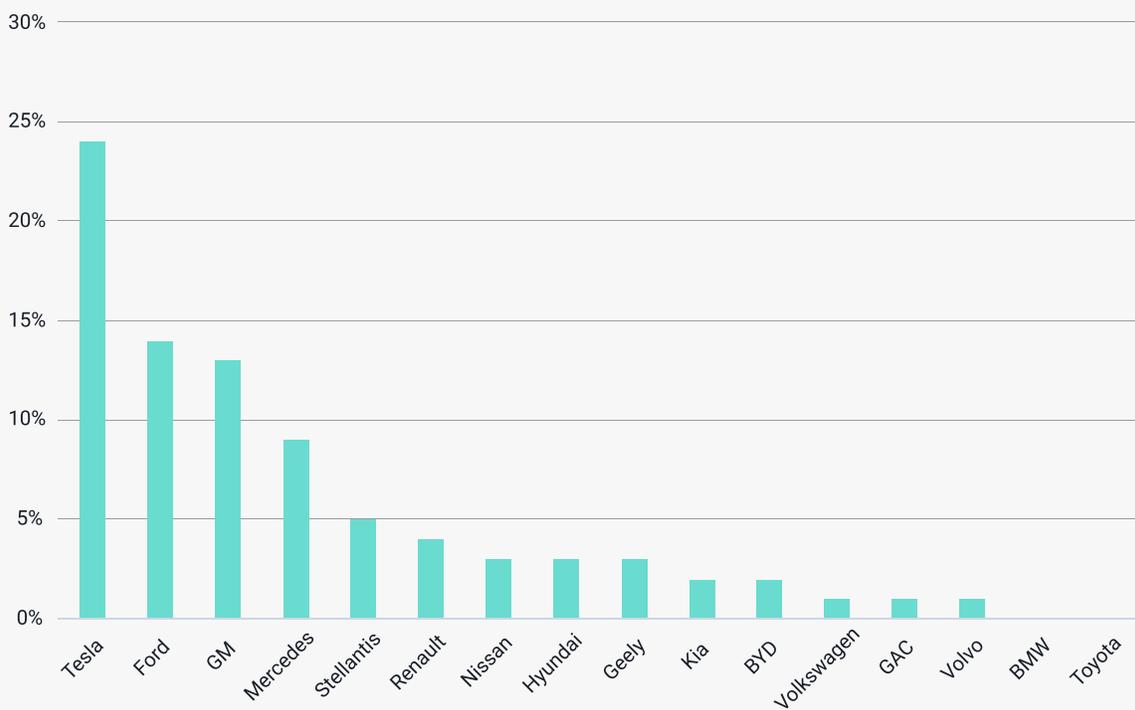


Tesla was the biggest improver within the section, with notable improvements in its approach on its steel, aluminum and battery supply chains, which resulted in a 24 percentage point improvement overall and a ranking of third place. GM's score jumped by 13 percentage points because of improvements in its efforts on steel and aluminum decarbonization, whilst Mercedes saw a modest increase due to strong improvements within

the aluminum section. Ford was another strong improver, due in large part due to its work on steel decarbonization.

Other companies saw much slower progress, with the European automakers Volkswagen, Volvo and BMW, together with the Chinese automaker GAC, making very modest improvements, and Toyota made no progress at all.

Figure 4 – **Percentage point improvements in the fossil-free and environmentally sustainable supply chain sections**



CASE STUDY

France's eco-bonus shows how we can promote cleaner EVs, and why automakers should act now on their supply

Written by [Transport & Environment](#)

In September 2023, France announced new green eligibility rules for awarding electric vehicle subsidies - a first in environmental policymaking. Starting in 2024, the government incentive of €5,000 - €7,000 will only be awarded to electric cars with a production carbon footprint below 14.75 tonnes of CO₂.

The French green bonus aims to reduce the environmental impact of cars, incentivising clean materials and energy for vehicle production, while also supporting domestic industry.

In fact, imported electric vehicles manufactured with a highly carbon-intensive energy mix will not qualify for the financial incentive and will lose some of their competitive edge.

The French initiative is a promising tool to address and reduce the high carbon footprint of the automotive industry and could be replicated by other European countries. Italy has already expressed interest in the approach. But for this incentive scheme to be replicated in a truly effective way across Europe, broader harmonization and alignment is essential.



General indicators

The general fossil-free and environmentally sustainable indicators provide an overall baseline score for the section. It seeks to capture a company's general approach to reducing supply chain carbon emissions and environmental harms, providing the foundations for automakers to take more targeted action on their steel, aluminum and battery supply chains.

European automakers lead the charge in this section. Mercedes, Volkswagen and BMW scored similarly and were all close to gaining half of the points available. Mercedes performed consistently well across the indicator categories and remained a leader in its approach to monitoring supplier compliance with GHG targets: requiring that all suppliers set emissions reduction targets and disclosing the number of suppliers audited against these targets.

Meanwhile, Volkswagen and BMW were the only automakers to score full points for setting and disclosing upstream scope 3 science-based targets. For example, in addition to Volkswagen 2050 carbon neutrality goal it has a target to reduce emissions in the production phase of its vehicles by 50% by 2030. Volkswagen was also the only company to score full marks for incentivizing suppliers to reduce GHG emissions, with the company stating that suppliers will not be awarded new contracts if they fail to meet Volkswagen's expectations regarding environmental performance.

Top five companies for general indicators

GENERAL RANK		OVERALL RANK	GENERAL (CLIMATE AND ENVIRONMENT) SCORE
1	Mercedes	2	47%
2	Volkswagen	6	46%
3	BMW	7	46%
4	Ford	1	44%
5	Stellantis	5	40%

The general fossil-free and environmentally sustainable section saw big improvements by some companies. Stellantis jumped 25 percentage points, partly through improvements to scope 3 target

setting with a goal to reduce upstream emissions by 40% per BEV by 2030 and to be net zero across the whole value chain by 2038 (however, the company provides no indication these targets have been verified as science-based). Ford improved its score by 21 percentage points by making progress on incentivizing and monitoring efforts by suppliers to reduce their GHG emissions, including by requiring all suppliers to submit science-based GHG reduction targets by the end of 2022. Tesla's score, meanwhile, rose by 13 percentage points, in part due to improved disclosure of scope 3 emissions for purchased goods and services.

GM also improved steadily, including with regard to improved processes for monitoring suppliers for compliance with GHG emissions reductions targets, with the company outlining the questionnaire and audit process it employs to this end. Within the general section, this indicator on monitoring suppliers saw the largest number of companies making strides with BMW, Ford, Geely, and Tesla also improving practices alongside GM.

Within this section, Volkswagen and BMW ranked much better than they did in the overall scorecard. Conversely, despite its improvements within the year, Tesla finished 12th out of 18 on the general indicators – 9 places below its overall position. The company needs to make considerable improvements in its approach to setting targets and using supply chain levers to reduce emissions and other environmental harms within its supply chain if it wants to catch up with industry peers like Mercedes and BMW.

Automakers on the whole performed reasonably well when it came to overall strategies to quantify, manage and reduce overall GHG emissions in their supply chain: 14 of the 18 companies analyzed disclose their scope 3 GHG emissions for purchased goods and services specifically. Only SAIC, BYD and GAC did not provide any information on their scope 3 emissions. Honda scored half points for disclosing overall scope 3 emissions but failing to adequately disaggregate this data.

Fossil free and environmentally sustainable steel

The Leaderboard provides more detailed analysis of environmental performance on key supply chains. The first of these is steel which, together with iron, forms on average around 16% of an EV's supply chain emissions footprint and around 30% for internal combustion engines vehicles. As such, the leaderboard awards points to companies for disclosing the emissions from their steel supply chains, setting targets and reporting on progress to reduce these emissions, and using their leverage as major buyers of steel to accelerate the decarbonization of this industry, which is responsible for approximately 7-9% of the world's GHG emissions. Automakers are also awarded points for their efforts to recover and recycle steel.

Overall, the 2024 edition of the Leaderboard shows notable momentum behind automaker efforts to decarbonize the steel used in their vehicles.

In 2023, over half of automakers scored 0% on steel and over three quarters scored less than 10%. But in 2024, this dropped to one third and just over one third, respectively.

This suggests that pressure from civil society, investors and regulators over the past year has been successful in transforming steel decarbonization from a marginal issue for the auto industry into a mainstream one.

Volvo continues to be the clear industry leader on steel: receiving a score of 47%, nearly double that of the second highest scorer, Mercedes. Volvo's strong performance is down to the company setting targets to increase the amount of fossil free and recycled steel in its vehicles; disclosing information on their closed-loop recycling processes for steel, as well as the percentage of recycled steel currently used in its vehicles; and signing an advanced purchase agreement with SSAB for fossil-free steel, which will be supplied to the automaker at a commercial scale by 2026. Additionally, it is the only automaker to be a member of both SteelZero and ResponsibleSteel - two key multi-stakeholder initiatives working to drive steel decarbonization and responsible steelmaking.

Mercedes was another strong performer on steel decarbonization, scoring particularly well in the supply chain levers section. In this section, Mercedes scored points for also being a member of ResponsibleSteel, for disclosing information on the closed loop process it has implemented for steel at its Sindelfingen plant, and for signing offtake agreements with H2 Green Steel, Salzgitter and SSAB to purchase green steel (the largest number of advance purchase agreements for green steel signed by a single automaker).

After Volvo and Mercedes, a significant reordering of the top five scoring automakers for this section has occurred between 2023 and 2024. Geely, Hyundai and Volkswagen all lost their spot in the top five, and were replaced by Tesla, Ford, and GM.

Top five companies for fossil free and environmentally sustainable steel indicators

STEEL RANK		OVERALL RANK	STEEL SCORE
1	Volvo	4	47%
2	Mercedes	2	24%
3	Tesla	3	22%
4	Ford	1	17%
5	GM	8	17%

Tesla's ascent from joint last place last year to the third spot in 2024 was due entirely to the progress that the company has made regarding its scope 3 emissions disclosures. In an industry first, Tesla is now the only company to disclose disaggregated GHG emissions specifically for its steel supply chain. The company discloses that steel emissions constitute 8% of its Scope 3 emissions for categories 1 (purchased goods and services) and 4 (upstream logistics).

GM and Ford also achieved significant score increases on steel, jumping from 0% to 17%. GM and Ford's improvements came on the back of better target setting for fossil-free steel: both companies are now members of the First Movers Coalition's sector group on steel and have accordingly set targets to ensure that at least 10% of all their steel

purchased per year will be near-zero emissions by 2030. The automakers also scored points for entering into formal agreements with suppliers to incentivize investment in fossil-free steel: Ford discloses that it has entered into memorandums of understanding with strategic suppliers for low-carbon steel, while GM has recently established an agreement with U.S. Steel for low-carbon steel.

Volkswagen and Nissan also improved their scores on this indicator, with Volkswagen having signed agreements with H2 Green Steel and Salzgitter AG, and Nissan signing an agreement with Kobe Steel. However, it should be noted that the latter agreement is for reduced-emissions steel that will still be produced in coal-fired blast furnaces, and so lacks the ambition of the green steel procurement agreements signed by other automakers.

Despite losing its place in the top five ranking, Geely still ranks better in the steel section than it does elsewhere in the scorecard, coming in sixth place with a score of 16%. The company's score is due to its efforts on recovering and recycling steel: the

company has set a target for its tier 1 core suppliers to use 20% recycled steel by 2025, provides information on its closed loop recycling processes for steel and discloses the percentage of recycled steel parts within the Zeekr 001 model, which uses 15% renewable steel sheet materials. Meanwhile, Stellantis, which ranked fifth overall, did particularly poorly regarding steel, scoring no points at all. Stellantis was joined by Honda, Toyota, GAC, BYD, and SAIC in meeting none of the scorecard's criteria on steel decarbonization.

With companies scoring an average of just 11% on the steel indicators, there are several notable areas for improvement. Only Volvo and Geely scored points for setting targets to increase the amount of recycled steel used in their vehicles. Additionally, very few automakers collaborate with key multi-stakeholder initiatives (SteelZero, First Movers Coalition, and ResponsibleSteel) to drive greater production of fossil-free and environmentally responsible steel; GM, Ford, Volvo, and Mercedes were the only automakers to have joined these initiatives.



CASE STUDY

Car manufacturers are gearing up in the race for clean steel

Written by [Climate Group](#)



The global market for green steel, or steel that is processed without relying on burning coal or energy derived from fossil fuels, is showing real promise with technological innovation slashing emissions from production and a growing number of major companies demanding low-emission steel. However, in order to accelerate the decarbonization of the industry, increased investment and stronger net zero commitments from steelmakers are required this year.

Shifting to clean steel will require steel users to demand it. Since the automotive industry accounts for 12% of global steel demand, automakers will play a crucial role in speeding up the shift to clean steel. [SteelZero](#), an initiative led by Climate Group, is working with demand side companies to set industry ambition, showcase leadership and shape best practice. In the automotive sector, Volvo Cars, Polestar and SKF have made SteelZero commitments to use 50% low-emission steel by 2030 and 100% net zero steel by 2050, alongside over 40 other global companies including Maersk, Iberdrola, Mace, Lendlease and CIMC TCREA.

Steel producers are listening to their customers. Up to 32 green steel projects have been launched already. But this needs to be more than doubled by 2030. Meanwhile, agreements between steel buyers and producers, such as Volvo Cars and SSAB showcase how demand can drive action.

Policy is catching up as well. The EU implemented its Carbon Border Adjustment Mechanism (CBAM) that will slap higher costs on imported steel with higher emissions than domestic steel. This is expected to cover cars and other steel-containing products in future. Negotiations around the Global Arrangement on Sustainable Steel and Aluminum (GASSA) between the EU and the US could see barriers to prevent higher emission steel being imported into the US. Meanwhile, China has introduced incentives to increase the electrification of domestic steel production and improve scrap use.

With demand for clean steel growing at pace and favorable global policy facilitating a shift in the market, automakers need to get on board now or risk falling behind.

Fossil free and environmentally sustainable aluminum

Aluminum is another major contributor to emissions within the automotive supply chain, accounting for an estimated 27% of the supply chain emissions of BEVs. Aluminum is used for a wide variety of vehicle components, particularly in electric vehicles as automakers compensate for heavier batteries with lighter chassis and panels.

Shifting to clean energy sources and using new technologies to eliminate direct CO2 emissions from the refining and smelting processes are key to decarbonizing aluminum production.

Maximizing secondary aluminum production is also critical to reducing emissions. [The IEA projects](#) that the combined share of aluminum produced from recycled new and old scrap needs to reach nearly 40% (at least 70% of this from old scrap) by 2030 to meet net zero. In addition to evaluating automakers efforts to decarbonize primary aluminum production, the Leaderboard therefore also assesses their approaches to building closed loop processes for aluminum through recycling and recovery, which should include both pre- and post-consumer scrap.

As with steel, Volvo continues to top the Leaderboard on aluminum, albeit with a lower score (37%). Volvo has set 2025 targets for both primary aluminum decarbonization (to reach 4kg CO2 per kilogram on ingot level aluminum) and on recycled aluminum (to use 40% recycled aluminum by 2025, which is slightly below the 42% specified by IEA Net Zero pathway, but 5 years earlier). Volvo also scored points for being a member of the First Movers Coalition’s sector group on aluminum, and for disclosing information on its closed loop processes for aluminum, including the current percentage of recycled aluminum used in its production cycle (10%).

Volvo was the only company to retain its position in the top five ranking automakers on aluminum this year. Volkswagen, Nissan and Geely all lost their spots in the top five, being replaced by Tesla, Mercedes and GM. Ford, meanwhile, continues to score amongst the top five, but has dropped from second to fourth place.

Top five companies for fossil free and environmentally sustainable aluminum indicators

STEEL RANK		OVERALL RANK	ALUMINUM SCORE
1	Volvo	4	37%
2	Tesla	3	30%
3	Mercedes	2	28%
4	Ford	1	27%
5	GM	8	20%

The biggest improver within the year was Tesla, achieving a score increase of 30 percentage points. This was in part for disclosing its disaggregated aluminum emissions, which constitute 18% of its upstream Scope 3 emissions. It was also due to the company outlining its in-house aluminum alloy development, “which allows for recycled inputs to be utilized in high-performance applications.” These improvements saw Tesla jump from joint last place into second place.

Mercedes was another strong performer, improving its score from 10% to 28%. Mercedes’ performance especially stood out in relation to the supply chain levers indicators, in part due to signing a letter of intent with a supplier to “develop and introduce, by 2030, aluminum for automotive applications that is practically CO2 -free.” This improvement, alongside improved upstream target setting, meant the German automaker saw its ranking on aluminum advance from sixth to third place.

The East Asian automakers on the whole performed poorly on aluminum, with BYD, SAIC, GAC, Toyota, Honda and Kia all scoring 0%. Geely and Nissan were notable outliers: scoring 13% and 11% respectively. As with steel, Geely’s score is down to its work on aluminum recovery and recycling, providing detail on its closed-loop processes for aluminum and setting a target for its “tier 1 core suppliers” to use “30% recycled aluminum by 2025.” Nissan, meanwhile, scored additional points for its collaboration with Kobe Steel Ltd. to procure aluminum produced exclusively with solar energy.

The Leaderboard signals specific areas for widespread improvement by companies. As with steel, only Tesla currently discloses its scope 3 emissions for its aluminum supply chain. A key multi-stakeholder initiative for driving aluminum decarbonization is the First Movers Coalition; however, only Ford and GM are members of its aluminum sector group. Additionally, just two companies, Mercedes and Nissan, have disclosed advance purchase agreements with aluminum suppliers to facilitate greater investment and production of low-CO2 aluminum, which is significantly lower than the number of automakers that have done so for steel (7 in total).

Fossil free and environmentally sustainable batteries

Battery technology is at the heart of decarbonizing the automotive industry. Yet, battery supply chains are a significant source of supply chain GHG emissions for electric vehicles. Like steel and aluminum supply chains, their production creates additional environmental impacts on water, air pollution and biodiversity.

Supply chain GHG emissions are largely from the extraction, smelting and refining processes, with cell manufacturing constituting a smaller, but not insignificant, share. Reducing the emissions footprint of batteries can occur in a variety of ways, including by reducing the use of emissions intensive minerals, increasing the amount of recycled content and using renewable energy for mineral refining and cell manufacturing. The scorecard reflects these priorities, while focusing on three key battery minerals: nickel, lithium and cobalt. In addition to emissions, it also captures wider environmental impacts, including biodiversity loss, water pollution and mining tailings waste.

Tesla continued leading the industry with an overall (though still low) score of 33% and achieved the highest score increase of 15 percentage points across battery supply chain indicators. As with steel and aluminum, Tesla was the only automaker credited for disclosing disaggregated scope 3 emissions data for its battery supply chain - which constituted 27% of its supply chain emissions in 2022. Alongside increased emission disclosure, Tesla improved its score by disclosing the development of scalable battery recycling technologies, as well as of a reverse logistics system

to recover batteries from sold products, which have led to year-over-year increase in absolute volume of materials available for recovery. Tesla also had a higher baseline score from the 2023 edition of the Leaderboard for this section, thanks to its efforts on battery recycling and on directly sourcing battery minerals with contracts that include environmental requirements, allowing the company to ascend to first place.

Mercedes followed closely behind Tesla on batteries, scoring 32%. Mercedes achieved score increases in this section primarily for its work on battery recycling: the company is building a battery recycling facility in Kuppenheim, where they aim to achieve an overall recovery rate of 96%, which they plan to further increase by 2025.

Stellantis ranked third for sustainable battery indicators with a score of 29%. This position contrasts markedly with its performance on steel (0%) and aluminum (4%). The company's leading position was also due to its investments in battery recycling and in cobalt-free battery chemistries. The automaker has entered into contractual agreements with suppliers for zero carbon lithium and low carbon nickel.

Top five companies for fossil free and environmentally sustainable batteries indicators

STEEL RANK		OVERALL RANK	BATTERY SCORE
1	Tesla	3	33%
2	Mercedes	2	32%
3	Stellantis	5	29%
4	Renault	9	28%
5	Volkswagen	6	26%

After Tesla, Renault achieved the second largest score increase of 13 percentage points - placing the French automaker in fourth place, considerably better than its ninth position overall. Renault improved in three main areas: target setting, mineral sourcing and battery recycling. The company has set a target to reach 80% recycled material for cobalt, lithium and nickel in new batteries by 2030 - making Renault the only company to receive full points for this indicator on setting targets to reduce demand for primary

battery minerals. With regards to mineral sourcing, Renault signed a new agreement with Managem for less carbon-intensive cobalt sulfate, which it adds to existing agreements it had previously signed for the supply of low-carbon nickel sulphite and zero-carbon lithium. Finally, it also established a company, The Future is Neutral, which aims to become a leader in short-loop battery recycling.

The battery section of the Leaderboard also saw improvements by Chinese automakers, principally in the area of investments in new battery chemistries that reduce reliance on minerals including nickel, lithium and cobalt. Both BYD and GAC brought to market new generations of lithium iron phosphate batteries with higher energy densities and free from nickel and cobalt. BYD also plans to bring to market a sodium-ion battery, which uses relatively abundant sodium in place of more scarce minerals. Geely also made improvements with regards to battery recycling, providing qualitative information about a network of collection points for used batteries.

However, progress was not widespread. There were worryingly few advances from Ford, BMW, GM, Geely, Kia, Toyota, Nissan and Volvo within the year. Honda was the only company not to receive any points for the indicators related to sustainable batteries. Several indicators were also only met by a very small number of automakers. Only Volkswagen and BMW disclosed a requirement for their suppliers to use renewable energy to produce battery cells. With regards to target-setting, Stellantis, Renault and Mercedes were the sole automakers to set emissions reductions targets for batteries, with Renault being the only automaker to have set a 2030 target for battery manufacturing specifically.

More positively, 13 of the 18 companies assessed have established some form of closed loop process for battery recycling. Encouragingly, two automakers - Mercedes and Volkswagen - disclosed investments in new battery recycling technologies using hydrometallurgy processes that do not require energy intensive combustion processes.

InfluenceMap weighting

Public policy plays an important role in the transition to truly clean cars. To ensure that a company is supporting climate-positive regulation and policy, the scorecard includes a weighting for a company's approach to policy advocacy. This weighting is based on the work that InfluenceMap undertakes to assess corporations' and industry groups' influence on policy needed to address climate change. Companies can receive a positive or negative score depending on whether they are positively advocating for climate change policies or judged to be doing the reverse.

Across the companies included within the scorecard, Tesla has the most positive record on climate lobbying, rated a 'B,' followed by Volvo with a B-. Alongside Tesla and Volvo, the companies gaining positive weightings were: Mercedes, Volkswagen, Ford, GM, BYD and Nissan, which all received a C score from InfluenceMap. There were a number of automakers that had a downwards adjusted score as a result of their approach to lobbying, these included: Honda, Toyota, Kia, Hyundai, Renault, Stellantis, and BMW.

CASE STUDY

EV battery recycling: burning batteries is not the way to go

Written by [GAIA](#)

Addressing the climate crisis requires batteries to store energy for stationary storage and mobility, but more must be done to responsibly manage batteries throughout their lifecycle. GAIA has strong concerns about the current practices of battery lifecycle management. The unchecked production of toxic batteries with premature obsolescence, current end-of-life processing techniques (or “recycling”), and risks of waste colonialism are key environmental justice challenges to be addressed in the transition to BEVs.

Little is known about the fates of batteries retired from EVs, beyond a few references about less than 5% of them being recycled. Today, the most common industry “recycling” proposal – whether industry labels it as pyrometallurgy or hydrometallurgy – is a combination of thermal treatment, followed by acid-leaching (hydrometallurgy). The thermal treatment can either be pyrometallurgy smelting which is done at a temperature ranging from 1400C to 1700C, or lower-temperature incineration or pyrolysis which is done at a temperature around or below 600C. Both types of thermal treatment must be followed by hydrometallurgy as a second step in order to recover cobalt, copper, and nickel from the alloy or slag. In case of pyrometallurgy smelting, lithium is not recovered as it’s lost during the smelting process and too costly to separate from slag.

The reliance on thermal processing of batteries raises serious concerns about toxicity and carbon intensity. Treating batteries with high-heat thermal processing results in toxic emissions, ash and other byproducts, in particular carcinogenic emissions generated from burning nickel and cobalt compounds and other toxic gasses such as benzene (C6H6), hydrogen cyanide (HCN), and formaldehyde (CH2O), acid gas species hydrogen fluoride (HF), and hydrogen bromide (HBr) released at ambient temperature and upon heating. Burning fluorinated polymers in batteries can also generate per- and polyfluoroalkyl substances (PFAS), also known as ‘forever chemicals,’ with fluorine coming from decomposition of the electrode binder (PVDF)

and electrolyte (LiPF6). All too often, such facilities are sited in environmental justice communities, exposing frontline communities and workers to toxic emissions. Risks of PFAS release were for example a key factor in a grassroots victory in defeating a proposal for a low-temperature pyrometallurgy facility in Endicott, New York.

Additional concerns include low rates of material recovery and significant greenhouse gas emissions: for every tonne of battery processed, approximately an astonishing four tonnes of carbon dioxide will be emitted during the smelting process. The pyrometallurgical process can also generate carbon tetrafluoride, a particular compound that is estimated to be 6630 times more potent than carbon dioxide.

Current methods of burning batteries for “recycling” are not an answer, and regardless, recycling should only be considered as the last resort in a material’s life cycle. Safe and effective recycling further requires a host of significant barriers to be resolved in practice and policy, including robust collection systems, and addressing the high costs of transportation and logistics. All possible measures should be immediately taken in battery design and policy to ensure reparability of EV batteries, putting an end to the status quo of EV batteries with an artificially limited life in the vehicle. Immediate policy measures must also be taken to require battery design and accessible battery health and history information to enable EV batteries to be reused or repurposed when taken out of the vehicle at 80% of its initial capacity, thereby extending their life for 6 to 30 years for different second-life applications.



Who leads where? Human Rights and Responsible Sourcing

For decades, auto supply chains have been riddled with human rights and environmental abuses as a result of weak supply chain accountability policies and harmful company practices. The transformation of auto supply chains for the transition to EVs presents an opportunity to put an end to these abuses, but without proactive intervention from automakers, we risk replicating these abuses in EV supply chains too.

This section of the Leaderboard examines the policies, systems, and practices of automakers to address human rights risks and impacts in their supply chains. The indicators in this section are structured around the [UN Guiding Principles on Business and Human Rights](#) to evaluate automakers human rights commitments; and their efforts to identify, prevent, mitigate, account for, and remedy human rights abuses in their supply chains.

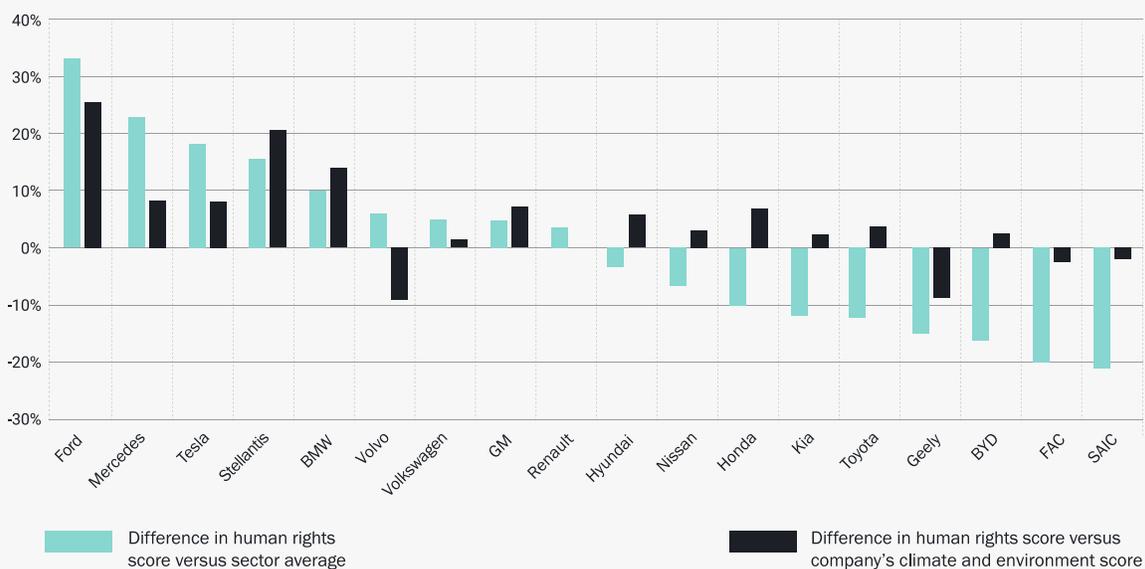
Ford continues to lead the industry in the 2024 edition of the Leaderboard, with a total score that was 32 percentage points higher than the average industry score. However, the automaker only scored

53% of the total points available in this section, illustrating just how far the industry has to go. Mercedes came in second place with a score of 44%, followed by Tesla, Stellantis and BMW.

Scores in this section are brought down by a significant drop in performance for the transition minerals, Indigenous Peoples' rights and workers' rights subsections. Whilst automakers scored an average of 37% for their work on overall human rights due diligence (evaluated in the "General" subsection), the average scores for the other three subsections fell to 24%, 4% and 19% respectively.

Overall, Ford scored 30 percentage points higher than it scored within the fossil free and environmentally sustainable supply chains section. This pattern is repeated for both Stellantis and BMW, which scored 21 and 14 percentage points higher in the human rights and responsible sourcing section. Mercedes and Tesla, however, achieved similar scores across both sections - underlining the potential for automakers to make strong progress across both areas of the Leaderboard.

Figure 5 – Differences in human rights & responsible sourcing scores

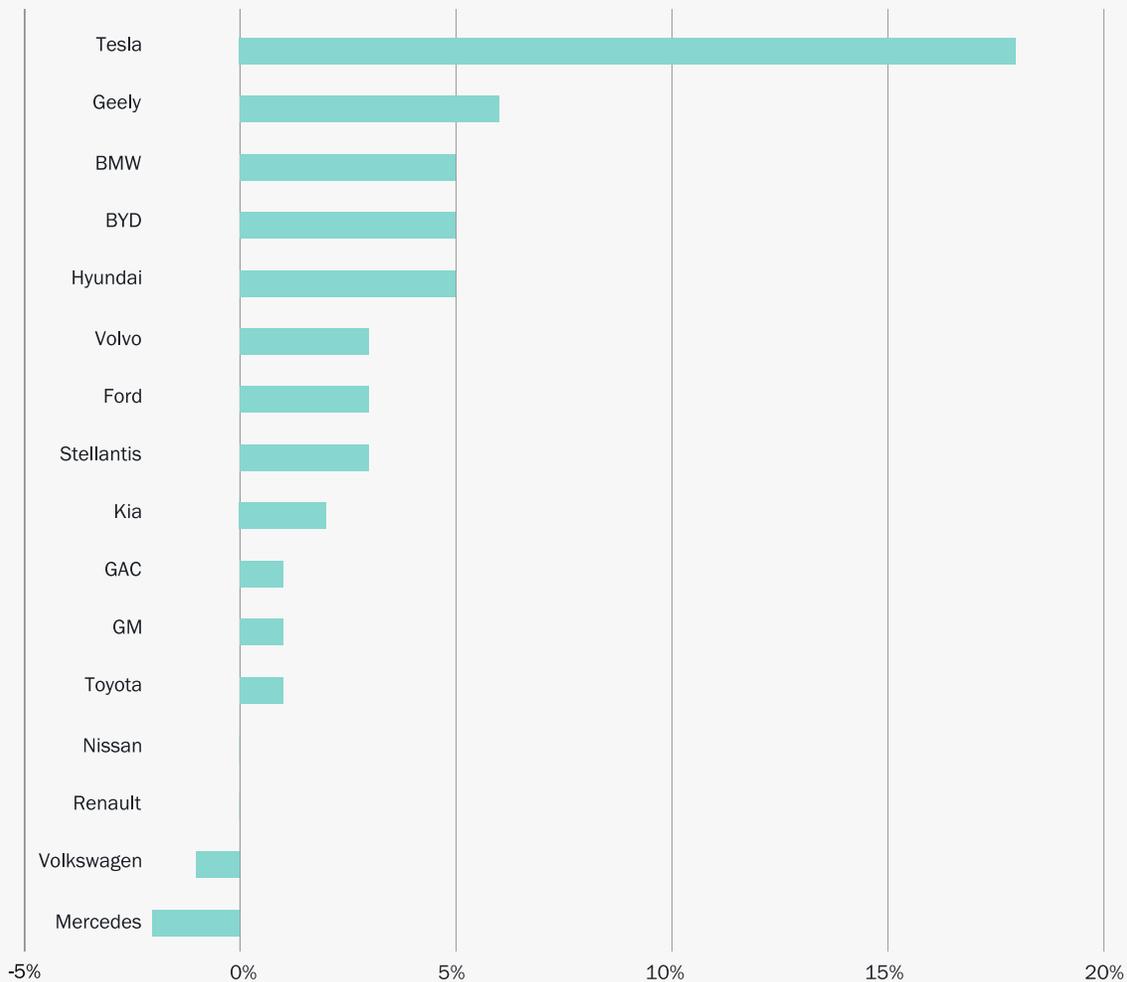


Tesla topped the table for biggest improvers on human rights within the year, increasing its overall score by 18 percentage points. It was the only company to make improvements in all four of the human rights and responsible sourcing subsections, making significant strides in particular on the indicators related to transition minerals.

Two Chinese companies (Geely and BYD) were also in the top five biggest improvers. Geely, the best performing Chinese company within the Leaderboard, achieved the second largest score increase (16 percentage points) for the General subsection. The specific changes implemented by the biggest improvers are explored below.

Despite these notable improvements by individual companies, the industry-wide rate of progress on upholding human rights and ensuring responsible sourcing is lagging in comparison to the efforts on supply chain decarbonization. The average score for this section rose by just 3 percentage points, compared to a 5 percentage point increase in the average score for the fossil free and environmentally sustainable supply chain section. Moreover, in subsections where performance was already weak improvements were almost non-existent. In the case of Mercedes and Volkswagen, scores actually declined due to backsliding on transparency with regards to the smelters and refiners in their supply chains.

Figure 6 — Percentage point improvements in the human rights and responsible sourcing section



General human rights indicators

The General human rights section of the Leaderboard provides a baseline assessment of how effectively automakers are addressing human rights risks and impacts across their supply chains.

On average, scores were higher for the general human rights indicators compared with the indicators in the other human rights and responsible sourcing subsections. Automakers can, and should, build on this progress through targeted action to improve transition minerals sourcing and ensure the rights of Indigenous Peoples and workers are respected in their supply chains.

Stellantis was the highest ranked automaker for this subsection, scoring 76% - one of the highest scores of the Leaderboard. The automaker performed particularly well across 'Prevent, Mitigate and Account' indicators, for which it scored 96%. This was due to the company's strong procedures for assessing human rights risks with suppliers before entering into contracts, auditing suppliers during the contract period and ensuring that corrective action plans are implemented when nonconformances are found. Stellantis also provides quantitative data on the operation of these procedures in practice, stating that 2,793 suppliers underwent CSR audits, 105 external social and environmental on-site audits were conducted and 468 suppliers were subject to corrective action plans in 2022.

Ford came in second place in this subsection, trailing Stellantis by four points. This was in part due to improvements relating to its grievance mechanism and to auditing suppliers during the contract period.

Top five companies for general human rights indicators

GENERAL HUMAN RIGHTS RANK	COMPANY	OVERALL RANK	GENERAL HUMAN RIGHTS SCORE
1	Stellantis	5	76%
2	Ford	1	72%
3	Mercedes	2	70%
4	BMW	7	59%
5	Volvo	4	53%

The company outlines their auditing process and how they select suppliers to audit, providing quantitative information about the number and type of non-conformances found, as well as the percentage of suppliers audited, both to date (32%) and this year (0.60%).

Mercedes was the third-best performer, scoring 70%, and was the only automaker to score full marks for the 'Identify' indicators. The company provides extensive detail on their risk saliency assessment process, specifying that this includes desktop reviews and interviews with external stakeholders, including NGOs and human rights experts. Mercedes also details how and where salient human rights risks are present in its supply chain and describes the process for identifying high risk suppliers, including the different factors considered.

Within the general section other examples of notable progress made by automakers include:

- Tesla improved its score by 18 percentage points, with improvements on assessing salient human rights risks, supply chain mapping of its mineral sources to identify high-risk suppliers and categories, and establishing a new grievance mechanism, delivered through the third-party managed Integrity Line.
- BMW made a number of improvements in its assessment and auditing of human rights risks. It also provided further information with regards to how it responds to non-conformances with its supplier code of conduct and discloses the "proportion of supplier locations with identified sustainability deficits and corrective measures agreed upon," with this figure being 67% for 2022.
- Stellantis now provides significant quantitative information on the numbers of grievances received through its grievance mechanism, their type and the outcomes, including convictions.
- Kia made improvements within the year, which included providing an explanation of how the company assesses human rights risks with individual suppliers (including Tier 2 suppliers) and disclosing quantitative data about the number of suppliers that have undergone such an assessment. The company also has a grievance mechanism to allow employees and stakeholders to report human rights issues.

CASE STUDY

Advances in EU Regulations and implications for automakers

Written by [Transport & Environment](#)

EU Battery regulation

In August 2023 the landmark European Battery Regulation went into force, setting product and end of life obligations for batteries placed on the EU market.

The law is a turning point in fostering responsible sourcing practices, clean manufacturing via carbon footprint obligations and recycling and recycled content obligations for batteries, among other measures.

On responsible sourcing, companies placing batteries on the market will have to identify, prevent, mitigate and address environmental and social impacts in the supply chains of lithium, cobalt, nickel and natural graphite via due diligence obligations. Automakers are already doing preparatory work related to these obligations, which will become enforceable mid-2025, as seen also in the scorecard.

In relation to carbon footprint, companies placing batteries on the market will have to first calculate and report the carbon footprint of each battery model per manufacturing plant. As a next step the EU will grade batteries according to different carbon performance classifications, after which a mandatory carbon threshold will prevent the dirtiest batteries from being placed on the EU market at all.

Finally, to encourage closed loop recycling systems, the law sets out material recovery targets for lithium, cobalt, nickel and copper which go up to 80% by 2031 for lithium and up to 95% for the rest. Further, the law sets out minimum recycled content targets for key raw materials which will start only in 2031.

EU Critical Raw Materials Act

The European Critical Raw Materials act was agreed at the end of 2023, and represents Europe's best effort to sustainably secure the minerals for its green transition. The law includes key benchmarks, including:

- 10% of the transition minerals Europe will need by 2030 to come from local extraction activities;
- 40% of the transition minerals processed in Europe, and
- 25% of the volumes of transition minerals in waste to be recycled.

One of the most tangible new provisions is the creation of 'Strategic Projects' across mining, refining, processing and recycling of critical minerals. The first set of projects will be selected in 2024 and will benefit from faster permitting on the condition that high environmental and social standards are met, and a proper engagement plan with communities is in place.

Projects in third countries can also apply to become a 'Strategic Project', if they obtain or commit to obtain sustainability credentials via a third-party certification scheme.

The 2024 edition of the Leaderboard also reveals progress made by the Chinese automakers on human rights due diligence. Geely was the strongest performer, going from zero to a score of 16% within the span of the year. The company has made commitments to human rights and now has an easily accessible Supplier Code of Conduct which explicitly states that suppliers are expected to meet human rights standards and apply these standards to their own suppliers. The company also outlines a process using Drive Sustainability's Sustainability Assessment Questionnaire to assess risks at individual suppliers.

BYD also made some improvements. The company now discloses some aspects of its social assurance process before contracting with suppliers, even though it still does not set out exactly how this assessment occurs. The company states that it "regularly investigates" supplier CSR performance, including through on-site inspections, and outlines how suppliers are selected for annual review. Finally, the company provides some detail regarding its response if non-conformances are identified, but discloses no numeric data to illustrate the implementation of such measures.

With new due diligence requirements for companies operating in the EU now entering into force, these improvements could be an indication that companies are already taking steps to ensure compliance with these incoming regulations. Nonetheless, progress was not universal: GAC only improved its score by 2 percentage points, while SAIC scored 0%.

Responsible sourcing of transition minerals

EV battery manufacturing relies on significant quantities of minerals, including cobalt, nickel, lithium, copper, manganese and zinc. Many of these minerals are associated with human rights risks because of where and how they are sourced, including in conflict-affected and high-risk areas (CAHRAs). Given this, transition mineral sourcing is a salient risk in automakers' EV battery supply chains. The Leaderboard therefore assesses transition mineral sourcing as a distinct category of automakers' approaches to human rights due diligence and responsible sourcing.



CASE STUDY

From Brazil to Papua New Guinea, Mine Waste Creates Serious Problems

By [Earthworks](#) and [Cultural Survival](#)

Mining generates enormous amounts of waste. For example, producing one metric ton of lithium from hard rock generates, on average, 1,634 metric tons of waste. Often, this waste is stored at the mine site in perpetuity.

Tailings, the waste created after the ore is processed, are usually stored behind earthen dams. Tailings dams are some of the largest engineered structures on the planet. [Research shows](#) that tailings dams are failing with increasing frequency and severity. A 2019 tailings dam failure in Brazil killed 272 people, destroyed buildings, and contaminated the local water sources. Slow and chronic contamination from tailings can further damage the surrounding water systems, air and soil.

With an estimated 20 to 30 thousand tailings facilities globally, many communities face risks and harms caused by poor tailings disposal. This can be clearly seen in the Jequitinhonha Valley of Brazil. The area, named by politicians and corporations as “Lithium Valley,” is also the ancestral land of dozens of Indigenous and traditional communities who have a deep connection to the land and have traditionally relied on its resources for their livelihoods. Sigma Lithium operates one of the lithium mines in the region, estimated to produce enough lithium for 600,000 electric vehicles in its first year with promises to increase yearly production threefold. The company [even brought](#) the state’s governor to the New York Stock Exchange to ring the opening bell and promote the idea of the “Lithium Valley.”

This projected lithium boom has communities concerned about the potential impacts of mining and tailings, on their traditional way of life. They claim that their water streams, essential for their crops, are disappearing and the main rivers are contaminated. They raise significant concerns over the potential for community displacement and the lack of adequate consultation and respect for their right to Free, Prior and Informed Consent.

Communities have raised concerns about mining activity encroaching closer to homes and population centers. The lack of planning and local community participation has caused costs to skyrocket and severely hampered the flow of goods, water, and transportation in the region, rendering those communities unable to cope with the challenges in the short term. [Sigma Lithium](#) claims they are not building tailings dams and instead storing tailings in a drier form, but the 2022 failure of a similar facility in the very same region of Brazil shows that this method [is not without risk](#).

In Papua New Guinea, the Ramu nickel and cobalt mine and processing plant provides another example of the disastrous impacts of irresponsible tailings practices. The plant, which processes nickel for EV battery chemicals, dumps millions of tons of waste into the ocean each year, decimating coastal ecosystems and damaging the health and livelihoods of thousands of local residents. In August 2019, [tailings from the Ramu facility overflowed](#), turning waters of the Basamuk Bay red, providing a small glimpse of scope of the toxic sludge being pumped into the ocean day in and day out.

[Communities around the world are calling for safer tailings practices](#) and an end to dumping mine waste into oceans and rivers. They demand the right to say no to tailings facilities and Free, Prior and Informed Consent from Indigenous Peoples. Mining companies and regulators must take significant steps to improve tailings safety and purchasers of metals and minerals should fully understand the risks posed by tailings in their supply chains.



This subsection of the Leaderboard assesses automakers performance in addressing risks related to transition mineral sourcing, using the same indicator structure outlined above: commit; identify; prevent, mitigate and account; and remedy. However, this subsection also aligns performance expectations with the [OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas](#).⁷

Ford continues to be the clear industry leader on transition minerals. Ford gained the highest score (86%) of any company in any of the Leaderboard subsections, and also scored full marks on the remedy indicators in this subsection. Ford has a standalone responsible minerals sourcing policy, which goes beyond conflict minerals to cover cobalt, mica, lithium and nickel, and at Ford’s request, other materials. The company also discloses extensive information about the work that it has been doing to map its battery supply chains to the point of extraction, stating that nineteen supplier audits have been conducted to date “along two select battery supply chains at all tiers through to the mine site.” Additionally, Ford provides a detailed analysis of their mineral supply chains and associated risks.

Top five companies for responsible sourcing of transition minerals

TRANSITION MINERALS RANK	OVERALL RANK	TRANSITION MINERALS SCORE
1 Ford	2	86%
2 Tesla	3	64%
3 Mercedes	1	42%
4 Stellantis	5	38%
5 Volkswagen	6	34%

Tesla was second in the ranking with a score of 64%. The company improved its transition mineral score by 31 percentage points, the biggest score increase by any company in any subsection. The company states that it has now mapped its cobalt, lithium and nickel to the point of extraction and discloses the percentages it has sourced directly from extractive

companies for nickel (>45%), cobalt (>55%) and lithium hydroxide (>95%), noting that all contracts include binding environmental and human rights requirements.

Mercedes, coming in third place, scored 42%, similar to its overall score of 40%. Mercedes discloses their process to map their mineral supply chains to the point of extraction. The mapping results for six raw materials are disclosed in the company’s Raw Material Report. However, Mercedes - together with Volkswagen - received less points for this subsection than they did in the 2023 Leaderboard, as both companies now provide less information with regards to their mineral supply chains: Mercedes no longer discloses a full list of the smelters or refiners (SoRs) in its supply chain and Volkswagen no longer discloses the countries of origin for each of its priority minerals.

Tesla’s performance demonstrates that significant improvements can be made over one year. However, such progress was not replicated by other automakers. Half of the automakers evaluated in 2023 and 2024 did not improve their scores at all (or worse, received less points than in 2023), and three quarters achieved score increases of 2 percentage points or less. The exception to this trend is Geely, whose score increased by 5 percentage points due to its supplier code of conduct now requiring suppliers to undertake due diligence in their supply chains with respect to conflict minerals.

Nonetheless, there were notable improvements against some indicators. The number of automakers that scored points against the indicator on engagement with the Initiative for Responsible Mining Assurance (IRMA) rose from 22% in 2023 to 39% in 2024. Tesla, Volkswagen and Volvo all increased their scores against this indicator for stating that they now request their mining suppliers undergo IRMA audits. This momentum is encouraging because IRMA achieved the highest rating in the additional assessment of third-party assurance and accreditation schemes that was carried out for the 2024 edition of the Leaderboard.

Assessment of third-party assurance and accreditation schemes

The responsibility for automotive companies to undertake human right due diligence is set out in the UN Guiding Principles on Business and Human Rights, and broadly understood as a process for identifying, preventing, mitigating, and remedying human rights impacts. Pressure for auto companies to demonstrate how these responsibilities are being fulfilled has coincided with significant growth of voluntary assurance and certification initiatives, which are often industry-led and governed. These schemes are, in turn, increasingly harnessed by automakers as a means of delivering on human rights and environmental due diligence obligations.

However, concerns have been raised over the efficacy of some schemes, many of which rely on flawed social audit processes. Concerns have also been raised over the lack of affected rights-holders' involvement in both the design and implementation of the accreditation process. Ultimately, the use of such schemes cannot be understood as a basis for legal compliance and, in isolation, not appropriate substitutes for due diligence responsibilities as set out in the UNGPs.

Nonetheless, that is not to say that such initiatives (and their respective assurance and accreditation processes) are unable to contribute to human rights and environmental due diligence. Indeed, some initiatives are underpinned by robust processes and can drive meaningful improvements in company practice.

In the 2023 edition of the Leaderboard, several indicators awarded points to automakers for their participation in and use of such initiatives, which provided a useful framework through which to measure company performance. Nevertheless, given significant divergences in the quality of such schemes,⁸ for the 2024 edition, an additional layer of analysis was undertaken in order to assess the robustness of the different schemes referenced in the Leaderboard, as well as notable alternatives. This assessment was also published by Lead the Charge as a standalone briefing.

The assessment evaluated each scheme against a series of minimum expectations relating to the extent to which a third party certification scheme can be considered credible and robust. These include an assessment of the governance of the standard, the veracity and transparency of the auditing and / or accreditation process, the role of impacted rights hold-

ers in the process, as well as expectations relating to the content of the standard itself. The results of this assessment were then used to develop a point modifier for the respective indicators on these schemes within the Leaderboard, with points being moderated progressively downwards for any initiative that is not considered to meet these minimum expectations.

In total, eight accreditation schemes were assessed: Responsible Steel; The Initiative for Responsible Mining Assurance (IRMA); Aluminium Stewardship Initiative (ASI); Responsible Minerals Initiative (RMI); Copper Mark; Towards Sustainable Mining (TSM); International Council on Mining & Metals (ICMM); and Global Steel Climate Council (GSCC). Together, these initiatives, and their associated auditing and assurance processes, cover a large swath of the supply chain and are used by a range of automakers. The Global Battery Alliance (GBA) was also included in the assessment, although this initiative did not receive a final score as its assurance scheme, the Global Battery Passport, has not yet been finalized.

The assessment revealed considerable divergences with regards to the credibility and effectiveness of these schemes, broadly aligning with the results of similar studies undertaken by Germanwatch and Mercedes-Benz.

At 88%, IRMA was the strongest performer by a considerable margin, with Responsible Steel coming in second place with a score of 63% against the minimum criteria. Notably, IRMA was the only scheme to achieve full points against the criterion on multi-stakeholder governance. ResponsibleSteel was the second strongest performer against this criterion: guaranteeing equal decision-making power for civil society in its membership body but not for its board of directors.

RMI, ASI, TSM and CopperMark all received scores ranging from 38% to 59%. These schemes have made progress against some of the assessment criteria, but demonstrated significant flaws by failing to meet multiple criteria related to multi-stakeholder governance, transparency of audit results and corrective action plans. At the bottom of the assessment sits GSCC, scoring just 3%. The ICMM's Performance Expectations Validation process also received an extremely low score, meeting only 16% of the minimum criteria.

Overall companies scored an average of 24% for their approach to transition mineral sourcing. While better than other subsections of the Leaderboard, it highlights that the auto industry still has a long way to go if it is to ensure that the minerals needed for the transition to EVs are sourced responsibly.

Indigenous Peoples’ rights and Free, Prior and Informed Consent

More than half of the resources needed to power the energy transition are located on or near Indigenous Peoples’ lands. But far too often, projects linked to auto supply chains, and extraction projects specifically, are conducted on Indigenous Peoples’ territories without their consent, sometimes even displacing them from their ancestral lands. Extractive projects also pollute their resources, which affects these communities’ right to food, water, livelihoods, and culture. As the transition to electric vehicles accelerates, it is critical that activities across the auto supply chain respect Indigenous Peoples’ right to self-determination and to Free, Prior and Informed Consent (FPIC).

The Leaderboard evaluates automakers’ efforts to conduct due diligence specifically in relation to risks to Indigenous Peoples’ rights, with a focus on their right to provide or withhold their Free, Prior and Informed Consent on projects and activities to be carried out on their lands and territories.

There was little to celebrate with regards to the scores in this subsection, which continue to be unacceptably low across the board. As noted previously, companies scored on average just 4% and there was a meager increase of 1 percentage point in the average score over the year. Only three companies (Tesla, Volvo and Volkswagen) increased their scores and 61% of automakers continue to score 0% on this issue.

The only area of potential optimism was Tesla’s improved score, which rose from 5% to 26%, enabling the company to take the top spot for this subsection from Mercedes. The company has introduced an updated requirement on FPIC, with the EV manufacturer’s human rights policy stating that: “For all raw material extraction and processing used in Tesla’s products, we expect our suppliers to engage with legitimate representatives of indigenous communities and respect their right to grant or withhold free, prior, and informed consent for their operations.” The automaker also provides case studies on its assess-

ment of Indigenous rights involving mines in Chile and Argentina for lithium and Canada and Indonesia for nickel.

Mercedes came in second place with a score of 15%. Mercedes was recognized for stating that suppliers must comply with FPIC, although its Responsible Sourcing Standards do not reference the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). The company’s Raw Material Report also identifies impacts to “community and indigenous rights” as a supply chain risk, but it does not reference FPIC specifically. Furthermore, because references to community and Indigenous rights are grouped together, it is not clear which risk applies to the different supply chains and countries analyzed by Mercedes - with the exception of lithium, where the automaker provides a description of Indigenous rights risks specifically.

Top five companies for Indigenous rights and free, prior and Informed consent

INDIGENOUS RIGHTS RANK		OVERALL RANK	INDIGENOUS RIGHTS SCORE
1	Tesla	3	26%
2	Mercedes	1	15%
3	GM	8	11%
4	BMW	7	8%
5	Ford	2	7%

There is widespread room for improvement across all the indicator categories on Indigenous Peoples’ rights. Within the Commit indicators, the Leaderboard found that only BMW, Mercedes and GM have made explicit commitments to respect the UNDRIP. Of these companies, only General Motors has made this commitment in both its overall human rights policy and its Supplier Code of Conduct. These three companies, together with Tesla, are also the only automakers to have made explicit commitments with regards to respecting FPIC. However, none disclose that these commitments are translated into the Indigenous languages of relevance to the sites located along their supply chains.

No automakers met the Leaderboard’s requirements for identifying Indigenous rights risks. These indicators require automakers to provide evidence of a process to screen for Indigenous rights risks in their

supply chains to the point of extraction. Only Mercedes and Tesla were awarded partial points for their aforementioned disclosures.

Companies performed marginally better against the prevent, mitigate, and account indicators of the Indigenous rights subsection. The primary FPIC risks are typically at mineral extraction and processing sites, but may also occur further downstream in supply chains where operations are on or adjacent to Indigenous lands. It is therefore encouraging that several automakers are now participating in multistakeholder initiatives that include Indigenous Peoples to promote and ensure respect for their rights at mineral extraction sites. As detailed in the previous section, several automakers disclosed that they are members of IRMA and / or request that their mining suppliers undergo IRMA audits. IRMA is the only third-party assurance scheme of industrial-scale mine sites that is governed equitably by the private sector, affected communities (including Indigenous Peoples), civil society, and workers. Volvo and Volkswagen’s score increases in this section were due to this indicator.

Finally, no company scored any points against the remedy indicator, which requires companies to demonstrate they have a process for investigating and remedying breaches of FPIC in their supply chain, which includes a formal role for impacted Indigenous groups.

Respect for workers’ rights

A recent study of the U.S. automotive manufacturing landscape found that the manufacturing of BEVs requires more labor hours, and therefore has more potential for job creation, than the manufacturing of internal combustion engine (ICE) vehicles. However, these estimates only hold true if they include battery cell production, the most labor-intensive part of EV manufacturing. The findings of this study reinforce the imperative of ensuring that workers’ rights are upheld, and advanced, across the whole supply chain as the automotive industry transforms itself for the transition to electric vehicles.

Respect for workers’ rights across auto supply chains is therefore the final subsection of the human right and responsible sourcing theme of the Leaderboard, representing another fundamental component of a just transition to EVs. To assess company performance on this issue, these indicators of the Leaderboard were shaped around the [International Labour](#)

[Organisation’s Declaration on Fundamental Principles and Rights at Work.](#)

FUNDAMENTAL RIGHTS AT WORK

The ILO Declaration on Fundamental Principles and Rights at Work identifies five fundamental principles and rights:

1. freedom of association and the effective recognition of the right to collective bargaining;
2. the elimination of all forms of forced or compulsory labour;
3. the effective abolition of child labour;
4. the elimination of discrimination in respect of employment and occupation; and
5. a safe and healthy working environment.

Ford and Mercedes topped the Leaderboard on workers’ rights, both receiving half the total possible points in this section. The companies were the only automakers to receive full credit for their efforts to identify workers’ rights risks in their supply chains, as both companies include the participation of trade unions in their human rights due diligence processes and disclose specific workers’ rights issues in their supply chains and where they are located. Mercedes was also recognized for having a collective bargaining agreement with a union in their headquartered country, and a global framework agreement with IndustriAll. In addition, the company consulted with IndustriAll and its works council to develop its human rights principles.

Top five companies for respect for workers’ rights

WORKERS’ RIGHTS RANK		OVERALL RANK	WORKERS’ RIGHTS SCORE
1	Ford	2	51%
2	Mercedes	1	50%
3	Stellantis	5	33%
4	Hyundai	10	28%
5	BMW	7	27%

Hyundai and Renault outperformed their overall ranking, while Tesla ranked lower (10th) than it did for its overall score (3rd). Hyundai's improved performance can be attributed to the South Korean automaker now disclosing workers' rights risks by location, including collective bargaining concerns in China.

However, improvements were rare within the workers' rights section. Indeed, overall, the average score improved by just 3 percentage points. Nearly half (44%) of the automakers evaluated in 2023 and 2024 made no improvement at all. This is a disappointing finding from the analysis, not least because of the wide range of areas that could be improved.

Nonetheless, one area of marginal improvement was related to living wage commitments. In the 2023 edition of the Leaderboard, none of the automakers assessed had made any kind of commitment to a living wage. In this year's Leaderboard, Ford and Volvo are credited for adding explicit commitments to a living wage in their human rights policies, although neither company disclosed a specific method for calculating a living wage. In addition to Ford and Volvo, BMW also became the only automaker to include a specific requirement in its Supplier Code of Conduct for suppliers to pay employees Living Wage.



CASE STUDY

UAW and Sparkz chart the way forward for battery workers

By [UAW Region 6](#)

The story of the green transition will be told largely through the successes or failures of the automotive and battery industries. The automotive industry employs millions of Americans and the fast-growing battery industry will soon employ hundreds of thousands. Whether these industries create quality jobs or if they participate in the race-to-the-bottom being driven by low road employers will determine to a large degree how much the public supports policies to accelerate the green transition.

In theory, creating quality jobs in these industries should be simple. Automotive and battery assembly are highly mechanized and automated industries, in which labor costs represent a small fraction of the overall costs when compared to materials and equipment. Companies can therefore raise wages and staffing levels without impacting prices too significantly.

But the electric vehicle and battery industries are currently dominated by low-road employers like Panasonic and Tesla. These companies maintain notoriously dangerous working conditions and their low wages and poor benefits drive down standards throughout the entire sector. Their factories are also some of the largest polluters in the green economy. Low road employers like this exacerbate a well-documented workforce shortage in emerging, green industries that require a highly-skilled workforce.

The United Auto Workers (UAW) union is leading the charge to correct these problems via its partnership with Sparkz, Inc., a next-generation battery maker opening a facility in Rancho Cordova, California. UAW and Sparkz have reached a card check neutrality agreement, meaning that Sparkz has committed to letting its future workforce form a union via the card check process instead of an onerous National Labor Relations Board election. The organizations will also partner to create the nation's first battery apprenticeship program as part of a workforce development program. Building a high-road alternative to existing

battery and EV companies will empower workers to improve their working conditions throughout the entire sector.

By forming a union and building a worker-centered training program, Sparkz workers will be on the forefront of the green transition. They will also be following the lead of unionized UAW workers at Ultium Cells in Ohio, which is currently the only unionized battery factory in the United States. As battery workers across the country seek union representation, the story of the Sparkz workers will be powerful. Workers can build on this example and ensure that sustainable new technologies create sustainable communities nationwide.



Where is there room for improvement?

There are two main ways for automakers to improve their performance. Automakers can make significant gains simply by matching the best practice of their higher performing peers across different issue areas. Over half of the indicators in the Leaderboard have been fully met by at least one company, while adding up the highest scores achieved by any company for each indicator results in a score of over 70%.

This means that automakers can take inspiration from what industry leaders are doing across different issues to dramatically improve their performance. This is an especially important strategy for low-performing companies, but also a viable one for industry leaders. Ford, for example, was this year's top ranking automaker but only achieved an overall score of 42%. Ford could therefore improve its score by over 28 percentage points by matching the best practices of its competitors that outperformed Ford across different indicators.

On the other hand, 30% of the indicators are not currently being met by any automaker. Closing this gap will require bold leadership from automakers that are willing to innovate and raise the bar for their competitors. This edition of the Leaderboard shows that such progress is possible. For example, in the 2023 edition not a single automaker had disclosed disaggregated scope 3 emissions for their steel, aluminum and battery supply chains. Additionally, no automaker had made an explicit commitment to a living wage. In the 2024 edition, Tesla was credited for becoming the first automaker to disclose disaggregated scope 3 emissions for these supply chains, whilst Ford, BMW and Volvo became the first automakers to make explicit commitments to a living wage.

This section looks at such opportunities for progress across the different sections of the Leaderboard.



Fossil-free and Environmentally Sustainable Supply Chains performance

Overall, companies scored higher against the General subsection (24%) than elsewhere. This suggests that better practice achieved by automakers on addressing climate and environmental issues overall could be replicated in more specific supply chain areas.

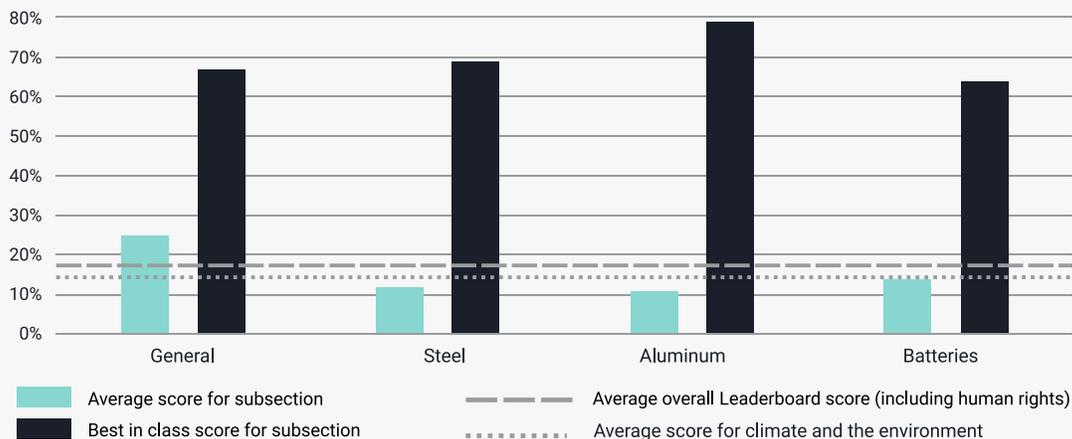
While General scores are on average higher, improved scores are possible across the board. The chart below shows that the best-in-class score – summing the highest scores for each individual indicator by any company – is consistently around the 70% mark. This demonstrates that automakers can greatly enhance their performance by matching the best practice of their best-performing peers across the different indicators. Further, the gaps between the average and the best-in-class scores, especially prominent for steel and aluminum, highlight the patchy nature of the auto industry’s approach to managing climate and environmental risks in their supply chain, which the industry as a whole should be seeking to improve and make much more consistent.

The below chart also shows some marginal, but noteworthy, differences when it comes to best-in-class performance across the different indicator subsections. Although the average scores were higher for the General and Batteries subsections,

the best-in-class scores against these indicators were lower than they were for the Aluminum and, to a lesser extent, Steel subsections. The aluminum category had the highest best-in-class score of 79%, meaning that only 21% of these indicators have still not been fully achieved by at least one automaker. In contrast, this score was 67% for the General indicators and 64% for the Battery indicators. This shows that, while automakers on average will be starting from a higher baseline when it comes to their performance against the General and Batteries indicators, strengthening industry-wide performance in these areas will require more leadership from automakers to meet the performance expectations that are currently not being met by any of their peers.

In the General category, for example, the majority of automakers have made progress on scope 3 emissions disclosure. However, companies performed considerably less well when it came to disclosing information on other environmental impacts (air pollution and water) in their supply chain. No companies disclosed other significant supply chain emissions (GRI 3-5) and only Honda provided any data on water usage by key suppliers. Similarly, half of the automakers evaluated disclosed that emissions reductions are taken into account as part of their tender and contracting process, but no automakers stated that water management is a factor in choosing preferred suppliers in their tender process.

Figure 7 – Average and best in class scores for the fossil-free and environmentally sustainable supply chains section



When it comes to company performance on steel and aluminum, the gap between the industry leader, Volvo, and the rest of their peers is notably larger. Volvo achieved the highest score for the target-setting indicators - having set targets related to the decarbonization of its primary steel and aluminum, as well as to increase its use of secondary steel and aluminum. Volvo also scored highest on the supply chain lever indicators for steel, thanks to the advance purchase agreement it has signed for fossil-free steel and for being the only automaker to be a member of both SteelZero and Responsible Steel. Given the wide gap between Volvo's scores and the industry averages, other automakers would do well to draw inspiration from Volvo's performance in these areas.

Another theme that cuts across the steel, aluminum and batteries subsections (illustrated in the chart below) is that automakers scored higher on the supply chain lever indicators than they did for the indicators on setting targets and demonstrating progress towards those targets, whose scores were in turn higher than those for the disclosure indicators. This suggests that, in contrast to the General indicators where this pattern was reversed, automakers seem to be implementing a more ad-hoc approach to decarbonizing their steel, aluminum and battery supply chains: taking individual actions without linking them to a wider strategy linked to robust targets and a comprehensive mapping of the emissions in these supply chains.

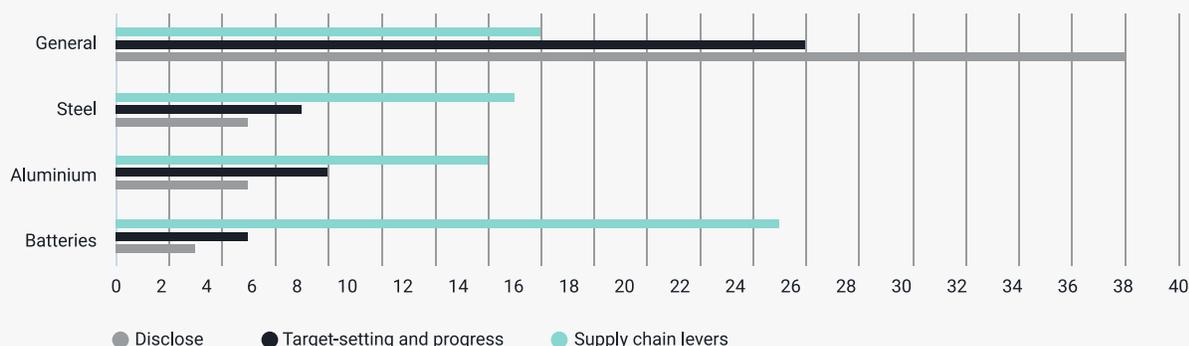
Automakers can take inspiration from the industry leaders in these areas to improve their performance.

As mentioned above, Tesla currently leads the industry when it comes to mapping and disclosing the emissions from their steel, aluminum and battery supply chains, while Volvo is the industry leader when it comes to target-setting for steel and aluminum. However, it is Renault that leads on setting targets for its battery supply chain, having set targets to both reduce the emissions from battery manufacturing by 35% by 2030 and to reach 80% recycled cobalt, lithium and nickel in new batteries by 2030.

The industry leaders on the supply chain levers indicators, whose average scores are still relatively low, are more diverse. While Volvo leads the supply chain levers indicators on steel, it is Mercedes who leads these indicators for aluminum, being one of only two automakers (together with Nissan) to have signed advance purchase agreements for low-carbon aluminum. When it comes to the supply chain levers indicators on batteries, three automakers attain the top score of 52%: Tesla, Volkswagen and Mercedes.

Finally, there are some indicators across each of these subsections that have not been attained by any automakers. For example, multiple automakers have signed offtake agreements for the provision of low-carbon steel and aluminum, but none of the companies currently disclose the percentage of low-carbon steel and aluminum that is used in their production cycles. On batteries, no company has set a disaggregated target to increase the recovery rates for the lithium, cobalt and nickel used in their batteries.

Figure 8 – Average scores for each indicator category across the across the four human rights and responsible sourcing subsections



Human Rights and Responsible Sourcing performance

The average score against the General human rights indicators (37%) was the highest across all the indicator subsections of the Leaderboard. This subsection also saw the largest score increase (6 percentage points) over the average score in 2023.

The best-in-class score - summing the highest indicator scores by any company - was also very high for General human rights indicators (88%), but was even higher for the indicators on the responsible sourcing of transition minerals (95%).

Company performance across these two issue areas is dramatically different to their performance on Indigenous Peoples' rights and workers' rights, which together represent the lowest best in class scores across all the subsections of the Leaderboard (32% and 54% respectively). Moreover, the average score on Indigenous Peoples' rights (just 4%) was the lowest of all the subsections.

The average and best-in-class scores for human rights and responsible sourcing show that different strategies are needed to strengthen company performance across the four issue areas of this section. In order to improve performance on overall human rights due diligence and the responsible sourcing of transition minerals, automakers can achieve very high scores by emulating the practices of their best performing peers across the different indicators. This applies not only to low-performers but also to industry leaders, which

still have to close important gaps in order to fully meet the Leaderboard's performance expectations on these issues.

On the other hand, strengthening performance on the rights of Indigenous Peoples and workers will require further leadership from automakers who are willing to be the first amongst their peers to meet specific performance expectations on these critically important issues for auto supply chains.

With regards to the former strategy, Ford stands out as the clear leader on the responsible sourcing of transition minerals, scoring 62 percentage points higher than the industry average and 22 percentage points higher than Tesla, coming in second place. The company met all expectations within 9 of the 13 indicators, and achieved the highest score on the identify and remedy indicators.

There is a greater diversity of leadership within the General human rights due diligence indicators, with a 7 percentage point gap between the top three scoring automakers (Stellantis, Mercedes and Ford). Stellantis achieved the highest scores on the prevent, mitigate and account indicators, as well as the indicators on access to remedy. But multiple automakers scored full points on the commit indicators (BMW, Ford, GM, Mercedes and Volvo) and Mercedes was the only automaker to score full points on the identify indicators.

Figure 9 – Average and best in class scores for the human rights and responsible sourcing section

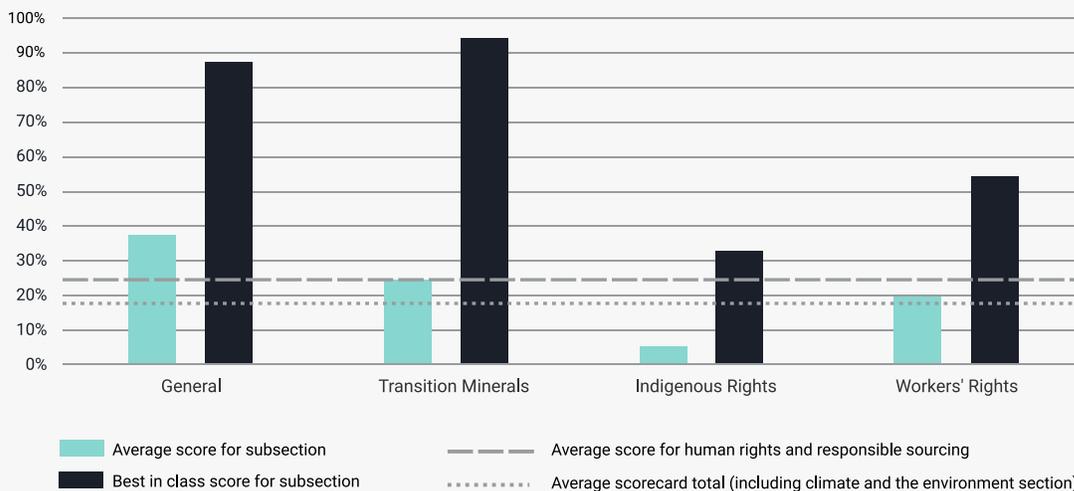


Figure 10 — Average scores for each indicator category across the four fossil-free and environmentally sustainable supply chains subsections



There are clear priorities for improving industry performance on both overall human rights due diligence and the responsible sourcing of transition minerals. The lowest scores in both sections were for access to remedy, as illustrated in the chart above. In the General subsection, Stellantis and Volkswagen achieved the highest scores for their work on establishing a human rights grievance mechanism. However, neither automaker scored full points against these indicators due to not explaining how their grievance mechanisms are communicated to supply chain stakeholders. GM achieved the highest score for the indicator on access to remedy for outlining a clear process for determining and providing remedy. But again, the company did not achieve full points as it does not provide any quantitative or qualitative data to illustrate how this process operates in practice.

Ford and Tesla were the only automakers to score points on the remedy indicator in the transition minerals section, due to their use of RMI’s Mineral Grievance Platform for grievances to be raised about smelters and refiners in their supply chains. Ford was the sole automaker to receive full points against this indicator, as the company additionally discloses how they review and investigate grievances raised through this mechanism.

Similarly, only Ford and GM received full points against the indicator in this subsection on directly engaging smelters and refiners to build their due diligence capacities. GM, for example, states that it conducted outreach to 46 eligible SoRs to encourage

them to join RMI’s Responsible Minerals Assurance Process program, and that it actively participates in the Smelter Engagement Teams of the Automotive Industry Action Group and RMI to prioritize and conduct outreach and visits to SoRs.

Average scores were low across all of the indicator categories on respect for Indigenous Peoples’ rights. However, they were slightly higher for the commit indicators (8%) than they were for the identify (4%), prevent, mitigate and account (7%) and remedy (0%) indicators. Across these three latter indicator categories, all automakers scored 0% on the indicators requiring that they have a formal process in place to engage critical upstream suppliers on FPIC; disclose how they are prepared to respond if they identify violations of FPIC in their supply chains; and have put in place a process to remedy violations of FPIC in their supply chains. In fact, only one automaker fully met the scoring criteria of one indicator across all three of these categories, which was Tesla for providing additional explanation regarding the practices by which its suppliers must obtain FPIC.

These shortcomings indicate that even the minority of automakers that have made explicit commitments to Indigenous Peoples’ rights are not putting in place adequate processes to screen for and mitigate Indigenous rights risks in their supply chains, or establishing mechanisms to remedy violations when they do occur.

CASE STUDY

The Thacker Pass Mining Project: Free, Prior and Informed Consent and Indigenous Peoples' Rights

By [The SIRGE Coalition](#)

General Motors [announced](#) in January 2023 that it will invest \$650 million in Lithium Americas Corp. and will help the company develop its Thacker Pass lithium mining project, with the aim of ensuring a supply of lithium for its electric vehicles. However, the Thacker Pass project is proposed on Peehee Mu'huh, a sacred site on Paiute, Shoshone and Bannock lands in Northern Nevada. This landscape holds significant spiritual value to Paiute, Shoshone and Bannock peoples, in part, because this is the site of two massacres resulting in many ancestors' bodies being buried in the land. The Reno Sparks Indian Colony, Berns Paiute Tribe, Summit Lake Paiute Tribe, and People of Red Mountain do not consent to the project and have filed lawsuits in opposition to the Thacker Pass mining site.

Peehee Mu'huh, which translates to "rotten moon", is the site of two massacres which gave the sacred site its name. During the second massacre in September 1865, the U.S. government attempted to exterminate the region's Indigenous Peoples, including children, by attacking a camp at the base of the pass. This attack was part of the broader pattern of federal policy to open up western lands for Euro-American settlers and to promote the growth of industries,

including mining. Lithium Americas is able to propose a mine at Thacker Pass today because of this historical context of violence and dispossession of Indigenous lands.

Despite GM's [Human Rights Policy](#), which includes a commitment to the UN Declaration on the Rights of Indigenous Peoples and to Free, Prior, and Informed Consent (FPIC), it has not paused its investment to assess its Indigenous Rights risk, nor has it required Lithium Americas to assure that it has obtained consent in line with FPIC standards. This comes after the People of Red Mountain and Securing Indigenous Rights in the Green Economy (SIRGE) sent an [open letter](#) addressed to GM, calling for it to require Lithium Americas, and its other suppliers, to implement FPIC policies in accordance with UNDRIP, and to rescind its investment where its suppliers fail to do so.

People of Red Mountain, a group of traditional Paiute, Shoshone and Bannock peoples with ancestral ties to the area and allies have asked GM to meet and the company has not done so, nor even responded to the multiple requests.



With regards to workers' rights, Ford (51%) and Mercedes (50%) were the clear leaders – ahead of the next best by 17 percentage points. Both companies, for example, provide good examples of how to identify (through trade union consultation) and disclose salient workers' rights risks in their supply chains. They are also very close to the best-in-class score for workers' rights (54%), underlining their lead over others. Nonetheless, the fact that these companies barely met just over half of the performance expectations of these indicators illustrates that even the industry leaders on workers' rights have a long way to go before they can claim to be adequately addressing this issue across their supply chains.

Furthermore, the low best-in-class score for this subsection shows that nearly half of the performance expectations contained in the workers' rights indicators have not yet been met by any automaker. As with Indigenous rights, some indicators had scores of 0% across all automakers. For example, no companies disclosed any evidence that trade unions are formally

engaged to verify the implementation of corrective actions pertaining to workers' rights violations, or in any remedy processes involving workers' rights.

Other performance expectations were met only by a very small number of automakers. Across all 18 companies only Ford, Mercedes and BMW have made commitments to a living wage, and even then, do not score full marks because they do not state how it is calculated. This issue should be a priority if the industry is to ensure a just transition for workers in EV supply chains.

Differences between markets

Overall, European and US companies⁹ perform very similarly, with average scores of 28% and 31% respectively. The scores among East Asian automakers are lower, with an average score of 8%. Scores in the fossil-free and environmentally sustainable supply chains section were similar between European and US automakers, while US automakers achieved, on average, higher scores on the human rights and responsible sourcing indicators.

European automakers notably scored higher in the general indicators of the fossil-free and environmentally sustainable section. However, US automakers' stronger performance in the human rights section was especially noticeable for their approaches to transition minerals. US companies' better performance on responsible transition minerals may partially be linked to mandatory conflict mineral reporting under the Dodd-Frank Act, which may have resulted in US automakers having stronger supply chain tracing expertise that can be applied to other mineral supply chains (though this does not guarantee a good score, considering the spread between US companies' scores on transition minerals).

For those companies analyzed in both years, the results show that US companies have seen a rapid increase in their scores, which have jumped by 10 percentage points. European automakers' progress was much more circumspect, with a 2 percentage point increase. This resulted in US automakers overtaking several European peers: Tesla bumped Volvo for third place and the top spot switched hands from Mercedes to Ford.

With an average score increase of 2 percentage points, East Asian automakers' progress was similar to that of their European counterparts. However, as they started from a lower base, this meant last year's scores improved by 33%. Their progress was strongest in the "General" subsections for both the fossil-free and environmentally sustainable supply chains section, and the human rights and responsible sourcing section.

For the lowest scorers, the first steps look to be high-level commitments and requirements on sustainable and responsible supply chains, which can

then be used to drive further improvements in other areas. For example, Geely's improved score within the general human rights section was supported by new requirements for its supplier to respect human rights that are outlined in its supplier code of conduct; a positive step which BYD, SAIC and GAC could look to replicate. East Asian automakers could also look to those automakers ranking in the middle of the leaderboard for achievable short-term changes. This could mean making further improvements within the General sections where mid-table performers are noticeably stronger than those towards the bottom.

For US automakers, improvements were most noticeable in the fossil-free and environmentally sustainable section (up 14 percentage points compared with 5 percentage points in the human rights section), particularly in the steel and aluminum subsections. Within the human rights and responsible sourcing section, these automakers made improvements in the transition minerals section.

There were diverging performances within, as well as between, markets. In the US, despite significant strides this year, GM trailed Ford by 20%. In Europe, Renault was 21% below Mercedes. In Japan and Korea, Toyota, Honda, and Kia scored around half the points of Hyundai (15%). Meanwhile, Geely (10%) outperformed other Chinese automakers by 6-9% overall, and 12-13% on fossil-free and environmentally sustainable indicators. This divergence of scores within geographies demonstrates that there is ample room for improvement within specific markets.



CONCLUSION

Lead the Charge's annual Leaderboard is a benchmark of an automaker's competitive edge to build an equitable, sustainable and fossil-free supply chain. The Leaderboard is a tool that can be used by automakers, investors, policymakers and consumers to identify who is leading, who is lagging, and how and where to drive positive change in automotive supply chains.

The 2024 edition of the Leaderboard demonstrates that important progress has been made across several areas. In some cases, these improvements have been significant, demonstrating that rapid progress can be achieved in a relatively short period and that automakers can be pressured to step up their performance or risk losing their competitive edge.

However, despite these positive changes, the auto industry still has a long way to go. No company scored more than half of the points available. Some automakers perform poorly across the board, while the performance of others is frequently patchy. There are also areas where improvement was extremely limited. This is most worrying with regards to the just transition indicators, particularly Indigenous Peoples' rights where company policy and action was already weakest.

As the rapidly accelerating transition to electric vehicles addresses the dirty tailpipe emissions of the auto industry, it is essential that automakers also look towards their supply chains with the aim of manufacturing EVs that are truly clean across their lifecycle.

This applies not only to reducing supply chain emissions, but also to addressing other harmful environmental and human rights impacts, from mining through to manufacturing and reuse and recycling. Achieving this is not only a moral imperative but a growing expectation of regulators, investors, and consumers that all vehicles are made equitably, sustainably and fossil-fuel free.



Company Performance Summaries

Source of BEV Sales Data: EV-Volumes OEM Share tracker

All figures are cumulative annual values up to and including July 2023. The data covers passenger vehicles only and includes Europe, China, Korea, Japan, the United States and Canada.





Ranking	7	Comparison	↓ #6 in 2023
Bev Sales #	165,303		
Bev Sales %	13%		
Total Score	24%		
Climate Score	17%		
Human Rights Score	31%		

SUMMARY

BMW almost doubled its EV output last year, but has made little progress since the 2023 Leaderboard on building a more equitable and sustainable supply chain. Its low fossil-free and environmentally sustainable score continues to be held back by inaction on steel and aluminum, as well as its unacceptable track record on climate lobbying – for which InfluenceMap gives it the second lowest score of the auto industry.

KEY TAKEAWAYS

- Discloses and has set a science-based target to reduce its overall Scope 3 GHG emissions for purchased goods but does not disaggregate these by supply chain.
- Has a lack of dedicated targets and strategies to decarbonize the steel, aluminum and batteries used in its vehicles.
- Outperforms most peers in having contractual requirements for its battery cell suppliers to use green electricity, and has also made progress in establishing closed loop systems for batteries by working with a battery recycler in China.
- Has some high-level human rights due diligence policies in place, with mechanisms to identify, mitigate, and remedy abuses in its supply chain.
- These policies and mechanisms need to be strengthened for responsible mineral sourcing, workers' rights, and especially, to ensure the respect of Indigenous Peoples' right to Free, Prior and Informed Consent.
- Made a significant improvement on workers' rights in 2023 by becoming the first automaker to introduce a requirement in its supplier code of conduct to pay a living wage.



2024 Ranking

16

Comparison

↑ #17 in 2023

BEV Sales #	711,556
BEV Sales %	48%
Total Score	4%
Climate & Environment	2%
Human Rights	5%

SUMMARY

BYD continues to be one of the leaders of the EV transition: it now exclusively produces battery EVs and hybrids, having terminated the production of internal combustion vehicles in 2022. It is also an industry leader when it comes to innovations in battery technologies to reduce the use of emissions intensive minerals such as nickel, cobalt and lithium.

However, while some basic new disclosures improve BYD's score compared to last year, an overall lack of transparency about its supply chain leaves it near the bottom of the Lead the Charge Leaderboard. As the second largest producer of EVs in the world, BYD could leverage its vertically integrated supply chain to emerge as an equitable and sustainable supply chain leader.

KEY TAKEAWAYS

- Is one of only 3 companies that fails to disclose their supply chain emissions or decarbonization targets.
- Discloses almost no efforts to reduce the climate and environmental impacts of its steel, aluminum, and batteries.
- Has now delivered a lithium-ion battery which is cobalt and nickel free, and states that it will soon bring vehicles using sodium-ion batteries to market.
- Has taken some basic first steps in disclosing how it monitors its suppliers' performance on social issues, but still has not disclosed any clear requirements or processes to ensure that human rights are respected across its supply chain.



2024 Ranking

1

Comparison

↑ #2 in 2023

BEV Sales #	43,570
BEV Sales %	2%
Total Score	42%
Climate & Environment	29%
Human Rights	54%

SUMMARY

Already the strongest performer on human rights, Ford made progress across both environmental and human rights indicators this year – allowing the company to race past former top scorer, Mercedes, and claim the top spot of the Leaderboard.

Nonetheless, there are clear areas for improvement. Ford still falls behind competitors when it comes to eliminating fossil fuels and environmental harms from its steel, aluminum, and battery supply chains. Ford’s human rights score continues to be dragged down by its unacceptably low score on Indigenous Peoples’ rights, which was also one of the areas where no improvement was made over its 2023 score.

KEY TAKEAWAYS

- Has an industry-leading responsible minerals policy and due diligence processes, with extensive battery supply chain mapping and a dedicated grievance mechanism.
- Achieved the highest score on workers’ rights and, encouragingly, has now made a living wage commitment in its human rights policy. However, still has significant areas to improve such as establishing procedures for working with unions on corrective actions and remedy.
- Failed to make progress on Indigenous Peoples’ rights, with no score improvement over its unacceptably low 2023 score of 7%.
- Made improvements on overall supply chain decarbonization by requiring all suppliers to set Science-Based Targets and action plans.
- Made progress on fossil-free steel and aluminum by joining the First Movers Coalition and accordingly setting targets for green steel and aluminum usage. Also signed new agreements with strategic steel suppliers for low-carbon steel.
- Announced new battery R&D investments, including a new battery research center testing novel battery materials, but lacks targets for battery decarbonization and mineral recovery.



2024 Ranking

17

Comparison



#16 in 2023

BEV Sales #	265,391
BEV Sales %	60%
Total Score	2%
Climate & Environment	3%
Human Rights	1%

SUMMARY

GAC's rapidly increasing EV production is impressive, but a lack of disclosure, commitments and actions to build a clean and responsible supply chain leave it near the bottom of the Leaderboard. GAC has made some progress on batteries by bringing a new LFP battery to the market, reducing reliance on energy intensive minerals, and has disclosed some minimal actions on due diligence of suppliers for the first time. However, this has not been matched by other actions to eliminate fossil fuels, environmental harms and human rights abuses from its supply chain.

KEY TAKEAWAYS

- Is one of the leaders on the EV transition, with BEVs now accounting for 60% of its total sales.
- Has a 2050 net zero target covering the supply chain, but no interim target, and has disclosed extremely little information on the supply chain actions it is taking to achieve this target.
- Has brought to market new nickel- and cobalt-free LFP batteries.
- Now provides limited evidence that suppliers are audited for social risks, but provides little detail on the content and coverage of these assessments, and scores 0% on almost all other indicators related to supply chain due diligence.

2024 Ranking

12

Comparison



#13 in 2023

BEV Sales #	172,105
BEV Sales %	25%
Total Score	10%
Climate & Environment	15%
Human Rights	6%

SUMMARY

Geely further consolidated its position as the top performing East Asian automaker on fossil-free and environmentally sustainable this year, whilst also achieving the second largest score increase on human rights over the year. Whilst Geely still has a long way to go to become an industry leader on clean and equitable supply chains, the strong progress it has made to date provide solid foundations for the automaker to take more targeted action on specific supply chains like steel and aluminum, as well as on salient human rights issues like responsible sourcing of transition minerals

KEY TAKEAWAYS

- Highest scoring East Asian automaker on fossil-free and environmentally sustainable supply chains, due to its work on scope 3 emissions, as well as its disclosure and targets on recycled steel and aluminum. Made additional progress in 2023 by applying a sustainability assessment to a significant majority of its tier 1 suppliers and developing closed-loop processes for steel and batteries.
- Falls behind industry peers when it comes to taking action on fossil-free steel and aluminum.
- Achieved the second largest score increase (16 percentage points) in the “General” human rights category of the Leaderboard, due to new supplier requirements on human rights and improved due diligence processes to audit suppliers for compliance with its code of conduct. This initial progress on supply chain due diligence should be strengthened with improved processes to identify and remedy salient human rights risks and impacts in its supply chain.
- A lack of commitments and action on responsible transition mineral sourcing, Indigenous rights and workers’ rights bring down Geely’s human rights score.



SUMMARY

GM was one of the strongest improvers on the fossil-free and environmentally sustainable indicators this year, achieving a score increase of 14 percentage points – largely due to improved disclosure of its upstream scope 3 emissions and to setting new targets on fossil-free steel and aluminum procurement through the First Movers Coalition. However, a lack of progress in tandem on human rights, where GM’s score is less than half of Ford’s, means that GM’s overall ranking remains unchanged this year.

KEY TAKEAWAYS

- Disclosed its supply chain Scope 3 emissions this year, finally catching up with many of its competitors.
- Joined First Movers Coalition last year and accordingly commits to sourcing a portion of its steel and aluminum from near-zero emissions sources by 2030. Also signed a new agreement with U.S. Steel, who will provide the company with low-emission steel starting this year.
- Fossil-free and environmentally sustainable score brought down by inaction on the impacts of its battery supply chain, for which it scored just 8%.
- Achieved a score increase of a mere 1 percentage point on human rights, despite scoring just 25% on this area in 2023. Still has ample room for improvement with regards to human rights due diligence, in particular by introducing measures to prevent, account for and remedy human rights abuses in its supply chain.
- Is one of the few automakers with an explicit commitment to Indigenous Peoples’ right to Free, Prior and Informed Consent. However, disappointingly, is not taking action to ensure this commitment is realized with its investment in Lithium Americas and the Thacker Pass project.
- Could improve weaker performance on workers’ rights through committing to a living wage and working with unions to prevent, mitigate and remedy workers’ rights abuses in its supply chain.



2024 Ranking

14

Comparison

N/A

BEV Sales #	9,334
BEV Sales %	1%
Total Score	14
Climate & Environment	8%
Human Rights	4%

SUMMARY

Honda, a major laggard in the transition to electric vehicles, is a new entrant to the Leaderboard this year, which finds that the automaker is also one of the worst performers of the industry when it comes to eliminating emissions and environmental harms from its supply chain, scoring just 4% in this area. Honda fares little better on human rights, having made some commitments but lacking adequate substance when it comes to policies and processes to ensure these commitments are fulfilled.

KEY TAKEAWAYS

- Is one of the few automakers that fails to adequately disclose the scope 3 emissions from its supply chain and to set a science-based target to reduce its supply chain emissions.
- Has not disclosed any action taken to decarbonize its steel, aluminum, and battery supply chains, receiving a 0% score in all three categories.
- Poor track record on climate lobbying further pulls down its fossil-free and environmentally sustainable score.
- Has made top-level commitments to human rights, responsible transition minerals and workers' rights. But fails to disclose adequate due diligence processes to identify, prevent, mitigate and remedy human rights risks and abuses in its supply chain



2024 Ranking

10

Comparison



#11 in 2023

BEV Sales #	191,560*
BEV Sales %	7%*
Total Score	15%
Climate & Environment	12%
Human Rights	18%

SUMMARY

Hyundai has grown its EV production this year (although EVs still only account for a trivial portion of its overall vehicle sales) and has also made modest improvements on its supply chain, causing the automaker to increase its Leaderboard ranking by one place and become the highest-scoring East Asian automaker overall.

Nonetheless, Hyundai trails many of its industry peers when it comes to clean and equitable supply chains. In particular, it has made almost no progress on reducing the emissions and other environmental impacts from its steel, aluminum, and battery supply chains, and has also failed to improve its performance on the responsible sourcing of transition minerals and Indigenous rights.

KEY TAKEAWAYS

- Discloses its scope 3 supply chain emissions and has set a target to achieve carbon neutrality across its entire value chain by 2045, but no longer discloses clear interim targets for its supply chain.
- Discloses no action to decarbonize the primary steel and aluminum used in its vehicles, although it has taken some initial steps on secondary steel and aluminum.
- Continues to be one of the worst scorers on auto industry climate lobbying from InfluenceMap; only Toyota scores lower.
- Has made some concrete human rights commitments and now discloses its human rights risk by region, including some workers' rights risks.
- Worryingly, Hyundai does not provide any evidence that it has meaningfully strengthened the human rights due diligence processes for its supply chain, despite investigations published last year that found widespread use of child labour by its suppliers in Alabama.

*Sales figures are for Hyundai Motor OEM which includes both Hyundai and Kia.



2024 Ranking

13

Comparison



#14 in 2023

BEV Sales #	191,560*
BEV Sales %	7*
Total Score	13 (14)
Climate & Environment	8%
Human Rights	7%

SUMMARY

Kia was one of the lowest performing automakers in the first edition of the Leaderboard and achieved a meager score increase of 2 percentage points in 2023, meaning that Kia remains near the bottom of the ranking in the 2024 edition of the Leaderboard. Kia continues to have weak scores across the board, receiving a 0% score in two categories (fossil free and environmentally responsible aluminum, and Indigenous Peoples' rights) and achieving scores of less than 10% across the indicators on steel, batteries and responsible sourcing of transition minerals.

KEY TAKEAWAYS

- Has a 2045 carbon neutrality declaration and interim targets, with preparations to join the Science-based Targets Initiative.
- Now discloses scope 3 emissions for purchased goods and services.
- Has a battery closed loop system for extracting raw materials.
- Includes little detail on its steel, aluminum and battery decarbonization efforts - scoring less than 10% across all these categories.
- Has made commitments to human rights, workers' rights, and responsible sourcing of transition minerals, but provides few details on the measures taken to realize these commitments. However, does provide more detail this year on its system for evaluating human rights risks at individual suppliers.
- Overall human rights score brought down by very poor performance on transition minerals and Indigenous

*Sales figures are for Hyundai Motor OEM which includes both Hyundai and Kia.

Mercedes-Benz

2024 Ranking

2

Comparison



#1 in 2023

BEV Sales # 138,207

BEV Sales % 11%

Total Score 41%

Climate & Environment 37%

Human Rights 45%

SUMMARY

Mercedes lost its number one position in the second edition of the Leaderboard to Ford. However, the automaker continues with a strong performance across both the fossil-free and environmentally sustainable and human rights and responsible sourcing sections. Mercedes made some notable improvements during 2023, in particular on fossil free and environmentally responsible aluminum – for which it received an 18 percentage point score increase.

Mercedes has room to move forward and reclaim its number one title through disclosing disaggregated supply chain emissions like fellow industry leader Tesla did this year, as well as prioritizing their commitment to the rights of Indigenous Peoples.

KEY TAKEAWAYS

- Discloses supply chain emissions and has set a target to be net zero by 2040 across all stages of its value chain, with a new interim target to cut value chain emissions by 50% by the end of this decade.
- Has set clear requirements for suppliers on setting emissions targets and disclosing water usage.
- Top three scorer across the fossil free and environmentally responsible steel, aluminum and batteries categories. Made especially strong progress on aluminum decarbonization this year by setting new targets and signing a letter of intent with an aluminum producer to develop and use “practically CO2-free” automotive aluminum.
- Also strengthened performance on recycling and reuse this year by disclosing progress on a new closed-loop process for steel production scrap at its Sindelfingen plant and a new battery recycling factory in Kuppenheim this year, which will use efficient hydrometallurgical processing.
- Decent scores in the human rights section across the General, Transition Minerals and Workers’ Rights categories. Also achieves the highest score on Indigenous Peoples’ rights, but with this score at just 17%, it still has significant room for improvement.



2024 Ranking

10

Comparison



#11 in 2023

BEV Sales #	152,517*
BEV Sales %	7%*
Total Score	13%
Climate & Environment	12%
Human Rights	15%

SUMMARY

Scoring just 13% overall, Nissan made limited progress this year and performs poorly across both the Fossil-free and Environmentally Sustainable and human rights indicators. Nissan has set some targets and commitments on emissions and human rights in its supply chain, but demonstrates little in the way of concrete actions it is taking to realize these commitments.

KEY TAKEAWAYS

- Discloses scope 3 emissions for purchased goods and has set a 2050 target to achieve carbon neutrality across the lifecycle of its products, but has not set an interim scope 3 target.
- Signed new agreements to procure lower CO2 steel and aluminum from Kobe Steel. However, it should be noted that, in the case of steel, this will still be from coal-fired blast furnaces, and so lacks the ambition of the green steel procurement agreements signed by other automakers.
- Continues to score just 4% for its efforts to address the climate and environmental impacts of its battery supply chain.
- Commitments on human rights, workers' rights and responsible transition mineral sourcing, but not on indigenous rights. Discloses few concrete measures to realize these commitments, particularly with regards to transition minerals and workers' rights.
- Announced that a supply chain human rights grievance system is planned but not yet implemented.

*Sales figures are for the R-N-M Alliance OEM which includes Renault, Nissan and Mitsubishi.

RENAULT

2024 Ranking

9

Comparison

↓ #7 in 2023

BEV Sales #	152,517*
BEV Sales %	7%*
Total Score	19%
Climate & Environment	17%
Human Rights	21%

SUMMARY

Renault performed poorly across both the environmental and human rights indicators. It is the weakest performer of the European automakers and failed to improve in most indicator categories this year. A notable exception is for fossil free and environmentally sustainable batteries, where it was one of the biggest improvers, largely due to its efforts around closed-loop processes for battery recycling.

KEY TAKEAWAYS

- Has a 2030 GHG reduction target for its supply chain and states that it will focus on steel, aluminum and batteries.
- Strong progress on batteries during 2023, due to setting targets for increasing the share of recycled battery minerals, establishing a new company to focus on closed-loop battery recycling and signing a purchasing agreement for low-carbon cobalt.
- However, demonstrates little progress on its GHG emission reduction targets for steel and aluminum: it has not disclosed any purchasing agreements for low-carbon steel or aluminum, and does not participate in any multi-stakeholder initiatives focused on driving demand for clean steel and aluminum.
- Made no progress on any of the human rights categories during 2023.
- Overall human rights score is brought down in particular by inadequate actions on responsible transition mineral sourcing and a 0% score on Indigenous Peoples' rights.

*Sales figures are for the R-N-M Alliance OEM which includes Renault, Nissan and Mitsubishi.



2024 Ranking

18

Comparison

N/A

BEV Sales #	60,351
BEV Sales %	33%
Total Score	1%
Climate & Environment	2%
Human Rights	0%

SUMMARY

A new entrant to the scorecard this year due to its burgeoning EV sales, SAIC has increased its BEV production to about a third of total production. Unfortunately, it is the lowest-scoring automaker in this year's Leaderboard, due to its poor disclosure and lack of public commitments on building a clean and equitable supply chain.

KEY TAKEAWAYS

- One of only 3 automakers that fails to disclose its scope 3 emissions or an emissions reduction target covering the supply chain.
- Has made minor progress on batteries: co-establishing a new company called Energiex to enhance the recycling and re-utilisation of batteries, and collaborating with a startup on R&D into solid-state batteries, which hold potential to reduce the climate and environmental impacts of batteries.
- Lacks commitments on human rights and does not disclose any meaningful due diligence processes for its supply chain.



2024 Ranking

5

Comparison

#5 in 2023

BEV Sales #	151,236
BEV Sales %	6%
Total Score	27%
Climate & Environment	18%
Human Rights	37%

SUMMARY

Stellantis underperforms on fossil free and environmentally sustainable supply chains, with almost no action to decarbonize the steel and aluminum used in its vehicles, and a poor rating from InfluenceMap on climate lobbying, which further brings down its overall score.

It performs much better on human rights - especially in the “General” section looking at overall supply chain due diligence policies and measures, for which Stellantis received the highest score out of the 18 automakers evaluated.

KEY TAKEAWAYS

- Discloses Scope 3 emissions for its supply chain and has now set targets to reduce its supply chain emissions by 40% per BEV by 2030 and to be net zero across the whole value chain by 2038.
- Scores the lowest out of the European and U.S. automakers on fossil free and environmentally sustainable steel and aluminum, and demonstrated no progress on these supply chains during 2023.
- Scores higher for batteries due to recycling processes, investments in battery chemistries to reduce the use of high-emissions minerals and for entering into contractual agreements with lithium and nickel suppliers to reduce the carbon footprint of mining these minerals.
- Strongest automaker in the General human rights section, with a score of 76%, due to robust measures for preventing, mitigating, and holding suppliers accountable for potential human rights violations.
- However, they are behind several of their peers on workers’ rights and responsible transition mineral sourcing.
- Continues to score 0% on efforts to ensure respect for Indigenous Peoples’ rights in its supply chain.

2024 Ranking

3

Comparison

↑ #9 in 2023

BEV Sales #	945,119
BEV Sales %	100%
Total Score	35%
Climate & Environment	31%
Human Rights	39%

SUMMARY

Tesla was the biggest mover of the Leaderboard this year, improving across all indicator categories to achieve an overall score increase of 21 percentage points and a significant boost up the rankings from 9th to 3rd position. Nonetheless, there is ample room for improvement. On fossil-free and environmentally sustainable supply chains, Tesla can build on the progress that it has made in 2023 on measuring its supply chain emissions to take targeted action on decarbonizing its steel, aluminum, and battery supply chains. On human rights and responsible sourcing, Tesla should prioritize strengthening policies and processes to ensure the rights of Indigenous Peoples and workers are respected across its supply chain. These areas provide Tesla with the opportunity to continue strengthening its performance at the same rate as it has done this year and become the industry leader on equitable, sustainable, and fossil-free supply chains.

KEY TAKEAWAYS

- In 2023, became the first automaker to disclose disaggregated scope 3 emissions for its steel, aluminum, and battery supply chains. However, has not set any emission reduction targets for these supply chains.
- Performs well on fossil-free and environmentally responsible batteries, due to progress on closed loop processes for battery recycling, investments in battery chemistries like LFP batteries that can reduce demand of high intensity minerals, and sourcing significant percentages of its cobalt, nickel and lithium directly from mining suppliers with contracts that include environmental requirements.
- Performs poorly on steel and aluminum - providing no evidence of actions taken to decarbonize these supply chains, with the exception of some progress on aluminum recycling.
- Significant improvements in its human rights due diligence and responsible transition mineral sourcing processes, with a new third-party grievance mechanism and more comprehensive supply chain mapping, human rights priority areas and engagement actions for each of the key transition minerals. Also now encourages its suppliers to undergo IRMA audits, with four mining suppliers agreeing to do so.
- Improved score on Indigenous Peoples' rights with a full commitment to Free, Prior and Informed Consent for all raw material extraction and processing in its supply chain. However, with a score of just 14% for this category, there is still much more to be done.
- Human rights policy and supplier code of conduct now includes a commitment to respect all five of the ILO Principles, including the right to collective bargaining, but has made no progress beyond this on workers' rights. This is especially concerning given the criticisms of Tesla in 2023 for not respecting collective bargaining rights of workers in Sweden.



2024 Ranking

15

Comparison



#12 in 2023

BEV Sales #	46,821
BEV Sales %	1%
Total Score	7%
Climate & Environment	5%
Human Rights	9%

SUMMARY

The second edition of the Leaderboard further entrenches Toyota's reputation as the biggest climate laggard of the automotive industry. Not only do BEV sales continue to constitute just 1% of Toyota's total vehicle sales, the automaker has not improved its climate lobbying performance - rated the worst of the auto industry by InfluenceMap - or its fossil-free and environmentally sustainable score in the Leaderboard of just 5%. Toyota needs to change track fast or risk sliding into irrelevance as the rest of the industry races towards a cleaner future.

KEY TAKEAWAYS

- Discloses scope 3 supply chain emissions and has set a 2050 target to eliminate all life-cycle emissions.
- Scores zero points on all steel and aluminum indicators, and just 4% on the battery supply chain indicators, exhibiting an all-around failure to reduce emissions and other environmental impacts from these supply chains.
- Has a basic commitment to the UN Guiding Principles on Business and Human Rights and asks suppliers to apply human rights requirements to their own suppliers. But still fails to provide tangible evidence of concrete measures to realize this commitment.
- Scores less than 10% on the indicators on responsible transition mineral sourcing, Indigenous Peoples' rights, and workers' rights - lacking even basic commitments on these issues.



2024 Ranking

6

Comparison



#4 in 2023

BEV Sales #	370,513
BEV Sales %	9%
Total Score	26%
Climate & Environment	25%
Human Rights	26%

SUMMARY

Despite being a relatively strong performer in the inaugural Leaderboard, Volkswagen was the only automaker not to improve its overall score in the second edition. Whilst it did make some progress with regards to battery recycling and advance purchase agreements for low-carbon steel, this was offset by backsliding with regards to the level of transparency provided on its mineral supply chains. This lack of progress has led to Volkswagen's drop from 4th to 6th place in the Leaderboard.

KEY TAKEAWAYS

- Discloses 2030 and 2050 targets to reduce scope 3 supply chain emissions.
- Inadequate progress on steel and aluminum decarbonization due to a lack of material-specific targets and participation in key multi-stakeholder initiatives.
- Discloses a new agreement with Salzgitter AG to produce low-carbon steel from the end of 2025 and a new joint venture with battery recycler Umicore to recover minerals.
- Has developed solid, but insufficient, processes for human rights due diligence and responsible mineral sourcing.
- No longer discloses the countries of origin or country-specific risks for its mineral supply chains.
- Makes no commitment to Indigenous Peoples' rights and inadequate policies to ensure workers' rights are respected throughout its supply chain.

2024 Ranking

4

Comparison



#3 in 2023

BEV Sales # 88,156

BEV Sales % 23%

Total Score 32%

Climate & Environment 36%

Human Rights 27%

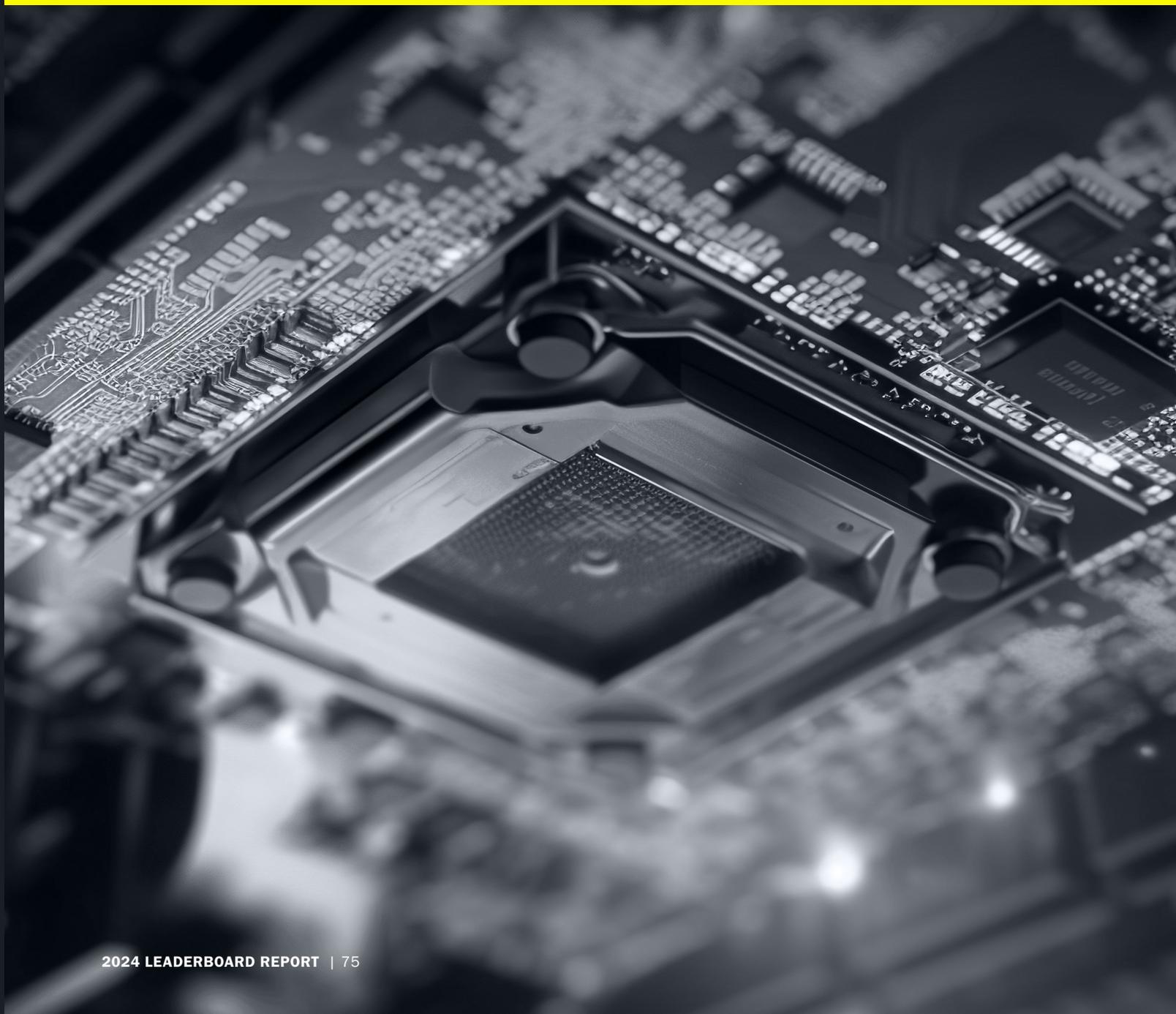
SUMMARY

Volvo has rapidly grown its EV production in recent years and continues to be the industry leader on fossil-free steel and aluminum. However, compared to other automakers, Volvo has made relatively little progress overall this year – resulting in the automaker slipping out of the top three. Volvo’s top score on fossil-free and environmentally sustainable has now been matched by Mercedes, while its marginal progress on human rights and responsible sourcing leaves Volvo lagging behind several competitors.

KEY TAKEAWAYS

- Continues to be the highest scorer on fossil-free and environmentally sustainable supply chains, but the gap between the second highest scorer, Mercedes, has been reduced to less than 1%.
- Continues to be the industry leader on fossil-free steel and aluminum due to its closed loop processes, recycling targets, advance purchase agreements and participation in the multi-stakeholder initiatives SteelZero and First Movers Coalition.
- Has a decent human rights performance, but is brought down by its 0% score on Indigenous rights.

Appendix 1: Table of indicators by Leaderboard sections



**Fossil-free and Environmentally Sustainable supply chains
(climate and environment):**

THEME	INDICATOR CATEGORY	INDICATORS
Fossil Free and Environmentally Sustainable Supply Chains (General)	Disclosure of emissions and water management	<ul style="list-style-type: none"> ■ The company discloses total scope 3 GHG emissions due to purchased goods and services. ■ The company discloses “significant emissions” in its supply chain. ■ The company discloses water usage by key suppliers in its supply chain.
	Target-setting and progress towards fossil free and environmentally sustainable supply chains	<ul style="list-style-type: none"> ■ The company has set and disclosed a scope 3 SBT (must include reference to upstream/purchased goods & not only ‘Well to Wheel’) ■ The company commits to having suppliers provide science-based targets for GHG emissions. ■ The company discloses the current percentage of suppliers providing science-based targets. ■ The company requires all significant suppliers to disclose their water management plan and water usage. ■ The company has programs in place to monitor suppliers for compliance with GHG emissions targets and other environmental impacts.
	Use of supply chain levers to achieve fossil free and environmentally sustainable supply chains	<ul style="list-style-type: none"> ■ The company incentivises suppliers to reduce GHG and other significant air emissions. ■ The company incentivises suppliers to improve water management
Fossil Free and Environmentally Sustainable Steel	Disclosure of scope 3 GHG emissions due to steel supply chains	<ul style="list-style-type: none"> ■ The company discloses disaggregated GHG emissions for their steel supply chains.
	Target setting and progress towards fossil free and environmentally sustainable steel supply chains	<ul style="list-style-type: none"> ■ The company has set targets for the use of fossil free and environmentally sustainable steel. ■ The company publishes progress towards their target by disclosing the current percentage of low-CO2 steel in their annual production cycle. ■ The company has a target for the use of secondary/scrap steel by 2030. ■ The company publishes progress towards their target by disclosing the current percentage of recycled steel used in its annual production cycle.

	<p>Use of supply chain levers to achieve fossil free and environmentally sustainable steel supply chains</p>	<ul style="list-style-type: none"> ■ The company participates in multi-stakeholder procurement initiatives to collaborate with other buyers to incentivise investment in and production of fossil-free steel at scale. ■ The company participates in multi-stakeholder standard / certification initiatives to drive investment in and production of socially and environmentally sustainable steel at scale. ■ Company has entered into formal arrangements with suppliers to incentivise investment in and greater production of fossil-free steel. ■ The company integrates improved recyclability of steel into automobile design and manufacture.
<p>Fossil Free and Environmentally Sustainable Aluminium</p>	<p>Disclosure of scope 3 GHG emissions due to aluminium</p>	<ul style="list-style-type: none"> ■ The company discloses disaggregated GHG emissions for their aluminium supply chains.
	<p>Target setting and progress towards fossil free and environmentally sustainable aluminium supply chains</p>	<ul style="list-style-type: none"> ■ The company has set targets for the use of fossil free and environmentally sustainable aluminium ■ The company publishes progress towards their target by disclosing the current percentage of low-CO2 aluminium in their annual production cycle. ■ The company has a target to increase use of secondary/scrap aluminium by 2030. ■ The company publishes progress towards their target by disclosing the current percentage of recycled aluminium used in its annual production cycle.
	<p>Use of supply chain levers to achieve fossil free and environmentally sustainable aluminium supply chains</p>	<ul style="list-style-type: none"> ■ The company participates in multi-stakeholder procurement initiatives to collaborate with other buyers to incentivise investment in and production of fossil free aluminium at scale. ■ The company participates in multi-stakeholder standard / certification initiatives to drive investment in and production of socially and environmentally sustainable aluminium ■ The company has entered into formal arrangements with suppliers to incentivise investment in and greater production of fossil free aluminium ■ The company integrates improved recyclability of aluminium into automobile design and manufacturing process.

Fossil Free and Environmentally Sustainable Batteries	Disclosure of scope 3 GHG emissions due to battery supply chains	<ul style="list-style-type: none"> ■ The company discloses disaggregated scope 3 emissions for their battery supply chains, including a total for the whole battery and disaggregated emissions for high intensity minerals, including Nickel and Lithium at a minimum.
	Target setting and progress towards fossil free and environmentally sustainable battery supply chains	<ul style="list-style-type: none"> ■ The company has set a target to produce fossil free and environmentally sustainable batteries. ■ The company has set a target to reduce reliance on energy intensive minerals in battery production. ■ The company has set collection and/or recovery targets for high intensity battery metals.
	Use of supply chain levers to achieve fossil free and environmentally sustainable battery supply chains	<ul style="list-style-type: none"> ■ The company requires all battery manufacturers to use 100% renewable electricity ■ Company enters into formal agreements (inclusive of joint ventures and investments) with extractives and other value chain companies to reduce the environmental impact of lithium sourcing. ■ Company enters into formal agreements (inclusive of joint ventures and investments) with extractives and other value chain companies to reduce the environmental impact of nickel sourcing. ■ Company enters into formal agreements (inclusive of joint ventures and investments) with extractives and other value chain companies to reduce the environmental impact of cobalt sourcing. ■ The company participates in multi-stakeholder initiatives to collaborate with other buyers to incentivise investment in and production of fossil free and environmentally sustainable batteries at scale. ■ The company invests in R&D to reduce the use of high emissions minerals (e.g. nickel, cobalt) in their batteries. R&D could be done in house or via formal partnerships with battery manufacturers. ■ The company invests in R&D to increase the recyclability of their batteries. ■ The company has established closed loop processes to increase the % of batteries being recycled at end of life.

Human rights and responsible sourcing indicators

THEME	INDICATOR CATEGORY	INDICATORS
Responsible Sourcing: General HR indicators	Commit	<ul style="list-style-type: none"> ■ The company has a public commitment to human rights. ■ The company extends their human rights commitments to their Tier 1 suppliers and beyond.
	Identify	<ul style="list-style-type: none"> ■ The company has a process in place to assess salient human rights risks in their supply chain. ■ The company discloses the salient human rights risks in their supply chain and where they are located. ■ The company has a process for identifying high risk supplier categories in their supply chain.
	Prevent, Mitigate and Account	<ul style="list-style-type: none"> ■ The company assesses the risk of adverse human rights impacts with suppliers prior to entering into any contracts. ■ The company discloses how it monitors/audits suppliers for compliance with the supplier code of conduct during the contract period. ■ The company reports on how it is prepared to respond if it finds non-conformances with the Supplier Code of Conduct in its supply chains. ■ The company discloses how they verify the implementation of corrective actions.
	Remedy	<ul style="list-style-type: none"> ■ The company has put in place a formal mechanism whereby workers, suppliers, suppliers' workers (in any tier) and other external stakeholders can raise grievances regarding adverse human rights impacts in their supply chain to an impartial entity. ■ The company discloses data about the practical operation of their due diligence mechanism, such as the number of grievances filed, addressed, and resolved, or an evaluation of the effectiveness of the mechanism. ■ The company has put in place a remedy process.
Responsible Sourcing of Transition Minerals	Commit	<ul style="list-style-type: none"> ■ The company has a commitment to responsible metals and minerals sourcing. ■ The company requires its suppliers to undertake due diligence in accordance with the OECD Due Diligence for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas

	Identify	<ul style="list-style-type: none"> ■ The company has a process in place to assess transition minerals risks in their supply chain to the point of extraction. ■ The company discloses transition minerals risks in their supply chain and where they are located. ■ The company publishes a smelter or refiner (SoR) list and indicates which SoRs are conformant with the Responsible Minerals Initiative (RMI).
	Prevent, Mitigate and Account	<ul style="list-style-type: none"> ■ The company discloses how it monitors/audits suppliers for compliance with the transition minerals due diligence requirements. ■ The company formally engages SoRs to build their capacity to conduct due diligence of their own supply chains. ■ The company formally engages extractives companies and includes human rights clauses in any contractual arrangements. ■ The company is a member of IRMA and actively engages their suppliers with regards to IRMA mining audits. ■ The company reports on how it is prepared to respond if it finds non-conformances associated with its responsible minerals sourcing policy occurring in its operations or supply chains. ■ The company discloses how they verify the implementation of corrective actions.
	Remedy	<ul style="list-style-type: none"> ■ The company has put in place a formal mechanism whereby grievances can be raised about SoR facilities.
Indigenous Rights and Free Prior and Informed Consent	Commit	<ul style="list-style-type: none"> ■ The company explicitly commits to respecting the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). ■ The company has a public commitment to free, prior and informed consent. ■ The company extends their indigenous commitments to their Tier 1 suppliers and beyond. ■ These commitments are translated into the Indigenous languages used by impacted communities.
	Identify	<ul style="list-style-type: none"> ■ The company has a process in place to assess Indigenous rights risks in their supply chain to the point of extraction.

	<p>Prevent, Mitigate and Account</p>	<ul style="list-style-type: none"> ■ The company provides additional discussion regarding the practices by which a suppliers must obtain FPIC, and explicitly states that the process must reach and engage with impacted Indigenous Peoples. ■ The company is a member of a multi-stakeholder group (e.g. IRMA) that include the participation of Indigenous and frontline communities to promote and ensure the rights of communities at the point of extraction. ■ The auto manufacturer has a formal process in place to engage critical upstream suppliers on FPIC (e.g. extractives companies) ■ The company reports on how it is prepared to respond if it finds FPIC breaches in its supply chain.
	<p>Remedy</p>	<ul style="list-style-type: none"> ■ The company has a process for investigating and remedying breaches of FPIC that includes a formal role for impacted Indigenous groups.
<p>Respect for Workers' Rights</p>	<p>Commit</p>	<ul style="list-style-type: none"> ■ The company has a commitment to workers' rights ■ The company extends their workers' rights commitments to their Tier 1 suppliers and beyond.
	<p>Identify</p>	<ul style="list-style-type: none"> ■ The company consults trade unions in their assessment of salient workers' rights risks in their supply chain. ■ The company discloses the salient workers' rights risks in their supply chain and where they are located.
	<p>Prevent, Mitigate and Account</p>	<ul style="list-style-type: none"> ■ The company actively collaborates with workers' and the representative organisation(s) of workers' own choosing to promote workers' rights and prevent abuses in the supply chain. ■ The company reports on how it is prepared to respond if it finds non-conformances associated with its workers' rights policy occurring in its operations or supply chains. ■ The company works with the relevant trade union and/or worker representative organisation to verify the implementation of corrective actions pertaining to workers' rights.
	<p>Remedy</p>	<ul style="list-style-type: none"> ■ Workers and the representative organisations of workers' own choosing are formally included in the remedy process.

Endnotes

- 1 See: Science-based Target Initiative (2018), Value Chain in the Value Chain: Best Practices in Scope 3 Greenhouse Gas Management, https://sciencebasedtargets.org/resources/files/SBT_Value_Chain_Report-1.pdf
- 2 See: UN OHCHR (2011), Guiding Principles on Business and Human Rights: Implementing the United Nations “Protect, Respect and Remedy” Framework, https://www.ohchr.org/sites/default/files/documents/publications/guidingprinciplesbusinesshr_en.pdf
- 3 See: Germanwatch (2022), An Examination Of Industry Standards In The Raw Materials Sector, https://www.germanwatch.org/sites/default/files/germanwatch_abstract_an_examination_of_industry_standards_in_the_raw_materials_sector_2022-09.pdf
- 4 See: InfluenceMap, Automotive Climate Tool: <https://automotive.influencemap.org/>
- 5 See the First Movers Coalition’s website for information: <https://initiatives.weforum.org/first-movers-coalition/home>
- 6 See the accompanying Lead the Charge methodology document for a more detailed explanation of why and how this framework was used in the Leaderboard.
- 7 See the accompanying [Lead the Charge methodology document](#) for a more detailed explanation of why and how this framework was used in the Leaderboard.

- 8 See: Germanwatch (2022), An Examination of Industry Standards in the Raw Material Sector, https://www.germanwatch.org/sites/default/files/germanwatch_abstract_an_examination_of_industry_standards_in_the_raw_materials_sector_2022-09.pdf 9 Stellantis is an Italian-American company. For the purposes of US and European comparisons, Stellantis’s scores were equally divided between the two markets.



Lead the Charge

Learn more at
leadthecharge.org