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SUSTAINABLE OPTIMISM – AISTECH REPORT

Driving the sustainable transition

US and European carmakers are propelling the transition to sustainable steel, says **Matthew Groch***, while Asian automakers continue to lag behind.



FOR NGOs working on decarbonizing the automotive sector, there is a chicken-and-egg scenario in the industry's steel supply chain. While steelmakers often point to a lack of demand from the auto industry, carmakers point to the deficit of low-carbon primary steel available on the market and its lack of availability in the near future. This stalemate between suppliers and auto OEMs has led to an impasse, with each side waiting for the other to make the first move. However, recent developments from automakers and new hydrogen-based steelmaking opportunities in the United States and in Europe seem to be finally shifting the conversation. And while auto companies in the US and EU are beginning to embrace a sustainable steel future, carmakers in Asia are falling behind industry peers.

According to Vantage Market Research, the demand for low-carbon steel is expected to increase by 125.1% from 2023 to 2030, with the automotive sector projected to account for over 47% of the market share by 2030. Lead the Charge

(LtC), a coalition of organizations from around the world, pushes automakers to take action by publishing an annual leaderboard evaluating 18 of the world's leading automakers on their efforts to eliminate emissions, environmental harms, and human rights violations from their supply chains. LtC released its second annual leaderboard in February 2024. While the findings vary drastically by company, it is clear that most automakers have begun to embrace the transition, while a few continue to hold on to the business-as-usual model.

The 2024 LtC leaderboard noted an important shift from automakers to equitable, sustainable, and fossil-free steel supply chains. In the 2023 leaderboard, over half of automakers scored 0% on steel and over three-quarters of companies evaluated scored less than 10%. Those numbers have reversed in 2024, with two-thirds of the automakers scoring over 10%. While these are certainly not passing grades, the general improvement across the board demonstrates that the auto

industry is beginning to make the shift to sustainable low-carbon steel.

The report also notes significant shifts in scoring for major automakers in the United States. Tesla, Ford, and General Motors (GM) all scored 0% in 2023. According to the new leaderboard, all three automakers are now in the top five rankings for steel, with Tesla making the largest jump (to 22%) and Ford and GM rising to 17%. Tesla's jump largely reflects the fact that it is the first automaker to disclose disaggregated scope 3 emissions for its steel supply chain. While Tesla started to make these disclosures in 2023, it has not yet set any emission reduction targets for its steel supply chain. Ford and GM both increased their scores by joining the First Movers Coalition (FMC) for steel in 2023. By joining FMC, the companies pledge that 10% of their annual steel procurement will be near-zero emissions by 2030. While the improvements from US automakers are laudable, it is increasingly clear that there is growing pressure on steelmakers to expedite their transition from coal.

*Senior director, Mighty Earth.

Most notably, GM has been under pressure from civil society groups and frontline communities for its relationship with Cleveland-Cliffs (Cliffs), the automaker's six-time 'Supplier of the Year' for steel. Just miles from GM's headquarters in Michigan, Cliffs' Dearborn Works facility operates in one of the most polluted zip codes in the United States. In 2023, Cliffs had to spend \$100 million on air pollution controls after violating the Clean Air Act and releasing too much lead, manganese, and visible emissions from the facility. Local residents have published op-eds, sent letters to GM CEO Mary Barra, and held demonstrations outside GM's headquarters calling on automakers to take action on Cliffs. GM is facing similar pressure from groups over Cliffs' plans to reline the Burns Harbor facility in Indiana, where the company recently agreed to pay \$3 million in penalties for spilling cyanide and ammonia into Lake Michigan. For US automakers like GM, associating with steel suppliers linked to coal and heavy levels of local pollution is increasingly a brand risk as companies seek to position themselves as industry leaders in clean battery electric vehicles (BEVs).

While European automakers continue to lead the industry in the transition to sustainable steel, the 2024 leaderboard showed no real improvement over the past year. Volvo continues to top the leaderboard for steel, coming in with a score of 47%, unchanged from last year's score. Volvo's score reflects its position as an industry leader on fossil-free steel, advance purchase agreements, and participation in multi-stakeholder initiatives with ResponsibleSteel, SteelZero, and FMC. Mercedes remained stagnant at number two for steel with a score of 24% on the leaderboard for the second year in a row, with the highest marks coming from entering into formal agreements for low-carbon steel. Mercedes also received credit for being a member of ResponsibleSteel. While Volvo and Mercedes retain their spots at the top of the leaderboard for the second consecutive year, no other European carmaker broke into the top five, with Volkswagen sitting at No. 7 with a score of 15% and BMW at No. 10 with a score of 11%. Despite little progress from European automakers in the 2024 scoring, the January announcement of H2 Green Steel securing \$7 billion in funding to construct a carbon-free steelmaking facility in Sweden

is an important sign that the supply of sustainable steel in Europe for automakers is growing.

Unfortunately, while the automakers in the US and Europe have demonstrated a commitment to sustainable steel, carmakers across Asia are falling behind. The 2024 leaderboard showed that no Asian automaker made significant progress in the transition to sustainable steel. Geely, the highest-performing Asian auto company on steel, ranked No. 6 with a score of 16%, an increase of only 1% from the year prior. The only other companies to make the top 10 for this region are Hyundai at No. 8 with a score of 12% and Nissan at No. 9 with a score of 11%. In fact, the only other carmaker from Asia to score above 0% is Kia, with a score of only 4%.



Shockingly, auto giants Toyota and Honda both received a score of 0% for the second year in a row, cementing the carmakers as industry laggards in the transition to sustainable steel.

Much like automakers in the US, car companies from Asia are beginning to feel the pressure from civil society to decarbonize their steel supply chains. In Korea, Hyundai has faced public pressure from groups for making no progress on phasing out the coal-based steel used in its vehicles. Research shows that the air pollution from South Korea's three coal-fired steel plants, one of which belongs to Hyundai, could cause an estimated 19,400 premature deaths by 2050 under a business-as-usual scenario. In the US, groups have also actively been campaigning against Hyundai's use of coal in its steel supply chain. In 2023, groups rallied at the White House during Korean President Yoon Suk Yeol's visit to Washington, DC, and

performed a 'die-in' at the Hyundai display at the Los Angeles Auto Show. In March 2024, groups staged a protest performance outside the New York Auto Show before being dispersed by law enforcement. As Hyundai aims to position itself as a leader in sustainability and the transition to BEVs, the growing chorus of criticism and public awareness of inaction over decarbonizing its steel supply chain cannot be ignored.

In 2023, ArcelorMittal CEO Aditya Mittal predicted that transitioning to sustainable steel would increase the cost of an average vehicle by \$100 to \$200. This is not a hefty price for consumers to pay to address local pollution and the 8% of global greenhouse gases caused by steel manufacturing. However, there will be an even bigger cost to carmakers who refuse to embrace

the opportunity to decarbonize and build the truly clean BEVs of the future. While the LtC leaderboard is an important tool for consumers to measure automakers' commitment to decarbonizing their supply chains, hopefully, it will also be an alarm bell for those industry laggards.

The 2024 leaderboard offers an important insight into the direction of the global automotive community when it comes to sustainable steel. Carmakers in the US are beginning to make substantial investments in decarbonizing steel and have closed the gap with their European counterparts who have plateaued over the past year. Meanwhile, automakers in Asia continue to fall behind, and many have made little to no progress over the past two years. Regardless of region, carmakers must acknowledge that consumers are becoming increasingly aware of the embodied emissions in the vehicles they want to buy ... including steel. ■