

# Auto Bytes

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# Green manufacturing in automobile industry - A sustainable development



## Introduction

The automotive industry has been prone to criticism for lack of corrective measures in meeting environment norms and inadequate action plan. Being one of the main sources of pollutant and energy consumption, the industry has had a huge impact on environment. From pre-assembly to post-use, the industry is facing the pressure to adopt sustainable practices faster.

Thus, 'Go Green' initiative has become the trend and gained attention of stakeholders worldwide. For instance, Tesla has embraced technology solutions and systems, both at the user and manufacturing end, in order to make its green initiatives sustainable at every juncture. While this effort towards green manufacturing might not have a direct impact on climate change, it will work towards saving the environment and improving the overall financial performance of the automotive industry.



## Environmental issues in the industry

- Scrap generation and discharge of hazardous material
- Packaging and waste reduction, eco-friendly processes and products in the supply chain, raw material decrease, reuse of material
- CO2 emissions of vehicles, affordable mobility
- Reduction of air emissions, waste water and solid wastes, decrease in consumption of hazardous/harmful/toxic materials, decrease in frequency for environmental accidents
- Greenhouse gas (GHG) emissions from vehicles
- End of Life Vehicle
- Factors stimulating radical technological change (new entries, external shocks or crises, performance of the new technology, market changes and industry competition)
- Vehicle life cycle



## India and the world

### What the automobile industries are doing to go green

In India, the shift to BS VI emission norms in April 2020 has been largely accepted by the industry where the Original Equipment Manufacturers (OEMs) have leveraged on the popular idea of green manufacturing. However, while the industrial competition is characterised by overcapacity, high market saturation, high labour and fixed costs, and the need for constant product development and innovation, there is a need for improvement, especially, in the design phase by using lightweight materials, improving fuel efficiency and inventing new energy sources.

Various auto companies are taking initiatives in the area of green marketing in their operations. Some are initiating it as a part of their corporate social responsibility programmes. Focused on lessening the environmental impact of their business practices and that of their suppliers, the industry is involving more procurement professionals for conversations and decision-making. Bridgestone Group came up with its Global Sustainable Procurement Policy focused on creating thriving sustainable supply chains and aligning with the promise of using 100% sustainable materials by 2050. Volkswagen Group also said it will begin awarding more business to suppliers that focus on sustainability. Other recent auto sustainability initiatives include Nikola Motors' plan to build a North American hydrogen fuelling network of 700 stations by 2028 in addition to zero-emission trucks; Mercedes-Benz's use of blockchain technology for more transparency in complex supply chains; and Volvo's XC60 T8 Twin Engine plug-in hybrid SUV, which contains high levels of recycled plastics. As this trend continues, procurement will continue to play a bigger role in bringing these initiatives to fruition.



## Green investments

Also, investment in green technologies by the auto sector will have a good impact on the air quality. In order to go green, there are **4Rs - reduce, reuse, recycle and renew** -- primarily focused on reducing raw material. With increasing pressure on availability of natural resources, opportunities for lightweight and recycled materials are being explored by the OEMs. This drive will increase the use of such lightweight material from 30% to 70% by 2030.



Due to the mass use of vehicles and their shortening life cycle, end-of-life vehicle (ELV) is also perceived as an important issue. Therefore, the draft voluntary vehicle scrappage policy by the government, with a focus to create disincentives for older vehicles plying on roads, is much awaited.

By 2025, approximately there would be 22 million obsolete vehicles or ELVs in India with a high requirement of recycling as per the Central Pollution Control Board (CPCB). It is also expected that about 25% of the waste material coming from an ELV would pose a potential environmental threat due to the presence of heavy metals, waste oils, coolants, ozone-depleting substances and others that may seriously jeopardise India's efforts towards embracing the mandated Sustainable Development Goals (SDGs) by the United Nations.

Thus, companies can address sustainability concerns by focusing on incremental measures covering the entire value chain - from procurement to processes, products and marketing.



## Our view

As the automobile industry is heading towards a green future, joining the bandwagon and implementing green manufacturing in the business is inevitable. Looking at the availability of resources, becoming 100% environment-friendly might not be feasible at the moment. But the industry is trying to cope with the challenges gradually. The OEMs, therefore, need to strike a balance between these objectives: Mitigating climate change, reducing air pollution, enhancing energy security and strengthening the competitiveness of the auto industries.

The future of the sector will be shaped by initiatives taken by the players towards amalgamating new software technologies with e-vehicles and other alternative energy possibilities. There will be an economic shift towards the Asian markets. Overall, green initiatives should be coordinated with important regulations, economic incentives and green infrastructure investments.

### Sources

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- [greencarreports.com](https://greencarreports.com)
- SourceToday
- [cpcb.org](https://cpcb.org)

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