

Resource Recycling Initiatives



Medium- to Long-Term Vision for Material Issues

	Risks	Opportunities	Direction of Responses
Long Term	<ul style="list-style-type: none"> ● The cost of procuring raw materials could increase due to resource constraints, such as the depletion of precious metals or other natural resources. ● The Company could face increasingly stringent regulations, such as on the use of recycled materials and recycling, and rising costs to respond to them. ● The corporate image could suffer from a delayed response to resource recycling. 	<ul style="list-style-type: none"> ● We could stabilize procurement costs by reducing our dependence on depleted resources. ● It might be possible to reduce costs by using resources more efficiently and reusing waste. ● We could heighten competitiveness through 3R design and more advanced recycling technologies. ● We could find more opportunities to make use of used batteries. ● The corporate image could be enhanced by appealing to our efforts to contribute toward a recycling-oriented society. 	<ul style="list-style-type: none"> ● We will contribute to a resource-recycling-oriented society by minimizing input resources and maximizing resource efficiency.
Medium Term	External Environment	Stakeholders' Needs and Expectations	Medium-Term Targets
	<ul style="list-style-type: none"> ● An increasing shift toward a circular economy ● The manifestation of waste-related issues in Japan and overseas (such as emerging markets limiting imports) ● The increasingly strict EU Batteries Regulation (calls for disclosure of amounts of reused materials, among other items) ● Plastics causing the marine pollution problem 	<ul style="list-style-type: none"> ● Mounting demands for environmental consideration ● Growing ESG investment (investors promoting changes in corporate activities) 	<ul style="list-style-type: none"> ● Expanding adoption of plastic materials not derived from oil ● Achievement of zero direct landfill waste (less than 0.5%) ● Reuse of batteries used in electric vehicles (EVs)

FY2020 Materiality Targets and Results

○: As planned △: Delayed

Details of Main Initiatives	FY2020 Targets	Indicators	FY2020 Results	Self-Evaluation
Expanding adoption of plastic materials not derived from oil	<ul style="list-style-type: none"> ● Create a roadmap for expanding the percentage of plastic materials not derived from oil used in vehicles 	Progress of initiative	<ul style="list-style-type: none"> ● Clarified the types of vehicles and components to consider expanding the use of plastic materials not derived from oil; created a roadmap clarifying FY2025 targets and measures 	○
Achievement of zero direct landfill waste (less than 0.5%) by FY2030	<ul style="list-style-type: none"> ● Plants in Japan: Achieve zero direct landfill waste (less than 0.5%) ● Overseas plants: Have begun gathering data 	Progress of initiative	<ul style="list-style-type: none"> ● Plants in Japan: Achieved ● Overseas plants: Have begun managed operations of data on waste using an environmental performance management system 	○
Reuse of batteries used in EVs	<ul style="list-style-type: none"> ● Install an energy storage system (BESS^{*1}) at the Okazaki Plant and begin considering issues related to utilizing reused batteries 	Progress of initiative	<ul style="list-style-type: none"> ● Installed equipment for verification testing of BESS, and are implementing a VPP^{*2} verification test 	○

*1: BESS stands for battery energy storage system.

*2: VPP stands for virtual power plant, which involves using information and communication technology for the integrated control of dispersed energy resources, creating a virtual plant that operates as if it were a single power plant.

Basic Approach

The rise in populations and economic growth in emerging markets is leading to a rise in the consumption of minerals, fossil fuels and other resources.

Against this backdrop, MITSUBISHI MOTORS is working to use fewer resources and use them more effectively. We believe we can add more value to vehicles in manufacturing process. This belief underpins our belief that effective resource use is an important priority. The Environmental Plan Package positions resource recycling as an environmental issue to engage in directly, and we are contributing to a resource-recycling-oriented society by minimizing input resources and maximizing resource efficiency.

Countries and industry groups are formulating various initiatives in order to promote automobile recycling and correct processing. In response, the Company set targets to improve the ease of recycling, reduce the use of lead, and introduce recycled parts for new vehicles when the MITSUBISHI MOTORS Recycling Initiative was established in 1998. We have continued to engage in this initiative.

At production plants, with the aim of realizing a recycling-oriented society that gives consideration to the environment and resources, we are promoting the effective use of resources. We are achieving a landfill waste disposal rate of zero (less than 0.5%) at every plant by converting industrial waste materials generated from production processes into reusable resources and reducing the volume of waste discharged.

▶ Data (p. 111): Generated waste, generated waste and externally disposed waste (MITSUBISHI MOTORS along), raw material inputs

Recycling-Based Design and Development

Under vehicle recycling legislation in Japan, Europe and China, automobile manufacturers are obligated to consider recycling when developing products.

We conduct design and development that actively incorporates not just recycling, but all aspects of the 3Rs including reduction and reuse. Since 1999, we have implemented the 3Rs in the stage starting with conceptual design in accordance with our unique Recycling Plan Guidelines.

With regard to wires and harnesses, and motors, we have improved detachability and ease of recycling in accordance with the Harness Design Guidelines.

At dealers, bumpers replaced during repairs are recycled for undercovers and battery trays. We are also promoting the increased use in other parts of recycled materials and plastic materials not derived from oil used in vehicles, such as biomass plastics.

TOPICS

Using Thermoplastic Resin

The ECLIPSE CROSS (PHEV model), which was launched in 2020, uses easily recyclable thermoplastic resin for exterior and interior parts.

Main parts (indicated in green) that use thermoplastic resin



Exterior



Interior

End-of-Life Vehicle Recycling

We encourage the recycling of end-of-life vehicles to reduce the environmental impact of waste from these vehicles. In Japan, the European Union and other regions, we promote recycling in accordance with the automobile recycling laws of each country. We comply carefully with the evolving automobile recycling laws that are being introduced in emerging countries in Asia.

The Environmental Targets 2030 identify the reuse of batteries used in electric vehicles as one item to be addressed. From the perspective of conserving resources, we are undertaking initiatives to utilize used batteries.

Reuse of Batteries Used in Electric Vehicles (EVs)

Used EV batteries retain sufficient storage capacity to make them useful for other applications, so from the perspective of conserving resources we are working to effectively reuse EV batteries. To ensure these batteries can be effectively used for storage, we are conducting verification using a large-scale rooftop solar power system at the Okazaki Plant and built a power storage system that employs used batteries from the OUTLANDER PHEV.

In Japan, Europe and North America, we have begun creating a system for collecting used batteries. The aim is to develop recycling technologies for and properly dispose of batteries for battery electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs).

Response to Automobile Recycling Laws in Japan

Since the End-of-Life Vehicle Recycling Law was enacted in Japan in 2005, the company has been accepting used automobile shredder residue (ASR), airbags, and fluorocarbons for recycling.

Regarding ASR recycling, we participate in ART*1 in order to jointly process ASR. As a result of the creation of new processing facilities and other measures, the ASR recycling rate in FY2020 was 96.4%, substantially above the statutory standard of 70% in effect since 2015. We will continue to develop new recycling facilities to ensure the stable processing of ASR.

The company outsources the treatment of airbags and fluorocarbons to the Japan Auto Recycling Partnership (JARP).

In addition, for the effective use of recycling fees deposited from customers, we proactively work on increasing the recycling rate by conducting efficient recycling and proper processing of these three items.

*1 Automobile Shredder Residue Recycling Promotion Team established by Nissan Motor Co., Ltd., Mazda Motor Corporation, MITSUBISHI MOTORS and others.

Recycling Promotion in the EU

Response to the EU's Directive on the Recycling of End-of-Life Vehicles

In the EU, in accordance with the End-of-Life Vehicles Directive*2 established in 2000, automobile manufacturers or importers must accept and recycle end-of-life vehicles. Also, in 2003, the ELV Directive*3 was enacted, specifying ease of recycling as a certification requirement.

The company built a system of acceptance and recycling in line with the actual situation of EU member countries centering on our European subsidiary Mitsubishi Motors Europe B.V. (MME).

*2 "Directive of the European Parliament and of the Council on End-of-Life Vehicles"

*3 Abbreviation of End-of-Life Vehicles.

Provision of Dismantling Information

In the EU, automobile manufacturers must provide dismantling information for new model vehicles to treatment operators. The company provides such information on a timely basis by using the International Dismantling Information System (IDIS) jointly developed by automobile manufacturers.

Response to the EU's Directives on Approval for Vehicle Models for Recyclability

In the EU, satisfying the minimum 95% recyclability rate is a requirement for type approval of vehicle models, and the company established a system that satisfies the requirements of this directive. Our vehicles sold in the EU meet the requirements of the directive under this system. We will continue to acquire recyclability approval for all new models sold in the EU.

Initiatives to Reduce Waste Generation and Reuse Resources in Production Activities

By improving its production processes, the Company is working to reduce the amount of waste it generates through manufacturing. For the waste we do generate, while curtailing treatment costs we continue to improve the ways in which we sort and treat waste, using it more effectively as resources. As we continue working toward the achievement of zero direct landfill waste (less than 0.5%), a goal raised in the Environmental Targets 2030, we are endeavoring to reduce waste generation, reuse waste as resources and dispose of waste properly.

Effective Use of Resources and Recycling

