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# 7 Environment



## Material Issues

- Responding to climate change and energy issues
- Ensuring clean air
- Advancing powertrain electrification
- Utilizing resources efficiently
- Conserving water resources
- Preserving biodiversity
- Managing chemical substances and preventing pollution



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## Honda Environmental and Safety Vision/ Honda's Environment Statement

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Ever since the 1960s, Honda has actively endeavored to solve environmental issues. In the 1970s, Honda developed the low-pollution CVCC\* engine that successfully reduced carbon monoxide, hydrocarbon and nitrogen oxide (NOx) emissions, making Honda the world's first automaker to comply with the U.S. Clean Air Act - a regulation thought at the time to be the most stringent in the world.

In 1992, Honda's Environment Statement was released to serve as the Company's guideline for all environmental initiatives. The statement articulates the basic stance to reduce environmental impact at every stage in the life cycle of its products, from product procurement to design, development, production, transportation, sale, use and disposal stages.

In addition, for Honda to further promote the above-mentioned environmental initiatives and continue to be a company society wants to exist, the Honda Environmental and Safety Vision was established in 2011. Aimed at the realization of the joy and freedom of mobility and a sustainable society where people can enjoy life, as is declared in this vision, each of Honda's global business sites is engaging in the reduction of an array of environmental impacts from the aspects of both production-based and corporate activities. Such initiatives include reduction of greenhouse gas (GHG) emissions, which are considered to be a cause of climate change, as well as energy use; efficient use of resources, including water and minerals; and appropriate treatment and reduction of waste.

Honda will conduct these activities while sharing Honda's Environment Statement with everyone associated with Honda, including suppliers and distributors in addition to Honda Group companies, in order to realize this vision.



Honda Environmental and Safety Vision

Realizing the joy and freedom of mobility and a sustainable society where people can enjoy life

#### Honda's Environment Statement

As a responsible member of society whose task lies in the preservation of the global environment, the Company will make every effort to contribute to human health and the preservation of the global environment in each phase of its corporate activities. Only in this way will we be able to count on a successful future not only for our company, but for the world.

We should pursue our daily business under the following principles:

- 1. We will make efforts to recycle materials and conserve resources and energy at every stage of our products' life cycle—from research, design, production and sales, to services and disposal.
- 2. We will make every effort to minimize and find appropriate methods to dispose of waste and contaminants that are produced through the use of our products, and in every stage of the life cycle of these products.
- 3. As both a member of the company and of society, each associate will focus on the importance of making efforts to preserve human health and the global environment, and will do his or her part to ensure that the company as a whole acts responsibly.
- 4. We will consider the influence that our corporate activities have on the regional environment and society, and endeavor to improve the social standing of the company.

Established and announced in June 1992 Honda's Environment Statement

\* CVCC: Compound Vortex Controlled Combustion

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# **Global Management**

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## **Environmental Management Promotion** Structure and Management Cycle

Honda recognizes that environmental issues such as climate change and energy/resource issues, which require global responses, are material issues that impact Honda's business operations. Based on this recognition, the Environmental Committee was established in 1991, chaired by the Chief Executive Officer (CEO) and comprised of members of company management. In 1995, the Committee became the World Environmental Committee and assumed responsibility for discussing and formulating plans for environmental protection activities worldwide. Since then, it had continued to meet every year as the World Environment and Safety Strategy Committee. Chaired by the CEO, this re-established Committee deliberates on the PDCA cycle of each region as well as risks and opportunities concerning climate change, energy and resources. It also explores Honda's short-, medium- and long-term environmental strategies based on these risks and opportunities.

Medium- and long-term environmental policies and plans at the global level are formulated at the meeting of the World Environment and Safety Strategy Committee on the basis of company-wide direction and mediumand long-term business plans. All committee members are involved in the meeting's decision-making.

Following the decisions made at the above meeting, the World's Six Region Environmental Committee, made up of the environmental divisions of each regional headquarters, also meets every year. Once the information sharing process at these meetings concludes, these divisions formulate concrete action plans and then implement necessary measures.

In terms of the progress of Honda's environmental initiatives and the themes applicable worldwide, the Corporate Planning Supervisory Unit collects information from Regional Operations and reports it at the meeting of the World Environment and Safety Strategy Committee. The Company is striving to continuously enhance environmental management through the reflection of the above information in the medium-term business plan and policy for the following term and the implementation of the PDCA cycle by each Regional Operation and environmental division.

Environmental regulations prompted by climate changes and risks related to natural disasters are managed, monitored, reflected in risk management activities and integrated into company-wide priority risks ( $\Rightarrow$  p. 48).

## **Environmental Management System**

Honda's existing global vehicle assembly and product assembly plants have acquired IS014001, an international certification for environmental management systems (as of March 2022). Therefore, coverage of environmental management systems is virtually 100%. Honda is in the process of obtaining certification for newly built plants.

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## **Current Status of Compliance with Environmental Regulations**

In accordance with Honda's Environment Statement, the Company has introduced environmental management systems at all business sites and in each division. Along with promoting continuous efforts to improve environmental performance, it strives to comply with its own voluntary environmental standards, which are more stringent from an environmental perspective than any national or local regulations.

In the last five years, Honda has not committed any serious noncompliance with environmental laws and regulations, paid substantial fines/sanctions in breach thereof or recorded any major chemical releases.

In addition, no environment-related complaints were received through the official complaint resolution program.



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## **Global Management**

## **Environmental Accounting**

#### **Environmental Accounting in Japan**

To facilitate efficient environmental management, Honda tabulates the cost reduction and profit attributable to its environmental protection activities, thus working to keep abreast of their economic impact.

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Going forward, Honda is committed to continuing improvement of the accuracy of this data, which it sees as an indicator of corporate value and as a tool for making environment-related management decisions.

9	DATA	DATA
6	Cost of environmental conservation activities and investments	Economic benefits (Effect on revenue and expenses)
2	> p. 77	> p. 77





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Through Honda's proprietary technologies and business activities, the

Company will work to deal with climate change issues, energy issues,

effective utilization of resources and preservation of clean air, which are

outlined as challenges in the materiality matrix, with an aim to realize a

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zero-environmental impact society in the future.

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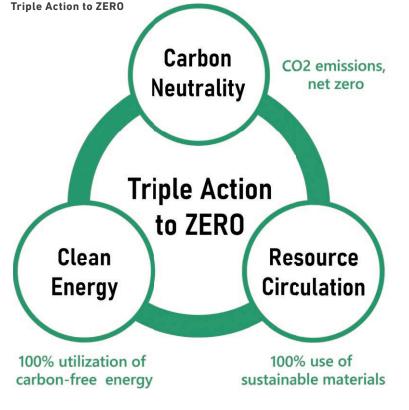
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## **Triple Action to ZERO**

In order for people to live on the earth in a sustainable manner, Honda seeks to realize a recycling-based society with zero environmental impact. Accordingly, the Company has set even higher targets than our previous Triple ZERO initiative.

Efforts will be centered around the Triple Action to ZERO, which integrates three elements, namely carbon neutrality, clean energy and resource circulation, into one concept.

## CO<sub>2</sub> emissions, net zero by 2050

To address climate change issues, Honda will work toward a target of limiting the global temperature rise to 1.5°C above pre-industrial levels by reducing carbon emissions from corporate activities and throughout the product life cycle.

## 100% utilization of carbon-free energy by 2050

To address energy issues, Honda will go a step beyond its conventional initiative of reducing energy risk and aim to use clean energy both during product use and in corporate activities.

## 100% use of sustainable materials by 2050

To address the effective utilization of resources, Honda will conduct research into the recycling of materials, including reuse and recycling of batteries. Going beyond its previous initiative aimed at reducing risks related to resources and waste disposal, Honda will take on an additional challenge of developing products that use sustainable materials having zero environmental impact.

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## **Responses to Climate Change and Energy Issues**

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Climate Change: Risk and Opportunity Analysis Based on **Multiple Scenarios** 

Honda performs scenario analysis, noted as an important tool in the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and creates strategies based on multiple scenarios for today and for the future.

Each scenario contains uncertainty caused by varying factors, which

makes it important to conduct analysis and verification assuming different situations. Honda believes that identifying risks and opportunities in respective scenarios will enable more sustainable corporate management.

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Accordingly, Honda has developed strategies based on multiple scenarios. The Company utilizes these strategies in undertaking business and promoting products and seeks to reduce risks and create opportunities, thereby ensuring that it offers services and products with greater resilience.

The table below provides a list of Honda's efforts in each risk and opportunity category. Honda is making a range of efforts to increase the resilience of its strategies against the identified risks and opportunities.

Opportunition for Upport

Important Issues			Risks for Honda			Opportunities for Honda	
onmental Data		Climate-related risks (From TCFD recommendations)	Specific response / corresponding section		Climate-related opportunities (From TCFD recommendations)	Specific opportunity / corresponding section	
79		Policy and legal risks			Products and services		
y		<ul> <li>More stringent regulations for GHG emissions</li> <li>Greater obligation to report</li> </ul>	Promotion of better fuel efficiency     and electrification     Disclosure of emissions from the	(⇒ <u>p. 06, 07, 62, 63</u> ) (⇒ <u>p. 73</u> )		<ul> <li>Reduction of TCO* through eMaaS</li> <li>Sales expansion of electrified products and services</li> </ul>	$(\Rightarrow \underline{p. 61}) (\Rightarrow \underline{p. 06}, \underline{07}, \underline{16}, \underline{63})$
n Resources ······112		emissions	entire product life cycle	(→ <u>p. 75</u> )		• Expansion of product sales under the	(⇒ <u>p. 61</u> )
y Chain •••••• 139		Technology risk			Markets		
Contribution Activities •• 155	Transition risk $\Rightarrow$ 2°C / 1.5°C Major impact	Replacement with low-carbon products	Promotion of electrified products	(⇒ <u>p. 06, 07, 62, 63</u> )	Access to new markets	<ul> <li>Market expansion through high value-added products and services</li> </ul>	(⇒ <u>p. 06</u> , <u>07</u> )
	Changes in the market to	Market risk			Energy source		
	eliminate forms of mobility with greater CO2 emissions	• Changes in consumer behavior	Product development under the	(⇒ <u>p. 61</u> )	• Use of energy with lower emissions	• Reduction of production costs through	(⇒ <u>p. 64</u> )
	Diversification of energy needed	<ul> <li>Uncertainty in market signals</li> <li>Higher raw materials costs</li> </ul>	<ul> <li>multi-pathway strategy</li> <li>Product designs based on 3Rs</li> </ul>	(⇒ <u>p. 65, 66</u> )	<ul> <li>Shifting to distributed energy sources</li> </ul>	the use of renewable energy and energy saving	
	for product use and services		(reduce, reuse and recycle)	( * <u>p. 00</u> , <u>00</u> ,		• Expansion of battery sharing through Honda Mobile Power Pack	(⇒ <u>p. 68</u> )
		Reputation risk			Resource efficiency		
		Changes in consumer perceptions     Accusations against the industry     Growing concerns among     stakeholders	<ul> <li>Promotion of low-emissions products and services</li> <li>Transition to carbon neutral status</li> <li>Communicating resilient strategies</li> </ul>	$(\Rightarrow \underline{p. 61}, \underline{62}, \underline{63})$ $(\Rightarrow \underline{p. 61})$ $(\Rightarrow \underline{p. 60})$	Utilization of more efficient transportation means     Promotion of recycling	Active promotion of 3Rs	(⇒ <u>p. 65</u> , <u>66</u> , <u>67</u> )
		Acute risk			Resilience		
	Physical risk $\Rightarrow$ 4°C	<ul> <li>Increased severity of floods and other extreme weather events</li> </ul>	<ul> <li>Formulation of a global BCP</li> <li>Establishment of a global value chain</li> </ul>	$(\Rightarrow \underline{p. 47}, \underline{48}) (\Rightarrow p. 149)$	<ul> <li>Improvement of reliability and operational capability of supply</li> </ul>	<ul> <li>Stable production structure based on a global value chain</li> </ul>	(⇒ <u>p. 152</u> )
	Major impact <ul> <li>Disruption of infrastructure <ul> <li>caused by extreme weather</li> </ul> </li> </ul>	Increase in floods and other extreme weather events     Disruption of supply chain	Measures against procurement risk	$(\Rightarrow \underline{p. 152})$	chain • Expanding products and services related to ensuring resilience	Contribution to early recovery by providing products and services responding to disasters	(⇒ <u>p. 63</u> )
	events	Chronic risk				<ul> <li>Stable energy supply through eMaaS</li> </ul>	
ownership	<ul> <li>Increased necessity for products and services that respond to</li> </ul>	Shifts in rain and other climate	Efforts to reduce water intake and	(⇒ <u>p. 64</u> , <u>65</u> , <u>69</u> )			
	extreme weather events	patterns • Higher average temperatures	energy use • More efficient energy consumption (for air conditioning)	(⇒ <u>p. 64</u> )			

Dieles fee Use de

\* Total cost of ov



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## **Responses to Climate Change and Energy Issues**

## Honda's Approach

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The mobility environment is currently undergoing dramatic changes. Amid such changes, Honda is moving forward with its response to climate change through initiatives that link Honda's business strategy with its environmental strategy. The Company is proactively striving to reduce environmental impact while foreseeing changes in the marketplace and among customers as well as placing its priority on contributing to the lives of customers.

In October 2020, Honda announced its intent to realize carbon neutrality. Going a step further, in April 2021 the Company announced its vision to "realize carbon neutrality for all products and corporate activities Honda is involved in by 2050" in order to achieve a circular society with zero environmental impact. The concept behind this vision is to reduce carbon emissions based on the targets laid out in the Paris Agreement to keep the temperature rise below 1.5°C.

In order to make steady progress toward carbon neutrality by 2050, Honda has defined corresponding targets and has been promoting efforts accordingly. In the area of products, in addition to the ratios of electrified products in global sales, Honda has selected another 2030 milestone concerning CO<sub>2</sub> emissions intensity from the use of products. In the area of corporate activities, Honda aims to reduce its total CO<sub>2</sub> emissions by 46% from FY2020.

Honda has already applied to the Science Based Targets (SBT) initiative to receive validation of these targets.

Honda determined the introduction of internal carbon pricing (ICP) to further accelerate reduction of CO<sub>2</sub> emissions in its business activities at the 2021 meeting of the World Environment and Safety Strategy Committee. Preparation for the introduction is currently underway.

There is more than one approach to the protection of the global environment, and efforts to maximize the use of renewable energy are also crucial. Recognizing there are diverse approaches to solutions toward the use of renewable energy and CO<sub>2</sub> reduction, Honda has formulated a "multi-pathway" concept to proactively offer environmentally friendly products matched to each region. A symbolic technology in this area is "Honda e: Technology," a set of Honda's electrification technologies. As for maximizing the use of renewable energy, Honda is moving ahead with the development of technologies necessary to build a future society, which links energy management service with mobility service. In 2019, the Company announced the "Honda eMaaS" concept along with a plan to formulate proposals for commercialization and conduct market feasibility tests. The concept combines Energy as a Service (EaaS), a next-generation service to optimize power supply and energy use, and Mobility as a Service (MaaS), a next-generation mobility service. Honda will align its groups of products in different fields and offer diverse value to society and customers.

In its corporate activities as well, Honda is working to increase the use of renewable energy by introducing a type of renewable energy suited for each region.

In addition to CO<sub>2</sub> reduction, technologies to separate, capture and reuse CO<sub>2</sub> play another important role in realizing carbon neutrality. As such, Honda is also promoting research for net zero CO<sub>2</sub> emissions.





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## **Responses to Climate Change and Energy Issues**

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## **Product Initiatives**

#### Three Initiatives to Reduce GHG Emissions

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Emissions from "use of products" account for approximately 80% of CO2 emissions from Honda's entire product life cycle. In light of this, Honda works to reduce CO<sub>2</sub> emissions during usage in all of its products, and manufactures and sells items that can be supplied with confidence as environmentally friendly products.

To date, Honda has carried out the following three initiatives to reduce GHG emissions, most notably CO<sub>2</sub> emissions, while expanding production and sales globally.

- ① Reducing CO<sub>2</sub> emissions through efficiency improvements of internal combustion engines
- 2 Reducing CO<sub>2</sub> emissions by applying environmentally innovative technologies and diversifying energy sources
- ③ Eliminating CO<sub>2</sub> emissions through the use of renewable energy and total energy management

By implementing these in phases, Honda is steadily and ultimately reducing CO<sub>2</sub> emissions to net zero.

Honda has been undertaking the three initiatives in accordance with the Honda Environmental Performance Standard (HEPS), which are unique and advanced-level product guidelines formulated in 2011.

In the future, Honda will formulate the HEPS 2.0, an upgraded version of the original HEPS, to achieve zero environmental impact in 2050.

As a result of certification of products that were launched in FY2022, 18 motorcycle models, 6 automobile models and 3 power product models - a total of 27 models - were HEPS-certified. Cumulatively, this brings the number of HEPS-compliant products to 205 motorcycle models, 98 automobile models and 53 power product models, or 356 models in total. In addition, there were no violations in product and service information

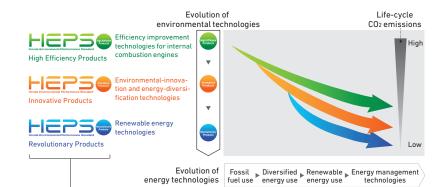
or labeling in general.

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Global Number of HEPS-compliant models

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#### High Efficiency Products

Products that emit less CO<sub>2</sub> emissions because of improved internal combustion engine efficiency. This category includes products that incorporate technologies for improving fuel combustion and transmission efficiency and reducing friction between engine parts. Compliance is determined based on how well a product reduces or helps reduce CO<sub>2</sub> emissions during use compared with preceding models.

#### Innovative Products

Products that emit less CO<sub>2</sub> because they use an environmentally innovative technology or an alternative energy source. This category includes motorcycles that incorporate Honda's patented Idling Stop System, automobiles that incorporate hybrid technologies or direct injection engine technologies, and power products with electronic fuel injection (FI). Alternative energy technologies include motorcycles and automobiles that can run on ethanol and power products that can run on gaseous fuels. Compliance is determined based on how well a product reduces or helps reduce CO2 emissions during use compared with preceding models.

#### Revolutionary Products

Products that reduce or eliminate CO<sub>2</sub> emissions by harnessing renewable energies or facilitating total energy management. This category includes products that incorporate electromotive technologies or technologies for using renewable energy.



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## **Responses to Climate Change and Energy Issues**

## **Advancing Powertrain Electrification**

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Honda views changes in social needs and the social structure induced by climate change and energy diversification as key challenges and actively promotes product electrification.

Increasing the lineup and use of electrified products will contribute to reducing CO<sub>2</sub> emissions when in use, which in turn will lead to lower climate changes risks, while addressing energy issues by making use of renewable energy.

In addition, the battery mounted on electrified vehicles can be used as a power source for leisure activities or during an emergency, thereby improving the guality of customers' lives.

Based on this belief, Honda has set a target to electrify 15% of motorcycles, 30% of automobiles and 36% of power products in their respective global sales in 2030. To achieve this goal, the Company is seizing all new business opportunities by enhancing and upgrading its product lineup ( $\Rightarrow$  <u>p. 16</u>).

Targeted ratios of electrified products\*





**Power products** 36%

## TOPICS

## Selling Only Electrified Vehicles, Including Hybrid Vehicles and Electric Vehicles, in China in the Future

In October 2021, Honda announced that after 2030, it will not release any new gasoline-powered models in China and that all new models coming to the market will be electrified vehicles, such as hybrid vehicles and electric vehicles (EVs). Over the course of five years. Honda will release 10 e:N series models, which represent the first Honda-brand EVs to be released in China. The Company also envisions to export these models from China in the future.

In spring 2022, the e:NS1 and e:NP1 were rolled out by Dongfeng Honda Automobile Co., Ltd. and Guangqi Honda Automobile Co., Ltd., respectively. These two are the first set of the e:N series models developed under the concept of "Dynamic, Intelligence and Beauty." In addition, Honda is currently developing three concept models, e:N COUPE Concept, e:N SUV Concept and e:N GT Concept, with a goal to initiate their sales within the next five years.

In order to release an increasing number of the e:N series models in China in coming years, Honda will accelerate its electrification initiatives in an integrated manner, covering not just product development but also sales, production and a system of stable battery supply.



\* Ratio of battery electric motorcycles and electric bicycles for motorcycle products; battery electric vehicles and fuel cell vehicles for automobile products: and electrified products for power products.



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#### **Responses to Climate Change and Energy Issues**

## **Corporate Activities Initiatives**

With the aim of achieving net zero CO<sub>2</sub> emissions and wholly deriving power from carbon-free energy sources in corporate activities by 2050, Honda is focusing on a reduction in energy consumption and CO<sub>2</sub> emissions while giving consideration to the potential for expanding production and sales globally.

Toward the realization of these targets, Honda has been promoting reduction in carbon emissions by making efforts in the order of increasing production efficiency, encouraging energy-saving initiatives, shifting to low-carbon energy sources and utilizing renewable energy.

When building or renovating its plants, Honda actively introduces the latest energy-saving technologies and know-how at plants, including the Saitama Factory's Yorii assembly plant that achieved a 30% reduction in per unit energy use compared with other Honda plants\*. To support the energy-saving initiatives of various business sites operating around the world, the Company has built a mechanism for promoting information sharing among business sites and regions while at the same time enhancing technical support from Japan.

In addition, Honda is actively introducing renewable energy around the world.

In doing so, Honda discriminately adopts a method that can directly contribute to the reduction of CO<sub>2</sub> in local communities. More specifically,

the Company focuses on installing new power generation facilities, first examining the installation within its premises and then gradually expanding the scope to outside the premises for greater use of the facilities.

In 2021, the Boiling Springs Wind Farm went into operation in the U.S. state of Oklahoma, from which Honda will receive 120 MW through a virtual power purchase agreement (VPPA). Honda will acquire and use renewable energy certificates corresponding to the amount supplied through the scheme to offset CO<sub>2</sub> emissions from its plants in Ohio, Indiana and Alabama.

In Japan, Honda has concluded agreements to purchase renewable energy-derived power generated by solar power systems installed within its factory premises and operated by a third party. A 3.8-MW system and a 2.0-MW system have commenced operation at the Kumamoto Factory and Saitama Factory's Yorii assembly plant, respectively.

Including these, Honda's business sites across the world used 804 GWh of power derived from renewable energy sources, such as solar and wind, in FY2022.

Going forward, Honda will continue to use renewable energy matched to local conditions.





Kumamoto Factory (3.8 MW)



Saitama Factory's Yorii assembly plant (2.0 MW)



Boiling Springs Wind Farm (120 MW)

\* Comparison with Saitama Factory's Sayama assembly plant

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## **Efficient Utilization of Resources**

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## Honda's Approach

Honda believes that the difficulty of obtaining or depletion of rare earth metals and other resources used in its products affects the procurement of components and raw materials necessary for manufacturing products and thus poses a significant risk to the Company's business continuity.

Therefore, Honda considers the efficient utilization of resources as one of the material issues and is actively promoting 3R (reduction/ reuse/recycling) activities as well as ensuring proper processing when disposing of end-of-life products.

Giving consideration to the risks involved in resource depletion and waste disposal that could potentially lead to environmental pollution, Honda aims to reduce the overall amount of waste generation.

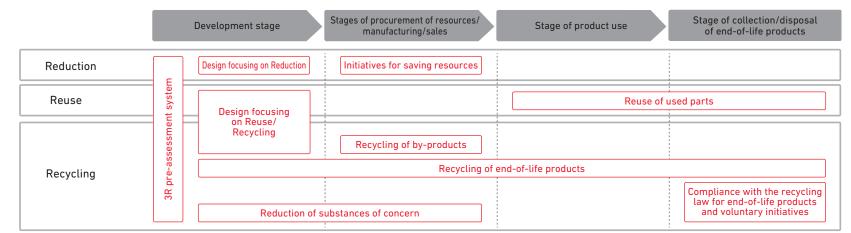
Accordingly, the Company has set the goal of reducing the total waste generation by 14.5% as compared to BAU\* in all corporate activities in FY2031 (equivalent to a 1.8% annual reduction of waste generation per unit of internal production from FY2019 levels).

For water resources as well, Honda is giving consideration to water supply risk that affects its businesses and depletion risk that impacts local communities. Honda has thus established the target of reducing total industrial water intake by 14.5% as compared to BAU in all corporate activities in FY2031 (equivalent to a 1.8% annual reduction of industrial water intake per unit of internal production from FY2019 levels). In both areas of waste generation and water intake, the Company will remain committed to minimizing environmental impacts.

In April 2021, Honda also declared to achieve 100% use of sustainable materials by 2050 in order to take up a challenge of developing products made of sustainable materials with zero environmental impact.

Aiming for zero environmental impact related to resources and disposal that occur in various stages ranging from resource procurement to disposal, Honda is tackling this issue through cooperation/partnership with internal/external stakeholders.

#### Initiative for zero environmental impact related to resources and disposal





\* Business as usual: Production volume that varies depending on the production plan

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\*1 Index based on "Definition of Recyclable Rate for New Vehicles and Guidelines on Calculation Method" issued by Japan Automobile Manufacturers Association, Inc. (JAMA)

\*2 Recyclable rate that includes the thermal energy recovered; in accordance with calculation methods of recyclable rate for cars in ISO22628, etc.

# environment

## **Efficient Utilization of Resources**

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## Initiatives in the Development Stage

#### 3R Pre-Assessment System

Honda introduced the 3R pre-assessment system, which assesses the 3R elements of each model to be newly developed in the stage of product development, for motorcycles in 1992 and for automobiles in 2001. The Company is striving to improve the level of 3R elements.

## **Design Focusing on Reduction**

Honda is making efforts in downsizing and weight reduction by considering alternative structures and materials for all components in each product, such as the body framework, engine and bolts. For example, the Company used thinner structural bumpers in the N-WGN as part of a reduction-oriented design geared toward creating a lighter product. The availability of materials with higher rigidity and fluidity along with advances in manufacturing technologies allowed Honda to reduce the weight of the previous design by approximately 20%, which had an average thickness of 3.0 mm, by using less resin in bumper production.

In Japan, Honda is progressively expanding the use of these enhanced structural bumpers in new models launched after the N-WGN. Overseas, it has begun rolling it out globally with the Civic. The Company expects to further reduce material use by applying the new design worldwide.

## **Design Focusing on Reuse/Recycling**

Honda is engaging in structural design that takes into account easier recycling and maintenance, use of easily recyclable materials and recycled resins, and display of contents of materials for resin/rubber components, etc. For automobiles, the Company uses easily recyclable materials for a wide array of exterior/interior components, such as inner weather-stripping and the outer surface of instrument panels, and at the same time has enabled the use of recycled materials for air conditioner ducts. In addition, Honda labels resin and rubber parts with their constituent materials wherever possible to facilitate recycling.

As a result of the activities mentioned above, with regard to the recyclable rate<sup>\*1</sup> for all new and redesigned vehicles sold in FY2022, Honda is maintaining more than 95% for both automobiles and motorcycles. Meanwhile, the recoverability rate for components/ materials<sup>\*2</sup> used in power products was more than 95%.

## Initiatives at the Product Use Stage

## **Recycling of End-of-Life Components**

Honda collects and recycles end-of-life components generated from repair, replacement, etc., from dealers nationwide. In FY2022, the Company collected and recycled approximately 138,000 end-of-life bumpers. Collected bumpers are recycled and used for undercovers and other components of the Freed model.

Honda will continue the recycling of end-of-life components, including the collection/recycling of end-of-life hybrid vehicle drive batteries.



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## **Efficient Utilization of Resources**

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## Initiatives in the Disposal Stage

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#### Initiative for Automobiles

The Act on Recycling, etc., of End-of-Life Vehicles (automobile recycling law) requires automakers to collect and properly treat three items: fluorocarbons, airbags and shredder dust (Automobile Shredder Residue (ASR)).

In FY2022, the number of Honda automobiles collected was approximately 420,000 for fluorocarbons (-4.8% from the previous fiscal year), approximately 430,000 for airbags (-4.0%) and approximately 480,000 for ASR (-2.9%). Recycling rates for gas generators and ASR were 95.3% and 96.6%, respectively, which satisfy the recycling rates specified by ordinance of the relevant ministry (at least 85% for gas generators and at least 70% for ASR).

## **Initiative for Motorcycles**

Honda joined hands with other motorcycle manufacturers in Japan and participating motorcycle importers and started to implement the voluntary recycling of motorcycles in October 2004. With the cooperation of related dealers, various companies in the motorcycle industry started this scheme for providing a safety net for the treatment of end-of-life motorcycles, the world's first of its kind. End-of-life motorcycles are collected at the dealers and the designated points of collection free of charge and are properly recycled at recycling facilities.

Regarding end-of-life motorcycles collected at designated points of collection, there were 1,359 Honda products in FY2022, which accounted for 66.2% of all units collected. The recycling rate of Honda products came to 97.5% on a weight basis, enabling us to achieve the target recycling rate of 95% since FY2014.

## **Corporate Activities Initiatives**

Honda is making efforts to reduce the volume of waste generated through business activities.

The Company is stepping up 3R efforts that include resource reduction initiatives, such as the reduction of by-products through an increase in throughput yields. Honda properly manages imports and exports of waste deemed hazardous under the terms of Annexes I, II, III, or VII of the Basel Convention. In addition, the Company is striving to eliminate all use of ozone-depleting substances (ODS) at business sites in accordance with the Montreal Protocol and local laws and regulations in the countries in which it operates, and there are no major emissions from any of its operations.

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\*1 Super Ultra Low Emission Vehicle

- \*2 Low Emission Vehicle
- \*3 A technology that eliminates a middle coating process from a commonly used 4-coat/3-bake auto body painting process to realize a 3-coat/2-bake water-based painting process

environment

## **Preservation of Clean Air**

## Honda's Approach

Honda recognizes that air pollution has been a critical issue since the 1960s and believes that air pollution in cities has a negative effect on people's health. The Company, therefore, has sought to resolve this issue through the development of technologies that clean the gas emitted from its products.

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To date. Honda has achieved cleaner exhaust emissions from motorcycles by switching the engines of all its motorcycles on the market to four strokes, with the Honda Programmed Fuel Injection (PGM-FI) system being applied to more than 80% of models sold worldwide for better combustion efficiency.

With regard to automobiles, the Accord Plug-in Hybrid has become the first in the world to certify to SULEV<sup>\*1</sup> 20 of California's LEV III<sup>\*2</sup> emissions regulations, deemed to be the toughest in the world. Amid application and strengthening of exhaust emissions regulations in emerging countries, Honda is also promoting pre-emptive response in various countries in Asia and the Middle East.

As for power products, Honda has cleared compliance of United States Environmental Protection Agency Phase 3 regulations, the most stringent in the world, through engine enhancement technology without using a catalvst.

Honda will continue to reduce harmful substances contained in exhaust emissions from internal combustion engines and expand its lineup of electrified vehicles that do not emit exhaust gas while in use.

In the production of automobiles, solvents found in paint and thinner used mainly in paint processes can generate Volatile Organic Compounds (VOC), the cause of photochemical oxidants. Honda has sought to reduce VOC emissions such as through the improvement of painting efficiency, installation of equipment to remove VOC and introduction of Honda Smart Ecological Paint<sup>\*3</sup>, a highly functional painting technology that shortens the automobile painting process, at the Yorii assembly plant. Honda will continue to undertake these and other reduction efforts in the future.

Honda believes that providing products with high environmental performance at reasonable prices and leading the industry in terms of cleaner exhaust emissions and air pollution response will serve to preserve clean air and bring about a greater opportunity for business expansion.

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## TOPICS

## Launching a Battery Sharing Service in India for **Electric Rickshaws**

India as a whole is committed to increasing the use of renewable energy, placing a specific emphasis on the electrification in the transportation sector, which accounts for about 20% of the country's GHG emissions. More than 8 million rickshaws (three-wheeled taxis) are owned and used by people in the country as their daily means of transportation. In addition, rickshaws operated in urban areas, in particular, mainly run on compressed natural gas and pose a significant challenge in promoting electrification.

As a response, Honda plans to initiate a battery sharing service for rickshaws, using its removable Honda Mobile Power Pack e: batteries in the first half of FY2023. Currently, electric means of mobility has the three issues of short cruising distance, long charging time and high battery cost. The battery sharing service for rickshaws has solved these issues by making the batteries replaceable. The service allows users to replace used units with fully charged ones at the nearest battery replacement station, eliminating their worry about running out of power and greatly reducing the risk of losing customers while recharging.



E-auto rickshaw and Honda Mobile Power Pack Exchanger e: (for which mass production is planned)

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## **Other Important Issues**

## **Conserving Water Resources**

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Cognizant of the potential for business activities to impact upstream and downstream water resources, Honda is also focusing on the conservation of water resources.

Since Honda seeks out communities where harmonious coexistence with nearby water sources is viable as potential plant locations, and builds plants in compliance with host countries' environmental assessment laws and regulations, no water sources are significantly impacted by the Company's water use. In addition, no water sources are affected by wastewater from Honda facilities since it treats wastewater and discharges treated water in accordance with applicable laws and regulations. Under these circumstances, Honda appropriately manages the amount of water used and works to manage and provide information on wastewater, which includes thorough quality control and disclosure of water quality test findings.

In addition, to minimize water intake, various business sites are implementing initiatives based on regional circumstances, such as the utilization of recycled water and water conservation.

Honda verifies water risk for all production sites by using such assessment tools as Aqueduct and Water Risk Filter. Accordingly, Honda has prioritized the introduction of a water recycling system to the Celaya Auto Plant of Honda de Mexico S.A. de C.V. in Mexico, the Tapukara Plant of Honda Cars India Ltd. in India and the No. 2 Plant of Guanggi Honda Automobile Co., Ltd. in China, where water risk is particularly high.

Total consumption of recycled water at production sites amounts to 3.6 million m<sup>3</sup> a year, which accounts for about 15% of Honda's total annual water use.

Honda will continue to examine the installation of a water recycling system around the world as necessary.

Honda strives to reduce environmental impact during product usage. The Company's lineup of engines for outboard motors consists solely of 4-stroke engines with the aim of reducing water contamination in the outboard motors being used around the world.

Honda has undertaken conservation activities for forest watersheds continuously since 1999 as part of its social contribution program. Production sites protect and manage the forest watersheds that they

benefit from and strive to keep them optimized for each region. Aware of the fact that water is an indispensable resource supporting its business, Honda will continue implementing this activity. (Please refer to the link below.)

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#### WEB

"Forest watersheds" (Japanese only)

> https://www.honda.co.jp/ philanthropy/forest/report/chichibu/





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## **Biodiversity Conservation**

Recognizing that its business activities can have an impact on biodiversity, Honda has long been putting a great deal of effort into activities that have led to the conservation of biodiversity. The Company carried out tree-planting and water-recycling initiatives at its plants in the 1960s and launched the Community Forest program in 1976.

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3

In 2011, the Company established the Honda Biodiversity Guidelines. As the basic statement, it stipulates as follows: "We recognize, under Honda's Environment Statement, that biodiversity conservation initiatives are an essential part of our commitment to the preservation of the global environment. We will continue to work toward harmony between this commitment and our activities."

Honda believes that minimizing the environmental impact resulting from its products and business activities represents the greatest contribution the Company can make to biodiversity conservation. The guidelines specify the priorities, including the development of environmental technology, initiatives based on corporate activities and initiatives for living in harmony with local communities, and Honda is actively promoting them.

Honda recognizes the emissions of GHGs and various other pollutants as two of the greatest impacts of business activities that threaten biodiversity. Honda also believes that waste, land use and water use affect biodiversity.

The Company has set priorities under the Guidelines and is working systematically to minimize these impacts on biodiversity. Each of Honda's key business sites in Japan also conducts a survey on the actual conditions of biodiversity and is promoting various activities that are appropriate for the applicable species, such as thinning, pruning and eradication of non-native species. Moreover, Honda continues to carry out fixed-point observation and reporting on ecosystems in collaboration with "Monitoring Sites 1000" (a project for promoting the monitoring of survey sites of important ecosystems) implemented by the Japanese government as a member of the International Union for Conservation of Nature and Natural Resources (IUCN), which creates an annual Red List.

Honda is considering assessing the factors that have an impact on biodiversity by expanding the scope of assessment to the entire product life cycle, from mining of raw materials to product disposal.

## PDF Honda Biodiversity Guidelines

> https://www.honda.co.ip/environment/report/ pdf/report/report-biodiversity-en.pdf

## Management and Reduction of Chemical **Substances**

Honda works to ensure the appropriate management and reduction of chemical substances contained in automotive components from the product design and development stages in order to reduce those materials that impact the environment.

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Laws and regulations have been introduced in each country to ensure the appropriate management of chemical substances and the reduction of harmful substances contained in automotive components. These legislations are based on a goal set by the United Nations in 2002 of minimizing the impact of chemical substances on people and the environment by 2020.

The International Material Data System (IMDS), a mechanism for collecting information throughout the supply chain on materials and chemical substances contained in components making up the vehicle, was developed in response to this trend largely by the German Association of the Automotive Industry. Honda is also tabulating and managing chemical substances via our independently developed global management system called the Management System of Chemical Substances (MoCS), which collects information based on IMDS.

Honda is moving ahead with the reduction of four types of heavy metals (lead, mercury, hexavalent chromium and cadmium) that are considered to have negative impacts on the environment while promoting the management of chemical substances via MoCS. As an example, for all new and redesigned vehicles sold in Japan in FY2022, components that do not use mercury were chosen for combination meters. The Company not only complies with laws and regulations in each country but also strives to eliminate the use of mercury on a voluntary basis.



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## Promoting Life-Cycle Assessment (LCA)

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Honda has been quantitatively calculating and assessing CO<sub>2</sub> emissions from all business activities by using its original life-cycle assessment (LCA) system. Accordingly, production, purchasing, sales and service, administration and transportation departments have been carrying out activities geared toward lower carbon emissions.

Honda recognizes that the promotion of LCA is an important initiative not just in reducing CO<sub>2</sub> emissions across product life cycles, from raw material procurement to product disposal, but also in implementing efforts for Triple Action to ZERO.

In the future, Honda will utilize LCA more broadly while making more proactive efforts in devising low-carbon solutions at the development stage and also reducing environmental impact through resource circulation.





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- \*1 The Greenhouse Gas Protocol: Development of the GHG Protocol was led by the World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI). \*2 FY2022 figure (Adjusted volume)
- 2 FY2022 figure (Adjusted volume) is calculated by Honda using the conditions applied until FY2021.

environment

## **Environmental Data**

3

#### Scope of Consolidation

Environmental data are provided on <u>pages 73 to 78</u> for the year ended March 31, 2022 from Honda Motor Co., Ltd. and 407 consolidated subsidiaries and affiliated companies in Japan and outside Japan (as of December 31, 2021).

#### Honda GHG Emissions in FY2022

As a responsible company operating in the mobility industry, Honda believes in the importance of calculating and disclosing GHG emissions in order to drive progress in initiatives to reduce global emissions.

As the first milestone in this endeavor, in August 2012 Honda disclosed estimates of all FY2012 GHG emissions from its entire value chain in conformity with the GHG Protocol<sup>\*1</sup>, currently the world's most widely used GHG emissions accounting standard. The Company became the world's first mobility company to release estimates of emissions not only from its own business activities (Scopes 1 and 2) but also from all upstream and downstream activities (Scope 3), extending from the procurement of raw materials to the transportation and customer use of Honda products and ending with the treatment of end-of-life products.

Honda continues to calculate and report its GHG emissions from its entire value chain and is making improvements to get a more accurate reading of emissions. The Company is doing this in Scope 3 (other indirect emissions), for example, by widening the boundaries of data collection for categories that account for the largest proportion of estimated emissions, and by improving the accuracy of calculation methods.

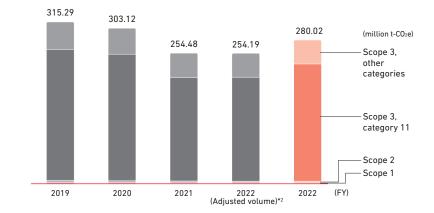
In due consideration of the actual results of FY2022, the scope of calculation for Scope 3, category 11 has been extended from about 90% of global sales volume to approximately all in total.

The conditions used in calculating figures such as annual mileage and lifetime years of use have been changed and are now based on the newer IEA Mobility Model (MoMo) instead of the conventional IEA SMP Model ( $\Rightarrow$  <u>p. 73</u>).

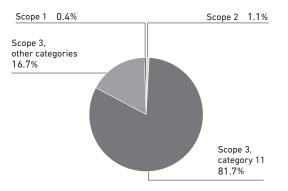
The calculations for FY2022 show that GHG emissions from Honda business activities were 4.30 million t- C02e, and total emissions from the value chain, including other indirect emissions, were 280.02 million t- C02e. Honda will continue to monitor and manage data and utilize this information in the actual implementation of emissions reduction measures.

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#### Total GHG emissions



#### Breakdown of total FY2022 GHG emissions



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Environment ····	55	Honda's to	tal GHG emiss	sions						(million t-CO2e)
Basic Approach				50115			FY2019	FY2020	FY2021	FY2022
Global Managemer Material Issues in t Environmental Dim	the	GHG emissio	ons from the entir	e Honda value chain	(Scopes 1, 2 and	3)	315.29	303.12	254.48	280.02
Responses to Clim Energy Issues	ate Change and	Breakdown	Direct emission	s from business activities	(Scope 1)		1.38	1.24	1.12	1.16 🗹
Efficient Utilization	n of Resources		Indirect emissio	ons from energy use	(Scope 2)		4.09	3.79	3.38	3.14 🗸
Preservation of Cle Other Important Is:			Emissions from	Honda business activities	(Total of Scopes	1 and 2)	5.47	5.03	4.50	4.30
— Environmental Dat	а		Emissions from	customer use of sold prod	ucts (Scope 3, catego	ry 11)	256.10	247.25	202.21	228.87 🗸
Safety ·····										
Quality			Other emissions	5	(Scope 3, other o	ategories)	53.72	50.84	47.77	46.85
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Scope 1: Direct GHG emissions from business activities, as defined by the GHG Protocol (e.g., Combustion of fuel oil at a manufacturing plant, emissions from work vehicles and company cars). The Scope 1 figures presented in this report include all GHGs emitted directly by Honda Motor Co., Ltd. and its consolidated subsidiaries and affiliated companies worldwide (excluding relatively small-scale companies). In Japan, Honda uses the emission factor based on the Act on Promotion of Climate Change Countermeasures and in each region except Japan, emission factors from the 2006 IPCC Guidelines for National GHG Inventories. Figures for climate change potential coefficient are derived from the IPCC's Fourth Assessment Report (2007).

Scope 2: Indirect GHG emissions from a company's use of energy, as defined by the GHG Protocol (e.g., electrical energy used by a manufacturing plant or office). The Scope 2 figures presented in this report include all GHGs emitted indirectly by Honda Motor Co., Ltd. and its consolidated subsidiaries and affiliated companies worldwide (excluding relatively small-scale companies). Honda adopts to the GHG Protocol's standard market-based method. In Japan, Honda uses electricity utilities emission factors based on the Act on Promotion of Global Warming Countermeasures. In each region except Japan, Honda uses electricity utilities emission factors and latest regional emission factors, and if unavailable, national emission factors from the IEA's Emissions from Fuel Combustion.

• Scope 3: Other indirect GHG emissions not included in Scope 1 and Scope 2, as defined by the GHG Protocol. Scope 3 is systematically broken down into 15 categories (e.g., category 11 includes emissions arising from the use of sold products; category 12 includes emissions arising from the end-of-life treatment of sold products).

• The "Scope 3, category 11" figures presented in this report represent the cumulative amount of GHGs that will have been emitted by products sold by Honda in the applicable fiscal year (automobiles, motorcycles, power products and aircraft) as a result of their use by customers from the time they received those products until they dispose of them in the future. Calculations cover the emission of all motorcycles, automobiles, power products and aircraft sold worldwide under the Honda brand name". These emissions are calculated using the following formula for each model and adding the results: CO<sub>2</sub> emissions intensity x Annual distance traveled or Annual usage in hours x Product lifetime in years x Annual unit sales.

• CO2 emissions intensity: Average annual mileage of each model set at same value per region or Annual consumption of each model and Average annual used time distinguish general business from business use

•Annual mileage / Lifetime years of use: Referring to IEA estimation model, "MoMo," etc.

• CO2 emission factor: Referring to the GHG calculation guidelines that public authorities in each region issued. If there are no appropriate guidelines, reference from the ones of Japanese.

• The "Scope 3, other categories" figures presented in this report are the sum of emissions from categories 1, 2, 3, 4, 5, 6, 7, 9, 10, 12 and 15. As per the GHG Protocol, Honda excludes categories 8, 13 and 14 from its calculations, as these categories are either not part of Honda business activities or emissions from these categories are accounted for in other categories.

Data indicated with 🖌 received the independent practitioner's assurance.



\* Excluding all-terrain vehicles (ATVs)



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Direct emissions (Scope 1) 🖌

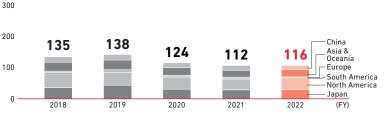
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#### GHG emissions

(10.000 t-CO2e)

400

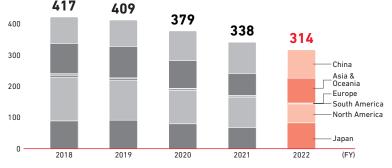


Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies)

Calculation method: Emissions amount =  $\Sigma$  [Volume of fuel usage x CO<sub>2</sub> emission factor] + CO<sub>2</sub> emissions from non-energy sources +  $\Sigma$  [Volume of non-CO<sub>2</sub> GHG emissions x Global warming factors] Emission factors

Japan: Emission factors based on the Act on Promotion of Global Warming Countermeasures Regions outside of Japan: Emission factors from 2006 IPCC Guidelines for National GHG Inventories Figures for global warming potential coefficient: The IPCC's Fourth Assessment Report (2007) • Figures of GHG emissions from non-energy source include some estimated values. • Calculations are mainly based on emissions from stationary combustion sources. • Expressed in three significant digits

Indirect emissions (Scope 2) 🗹 (10,000 t-C02e)



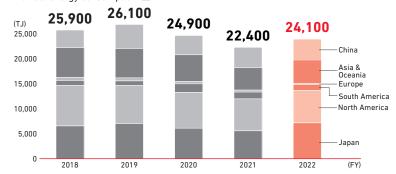
Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group Calculation method: Emissions amount =  $\Sigma$  (Purchased electricity consumption, etc.<sup>\*1</sup> x emission factor) Honda adopts to the GHG Protocol's standard market-based method. Emission factor:

Japan: Electricity utilities emission factors based on the Act on Promotion of Global Warming Countermeasures

Regions outside of Japan: Electricity utilities emission factors and latest regional emission factors, if unavailable, national emission factors from the IEA's Emissions from Fuel Combustion. "1 Other includes steam and hot water, the emission factors are based on the Act on Promotion of Global

1 Other includes steam and hot water, the emission factors are based on the Act on Promotion of Glo Warming Countermeasures.
• Expressed in three significant digits

#### Indirect energy consumption 🖌



Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies)

Calculation method: Consumption amount =  $\Sigma$  (Purchased electricity consumption etc.\*1 x unit calorific value) Purchased electricity has been converted to joules using the international standard 3.6 GJ/MWh. \*1 Other

Unit calorific value:

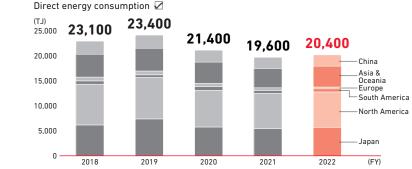
Japan: Unit calorific value from Reporting and Disclosure System based on the Act on Promotion of Global Warming Countermeasures

Regions outside of Japan: 2006 IPCC Guidelines for National GHG Inventories

Expressed in three significant digits

## e Report

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Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies)

Calculation method: Consumption amount =  $\Sigma$  (Fuel consumption x unit calorific value) Unit calorific value:

Japan: Unit calorific value from Reporting and Disclosure System based on the Act on Promotion of Global Warming Countermeasures

Regions outside of Japan: Derived from 2006 IPCC Guidelines for National GHG Inventories

Calculations are mainly based on energy consumed by stationary exhaust sources.
 A terajoule (TJ) is a unit of energy, "tera" meaning 10<sup>12</sup>.

• Expressed in three significant digits

Energy consumption





## 7 Performance Report

#### Environment · · · · · · · · · · · 55

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Responses to Climate Change and Energy Issues
Efficient Utilization of Resources
Preservation of Clean Air
Other Important Issues

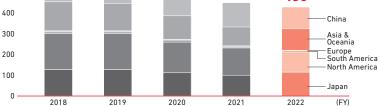
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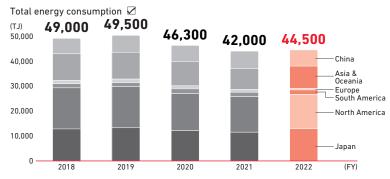
#### 



Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies) Calculation method: Total GHG emissions (Scope 1 and 2) = Direct GHG emissions + Indirect GHG emissions

Expressed in three significant digits

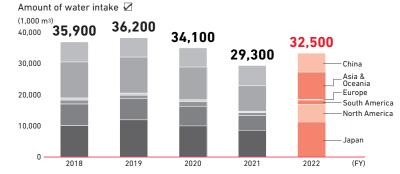
**Environmental Data** 



Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies) Calculation method: Total energy consumption = Direct energy consumption + Indirect energy consumption

•Expressed in three significant digits

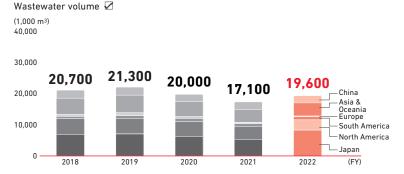
#### Water intake/Wastewater volume



Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies)

Calculation method: Amount of water intake =  $\Sigma$  (Purchased from the water facilities + Groundwater intake + Rainwater utilization amount + Surface such as rivers water intake)

 $\boldsymbol{\cdot}$  Expressed in three significant digits



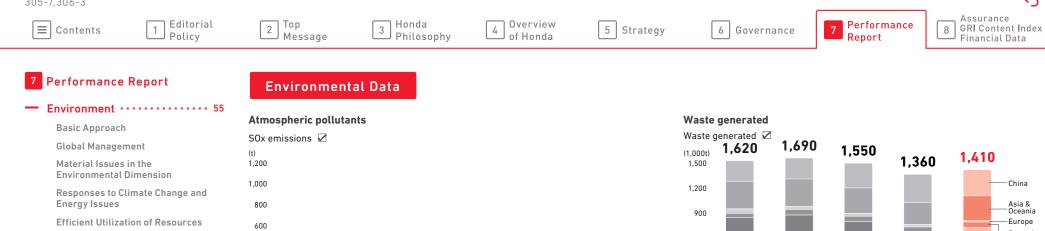
Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies) Calculation method: Volume amount = ∑ (Wastewater processed by other companies + Discharge directly into

public waters) • Figures include some estimated values.

• Expressed in three significant digits

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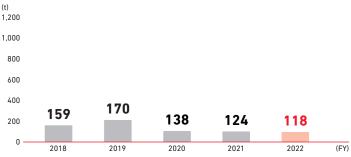
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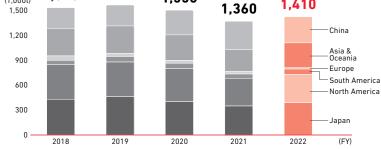
Social Contribution Activities •• 155

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Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies) Calculation method: Emissions amount =  $\sum$  (Fuel consumption x Density x Sulfur content x 64/32) • Calculations are based on fuel consumption. Density: Derived from the translation coefficient list in Statistics Information by Petroleum Association of

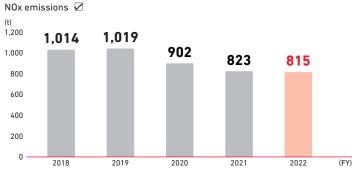
Japan Sulfur content: Derived from Act on the Quality Control of Gasoline and Other Fuels or the standard of LP gas (JIS K 2240)



Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies)

Calculation method: Emissions amount = ∑ (Industrial waste + general administrative waste + valuable resources emission)

· However, regions outside of Japan are beyond the scope of data for industrial waste (excluding harmful waste defined in accordance with regulations in respective countries) and general administrative waste. · Expressed in three significant digits



Companies covered: All consolidated subsidiaries and affiliated companies of the Honda Group (excluding relatively small-scale companies) Calculation method: Emissions amount =  $\Sigma$  (Fuel consumption x Emission factor for each fuel)

· Calculations are based on fuel consumption.

Emission factor for each fuel: Derived from NOx emissions calculation table (combustion facilities that do not measure the amount of exhaust gas, etc.) on Environmental Activity Evaluation Program (Ministry of the Environment).



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#### Environment ····· 55

Basic Approad	h
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**Global Management** 

#### Material Issues in the **Environmental Dimension**

<b>Responses to Climate</b>	Change ar	۱d
Energy Issues		

- Efficient Utilization of Resources
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				FY2022
Category		Major activities and investments	Investments (millions of yen)	Expenditures (millions of yen)
	Pollution pre- vention costs	Air, water, and soil pollution prevention	70	200
Business area costs	Global environmental conservation costs	<ul> <li>Global warming mitigation, ozone depletion pre- vention and other conservation activities</li> </ul>	866	356
	Recycling costs	<ul> <li>Waste processing, treatment, reduction, elimina- tion and recycling</li> </ul>	26	591
Upstream/ downstream costs		<ul> <li>Collection, recycling, resale and proper disposal of products manufactured and sold</li> <li>Industry organization and other membership fees</li> </ul>	0	768
Management costs		<ul> <li>Installation, operation and acquisition of certification for environmental management systems</li> <li>Environmental impact monitoring and measurement</li> <li>Management and training of associates and organi- zations responsible for environmental conservation (expenses for environment-related communications activities)</li> </ul>	60	2,237
Research and development costs		<ul> <li>Research, development, planning and design for impact reductions across product life cycles (R&amp;D costs for advanced eco-cars, including EVs and PHVs)</li> </ul>	7,575	295,836
Local conservation costs		<ul> <li>Environmental improvement measures, including ecosystem protection, cleanups, green space development and natural landscape conservation</li> <li>Local conservation and communication activities (beach cleanups and watershed conservation activities)</li> </ul>	0	126
Environmen- tal damage costs		Remediation of polluted soil	0	1
Total			8,597	300,115

Cost of environmental conservation activities and investments in FY2022

· Companies covered: Honda Motor Co., Ltd., Honda R&D Co., Ltd. and Honda Access Corporation

Accounting period: April 1, 2021 to March 31, 2022

· Some figures are estimated values.

- Guidelines, guidebooks and other environmental accounting publications by Japan's Ministry of the Environment were used as references.

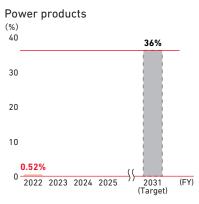
· Figures were calculated on a cash-flow basis with depreciation and amortization expenses excluded.

#### Economic benefits (Effect on revenue and expenses)

		FY2022 (millions of yen)
Income from sale of valuable waste	materials	7,125
	Installed technologies	33
Cost reductions from saved energy	Behavioral changes, etc.	36
Total		7,194

# environment

#### Motorcycles **Automobiles** (%) 40 30% 30 20 15% 10 0.37% 0.01% 0 2022 2023 2024 2025 )) 2022 2023 2024 2025 2031 (FY) 2031 (FY) (Target) (Target)



Sales ratio of electrified products

(%)

40

30

20

10

0

Motorcycles

171

(Models)

200

180

160

140

120

100

80

60

40

20

0

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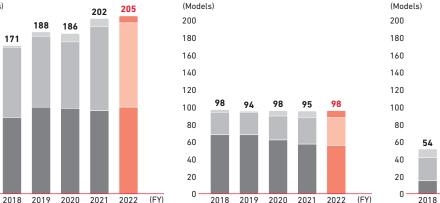
#### **Global Number of HEPS-compliant models**

186

202

Honda

3





Power Products

