

8. Environmental Initiatives

8-1 : Basic Approach

Honda Environmental and Safety Vision/Honda's Environment Statement

Ever since the 1960s, Honda has actively endeavored to solve environmental issues.

In the 1970s, Honda developed the low-pollution CVCC* engine, which 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 considered to be the most stringent in the world at the time. In 1992, Honda established the Honda Environment Statement, serving as the Company's guideline for all environmental initiatives. The statement articulates the basic stance towards reducing the environmental impact at every stage in the life cycle of its products, from product procurement to the 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. Such initiatives include the reduction of greenhouse gas (GHG) emissions, which are considered to be a cause of climate change, as well as energy use; the efficient use of resources, including water and minerals; and the appropriate treatment and reduction of waste, with the aim of conserving the global environment and biodiversity. Honda will realize this vision by conducting these activities while sharing Honda's Environment Statement with everyone associated with Honda, including suppliers and distributors in addition to Honda Group companies.

* CVCC: Compound Vortex Controlled Combustion

<p>Honda Environmental and Safety Vision Realizing the joy and freedom of mobility and a sustainable society where people can enjoy life Established in 2011</p> <p>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 also for the world. We should pursue our daily business under the following principles:</p> <ol style="list-style-type: none"> 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 service and disposal. 2. We will make every effort to minimize and properly dispose of the waste and contaminants generated at every stage of a product's life cycle. 3. As a member of both the company and 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 local people's health, environment and society, and endeavor to improve the social standing of the company. <p>Established and announced in June 1992</p>

8-2 : Honda's Material Issues

Through Honda's proprietary technologies and business activities, the Company will work to tackle climate change and energy issues, the effective utilization of resources and the preservation of clean air, which are outlined as challenges in the materiality matrix, aiming to realize a zero environmental impact society in the future.

Triple Action to ZERO

In order for people to live on Earth in a sustainable manner, Honda seeks to realize a society with zero environmental impact. Accordingly, the Company established the Triple ZERO initiative, a concept for environmental initiatives, and in 2021, it set Triple Action to ZERO, which defines specific target years and actions. 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. Under this concept, Honda is considering and implementing measures while taking into account a linkage of the three elements. The Company recognizes that this will lead to the acceleration of initiatives in international frameworks and to Nature-based Solutions (NbS)* that are attracting increasing interest from stakeholders.

* Nature-based Solutions (NbS): Initiatives that address social issues while preserving and restoring natural ecosystems

CO₂ emissions, net zero by 2050

To address climate change issues, Honda will work toward a target of limiting the global average 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 risks 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 go beyond its previous initiative aimed at reducing the risks related to resources and waste disposal by taking on the additional challenge of developing products and creating systems that use sustainable materials and have zero environmental impact.

In the area of corporate activities, Honda aims to achieve "zero" industrial water intake and industrial waste at Honda plants by 2050.

8-3 : Environmental Initiatives Chronology

year	Outline	Related Matters
1948	• Honda Motor Co., Ltd. established.	
1959	• Implemented plan to recycle aluminum casting swarf (Yamato Factory).	
1963	• Installed an aluminum dust mining machine to recycle machining scraps(Suzuka Factory).	• U.S. enactment of the Clean Air Act.
1964	• Received the Minister of International Trade and Industry Award for "streamlining of electricity use," including improvement of power transmission facilities and streamlining of production facilities.	
1966	• Established the Air Pollution (AP) Laboratory in the Honda R&D, specializing in research on low-pollution engines.	• California Air Resources Board initiates emission controls. • U.S. issued regulations to prevent air pollution. • Department of Transportation implements emission regulations for new vehicles (3% CO concentration).
1967		• Enacted Basic Act on Pollution Control.
1968		• Enacted Clean Air Act, Noise Regulation Act, and Pollution Dispute Resolution Act.
1970	• Established Pollution control headquarters. • Started a water circulation system that does not discharge industrial water to the outside (Sayama Factory).	
1971	• Announced outline of the low-pollution engine (CVCC).	• U.S. Environmental Protection Agency (EPA) enacted vehicle emission regulations in accordance with the U.S. Clean Air Act of 1970 (Muskie Act).
1972	• Concluded CVCC engine technology licensing agreement with Toyota Motor Corporation. • CVCC engine becomes the first to pass the U.S. Clean Air Act of 1970 emission standards in 1975.	
1973	• Concluded a CVCC engine technology licensing agreement with Ford Motor Company of the U.S. • Concluded a CVCC engine technology licensing agreement with Chrysler Corporation of the U.S. • Concluded a CVCC engine technology licensing agreement with Isuzu. • Launched the Civic (1500cc CVCC 3-door and 4-door).	
1974	• Export vehicles equipped with CVCC engines passed EPA (U.S. Environmental Protection Agency) emissions tests.	
1977	• Civic (CVCC) won first place in the U.S. Environmental Protection Agency (EPA) FEA77 fuel economy test for four consecutive years.	
1981	• Civic surpassed 40 miles per gallon in the 1982 model year vehicle fuel economy test conducted by the U.S. Environmental Protection Agency (EPA) (world record for a gasoline vehicle).	

year	Outline	Related Matters	year	Outline	Related Matters
1982	<ul style="list-style-type: none"> Announced Super Cub 50, which achieves ultra-low fuel consumption of 150 km per liter. 		2005		<ul style="list-style-type: none"> Kyoto Protocol became effective, Automobile Recycling Law enacted.
1990	<ul style="list-style-type: none"> Established Recycling Committee. 		2006	<ul style="list-style-type: none"> Announced 2010 worldwide CO₂ emission reduction targets for motorcycles, automobiles, and power products and manufacturing (an industry first). Published CSR (Corporate Social Responsibility) Report 2006. Developed Flexible Fuel Vehicle (FFV) that can run on mixed fuel (ethanol mixed fuel) for Brazil, based on gasoline engine. 	
1991	<ul style="list-style-type: none"> Established Environmental Council chaired by the Vice President. Became first Japanese auto manufacturer to collect and recycle used plastic bumpers on a large scale. Recycled used bumper materials into parts delivery boxes, started used bumper recycling (as recycling network test) 	<ul style="list-style-type: none"> Enacted law concerning the utilization of recyclable resources (Recycling Law). 	2007	<ul style="list-style-type: none"> CVCC engine and Cub F-Type recognized as Mechanical Heritage by the Japan Society of Mechanical Engineers. 	
1992	<ul style="list-style-type: none"> Established the Honda Environmental Declaration, Honda's policy for environmental initiatives. 		2011	<ul style="list-style-type: none"> Revised Green Purchasing Guidelines and expanded application to suppliers worldwide. Signed "E-KIZUNA Project Agreement" with Saitama City, and announced the outline of the Honda Smart Home System demonstration experiment, aiming to reduce CO₂ emissions in households. Established Honda's Environmental Vision (target to reduce global CO₂ emissions by 30% from 2000 levels by 2020) and announced the global environmental slogan "Blue Skies for Our Children" and logo. 	
1993	<ul style="list-style-type: none"> Released the Voluntary Plan*, which outlines the direction of Honda's environmental initiatives. <p>* Waste reduction plan in line with the voluntary action plan (Voluntary Plan) promoted by the Ministry of International Trade and Industry (MITI) and proposals for its formulation.</p>		2012	<ul style="list-style-type: none"> First public showing of a test house equipped with Honda's Smart Home System - Verification of in-home energy management technology using gas, solar, and electrified mobility systems begins. First in the industry to disclose global CO₂ emissions from the use of Honda products (according to Honda research). First in the industry to disclose all greenhouse gas emissions from Honda's global business activities and customer use of its products (according to Honda research). 	
1995	<ul style="list-style-type: none"> First gasoline engine vehicle to meet ULEV (Ultra-Low Emission Vehicle) standards of the California emission regulations in the U.S. Established the World Environment Council. Achieved a reduction of waste emissions by half from the 1991 level. 	<ul style="list-style-type: none"> Revised Enforcement Order of the Waste Disposal and Public Cleaning Law. 	2013	<ul style="list-style-type: none"> Established the world's first system to recycle rare earths extracted from nickel-metal hydride batteries for hybrid vehicles. Disclosed environmental initiatives relating to the construction of the Saitama Factory's Yorii Plant (Yorii-machi, Osato-gun, Saitama Prefecture) prior to operations commencing in July. Commenced leasing Accord Plug-in Hybrid to individual customers (World's first SULEV20-compliant Accord PHEV). 	
1996		<ul style="list-style-type: none"> Announced End-of-life Vehicle Recycling Initiative. 	2015	<ul style="list-style-type: none"> Honda's Annual Environmental Report 2014 won the Sustainability Reporting Excellence Award at the 18th Environmental Communication Awards. Published Honda Sustainability Report 2015 (integrating the information reported in the CSR Report and the Annual Environmental Report (Global Edition)). Announced the CLARITY FUEL CELL fuel cell vehicle. 	
1997	<ul style="list-style-type: none"> Launched the New Recycling Project. Developed 100% recyclable instrument panels (using olefin resin). Announced policy to "convert all motorcycle engines to 4-stroke. 	<ul style="list-style-type: none"> Announced law concerning promotion of measures to cope with global warming. 	2017	<ul style="list-style-type: none"> General Motors (GM) and Honda establish the industry's first joint venture to produce fuel cell systems in Michigan, U.S.A. - Both companies to use advanced fuel cell technology in their products. Established new company in the spring of 2018 for full-scale development of hydrogen stations. Eleven companies agreed to participate in the establishment of the new company. 	
1998	<ul style="list-style-type: none"> Developed Japan's first exhaust gas purification system for 4-stroke engines that complies with motorcycle exhaust gas regulations for light motorcycles. Launched the Green Dealer Project for automobile dealers. Announced the 1999 Accord, expanding the range of models compliant with the ULEV* standard, which significantly reduces emissions of hazardous substances. <p>*Ultra Low Emission Vehicle.</p>	<ul style="list-style-type: none"> Announced PRTR Law. 	2019	<ul style="list-style-type: none"> Developed high-efficiency electrification technology Honda e:TECHNOLOGY. Established consortium for swappable batteries for motorcycles. 	
1999	<ul style="list-style-type: none"> Published Honda's first annual environmental report. Announced Honda IMA System, Honda's unique hybrid system, and new lightweight aluminum body frame that significantly reduces body weight. First hybrid car to be named Insight. 2000 ACCORD was certified as a Super Ultra Low Emission Vehicle (SULEV), the most stringent of the new "LEV II" vehicle emission regulations to be enforced in California, U.S.A. starting in 2004. 	<ul style="list-style-type: none"> Announced Basic Act on Establishing a Recycling Society. 	2020	<ul style="list-style-type: none"> Isuzu and Honda concluded a joint research agreement on fuel cell (FC) trucks. Japan Post and Honda agreed to introduce Honda's electric motorcycle BENLY e: for mail delivery service. 	<ul style="list-style-type: none"> Enacted law concerning promotion of measures to cope with global warming.
2000	<ul style="list-style-type: none"> Published HONDA ECOLOGY environmental pamphlet. Introduced a green dealer certification system for automobile dealers nationwide. Insight hybrid car substantially breaks the Guinness Book of Records fuel economy record in the gasoline engine category. 	<ul style="list-style-type: none"> Enacted PRTR Law. 	2021	<ul style="list-style-type: none"> Declared 100% use of sustainable materials by 2050. Announced Triple Action to ZERO concept in Sustainability Report (carbon neutral, clean energy, resource circulation) Began field testing of recycling acrylic resin. 	
2001	<ul style="list-style-type: none"> Civic natural gas vehicle becomes the first vehicle in the U.S. to receive Advanced Technology PZEV (Partial-Credit Zero Emission Vehicle) certification from the California Air Resources Board. Established Green Purchasing Guideline. 	<ul style="list-style-type: none"> Enacted PRTR Law. 	2022	<ul style="list-style-type: none"> Published Honda Report (comprehensive report). 	
2002	<ul style="list-style-type: none"> Established the Honda LCA System to quantitatively assess the environmental impact of all business areas. FCX became the world's first vehicle to be certified by the Environmental Protection Agency (EPA) and the California Air Resources Board (CARB), which is a requirement for sales in the U.S. 	<ul style="list-style-type: none"> Announced Automobile Recycling Law. 			
2003	<ul style="list-style-type: none"> Developed the world's first electronically controlled fuel injection system (PGM-FI) for 4-stroke 50cc scooters. Announced that majority of Honda motorcycles sold worldwide will be equipped with FI by 2010. 				