

North American Environmental Report | 2011



BLUE SKIES FOR
OUR CHILDREN

This report covers Honda’s activities in the United States, Canada, and Mexico — including company policies, the overall direction of Honda’s environmental initiatives, and a current assessment of the environmental impact of its operations — for the fiscal year that began April 1, 2010, and ended March 31, 2011 (FY2011).

Management and Direction	Objectives, Targets, and Results	Addressing Global Climate Change	Reducing Honda’s Environmental Impact	Supplemental Information
<p>3 A Letter from Honda’s North American Chief Operating Officer</p> <p>5 Environmental Management</p>	<p>9 Objectives, Targets, and Results</p>	<p>12 Addressing Global Climate Change</p> <p>13 Voluntary CO₂ Emissions Reduction Goals</p> <p>15 Climate Change Policy</p> <p>16 Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions</p>	<p>20 Life Cycle Assessment</p> <p>21 Product Development</p> <p>40 Purchasing</p> <p>44 Manufacturing</p> <p>59 Sales and Service</p> <p>63 End-of-Life</p> <p>67 Administration</p>	<p>76 Environmental Community Activities</p> <p>82 Environmental Technology Milestones</p> <p>84 North American Corporate Profile</p>

On the Cover

The Honda global environmental symbol shown at right and on the cover of this report was chosen as the symbol for Honda’s environmental vision and will be used in future environmental activities throughout the world.



BLUE SKIES FOR OUR CHILDREN

“Blue Skies for Our Children” is the global environmental slogan adopted by Honda to express its commitment to the realization of its environmental vision through expanded environmental initiatives. Honda engineers, who took on the challenge to meet the stringent new emissions standards of the 1970s U.S. Clean Air Act, used the phrase “blue skies for our children” as a passionate rallying cry to devote themselves to this effort. This slogan continues to represent Honda’s passion toward its environmental commitment, which has not wavered and will remain resolute in the future.

To navigate this report

- Click on the tabs at the top of each page to jump to sections within the report, or use the page forward/back arrows.
- Click on any item in the table of contents above to go to that page.

Electronic format

To reduce the environmental impact of Honda’s reporting, this report is published in electronic format only. Please consider the environment before printing.

We value your opinion

We are interested in your response to this report, which will help us improve future reporting. Please [click here](#) to complete a brief survey.

A Letter from Honda's North American Chief Operating Officer

The past year brought with it unprecedented challenges to our global business operations, most notably the March 2011 earthquake and tsunami in Japan, which visited incredible damage upon the country and people of Japan, and caused major disruptions to Honda's supply chain and production operations around the world, including in North America. Despite these challenges, Honda has maintained a strong focus on the environment.



Tetsuo Iwamura (left) with the mayor of the City of Torrance, California, Mr. Frank Scottto, kicking off the Honda Electric Vehicle Demonstration Program with the first-ever public test drive of a prototype Fit EV electric vehicle, in December 2010.

In June of this year, we articulated Honda's Environmental Vision for the future, which calls for realizing "the joy and freedom of mobility" and "a sustainable society where people can enjoy life." At Honda, we view these as part of one vision in which the original thinking of Honda associates sparks innovation in technology and product design.

We have sought to capture this vision in the creation of a new global environmental slogan, "Blue Skies for Our Children," which recalls the efforts of Honda engineers in the early 1970s to create the CVCC engine, the first engine to comply with tough new

emissions standards set forth in the U.S. Clean Air Act. These young engineers adopted "Blue Skies for Our Children" as their rallying cry to make an important contribution to the reduction of automobile exhaust emissions.

Today, Honda is working to carry forward this passion for advancements in environmental technology. As part of this direction, we announced a new set of voluntary goals for 2020, a 30-percent reduction in the CO₂ emissions intensity of our automobile, motorcycle, and power equipment products, as compared to 2000 levels — along with targets for 2014 for the further reduction of CO₂ from our corporate operations, including manufacturing. These new targets follow the attainment of nearly all of our goals for the period from 2006 to 2010, during which we achieved significant reductions in CO₂ from both our products and production operations globally.

These are challenging new goals, and we will need to work with great focus and speed in order to meet our objectives. In North America, we have created a new system to measure the total CO₂ impact of our operations throughout the region. We have also created a new Environmental Business Development Office whose responsibility it is to increase strategic coordination on environmental matters across organizational functions within our North American organization and, looking across our various product lines, to propose new environmental products and business strategies.

A Letter from Honda's North American Chief Operating Officer

(continued)

In the product development domain in FY2011, we introduced three redesigned or substantially reengineered Honda models in North America — the 2011 Odyssey, 2011 Accord, and 2012 Civic — each of which achieves top-of-class fuel economy, low emissions, and top-level safety ratings. In the case of the Odyssey and Accord V6, these models benefit from new powertrain technologies developed by engineers at Honda R&D Americas in Ohio. In FY2011 we also kicked off the Honda Electric Vehicle Demonstration Program, which will lead to the launch of the Fit EV electric vehicle and a new Honda plug-in hybrid car with customers in selected U.S. markets beginning in the summer of 2012.

In the manufacturing domain, we realized our longstanding goal to achieve virtually zero waste to landfills from manufacturing operations in North America. As of April 1, 2011, ten of 14 plants in North America are operating with absolutely zero waste to landfills, while the remaining four plants are producing a very small amount of landfill waste that accounts for less than one-half of one percent of all manufacturing-related waste. In fact, more than 95% of all waste generated in the assembly of Honda products in North America is either recycled or reused.

And finally, in the sales and service domain, we continue to seek out means of reducing the environmental impact of service parts shipments, including the introduction of more fuel-efficient trucks, increased use of reusable packaging, more efficient packing of tractor trailers, and reengineered delivery routes that reduce truck travel. We will continue to accelerate these activities for the future.

These and the many other initiatives being undertaken by Honda associates in virtually every area of our operations are detailed in this, our seventh annual North American Environmental Report. This report is a fundamental part of Honda's environmental management process and is designed to provide our many stakeholders with a clear and comprehensive report of our environmental impact and our efforts to reduce that impact in Honda's North America region.

We welcome your feedback on this report as an important mechanism in helping to better inform our future decision making and actions to advance Honda's commitment to the environment, and to ensure that our company and its associates continue to operate in a manner consistent with Honda's ultimate goal — to be a company society wants to exist.



Tetsuo Iwamura

Chief Operating Officer, North American Regional Operations
President & CEO, American Honda Motor Co., Inc.

Environmental Management

Honda has been implementing proactive measures to help resolve environmental challenges since the 1960s, when societal concerns about air pollution began to grow. In 1966, soon after expanding into automobile production, the company established a department to research air pollution measures. As a result, Honda in 1972 introduced the CVCC engine, becoming the world's first automaker to comply with the U.S. Clean Air Act, doing so without the need for catalytic converter after-treatment technology — a challenge thought by many to be nearly insurmountable. Believing that issues raised by technology should be solved by technology, Honda has continued to confront environmental challenges. In 1992, the company issued the Honda Environment Statement to clearly define its approach to environmental issues.

Honda Environmental 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 activity. Only in this way will we be able to promote a successful future not only for our company, but for the entire world.”

We should pursue our daily business interests under the following principles:

- 1 We will strive 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 strive 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.

Environmental Management

(continued)

LINK TO GLOBAL INFO

[Honda's global environmental impact](#) **GO**

LINK TO GLOBAL INFO

[Honda's environmental vision](#) **GO**

Honda Environmental Vision

Realizing “the Joy and Freedom of Mobility” and “a Sustainable Society where People Can Enjoy Life.”

In 2010, Honda announced that the company’s direction in the period leading to the year 2020 would be “to provide good products to our customers with speed, affordability, and low CO₂ emissions.”

By “good products” we mean to embody customers’ wants and needs in attractive products using Honda’s unique technologies, knowledge, and ingenuity. Such good products must be delivered with speed without making our customers wait, and at affordable prices that make our customers happy with their purchase.

This is the direction Honda will take.

“With low CO₂ emissions” represents our conviction based on the strong sense of urgency that, as a manufacturer of personal mobility, Honda will have no future unless we achieve a significant reduction of CO₂ emissions.

This focus is encapsulated in the Honda Environmental Vision of a future in which environmental initiatives will allow people to realize “the joy and freedom of mobility” and “a sustainable society where people can enjoy life.” In this vision, Honda has expressed its strong determination to contribute to a society based on sustainability and harmony, so that it can continue to offer excitement to its customers through products and services used for personal mobility and in people’s everyday lives. Honda is determined to turn this vision into reality by actively implementing environmental initiatives on a global level.

Particular emphasis will be placed on the following aspects:

- At each stage of its products’ life cycles (products, corporate activities), Honda aims to:
 - minimize the use of fossil fuel and resources newly recovered from the Earth; and
 - minimize environmental impacts, including greenhouse gas emissions.
- Honda aims to reduce to zero, greenhouse gas emissions from Honda products used for mobility and in people’s everyday lives.

Environmental Management

(continued)

Honda has developed an institutional framework to put into practice the principles of environmental conservation as defined in the Honda Environmental Statement.

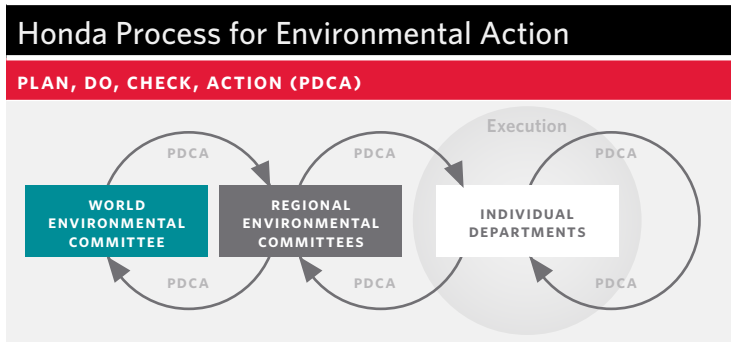
Honda’s regional operations, including the North America region, are given broad authority to fulfill their operational business responsibilities, which include planning and acting in accordance with Honda’s environmental vision to minimize the environmental impact of their local business activities. A hallmark of Honda environmental initiatives is that planning and execution are not delegated to specialists; rather, they are taken up directly by associates in all departments, who are engaged with environmental issues as part of their duties.

The **World Environmental Committee**, established in March 1995, considers global plans in accordance with the company’s business plans, determines environmental policies consistent with the company’s environmental mission statement, and shares those plans with the regional environmental committees.

The **North American Environmental Committee (NAEC)**, composed of members of the North American Regional Operating Board, is charged with promoting the policies of Honda’s World Environmental Committee. Each working group in the NAEC (depicted below) is tasked with conducting risk and opportunity evaluation, setting environmental goals, and conducting PDCA analyses that are reported to the NAEC. The PDCA cycle is executed at the working group, regional committee, and world committee levels so to achieve environmental goals while maintaining business sustainability.

LINK TO GLOBAL INFO

[Honda’s global environmental management system](#)
GO



WORLD ENVIRONMENTAL COMMITTEE				
REGIONAL OPERATIONS (NORTH AMERICA)				
NORTH AMERICAN ENVIRONMENTAL COMMITTEE				
PRODUCTS	LOGISTICS	MANUFACTURING	OFFICE AREA	CORPORATE COMMUNICATION
Automobiles Powersports Power equipment	Finished vehicle packaging and distribution Service parts packaging and distribution	Production Purchasing Parts logistics	Green building Recycling Energy efficiency	Environmental reporting

Environmental Management

(continued)

Key Practices

Environmental Risk Management

Honda considers risk management to be an integral part of environmental management. Honda's approach to risk management is reflected in various activities:

- systems for preventing spills and unplanned releases;
- systems for reducing environmental releases; and
- systems for recycling products, components, and manufacturing byproducts, in order to minimize landfill waste.

From long-term planning to daily operations, Honda strives to understand the scope of potential environmental impacts and to make prudent decisions to minimize impacts wherever possible.

Environmental Laws and Regulations

Regulatory compliance is fundamental to the production and in-use performance of Honda products, and to the continuance of Honda's operations in North America. All Honda companies have systems in place to ensure that their activities comply with all applicable legal requirements.

Emissions-Related Product Recalls

Honda's policy on product recalls, including emissions-related recalls, is in accordance with the procedures of its Quality Committee, which is composed of senior executives from various divisions of Honda. The Quality Committee makes decisions about Honda products manufactured and sold throughout the world, relying upon recommendations from Honda experts in each region.

Corrective Actions Taken in FY2011

During the fiscal year ended March 31, 2011, Honda initiated three corrective actions in the United States: two Product Update Plans (PUDs) and one Voluntary Emission Recall (VER).

DATE	DETAILS	MODEL(S)	UNITS
10/19/2010	U.S. VER: Due to a manufacturing defect, a crack may develop in the fuel tank grommet, in these small-displacement, general-purpose engines, causing a fuel leak.	GX25NT T3, GX25N FY1 Small Engines	5,997
9/20/2010	U.S. PUD: Due to the improper calibration of the electronic control module (ECM) of the oxygen sensor malfunction detection logic, certain oxygen sensor malfunctions may not be detected by the ECM.	BF200A, BF225A Marine Engines	223
8/3/2010	U.S. PUD: Due to inappropriate calibration of the power control and battery control modules, under certain driving conditions, the IMA battery may experience an internal electrical short circuit, resulting in reduced battery capacity and causing the malfunction indication light to illuminate.	Civic Hybrid	95,611

North American Environmental-Related Proceedings

In FY2011, Honda was not party to, or the subject of, any environmental-related administrative or judicial proceedings that it has to report¹ to the Securities & Exchange Commission.

¹ Pursuant to 17 CFR section 229.103



Objectives, Targets, and Results

Honda’s effort to manage and reduce the environmental impact of its operations in North America in FY2011 were guided by the following corporate objectives and fiscal year targets.

Summary (Table 1 of 3)				● = achieved goal	▲ = made progress toward goal	■ = no progress or improvement		
CATEGORY	MAJOR OBJECTIVES	FY2011 TARGETS		FY2011 RESULTS		LINK		
Product Development	Substances of Concern (SOCs)	Work with OEM parts suppliers to reduce or eliminate SOCs	Continue to reduce SOCs in Honda and Acura products where technically and economically practical		●	Continued implementation of International Materials Data System (IMDS) for parts and materials sourced from suppliers globally	37	
	PVC	Reduce the use of PVC in automobile interiors and other applications	New models achieve Honda’s target of a less than 1% concentration of chlorine in materials that could end up in the waste stream as shredder residue		●	Three new models introduced in FY2011 achieve Honda’s target for reduction in the use of PVC	39	
	End-of-Life Recyclability	Maintain or improve new-product designs to facilitate dismantling for end-of-life recycling of materials and components	Automobiles	Maintain a minimum 90% level of design recyclability ¹		●	Maintained 90% level of design recyclability for all new Honda and Acura models sold in North America	36
			Powersports and Power Equipment Products	Maintain a minimum 95% level of design recyclability ¹		●	Maintained 95% level of design recyclability for all powersports and power equipment products sold in North America	
	CO ₂ Emissions	Maintain or improve fuel efficiency of new Honda and Acura products	Automobiles	Increase U.S. CAFE by 5% over MY2006 levels by MY2010		●	U.S. CAFE for MY2010 Honda and Acura automobiles was increased 8.7% from MY2006 levels, to 31.7 mpg	23
			Powersports Products	Improve fuel economy of powersports products		●	The fleet average fuel economy of Honda motorcycles was improved 12.0% from the MY2000 baseline	32
			Power Equipment	Implement technologies for improved fuel efficiency		●	Introduced new mid-GX series engines with higher fuel efficiency along with reduced emissions and quieter operation	35
		Advance alternatives to petroleum	Improve the real-world appeal and practicality of electrically powered vehicles and supporting infrastructure		●	Introduced Fit EV Concept and new Honda plug-in hybrid platform Continued leasing of FCX Clarity fuel cell electric vehicles to customers in Southern California	30	
	Expand the market for natural gas-powered vehicles			●	Expanded U.S. retail dealer network for natural gas-powered Civic			
	Criteria Air Pollutants	Meet or surpass all applicable regulatory requirements of new Honda and Acura products	Meet or surpass all regulatory requirements applicable to new Honda and Acura products		●	Automobiles All Honda and Acura vehicles released in FY2011 met or surpassed U.S. EPA and Transport Canada Tier 2 Bin 5 emissions standards on an individual model basis	24	
			●	Powersports Products All Honda non-competition powersports products released in FY2011 met or surpassed EPA and CARB emissions requirements	32			
			●	Power Equipment All power equipment and marine engines met EPA Phase III exhaust and evaporative emissions standards	34			

¹ Honda’s calculation of product recyclability is based on the ISO standard 22628, titled “Road Vehicles Recyclability and Recoverability Calculation Method,” which bases its estimates on existing, proven treatment technologies and takes into account the mass of materials recycled, reused, recovered for energy, or otherwise diverted from landfill disposal. In addition to these guidelines, Honda’s calculation also takes into account recyclable mass within nonmetal residue.



Objectives, Targets, and Results

(continued)

Summary (Table 2 of 3)		<ul style="list-style-type: none"> ● = achieved goal ▲ = made progress toward goal ■ = no progress or improvement 				
CATEGORY	MAJOR OBJECTIVES	FY2011 TARGETS	FY2011 RESULTS	LINK		
Purchasing	CO ₂ Emissions	Promote more energy-efficient operations within Honda's North American supply chain	<ul style="list-style-type: none"> ● Held 18th annual Environmental, Safety and Ergonomics supplier symposium, including Honda Green Factory Achievement recognition, to share best practices and recognize supplier "green factory" innovations 	43		
		Adopt more efficient parts logistics processes		<ul style="list-style-type: none"> ● Avoided 5.6 million pounds of CO₂ emissions associated with parts shipments through increased cube utilization and dynamic load planning 	42	
			<ul style="list-style-type: none"> ● Avoided 3.15 million pounds of CO₂ emissions associated with parts shipments through efforts to reduce shipment associated with Saturday production 			
			<ul style="list-style-type: none"> ● Introduced revised Honda Green Purchasing guidelines for North American suppliers 	41		
Manufacturing	CO ₂ Emissions	Improve energy efficiency of manufacturing operations	Reduce the energy intensity of manufacturing operations	<ul style="list-style-type: none"> ● Automobiles 	CO ₂ emissions from automobile production were reduced 3.7% from the previous fiscal year, to 727 kg/auto	47
				<ul style="list-style-type: none"> ● Powersports Products 	CO ₂ emissions from powersports product production were reduced 43% from the previous fiscal year, to 269 kg/unit	
				<ul style="list-style-type: none"> ● Power Equipment 	CO ₂ emissions from power equipment production were reduced 10.6% from the previous fiscal year, to 9.3 kg/unit	
Waste	Reduce waste material generated as a result of manufacturing processes	Achieve near-zero (less than 1%) waste to landfill at all North American manufacturing facilities by end of FY2011	<ul style="list-style-type: none"> ● 10 of 14 plants achieved zero waste to landfill as of March 31, 2011 		52	
				<ul style="list-style-type: none"> ● Total waste to landfills from N.A. manufacturing plants was reduced to 0.5% of total manufacturing waste 	51	
Water Use	Improve the water use intensity of automobile manufacturing operations	Maintain or improve water use intensity of automobile production from FY2008 levels	<ul style="list-style-type: none"> ■ Water use intensity in automobile production was up 5.1% from the previous fiscal year, to 820 gal/unit and up 17.1% from FY2008 levels 	54		



Objectives, Targets, and Results

(continued)

Summary (Table 3 of 3)				<ul style="list-style-type: none"> ● = achieved goal ▲ = made progress toward goal ■ = no progress or improvement 	
CATEGORY	MAJOR OBJECTIVES	FY2011 TARGETS	FY2011 RESULTS	LINK	
Sales & Service	CO ₂ Emissions	Shift to more fuel-efficient modes of distributing finished products and service parts	Reduce CO ₂ emissions associated with the shipment of finished products and service parts	<ul style="list-style-type: none"> ● All Honda and Acura automobiles delivered in the U.S. in FY2011 were moved by carriers certified under the U.S. EPA's SmartWay Transport program Replaced 15 of 210 trucks in American Honda's U.S. service parts delivery fleet with EPA SmartWay Transport-certified trucks 	60
		Reduce vehicle miles traveled through more efficient logistics and driving methods		<ul style="list-style-type: none"> CO₂ emissions from U.S. parts shipments were reduced 813 metric tons through the use of Route Tracker technology 	61
		Improve utilization of shipping capacity		<ul style="list-style-type: none"> CO₂ emissions from service parts shipments in the U.S. were reduced 2,400 metric tons through improved cube efficiency 	60
	Waste		Reduce the volume of packaging and shipping materials being sent to landfills	<ul style="list-style-type: none"> ● Eliminated 2.2 million pounds of corrugated packaging material Eliminated 210,000 wood pallets through improved cube efficiency; and recycled 182,681 pallets 	62
End-of-Life	Waste	Increase the supply and variety of remanufactured service parts	Increase the number of remanufactured parts available for customer purchase	<ul style="list-style-type: none"> ● Introduced 44 new remanufactured parts numbers 	64
		Reduce the flow of overstock and end-of-life parts into the waste stream	Reduce the quantity of parts sent to landfills	<ul style="list-style-type: none"> ● Diverted from landfills nearly 60,000 pieces of electronic waste and 1.8 million pounds of overstock parts from landfills 	
Administration	Green Building	Certifying facilities to LEED green building standards	Certify new buildings to U.S. Green Building Council LEED standards	<ul style="list-style-type: none"> ● Three additional U.S. facilities achieved LEED green-building certification 	68
	CO ₂ Emissions	Adopt more energy efficient processes and deploy more energy efficient office equipment	Reduce energy consumption from administrative functions	<ul style="list-style-type: none"> ● Installed new, more energy-efficient computer servers at U.S. headquarters of American Honda 	71

Addressing Global Climate Change

Honda embraces its responsibility to help meet the challenges of climate change. Recognizing that climate change is a global phenomenon, Honda is committed to continuing efforts aimed at minimizing its environmental impact, both regionally and globally, with a particular emphasis on the reduction of carbon dioxide (CO₂) emissions.

Honda's Assessment of Risks and Opportunities in Relation to Climate Change and Energy Issues

Honda identifies risks and opportunities relating to climate change and energy issues from the perspectives of its business operations in the areas of automobiles, power sports, and power equipment products, and from a regional perspective under its regional operational management structure. Risks and opportunities are then assessed on a global basis by the World Environmental Committee. Findings from these risk and opportunity analyses are also used by regional operations and regional environmental committees, and by business divisions and functional operations, in the formulation of management policies and strategies. This risk management process is carried out annually or as required by the global Honda group, and for each region, product, and business site.

As shown in the diagram, Honda assesses on a global basis currently anticipated risks and opportunities in relation to climate change and energy issues. As these risks and opportunities are identified, they are reflected in Honda's mid-term management plans and the planning of specific environment-related initiatives.

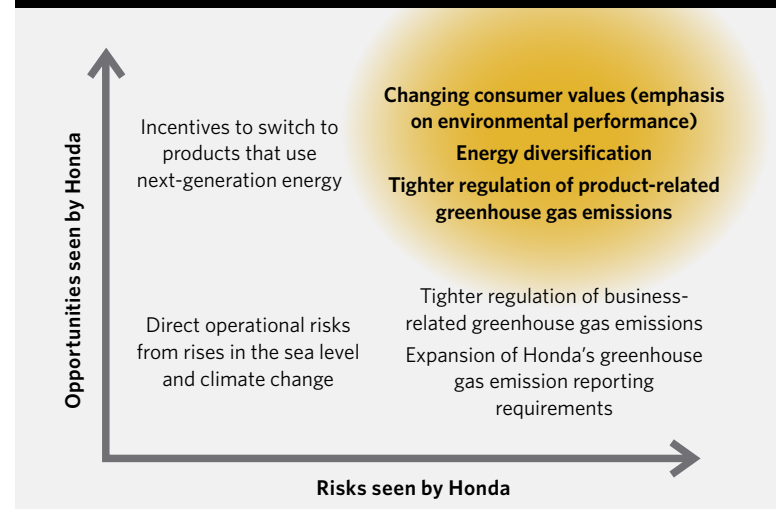
For example, to minimize risks related to the regulation of greenhouse gas emissions from products, Honda is actively working to reduce CO₂ emissions from its products. It has achieved its 2010 reduction targets for CO₂ emissions. These targets cover more than 90% of all automobiles, motorcycles, and power equipment products sold by Honda worldwide (see page 13) and set emissions reduction targets for new products introduced in the period from 2010 to 2020.

As consumers become more environmentally conscious, their values are changing and energy use is becoming more diversified. Honda is responding to these changes by developing, manufacturing,

and selling solar cells in Japan and by developing a solar-powered hydrogen station. The company has also initiated trials in Japan, the United States, and China to verify the benefits in the area of mobility, combining power technologies and information and communication technologies to realize a future, low-carbon society. Honda will progressively introduce new products resulting from this work.

Honda's efforts to meet greenhouse gas emissions standards relating to its corporate activities involve cooperation across all domains and regions.

Honda's Thinking on Risks and Opportunities of Climate Change and Energy Issues from a Global Perspective



Addressing Global Climate Change

Voluntary CO₂ Emissions Reduction Goals

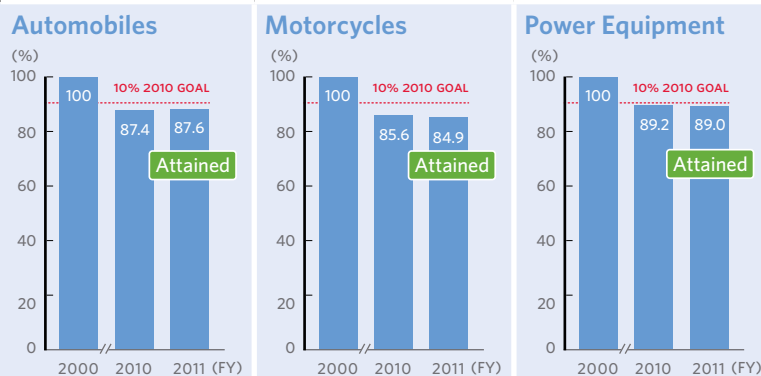
Honda predicts that demand for motor vehicles and other mobility products will continue to grow in the future. This means that Honda must work to achieve the conflicting goals of mitigating global climate change and keeping pace with growth in consumer demand.

Completion of 2010 Global CO₂ Emissions Reduction Goals

In 2006, the company adopted voluntary global CO₂ reduction targets with the aim of maintaining its ability to supply customers with products that have the lowest CO₂ emissions intensity through corporate activities that also have the lowest CO₂ emissions intensity. When setting these targets, Honda sought to lead the industry in improving the energy efficiency of both products and production operations. All of these targets have been achieved except one — the CO₂ emissions intensity of automobile production — which was not attained due to the very large reduction in vehicle production

levels as a result of global economic crisis in late 2008 and 2009. Honda was particularly successful in its efforts to improve the energy efficiency of its products: all targets relating to automobiles, motorcycles, and power equipment products were achieved. While the target for reductions in the CO₂ emissions intensity of automobile production could not be achieved, Honda still achieved a significant improvement in the energy efficiency of its production operations through the worldwide implementation of standardized measures to reduce CO₂ emissions.

Progress Toward CO₂ Reduction Targets for 2010 — Products

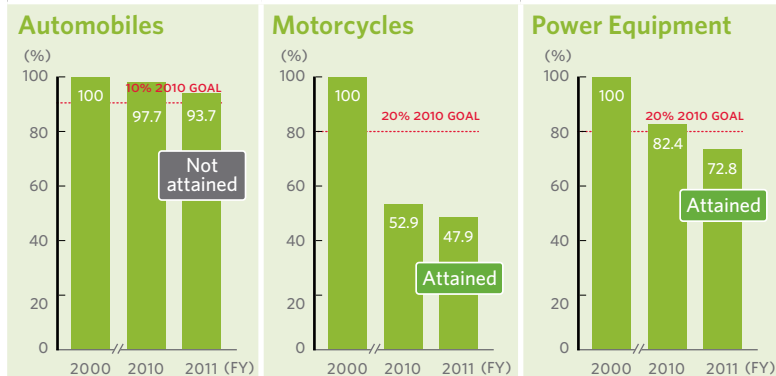


The 12.4% reduction attained surpassed the target. This reflects increased sales of fuel-efficient products, such as compact and hybrid vehicles, especially in developed countries, as well as improvements in the efficiency of engines in large vehicles.

The 14.1% reduction attained surpassed the target due to substantial increases in sales of the Wave110 scooter, which provides improved fuel efficiency, in Thailand and Vietnam, and compact vehicles with programmed fuel injection (PGM-FI) systems in Brazil.

Despite a decline in sales of compact household cogeneration units, which already had relatively low CO₂ emissions, improvements in the efficiency of large engines brought further reductions in emissions, resulting in an 11% reduction, greater than the target level of 10%.

Progress Toward CO₂ Reduction Targets for 2010 — Production



The target was not attained, in part because of substantial reductions in the number of units produced and sold as a result of the economic crisis. However, CO₂ emissions per unit produced were reduced 4.0% since fiscal 2010, mainly through improvements to the efficiency of production facilities.

CO₂ emissions per unit of production for motorcycles was reduced 52.1%, significantly better than the target level, as a result of initiatives that included the consolidation of production sites and the reduction of energy use during non-production periods.

A reduction of 27.2% in CO₂ emissions per unit of production surpassed the target level, in part through measures to reduce energy use during non-production periods.

Addressing Global Climate Change

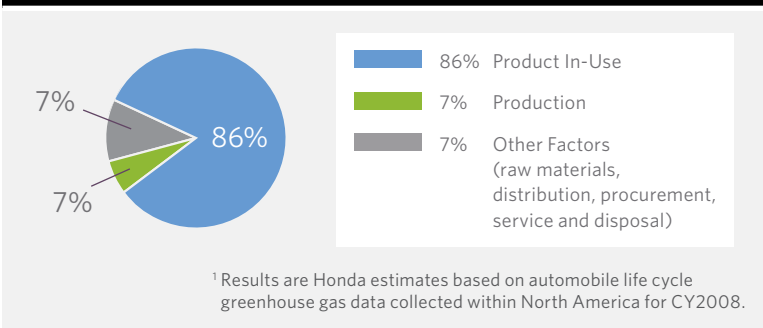
Voluntary CO₂ Emissions Reduction Goals

(continued)

Honda regards climate change and energy use as its most important challenges, and one of the key issues in addressing both challenges is the reduction of CO₂.

Honda Life Cycle Assessment Approach to CO₂ Emissions Reduction

Sources of Automobile Life-Cycle GHG Emissions¹



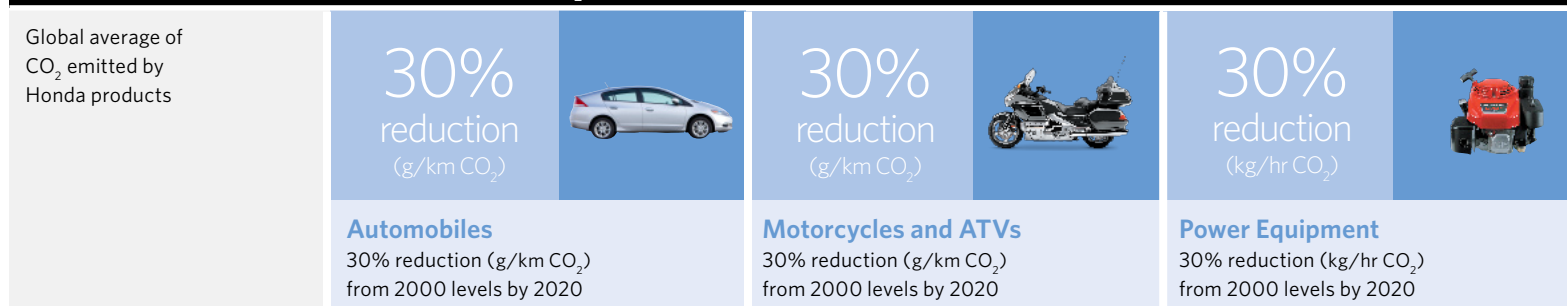
Estimates made using the Honda Life Cycle Assessment (LCA) Data System indicate that about 86% of Honda-related CO₂ emissions come from the product in-use stage. For this reason, Honda believes that the most important way for it to respond to climate change and energy issues is to reduce CO₂ emissions from its products during their use by Honda customers.

2020 Target to Reduce Product In-Use CO₂ Emissions

Having achieved all but one of its CO₂ emission reduction targets for fiscal 2010 products, Honda has set new global targets for 2020, including a

30% reduction in CO₂ emissions from Honda automobiles, motorcycles (and ATVs), and power equipment products, compared with 2000 levels.

2020 Reduction Targets for Product-Related CO₂ (compared with 2000)



Scope of targets

Automobiles: Japan, North America, Europe, Asia/Oceania, China, Central and South America (more than 90% of worldwide sales)

Motorcycles: Japan, North America, Europe, Thailand, India, China, Indonesia, Vietnam, Brazil, Philippines, Malaysia, Pakistan (more than 90% of worldwide sales)

Power Equipment: Products sold in all regions (excluding marine outboards)

Addressing Global Climate Change

Climate Change Policy

Honda's Outlook on Climate Change Policy

Honda develops environmental technologies and manufacturing processes that result in lower greenhouse gas emissions (GHGs) and more fuel-efficient products while delivering the performance, quality, and reliability that customers expect. Honda's environmental leadership is the result of its investment in original technology and its dedication to integrating the latest fuel-efficient technologies into its products. Honda believes that no single technology holds the key to the world's energy future. Accordingly, Honda believes in a "portfolio approach" that pursues multiple technology pathways

and seeks to comprehensively address the challenges associated with the deployment of new energy and vehicle technologies. At the same time, we recognize that a successful GHG program requires consumer acceptance of the vehicles and alternative fuels developed to reduce GHG emissions. Solving an environmental challenge as complex as global climate change requires the concerted efforts of industry, government, and consumers.

Using this philosophy as a foundation, Honda takes the following positions on current climate change mitigation strategies.

Public Policy Initiatives	Honda's Position
Federal Fuel Economy Standards — Greenhouse Gas Emissions Standards	Honda believes mandates on vehicle and product performance should be adopted at the federal level as a single national standard, as opposed to a state-by-state approach, as exhibited by the adoption of the White House initiative for harmonized national fuel economy/GHG emissions standard for vehicle model years 2012-2016. Honda continues to advocate for a single national standard as the U.S. Administration, California, automakers, and other stakeholders work together to develop and adopt new fuel economy/GHG emissions standards for model years 2017-2025. In today's marketplace, vehicles and other gasoline-powered products, such as lawn-care products, are designed, built, and distributed to meet the needs of an entire country, and sold nationwide. Efforts to apply the standards of a single state or province on a nationwide basis will inevitably result in inefficiencies, customer dissatisfaction, and increased costs to consumers.
Incentives	Incentives implemented by government entities can be constructive in stimulating nascent and expensive technologies, such as those used in fuel cell electric vehicles, natural gas vehicles, battery-electric vehicles, and plug-in hybrid electric vehicles. Incentives should be technology neutral, performance based, and limited in duration. Financial incentives, such as consumer tax credits, and non-financial incentives, such as HOV lane access for advanced technology vehicles, can help stimulate demand and enlarge the market for those types of automobiles. At the same time, the HOV incentive should be balanced with the overall purpose of the carpool lanes, which is congestion mitigation and air-quality improvement.
Registries	Any regulatory approach that is calibrated to baseline emissions requires registries that accurately reflect the current situation. Registries should be nationwide to ensure consistent and reliable reporting. Honda supports the U.S. EPA mandatory greenhouse gas reporting rule.
Cap-and-Trade	Cap-and-trade policies can penalize companies that are growing their market share while providing an unearned windfall to companies that are losing market share. With respect to mobile sources, GHG regulations already address CO ₂ emissions, thus cap-and-trade is unnecessary.
Biofuels	Biofuels offer promising opportunities to displace petroleum and could reduce GHG emissions. However, some biofuels are more effective at achieving this objective, and are more sustainable and economically viable than others. Compatibility with existing and future products, a viable distribution network, and a refueling infrastructure are all critical considerations. Specifically, given that ethanol is not compatible with legacy products, government must assure that legacy fuels remain in the marketplace, as well as introduce strong safeguards to prevent misfueling by consumers.

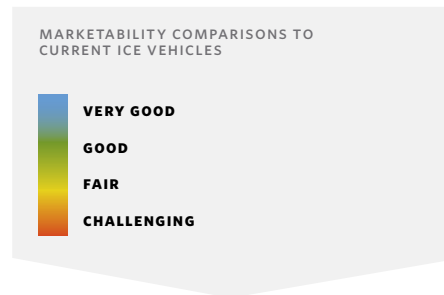
Addressing Global Climate Change

Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions

Honda is pursuing a “portfolio approach” to addressing both greenhouse gas emissions and the energy issue, a strategy that encompasses multiple technology pathways and seeks to comprehensively address the challenges associated with the deployment of new energy and vehicle technologies. Honda’s goal is the advancement of each technology path toward real-world deployments and the accumulation of experience that will help to improve both the technology and market conditions necessary to realize broad-based demand for more fuel-efficient and alternative fuel technologies.

The chart that follows seeks to provide Honda’s perspective in the North American market with respect to this portfolio approach, and to present a clear, concise, and contemporary rating system for various technologies with respect to their potential benefits to society—in the areas of air quality, GHG reduction, and energy security (reduced petroleum consumption)—and the unique

challenges to the marketability of each technology. Without this “scorecard” it can be easy to think that a single technology holds the most promise; however, every new technology involves risks and uncertainties. Technology uncertainties, social benefits, and marketability judgments altogether strengthen Honda’s resolve to proceed along a portfolio approach.



Many of these judgments are difficult, and may shift over time as information becomes clearer, technologies evolve, or circumstances change. For now, these color-coded references serve as a quick comparison between the current promise of these technologies and strategies for the North American market.

	SOCIAL VALUES			MARKETABILITY				Honda's effort
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
Improved Gasoline Internal Combustion Engine (ICE)	VERY GOOD	FAIR	FAIR	VERY GOOD	GOOD	VERY GOOD	VERY GOOD	<ul style="list-style-type: none"> Honda’s ICEs are already more advanced than the average ICE in the industry, including 100% application of variable valve timing, wide application of low-friction engine technologies, the increasing application of variable cylinder management, etc. Honda has plans in place to introduce advanced, new engine, and transmission technologies over the next decade as a central part of its voluntary commitment to a 30% reduction in CO₂ emissions from its automobile, motorcycle, and power equipment products by 2020, as compared to a 2000 baseline level.
	<ul style="list-style-type: none"> There remain significant opportunities to further improve the fuel efficiency of the gasoline internal combustion engine (ICE). Fuel efficiency improvements directly correlate with both GHG and petroleum reductions. Improved ICE presents the greatest short- to mid-term overall benefit to social values because of its existing high volumes and broad marketability. 			<ul style="list-style-type: none"> The incremental costs of improving ICEs should be paid back by fuel savings over several years even under current, moderate fuel prices. Improved gasoline ICEs are proven to be appealing and well accepted by consumers. 				

Addressing Global Climate Change

Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions

(continued)

	SOCIAL VALUES			MARKETABILITY				Honda's effort
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
Natural Gas	VERY GOOD	GOOD	VERY GOOD	CHALLENGING	FAIR	GOOD	GOOD	<ul style="list-style-type: none"> • Honda launched a 4th-generation natural gas-powered Civic in October 2011. This new 2012 Civic Natural Gas delivers increased fuel efficiency and driving range. • Honda began selling natural gas vehicles in 1998 to U.S. fleet customers, extending sales to retail customers in 2001. The company has steadily expanded its market footprint in the U.S. — and will market the new 2012 Civic Natural Gas to retail customers through nearly 200 Honda dealers in 36 U.S. states.
Diesel	GOOD	FAIR	GOOD	GOOD	FAIR	VERY GOOD	GOOD	<ul style="list-style-type: none"> • Honda actively markets 2.2-liter i-DTEC™ diesel engine technology in Europe, where diesel fuel is priced significantly lower than gasoline.
Biofuels	VERY GOOD	POOR - VERY GOOD	GOOD	POOR - VERY GOOD	FAIR - GOOD	VERY GOOD	FAIR	<ul style="list-style-type: none"> • All Honda and Acura automobiles, as well as the company's motorcycle and power equipment products, are capable of operating using E10 (10% ethanol in gasoline). Honda is researching the feasibility of higher blends, including mid-level blends such as E15 or E20, for cars and light trucks only. • In partnership with the Research Institute of Innovative Technology for the Earth (RITE) in Japan, Honda is conducting independent research into the efficient production of ethanol from cellulosic feedstocks.

- Natural gas is an abundant, inexpensive, and domestic fuel.
- ICEs optimized for natural gas can produce zero particulate emissions (Air Quality) and 25% fewer CO₂ emissions (GHG Reduction) than a gasoline-powered vehicle.
- Since natural gas is a domestic alternative to petroleum, it is excellent for energy security.
- Continued attention should be paid to the methods of extracting natural gas to ensure there are no substantial negative environmental or public health impacts.

- Public refueling stations remain the single biggest obstacle to the widespread adoption of natural gas vehicles.
- The cost premium for natural gas vehicles is roughly the same as that of a hybrid automobile, with the potential for further reductions. This cost premium can be offset by the lower fuel cost.
- Vehicle utility, such as cargo space, can be impacted by the space required for fuel storage.
- Natural gas vehicles offer performance, safety, and comfort on par with their gasoline counterparts.

- Modern diesel engines can meet stringent emissions standards.
- Diesel contains 13% more carbon than gasoline, therefore the CO₂ emissions reduction potential is less than the efficiency improvement, resulting in a score of "fair" for GHG reduction.
- Diesel engines offer up to 30% fuel-efficiency gains over current ICE technology, which is good for energy security.

- Diesel engines typically cost significantly more than their gasoline version. In some markets diesel fuel is much cheaper than gasoline, so the fuel savings can pay for the incremental diesel engine cost. The price of diesel fuel in North America is, however, not less expensive than gasoline, and this is expected to continue into the future. Therefore, the added cost of the engines, together with the higher-priced fuel, results in an overall higher cost.
- The reputation of diesel technology has improved in recent years with improvements in performance, emissions, and noise.

- Depending upon their sources and their processes, the greenhouse gas emissions from biofuels vary significantly.
- Biofuels offer significant opportunities to reduce petroleum use, although the scalability and volume potential of biofuels is unclear, hence the "good" rating.
- The greatest challenge is achieving sustainable biofuel processes that minimize impacts on land, water, and food.

- Infrastructure varies significantly: ethanol requires new infrastructure for the transportation of the fuel, however some biofuels are "drop-in" fuels like bio-butanol or bio-diesel. Drop-in fuels have the potential to fit directly into existing infrastructure.
- Biofuels resulting in ethanol are less appealing to consumers since they must refuel more frequently due to less energy per gallon of fuel.

Addressing Global Climate Change

Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions

(continued)

	SOCIAL VALUES			MARKETABILITY				Honda's effort
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
Hybrid Electric Vehicles	VERY GOOD	GOOD	GOOD	VERY GOOD	FAIR	VERY GOOD	VERY GOOD	<ul style="list-style-type: none"> Honda pioneered hybrids in the U.S. and Canada with the launch of the Insight hybrid vehicle in 1999. The company has steadily advanced its Integrated Motor Assist™ (IMA™) hybrid system to increase its efficiency and performance. In FY2011, Honda marketed three distinct hybrid models in North America— the Insight, the CR-Z Sport Hybrid, and the Civic Hybrid. A new-generation Civic Hybrid was introduced in the spring of 2011, delivering the highest fuel economy (44 mpg EPA rated) of any sedan in the U.S., while increasing its appeal with respect to performance, comfort, customer-friendly technology, and safety.
Plug-In Hybrid Electric Vehicles	VERY GOOD	GOOD	VERY GOOD	FAIR	CHALLENGING	GOOD	VERY GOOD	<ul style="list-style-type: none"> Honda is developing a new plug-in hybrid vehicle on a midsize sedan platform that uses a new Honda-developed two-motor hybrid system. The new Honda plug-in hybrid vehicle is scheduled for launch in the U.S. in 2012.
Battery Electric Vehicles	VERY GOOD	GOOD	VERY GOOD	CHALLENGING	CHALLENGING	CHALLENGING	VERY GOOD	<ul style="list-style-type: none"> Honda was the first to market an advanced battery electric vehicle in the U.S., the Honda EV Plus, between 1997 and 2003. EV plus used advanced NiMH batteries. Honda plans to lease its new Fit EV battery-electric vehicles to consumers in California and Oregon beginning in Summer 2012, expanding to six East Coast markets in early 2013. Honda estimates that the Fit EV will have an EPA estimated combined city/highway driving range of 76 miles (adjusted label value) from its 20 kWh battery pack, capable of a full recharge at home in as little as three hours.

Addressing Global Climate Change

Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions

(continued)

	SOCIAL VALUES			MARKETABILITY				Honda's effort
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
Fuel Cell Electric Vehicles	VERY GOOD	VERY GOOD	VERY GOOD	CHALLENGING	CHALLENGING	VERY GOOD	VERY GOOD	<ul style="list-style-type: none"> • Honda's FCX Clarity packages Honda fuel cell technology in a full utility four-passenger sedan. • Honda has had programs for consumer evaluation of the FCX and FCX Clarity, in operation since 2005. • Honda is working to advance not only FCEV powertrain technology, but also systems for hydrogen production and distribution, such as an experimental solar-powered hydrogen refueling station in operation at its U.S. R&D headquarters in Torrance, California.
	<ul style="list-style-type: none"> • On a wells-to-wheel basis, most hydrogen pathways are extremely clean, and hydrogen is identified by the California Air Resources Board as one of its ultra-low-carbon fuel pathways. • Hydrogen can be sourced in many different ways, including from electrolysis and from reformed natural gas. Either of these two methods replaces petroleum. 			<ul style="list-style-type: none"> • The cost of fuel cell technology and the very limited refueling infrastructure remain significant barriers. • Fuel cell vehicles deliver performance, utility, comfort, and driving range virtually on par with conventional gasoline-powered automobiles. 				

Technology Approach

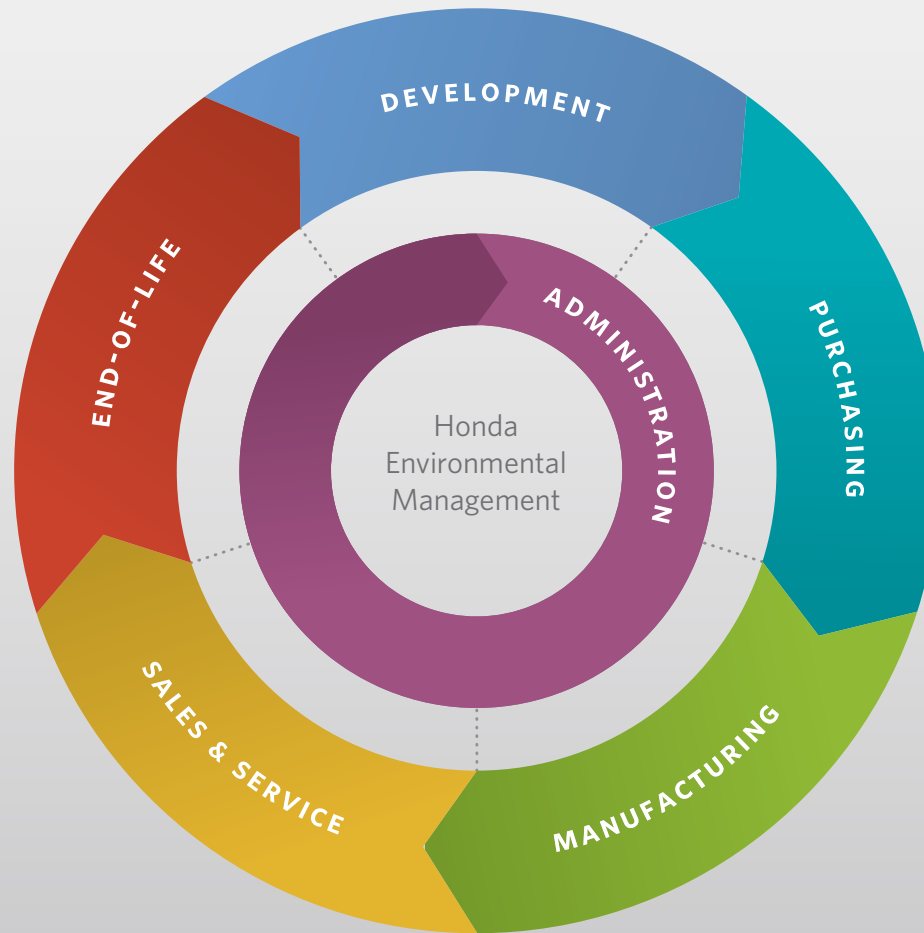
Technologies that apply to all vehicles, regardless of fuel or type of powertrain

	SOCIAL VALUE	MARKETABILITY	Honda's effort
Reducing Running Resistance	<ul style="list-style-type: none"> • Improved aerodynamic design, reduced tire rolling resistance, and lower vehicle mass can improve the fuel efficiency of any type of vehicle regardless of powertrain or energy source. • This has a positive effect on both GHG reduction and petroleum consumption. 	<ul style="list-style-type: none"> • Efforts to reduce running resistance must be taken into account with other factors, including vehicle cost, performance, safety, and utility, in order to meet the expectations of customers while simultaneously advancing the social benefits of new products. 	<ul style="list-style-type: none"> • Honda is continually researching new means of reducing vehicle running resistance while delivering on the performance, utility, and safety requirements its customers demand. • All new Honda and Acura vehicles introduced over the past several years have used increasing amounts of high-strength steel, which typically accounts for half or more of a new Honda or Acura vehicle's body structure, among the highest levels in the industry. • The company is continually exploring methods of reducing weight, including new materials and methods of body design, to allow for further reductions in weight while maintaining high levels of safety and customer value. • The company recently commissioned a new wind tunnel facility in Ohio that is designed to help engineers realize further improvements in aerodynamic efficiency at early stages of new vehicle development.

Life Cycle Assessment

Honda recognizes Life Cycle Assessment (LCA) as a critical tool for understanding the impact of its products and operations on the environment, and is working to minimize that impact in virtually every aspect of its business.

Click on any color-coded segment of the diagram for more detail.



DEVELOPMENT

In-use and end-of-life impact of Honda products on the environment as a result of product design, including fuel efficiency, the use of virgin, non-recyclable and potentially toxic materials, and the ease with which products can be effectively disassembled for recycling at the end of their useful life.



PURCHASING

Resource consumption, air emissions, toxic releases, and waste associated with the production of component parts manufactured by original equipment suppliers.



MANUFACTURING

Resource consumption, air emissions, toxic releases, and waste associated with the production and final assembly of Honda products in Honda's own manufacturing plants.



SALES & SERVICE

Emissions and waste from the effort to support the sales and servicing of Honda products in the marketplace, including the shipment of service parts and finished products between suppliers, warehouses, and dealers.



END-OF-LIFE

Waste and toxic emissions from the disposal of Honda products and parts at the end of their useful life.



ADMINISTRATION

Energy consumption, emissions, and waste resulting from the operation of Honda's offices and warehouse facilities.

Product Development



Honda products are developed locally and globally. Honda operates 16 major R&D facilities in North America that are engaged in the creation of new products — from initial concept all the way through to support for mass production.

OVERVIEW

The reduction of Honda's environmental impact begins with the development of products that use fuel more efficiently, contain fewer substances that are potentially harmful to the environment, are designed to be manufactured using fewer scarce or non-recyclable materials, and offer improved ease of dismantling to accommodate the recycling of materials at the end of a product's useful life.

FOCUS

The single largest impact of Honda's products on the environment comes from the consumption of non-renewable fossil fuels and the byproducts of fuel combustion, including CO₂ emissions, during customer use. Honda is pursuing further advances in product fuel efficiency as the core of its commitment to reduce the environmental impact of its products.

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
Substances of Concern (SOCs)	Continue to reduce SOCs in Honda and Acura products where technically and economically practical	Continued implementation of International Materials Data System (IMDS) for parts and materials sourced from suppliers globally	37
PVC	New models achieve Honda's target of a less than 1% concentration of chlorine in materials that could end up in the waste stream as shredder residue	Three new models introduced in FY2011 achieve Honda's target for reduction in the use of PVC	39
End-of-Life Recyclability	Maintain a minimum 90% level of design recyclability for automobiles, and 95% for powersports and power equipment products	Maintained 90% level of design recyclability ¹ for all new Honda and Acura models sold in North America	36
		Maintained 95% level of design recyclability for all powersports and power equipment products sold in North America	

¹ Honda's calculation of product recyclability is based on the ISO standard 22628, titled "Road Vehicles Recyclability and Recoverability Calculation Method," which bases its estimates on existing, proven treatment technologies and takes into account the mass of materials recycled, reused, recovered for energy, or otherwise diverted from landfill disposal. In addition to these guidelines, Honda's calculation also takes into account the recyclable mass within nonmetal residue.

Product Development Automobiles

Product Development Automobiles

Overview

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
CO ₂ Emissions	Increase U.S. CAFE by 5% over MY2006 levels by 2010	U.S. CAFE for MY2010 Honda and Acura automobiles was increased 8.7% from MY2006 levels, to 31.7 mpg	23
	Improve the real-world appeal and practicality of electrically powered vehicles, such as fuel-cell electric vehicles, and supporting infrastructure	Introduced Fit EV Concept and new Honda plug-in hybrid platform Continued leasing of FCX Clarity fuel cell electric vehicles to customers in Southern California	30
Criteria Air Pollutants	Meet or surpass all regulatory requirements applicable to new Honda and Acura products	All Honda and Acura vehicles marketed in the U.S. and Canada in FY2011 met or surpassed U.S. EPA and Transport Canada Tier 2 Bin 5 emissions standards on an individual model basis	24



The Automobile segment includes Honda and Acura brand passenger cars, minivans, sport-utility vehicles, and pickup trucks.

Product Development
Automobiles
Fuel Efficiency

Gains in fuel efficiency are the most direct way to achieve lower CO₂ emissions from automobiles. In order to achieve significant near-term reductions in CO₂ emissions, which contribute to global climate change, Honda is accelerating its efforts to further improve automobile fuel efficiency. Honda's commitment to automobile fuel efficiency can be traced back to the introduction of the first-generation Honda Civic, which, in addition to being the first vehicle to meet U.S. Clean Air Act emissions standards without the need for a catalytic converter, earned the top ranking in the first-ever U.S. EPA fuel economy ratings, in 1974. Honda as a corporation has led the EPA's annual composite adjusted fuel-economy rankings for 22 of the past 36 years.

Corporate Average Fuel Economy

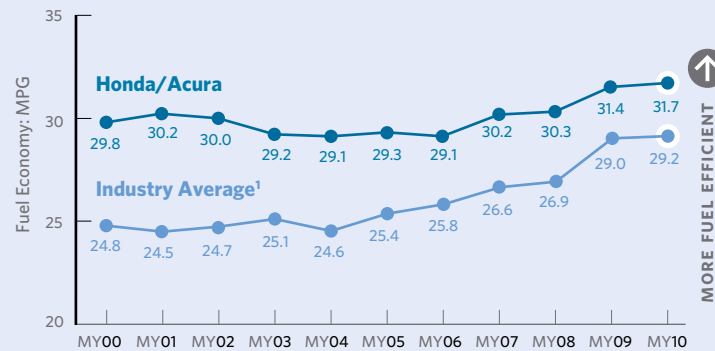
Honda's Corporate Average Fuel Economy (CAFE) and Corporate Average Fuel Consumption (CAFC), as determined by the U.S. Department of Transportation and Transport Canada, respectively, have continued to improve since model year 2006 (MY2006). This occurred after a moderate decline, from MY2001 to MY2004,

because of the increased ratio of light trucks to passenger cars in the company's U.S. and Canada automobile fleets. Increases in the sale of Honda and Acura light trucks since 2003 have been more than offset by technological and efficiency improvements in the company's total product lineup.

U.S. Car and Light Truck Fuel Economy (CAFE)



The U.S. Environmental Protection Agency (EPA) calculates "fuel economy" by the amount of miles traveled per gallon of gasoline for cars and light trucks, and calculates a sales-weighted Corporate Average Fuel Economy (CAFE) number for both passenger cars and light trucks. The combined values shown here are for comparison purposes only.

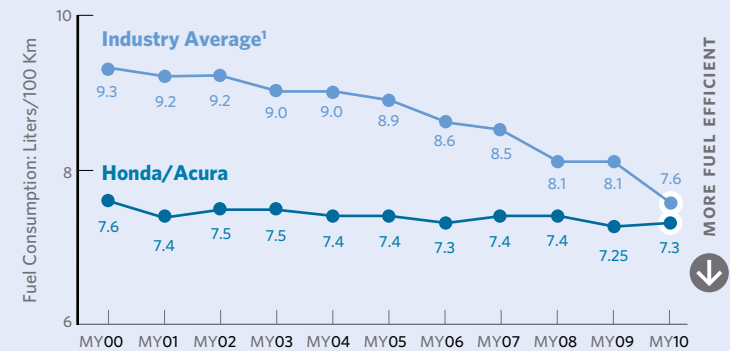


¹ Industry average for model year 2010 is Honda's estimate based on each manufacturer's mid-model-year CAFE/CAFC report as submitted to the NHTSA or Transport Canada.

Canadian Car and Light Truck Fuel Consumption (CAFC)



Transport Canada calculates "fuel consumption" by the amount of fuel consumed per kilometer traveled. Transport Canada does not issue a combined number for cars and light trucks. The combined numbers reported below were calculated by Honda, using Transport Canada car and light truck CAFC results, along with available calendar year sales data.



EPA Fuel Economy

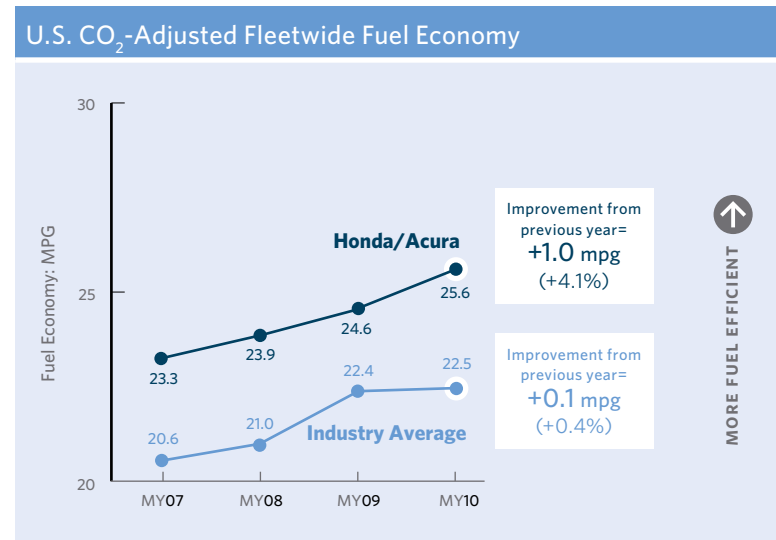
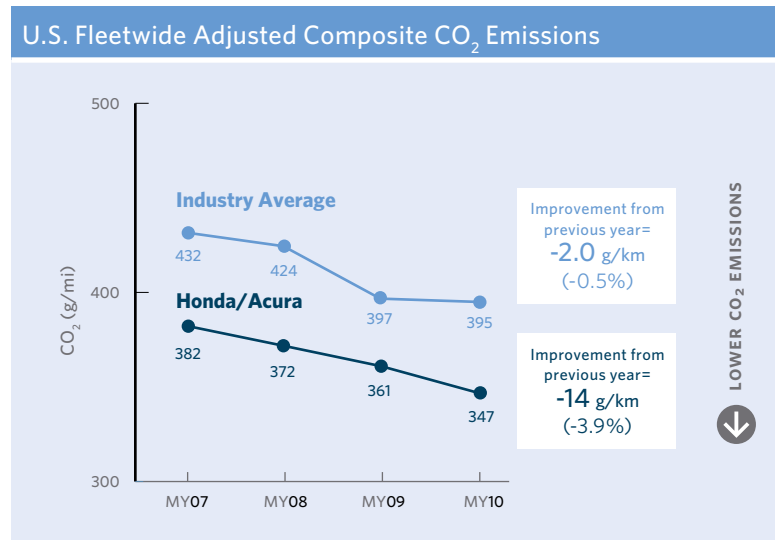
Honda introduced EPA fuel economy ratings to the North American Environmental Report for the first time in 2010. The U.S. EPA annually issues a report on fuel economy that uses values that are adjusted to better reflect the real-world experience of customers with respect to fuel economy. The EPA released its most recent report on fuel economy trends in the U.S. in November 2010.

In MY2010, the most recent year for which the EPA has complete and final production data, the EPA composite fuel economy rating for American Honda, which includes both Honda and Acura vehicles, rose 1.0 mpg, or 4.1%, to 25.6 mpg, substantially outperforming the industry and ranking among the lowest fleetwide adjusted composite CO₂ emissions and highest fuel economy ratings of any automakers operating in the U.S.

Product Development

Automobiles

Fuel Economy
Criteria Air Pollutants



Source: U.S. Environmental Protection Agency: Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2010, published November 2010

Automobile Exhaust Emissions — Compliance with Tier 2 Emissions Standards

Honda has consistently played a leading role in reducing vehicle exhaust emissions, and in meeting and exceeding U.S. federal vehicle emissions standards (see environmental milestones). Beginning in model year 2007, every Honda and Acura vehicle sold in the United States and in Canada meets or exceeds the U.S. EPA and Transport Canada Tier 2 emissions standards. Due to the challenging nature

of these standards, all automakers are permitted to use fleetwide averaging to meet the requirements; however, Honda and Acura automobiles meet these standards on an individual model basis without the need for fleet averaging ([see next page](#) for a table of Honda and Acura U.S. automobile emissions ratings).

Product Development Automobiles

Technology
Application

Application of Technology for Improved Fuel Efficiency and Reduced Emissions

Honda is applying a broad range of existing advanced technologies, such as VTEC™ (Variable Valve Timing and Lift Electronic Control™) valvetrain technology, to its full range of Honda and Acura automobiles in order to improve fuel efficiency and decrease exhaust emissions. Honda is also accelerating its efforts to develop and deploy technologies — such as its VCM™ (Variable Cylinder Management™) cylinder deactivation and Honda IMA™ (Integrated

Motor Assist™) hybrid systems — that will allow the company to further improve its products' environmental performance. More energy-efficient engines and transmissions, advancements in the use of lightweight materials, more aerodynamic vehicle bodies, low rolling resistance tires, and the further evolution of gasoline-electric hybrids will all play a critical role in future improvements to Honda's vehicle fleet fuel-efficiency and emissions performance.

Technology Application, Emissions, and Fuel Economy
for Selected Honda and Acura Automobiles in the United States and Canada*

	MODEL	ENGINE	TRANS- MISSION	VALVETRAIN	ELECTRIC POWER STEERING	CYLINDER DEACTIVATION	EMISSIONS		EPA FUEL ECONOMY		
							U.S. EPA	CARB	CITY	HWY	
Honda	Passenger Cars	CR-Z	1.5L I4 SOHC + IMA	CVT	16-valve <i>i</i> -VTEC	●		Tier 2 Bin 2	AT-PZEV	35	39
		Fit	1.5L I4 SOHC	5AT	16-valve <i>i</i> -VTEC	●		Tier 2 Bin 5	ULEV-2	28	35
		Insight	1.3L I4 SOHC	CVT	8-valve <i>i</i> -VTEC	●	●	Tier 2 Bin 3	AT-PZEV	40	43
		2012 Civic Sedan	1.8L I4 SOHC	5AT	16-valve <i>i</i> -VTEC	●		Tier 2 Bin 5	PZEV	28	39
		2012 Civic Hybrid	1.5L I4 SOHC + IMA	CVT	8-valve <i>i</i> -VTEC	●	●	Tier 2 Bin 3	AT-PZEV	44	44
		2012 Civic Natural Gas	1.8L I4 SOHC	5AT	16-valve <i>i</i> -VTEC			Tier 2 Bin 2 ILEV	AT-PZEV	27	38
		Accord Sedan	2.4L I4 DOHC	5AT	16-valve <i>i</i> -VTEC			Tier 2 Bin 5	PZEV	23	34
	Accord Crosstour (2WD)	3.5L V6 SOHC	5AT	24-valve <i>i</i> -VTEC		●	Tier 2 Bin 5	ULEV-2	18	27	
	Light Trucks	CR-V (4WD)	2.4L I4 DOHC	5AT	16-valve <i>i</i> -VTEC			Tier 2 Bin 5	ULEV-2	21	27
		Element (4WD)	2.4L I4 DOHC	5AT	16-valve <i>i</i> -VTEC			Tier 2 Bin 5	LEV-2	19	24
Odyssey†		3.5L V6 SOHC	6AT	24-valve <i>i</i> -VTEC	●	●	Tier 2 Bin 5	ULEV-2	19	28	
Pilot (4WD)		3.5L V6 SOHC	5AT	24-valve <i>i</i> -VTEC		●	Tier 2 Bin 5	ULEV-2	16	22	
Ridgeline		3.5L V6 SOHC	5AT	24-valve VTEC			Tier 2 Bin 5	ULEV-2	15	20	
Acura	Pass. Cars	TSX	2.4L I4 DOHC	5AT	16-valve <i>i</i> -VTEC	●		Tier 2 Bin 5	ULEV-2	22	31
		TSX	3.5L V6 SOHC	5AT	24-valve VTEC	●		Tier 2 Bin 5	ULEV-2	19	28
		2012 TL (2WD)	3.5L V6 SOHC	6AT	24-valve VTEC	●		Tier 2 Bin 5	ULEV-2	20	29
		RL (AWD)	3.7L V6 SOHC	6AT	24-valve VTEC			Tier 2 Bin 5	ULEV-2	17	24
	Light Trucks	MDX (AWD)	3.7L V6 SOHC	6AT	24-valve VTEC			Tier 2 Bin 5	ULEV-2	16	21
		RDX (2WD)	2.3L I4 DOHC Turbo	5AT	16-valve <i>i</i> -VTEC			Tier 2 Bin 5	ULEV-2	19	24
		ZDX (AWD)	3.7L V6 SOHC	6AT	24-valve VTEC			Tier 2 Bin 5	ULEV-2	16	23

* vehicles are model year 2011 unless otherwise specified

† Touring models

● = new since previous (FY2010) report

ACEEE 2011 Environmental Performance Ratings

The **American Council for an Energy-Efficient Economy** (ACEEE) performs an annual analysis of automakers' U.S. light-duty vehicle fleets. The independent rating is based on a single "green score" that takes into account a vehicle's exhaust emissions and its greenhouse gas emissions over the full product life cycle. Honda earned its 11th consecutive top rating with the natural gas-powered Civic GX, which earned the ACEEE's highest rating for the eighth straight year in 2011.

The Civic GX was joined on the ACEEE's list of America's top-12 greenest vehicles of 2011 by the Civic Hybrid, Insight, and Fit. Below are scores for Honda's highest-scoring model in each eligible vehicle class in which the company competes, as well as each model's class ranking and the highest and lowest scores recorded in each class. (Visit www.greencars.org for more information on the ACEEE rankings.)

ACEEE 2011 Green Scores for Honda and Acura

	ACEEE CLASS	MODEL	RANKING	GREEN SCORE	BEST-IN-CLASS SCORE	WORST-IN-CLASS SCORE
Honda	Two-Seaters	CR-Z	Superior	48	60	19
	Small Wagon	Fit (2010)	Superior	45	48	25
		Accord Crosstour	Below Average	37	48	25
	Compact Car	Insight	Superior	50	54	23
		Civic GX	Superior	54	54	23
		Civic Hybrid	Superior	51	54	23
		Civic	Above Average	46	54	23
	Midsize Car	Accord Sedan	Above Average	43	54	22
		Accord V6 Coupe	Average	39	54	22
	Compact SUV	CR-V (2WD)	Average	40	42	29
		Element (2WD)	Below Average	36	42	29
	Midsize SUV	Pilot	Average	33	41	21
	Minivan	Odyssey	Superior	37	37	31
Compact Pickup	Ridgeline	Below Average	30	39	27	
Acura	Compact Car	TSX (2010)	Average	39	54	23
	Midsize Car	TL	Average	36	54	22
		RL	Below Average	34	54	22
	Midsize SUV	RDX	Above Average	34	41	21
		MDX	Below Average	30	41	21
ZDX		Average	32	41	21	

Product Development Automobiles

Environmental
Performance Ratings

Product Development

Automobiles

Environmental Performance Ratings









(continued)

U.S. EPA SmartWay Ratings

In 2004, the U.S. EPA launched SmartWay as a new program designed in part to help consumers identify cleaner, more fuel-efficient transportation options. Each vehicle listed in EPA's Green Vehicle Guide receives an Air Pollution Score and a Greenhouse Gas Score, each operating on a scale of one to ten. For the SmartWay designation, a vehicle must get a combined score of at least 12, a minimum GHG score of 6, and a minimum air pollution score of 5. The SmartWay Elite designation is given to the best environmental performers, those vehicles that get a combined score of at least 17 with a minimum GHG score of 9 and a minimum air pollution score of 8.

The Air Pollution Score reflects vehicle tailpipe emissions that contribute to local and regional air pollution, creating problems such as smog, haze, and health issues. The major pollutants analyzed are non-methane organic gases (NMOG), non-methane hydrocarbons (NMHC), total hydrocarbons (THC), nitrogen oxide (NO_x), particulate matter (PM), carbon monoxide (CO), and formaldehyde (HCHO). The Greenhouse Gas Score measures emissions of carbon dioxide (CO₂) and other greenhouse gases.

MY2011 Honda Vehicles with an EPA SmartWay Elite Rating

MODEL	ENGINE	FUEL	TRANSMISSIONS	GREENHOUSE GAS SCORE ¹ 10= BEST	AIR POLLUTION SCORE ² 10= BEST	FUEL ECONOMY (MPG) CITY/HWY
Insight	1.3L I-4	Gasoline	CVT	9 	8 	40/43
Insight	1.3L I-4	Gasoline	5MT	9 	8 	40/43
Civic Hybrid	1.3L I-4	Gasoline	CVT	9 	8 	44/44
FCX Clarity	0.0L 0-cyl	Hydrogen	Other	10 	10 	60/60

¹ Greenhouse gases emitted from vehicles include carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), and relatively small amounts of hydrofluorocarbons (HFCs) and black carbon. The U.S. EPA's Green Vehicle Guide currently accounts for CO₂, CH₄, and N₂O. The value shown gives tons of greenhouse gases emitted by the vehicle if it were driven 15,000 miles per year. Tons are expressed as CO₂-equivalent emissions factoring in the global warming potential for each gas.

² The Air Pollution Score is based on the U.S. government emission standards for which the vehicle was certified to comply with, and reflects vehicle tailpipe emissions that contribute to local and regional air pollution, creating problems such as haze, and health issues.

Product Development

Automobiles

New Products

New Products Introduced in FY2011

2011 Honda Odyssey

Honda introduced the fourth generation of its Odyssey minivan in the fall of 2010. The Odyssey was the best-selling minivan in the U.S. in 2008 and 2009. The U.S. development team for the new Odyssey targeted fuel economy on par with smaller, lighter, and more aerodynamic V6-powered sedans.

The team applied more rigid high-strength steel to 59% of the Odyssey's unit body which, along with numerous refinements to body design, contributed 12 kilograms (kg) to the Odyssey's 47 kg reduction in total vehicle weight compared to the previous model. The use of high-strength steels also helped Odyssey to become the first minivan to achieve a five-star Overall Vehicle Score under new, more stringent federal government crash safety ratings enacted for 2011 model year vehicles.

In an effort to further reduce running resistance — the energy-robbing friction created by the tires and aerodynamic resistance when the vehicle is in motion — the team applied lower rolling-resistance tires, numerous underbody strakes, and other features designed to improve the Odyssey's aerodynamic efficiency.

Improvements to the powertrain included the use of a molybdenum coating on the engine's pistons and the application of a process called plateau honing to the engine's cylinder walls to reduce engine friction. In addition, Honda's second-generation Variable Cylinder Management™ (VCM™) cylinder deactivation technology was applied to all new Odyssey models, allowing the vehicle to operate in 3-, 4-, and 6-cylinder modes depending on driving conditions. In addition, the reduction in running resistance and engine friction contributed to an approximate 50% increase in the operating range of the VCM system when compared to the previous model.

These and other innovations depicted in the diagram on the next page resulted in a 3 miles per gallon (mpg) gain in highway fuel economy to 27 mpg (28 mpg in Touring trim), the highest fuel economy for any minivan in its class.

2011 Honda Accord

The 2011 Accord, also introduced in the fall of 2010, benefits from aerodynamic improvements combined with the application of engine friction reduction technologies that were first applied to the new Odyssey minivan. These include the plateau honing of the engine cylinder walls and the application of molybdenum coating on the engine's pistons. The EPA fuel economy ratings for 4-cylinder models were improved by 2 mpg in city driving and 3 mpg in highway driving, for an EPA rating of 23 city/34 highway. EPA fuel economy ratings for the 2011 Accord V-6 Sedan were improved 1 mpg in each mode, to 20 city/30 highway.

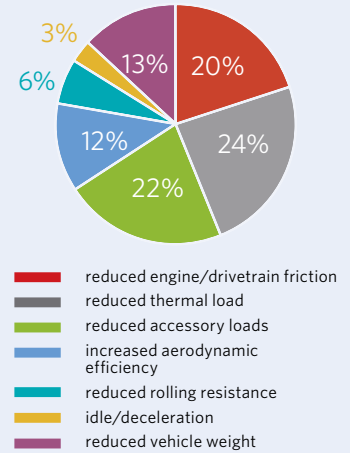


2011 Accord V6 Sedan

New Products Introduced in FY2011

2011 Odyssey Fuel-Efficiency Improvement Features

Product Development
Automobiles
 New Products
 (continued)



A Pistons coated with dots of molybdenum help oil adhere to the cylinder wall.
 Exhaust gas recirculation (EGR) ratios increased 10%.
 Machine honing of engine cylinder walls removes microscopic high spots to reduce friction between the piston and the cylinder wall.

B A 6-speed automatic transmission (on Touring models) employs a multi-plate lock-up clutch to expand the torque converter lockup area at low vehicle speeds for a 4.5% improvement in city fuel economy.

C A front lip spoiler and front inner fender strakes divert air lower and toward the inside of the vehicle, reducing the high pressure zone on the front tires.
D The body and lights were shaped through extensive wind-tunnel testing to control airflow separation and reduce drag.

E A 50mm reduction in roof height contributes to reduced aerodynamic drag.
F Front- and rear-quarter window seals with a ramp shape reduce turbulence and improve downstream airflow.

G Tires have 8% less rolling resistance than the previous model.
H A unit body composed of 59% high-strength steel contributes 12kg to the Odyssey's 47kg reduction in total vehicle weight.

I Variable ratio power-steering pump reduces loads by 70% at highway speeds (1.6% increase to fuel economy).
 An over-run alternator de-coupler reduces accessory belt tension 50% (1.5% gain to fuel economy).

Variable Cylinder Management (VCM) deactivates 2 or 3 of the engines' 6 cylinders under light engine loads. Reduced engine friction further increases the benefits of VCM, increasing its range of activation by up to 50%.
J The addition of a cold-air intake reduces intake air temperature by 21°C during highway cruising.

Honda launched an Electric Vehicle Demonstration Program (HEVDP) in December 2010 with the first public drive of a Fit EV prototype and an Accord Sedan test vehicle outfitted with Honda's two-motor plug-in hybrid system. The City of Torrance, California, home to American Honda Motor Co., Inc., along with Stanford University and Google, Inc., will each receive a Fit EV for testing starting in early 2012. In addition, the City of Torrance will test a plug-in hybrid vehicle beginning in 2012. Each of the three program participants will conduct general testing as well as evaluating specific issues related to the broader market introduction of electric vehicles.

Product Development

Automobiles

New Products

(continued)

Debut of Fit EV Concept and Honda Plug-In Hybrid Platform

Fit EV Concept

The Honda Fit EV is based on the popular, fuel-efficient and spacious Honda Fit 5-passenger compact car. The Fit EV will utilize a high-density coaxial electric motor derived from the FCX Clarity fuel cell electric vehicle, paired with a lithium-ion battery to deliver excellent efficiency and power while remaining quiet at high speeds. Battery recharging can be accomplished in as little as three hours when using a 240-volt charger. The Fit EV will achieve an estimated 123-mile driving range per charge using the U.S. EPA LA4¹ city cycle (70 miles when applying EPA's adjustment factor). Driving range can be maximized by use of an innovative 3-mode electric drive system, adapted from the 2011 Honda CR-Z sport hybrid. While in Econ mode, practical driving range can increase by as much as 17%, compared to driving in Normal. In addition to the 3-mode E-Drive system, the Fit EV will include several interactive coaching systems to assist the driver in maximizing battery range.



A production version of the Honda Fit EV Concept (pictured here) will be launched with customers in California and Oregon in the summer of 2012.

Honda Plug-In Hybrid Platform

The Honda plug-in hybrid platform showcases Honda's next-generation two-motor hybrid system, which will be integrated into a midsize sedan platform designed to be compatible with daily driving habits, allowing for short, frequent trips in all-electric mode, while providing long-distance driving capability. The Honda two-motor system continuously moves through three different modes to maximize driving efficiency.

- In all-electric mode, the vehicle uses a 6kWh lithium-ion battery and a 120 kW electric motor. Fully recharging the battery will take 3-4 hours using a 120-volt outlet and 1-1.5 hours using a 240-volt outlet.
- In gasoline-electric hybrid mode, the vehicle operates like a conventional hybrid vehicle, pairing a 2.0-liter, i-VTEC® inline 4-cylinder, Atkinson cycle engine with an electric Continuously Variable Transmission (E-CVT). An onboard generator adds to the battery powering the electric motor.
- For more efficient high-speed cruising, the vehicle can engage in a direct-drive mode, in which the engine can efficiently drive the front wheels.



Honda will launch a plug-in hybrid sedan in the U.S. in 2012. Pictured here is an Accord test vehicle equipped with Honda's two-motor plug-in hybrid system.

¹ The EPA city cycle is the standard government testing mode for electric vehicles and what most automakers use for comparison purposes.

Product Development Powersports Products

Product Development Powersports Products Overview

Targets and Results

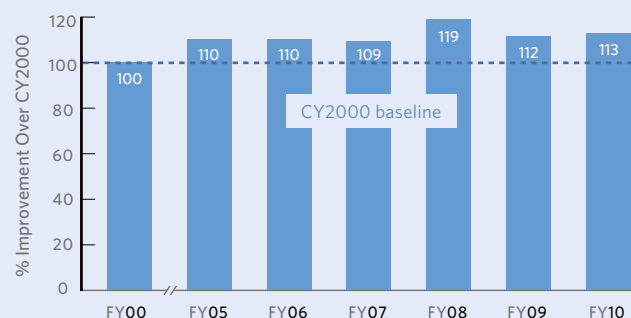
CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
CO ₂ Emissions	Improve fuel economy of powersports products	The fleet average fuel economy of Honda motorcycles in North America was improved 12.0% from the MY2000 baseline	32
Criteria Air Pollutants	Meet or surpass all regulatory requirements applicable to new Honda products	All Honda non-competition powersports products marketed in the U.S. in FY2011 met or surpassed EPA and CARB emissions requirements	32

The Powersports Products segment includes Honda motorcycles for street, off-road, and dual-sport use; four-wheeled utility and recreational all-terrain vehicles (ATVs); and multipurpose utility vehicles (MUVs).

Motorcycle Fuel Economy

The fleet average fuel economy of Honda's motorcycle fleet in North America in CY2010 was improved approximately 13% from the CY2000 baseline, and was up 1.0% from the FY2009 result.

Average Fuel Economy Improvement for North American Market (baseline: CY2000)



Honda calculations using U.S. EPA exhaust emissions data.

Product Development

Powersports Products

Motorcycle
Fuel Economy
Criteria Air
Pollutants

Exceeding Regulatory Emissions Requirements

Honda has consistently met or exceeded U.S. EPA and CARB emissions requirements for motorcycles, scooters, ATVs, and MUVs. In model year 2010, Honda substantially exceeded both EPA and CARB Tier 2 requirements for hydrocarbon (HC), nitrogen oxides (NOx), and carbon monoxide (CO) exhaust emissions, in part through the use of 4-stroke engines and electronic fuel-injection technology. In model year 2010,

Honda also exceeded both EPA and CARB requirements for evaporative emissions and fuel permeation. Globally, Honda is expanding the use of programmed electronic fuel injection (PGM-FI), catalytic converters, and other advanced engine technologies that provide additional opportunities for further reductions in motorcycle exhaust emissions and improvements in fuel efficiency.

Honda U.S. Emissions Versus Regulatory Standards (MY2010)

CLASS	HC (G/KWH)			HC + NOX (G/KWH)			CO (G/KWH)		
	HONDA	EPA	CARB	HONDA	EPA	CARB	HONDA	EPA	CARB
Motorcycle									
I (50-169cc)	0.1	1.0	1.0	n/a	n/a	n/a	1.9	12.0	12.0
III (>279cc)	n/a	n/a	n/a	0.4	0.8	0.8	3.5	12.0	12.0
Off-road (all)	n/a	n/a	1.2	n/a	n/a	n/a	n/a	25.0	n/a
ATV									
II (>225cc)	n/a	n/a	n/a	8.9	13.4	13.4	277	400	400
Off-Road Utility Vehicle									
II (>225cc)	n/a	n/a	n/a	9.3	13.4	12.0	290	400	400

Product Development Power Equipment

Product Development Power Equipment

Overview

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
CO ₂ Emissions	Implement technologies for improved fuel efficiency	Introduced new mid GX series engines with higher fuel efficiency along with reduced emissions and quieter operation	35
Air Pollutants	Meet or surpass all applicable regulatory requirements for exhaust emissions performance	Honda power equipment and marine engines have met the U.S. EPA's more stringent Phase III exhaust and evaporative emissions standards since January 2010	34



The Power Equipment segment consists of Honda lawnmowers, string trimmers, snowblowers, tillers, generators, and outboard marine engines, as well as general-purpose engines used in hundreds of applications for commercial, rental, and residential use.

Product Development

Power Equipment

Emissions Standards
New Products

Power Equipment Division to Meet 2012 EPA/CARB Regulation

Honda Power Equipment and engine products will meet all new 2012 EPA and California Air Resources Board (CARB) evaporative emissions standards, while also meeting EPA Phase III exhaust emissions regulations by January 2012. As part of Honda's "One Engine for All" initiative, all Honda general-purpose engines are developed to meet CARB and EPA standards, so they can be sold for use in all 50 U.S. states.

In fact, Honda's newest engines, the mid- and large-size GX Series, emit significantly fewer exhaust emissions than their predecessors. Additionally, these engines will meet EPA's 2012 requirements without the use of an engine catalyst.

Honda Marine's complete outboard engine line of products will meet all new industry marine evaporative emissions requirements by 2015.

Honda Marine BF250 Outboard Engine Debut



Honda Marine BF250

In late 2011, Honda Marine introduced an all-new BF250 outboard engine. The engine incorporates a host of Honda exclusive features, to maximize performance while providing an almost

20% improvement in fuel economy over competitive offerings. Additionally, the model provides quiet operation while offering a low-permeation fuel system that exceeds EPA emissions standards and complies with 2011 CARB emissions standards.

New EG, EM, and EB Series Generators

In January 2011, Honda Power Equipment introduced new versions of its three most popular portable generator lines: the Economy Series (EG models), the Deluxe Series (EM models), and the Industrial Series (EB models).

With these new generators, Honda is producing models that comply with EPA Phase III emissions regulations in all 50 states without the need for a catalyst.

To meet the EPA's evaporative emissions regulations, all new models have a low-permeation fuel tube and canister system along with a tethered chain-type gas cap.

All Honda generators are powered by advanced 4-stroke engines that make Honda generators among the world's quietest. Honda generators for typical residential use average 68-72 decibels (at rated load measured at a distance of 7 meters, average of 4 sides), with the Super Quiet series (EU models) operating at noise levels as low as 49 decibels, approximately the noise level in a typical office environment.



EB6500 Generator

Product Development

Power Equipment

New Products

Honda Launches New Mid-GX Series (GX120/160/200)

Honda Engines launched its new mid GX engines line in early 2011. Completely redesigned for 2011, the new GX120, the GX160 and the GX200 are single-cylinder, horizontal-shaft engines which are popular for use in commercial turf applications and equipment, including generators, water pumps, pressure washers and construction equipment.

The new mid GX engines also are equipped with a number of design enhancements, including a new carburetor chamber coating; the addition of a carburetor filter; and an improved fuel tank guard — all of which improve their reliability and durability. In addition, the new engines all meet EPA Phase III exhaust and evaporative emission standards. The design configuration of the new Honda mid GX models reduces pollutants such as hydrocarbons (HCs) and nitrous oxide (NOx) without the need for a catalyst, while maintaining the same level of output power as the models they replace.

Reducing Noise

The new engines also exhibit three primary design enhancements that contribute to class-leading low noise operations. Enhancements to the muffler, the breather valve and the case cover (GX160/200 models only) resulted in lower noise levels of up to 3dBA:

Noise Performance		
MODEL	PREVIOUS MODEL	NEW MODEL
Honda GX120	101 dBA	99 dBA (dual silent specification)
Honda GX160	102 dBA	99 dBA (dual silent specification)
Honda GX200	103 dBA	101 dBA (dual silent specification)



Honda GX small displacement general-purpose engine

Environmental factors are considered early in the design process and during each phase of the design and development of every Honda and Acura product. In component design and in the selection of materials, Honda looks for opportunities to reduce a product's total environmental impact, including its impact at the end of its useful life. Accordingly, Honda engineers take into account such factors as dismantling complexity, component remanufacturing, and the minimization of substances of concern (SOCs).

Product Development Design for the Environment

Product
Recyclability
Reducing
Substances of
Concern

Product Recyclability

In accordance with its global standard for the development of Honda products, the company has achieved and is committed to maintaining a minimum 90% level of design recyclability¹ for all Honda and Acura automobiles, and a minimum 95% level of design recyclability¹ for all powersports and power equipment products

sold in North America. As of 2004, all new Honda and Acura automobiles have met or exceeded the 90% target. Honda will continue to look for new ways to improve the design recyclability of future products, in balance with other critical considerations, such as quality, efficiency, cost, and durability.

Reducing Substances of Concern (SOCs)

Honda's efforts to reduce SOCs have been consistent with evolving government regulations. The tools detailed below will help the company better understand and track the presence of SOCs in its products. Further, it will enable the company to continue to reduce the negative environmental impact of its products throughout their life cycle. This information will be essential as society moves toward a more comprehensive approach to chemical management and green chemistry.

Supplier SOCs Management Manual

Honda's Supplier SOC Management Manual documents the company's expectations for all producers of parts and materials used in Honda's products with respect to SOCs and recyclability. The Supplier SOC Management Manual is updated annually to reflect the latest reporting requirements, SOC policies, and regional expectations. All suppliers are expected to reference the Manual for pertinent information regarding Honda's chemical management policies.

¹ Honda's calculation of product recyclability is based on the ISO standard 22628, titled "Road Vehicles Recyclability and Recoverability Calculation Method," which bases its estimates on existing, proven treatment technologies and takes into account the mass of materials recycled, reused, recovered for energy, or otherwise diverted from landfill disposal. In addition to these guidelines, Honda's calculation also takes into account recyclable mass within nonmetal residue.

Product Development Design for the Environment

Reducing
Substances of
Concern
(continued)

Reducing Substances of Concern (SOCs) continued

Compliance with Hazardous Material Regulations

Honda continues to monitor on a global basis regulations that impact products produced in North America. During FY2011, Honda, with the cooperation of its supply base, gathered material data on all parts and products bound for nations with hazardous material regulation requirements. Among other things, Honda focused on the REACH regulations, as well as the ban on usage of deca-BDE in the United States. Working with the supply base for Honda all-terrain vehicles and power products, Honda identified the parts using this chemical and worked with suppliers to eliminate usage in their mass-production manufacturing processes.

- **Continuing Use of International Material Data System (IMDS)**

Starting in April 2010, Honda began to receive material data sheet submissions in its IMDS from the company's global supply base. IMDS is being used to gather data for all Honda divisions: automobile, powersports, and power equipment. Honda is tracking the use of chemicals in a company-wide system that registers and classifies chemical substances. All suppliers providing products to any Honda manufacturing entity, as well as suppliers of service parts, are required to enter material data into IMDS. All suppliers of parts and materials procured by Honda are required to provide comprehensive data on the chemical composition of those parts and materials.

- **Honda Chemical Substance Management Standard (HCSMS)**

The HCSMS is used globally to identify those chemicals that should no longer be used, those chemicals for which a phase-out period has been identified, and those chemicals that Honda is monitoring for potential elimination. The HCSMS addresses automotive, powersports, and power equipment requirements. Honda is committed to reducing and, if possible, eliminating SOC's in all products.

- **Compliance with REACH**

In accordance with Honda's efforts to manage chemical substances in its products, the company has worked with its global supply chain to confirm compliance with the European Union's REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulation. This enables Honda to ascertain the content percentage amount of the substances of very high concern (SVHC) at the article level to confirm and report compliance.

Product Development

Design for the Environment

Reducing
Substances of
Concern

(continued)

Substances of Concern in Honda and Acura Products	
CURRENT STATUS	OPPORTUNITIES FOR FUTURE REDUCTIONS
Lead — used in electronic applications for its good melting characteristics, long-term stability, and vibration durability; used in metal alloys for its superior machinability, strength, and fatigue resistance.	
Reducing use in electronics, light bulbs, and corrosion-resistant paints.	Working with individual suppliers to introduce lead-free circuit boards that meet Honda's requirements for durability and performance.
Replaced lead with non-hazardous materials in electro-deposition coatings and steel bars (with the exception of residual amounts of contaminants that may include lead, such as lead in recycled aluminum).	Overcoming strength and fatigue performance concerns when lead inclusions in the microstructure of the steel alloys are replaced with manganese sulfide (MnS) inclusions.
Replaced automobile and on-highway motorcycle lead wheel weights with a zinc alloy.	Planning to introduce low-lead ATV wheel hubs by 2012. Trace amounts of lead in steel and recycled aluminum may still be present. Honda chemical substance guidelines allow for a maximum 0.25% lead content by volume.
Hexavalent Chromium — used to protect exterior parts from corrosion.	
North American suppliers have eliminated the use of hexavalent chromium.	Continuing to monitor suppliers for compliance.
Mercury — used for bright and uniform illumination.	
Honda has never used mercury in switches, radios, or ride-leveling devices. However, Honda still uses very small quantities of mercury in high-intensity discharge (HID) headlights and in illuminated entertainment and navigation systems.	Phasing in mercury-free displays using a new type of backlight, beginning with new models introduced in model year 2010. Starting to employ mercury-free alternative technology for HID bulbs within several years, as the remaining technical challenges are overcome.
All damaged and broken entertainment and navigation screens brought back to Honda and Acura dealers are recovered and remanufactured by Honda.	
Polybrominated Diphenyl Ethers (PBDEs) — used as a flame retardant and as a surfactant.	
Phased out the use of octa- and penta-BDEs in 2004. Working with suppliers to verify that these substances are no longer used in products. A small number of original equipment parts still contain PBDEs.	Working with suppliers to eliminate deca-BDEs from products when technically feasible. Honda will phase out deca-BD from all new ATV and off-road motorcycles as of 2011.
Perfluorooctane Sulfonate (PFOS) — used as a water repellent agent.	
Eliminated PFOS in all parts delivered to North American manufacturing facilities.	Continuing to monitor suppliers for compliance.
Polyvinyl Chloride (PVC) — used in sealants and interior materials to reduce weight and to meet high standards for durability, fade resistance, and other critical quality criteria.	
Replacing PVC used in instrument panels, inner-door weather stripping, and shift knobs.	Working with suppliers to implement PVC-free technologies for components such as interior and exterior trim pieces and seat coverings. Continuing to investigate effective alternatives to PVC for all paint department applications. Honda will begin to apply the technology once it has been proven effective.

Product Development

Design for the Environment

Reducing PVC
in Honda and Acura
Automobiles
Cabin Air Quality

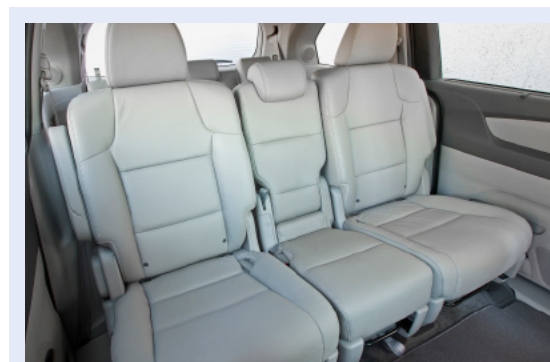
Reducing PVC in Honda and Acura Automobiles

Honda is working to significantly reduce the chlorine that ends up in shredder residue, primarily by reducing the use of polyvinyl chloride (PVC) in its vehicles.

Honda's goal is to reduce the use of materials containing chlorine to a less than 1% concentration in materials that can end up in the waste stream as shredder residue at the end of an automobile's useful life.

In FY2011, the company introduced three new models — the Accord Crosstour, the CR-Z Sports Hybrid, and the redesigned Odyssey minivan. These three new models joined 13 existing Honda and Acura models that meet this voluntary target. As a result, 16 of the 20 Honda and Acura automobile models sold in North America in FY2011 achieved this target: the Honda Fit, Insight, Civic Coupe, Civic Sedan, Civic Hybrid, Civic GX, Accord Coupe, Accord Sedan, Accord Crosstour, CR-V, CR-Z, and Odyssey, and the Acura RL, Acura RDX, Acura ZDX, and Acura TSX.

Honda continues to investigate high-quality and cost-effective alternatives to PVC in an effort to minimize its use in all products. Although Honda has minimized the number of vehicle parts containing PVC, cost and quality barriers present a challenge to its total elimination.



Honda is reducing the use of PVC in its interiors. Pictured here is the 2011 Honda Odyssey minivan, which uses PVC-free seating materials.

Cabin Air Quality (Reducing VOCs)

In line with Honda's strategy to reduce hazardous materials wherever possible, Honda is also focusing on the improvement of air quality within the interior of the vehicle. Honda engineers have been focusing efforts towards adequately measuring and predicting levels of in-cabin volatile organic compounds (VOCs). This activity resulted in a better understanding of which parts Honda engineers should focus on to help reduce in-cabin VOC levels.

- Several low in-cabin VOC technologies, such as low-VOC adhesives, tapes, foams, and coating materials, have been applied to Acura and Honda models since the launch of the 2008 Accord in the fall of 2007. Recently redesigned vehicles, such as the 2011 Odyssey and 2012 Civic, have included new non-painted, high-quality appearance, low-VOC plastic materials for the inner door handles.
- Honda will continue its efforts to reduce cabin VOCs and to improve air quality in the cabins of all its vehicles.

Purchasing



Honda works with about 600 original equipment manufacturers in North America that supply parts for new Honda and Acura vehicles. The company is advancing its efforts to promote more environmentally responsible manufacturing and shipping operations through numerous initiatives with its North American suppliers.

OVERVIEW

Our approach to environmental management extends to approximately 600 original equipment parts manufacturers (OEMs) and parts logistics companies that supply Honda operations in North America. Environmental impacts include material waste, consumption of natural resources, and greenhouse gas emissions, predominantly CO₂ from the production of component parts and the consumption of fuel to transport parts from suppliers to Honda plants.

FOCUS

We encourage OEM suppliers to adopt measures to reduce the environmental impact of producing parts and components for Honda and Acura products, focusing on energy use, emissions, and packaging waste. At the same time, we continually work in close partnership with suppliers and logistics companies to reduce the environmental impact from parts transportation through initiatives that include route consolidation, use of on-site consolidation centers to reduce shuttle traffic, and optimization of shipping transport space.

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
CO ₂ Emissions	Minimize CO ₂ emissions from the manufacture and transport of parts and materials supplied to Honda plants in North America	Avoided 5.6 million pounds of CO ₂ emissions associated with parts shipments through increased cube utilization and dynamic load planning	42
		Avoided 3.15 million pounds of CO ₂ emissions associated with parts shipments through efforts to reduce shipments associated with Saturday production	
		Introduced revised Honda Green Purchasing guidelines for North American suppliers	41

Since the announcement of the Honda Environmental Statement in 1992, environmental conservation activities have been one of Honda's top priorities. Honda has been committed not only to developing products with outstanding environmental performance, but also to taking environmentally responsible measures in all areas of its corporate activities including purchasing, production, administration, logistics, sales, and recycling.

Honda Green Purchasing Guidelines

North American Purchasing worked with Honda's parent company, Honda Motor Co., Ltd., to revise its Green Purchasing Guidelines to better track and reduce greenhouse gases and other aspects of its environmental impact over Honda products' life cycle. The guidelines, which also cover the business activities of Honda suppliers, were formulated in 2001 to guide Honda's environmental conservation activities in the area of purchasing.

Reflecting the globalization of Honda's purchasing practices, the Honda Green Purchasing Guidelines were revised in order to apply to all parts and materials suppliers around the world. With the new guidelines, Honda is striving to better track and reduce the environmental impact of Honda products throughout the supply chain beyond primary suppliers. In January 2011, North American Purchasing issued the revised guidelines to all suppliers; the

company continues its efforts toward the realization of a global low-carbon society.

The Supply Chain environmental activities focus on:

1. Environmental management activities to ensure environmental control for products (parts and materials) and corporate activities.
2. Environmental activities to reduce greenhouse gas emissions in all corporate areas.
3. Parts and material proposals focusing on environmental issues and the viewpoint of achieving weight reduction, lower rolling resistance, and energy usage reduction.
4. Complying with laws and regulations, and assuring compliance with the Honda Chemical Substance Management Standard.

Supplier Sustainability and Greenhouse Gas Initiative

Honda is taking a life cycle approach to greenhouse gas emissions. Honda is taking into account its suppliers' activities, its corporate activities, and the use of its product by customers. Looking at the total picture, Honda will reduce the environmental impact from all aspects of its activities, aiming to lower CO₂ emissions from its supply chain as well as within its corporate activities, and from customer use.

Honda is aiming to achieve best in class in terms of quality, cost, delivery, and development, but also in terms of environmental impact.

The Supply Chain Sustainability team is working with Honda's suppliers to ensure that the greenhouse gas emissions are controlled; Honda is asking suppliers to establish a structure for collecting, calculating, and reporting greenhouse gas data.

Purchasing Green Purchasing Guidelines Supplier Greenhouse Gas Initiative

Parts Logistics Initiatives Reduce Fuel Consumption and CO₂ Emissions

Since the start of Honda's North American manufacturing operations more than 30 years ago, the company has pioneered many advancements in parts logistics that reduce fuel consumption and minimize CO₂ emissions. Innovations include the sequencing of parts for just-in-time delivery to assembly lines, the use of returnable parts containers, and initiatives aimed at maximizing space utilization in trucks carrying parts and minimizing transport distances from suppliers to Honda factories.

Purchasing Parts Logistics

Reducing Impact of Extended Production Schedules

Customer demands may change more rapidly than manufacturing schedules can be adjusted. One way to meet that change in demand is to add daily overtime or Saturday production dates for specific plants. Although Honda generally operates in a just-in-time manufacturing environment, Honda recently initiated a program to pull ahead the delivery of materials to support Saturday production, when required, eliminating the transportation of parts and materials on Saturdays. Through close coordination with its suppliers, purchasing groups, carriers, cross docks, and receiving sites, Honda is able to accomplish this objective, which in FY2011 resulted in the avoidance of over 918,000 miles of truck travel and 1,428 metric tons of CO₂ emissions.

Managing Fluctuating Demand

As Honda's daily shipping volumes fluctuate, there is a challenge to ensure that parts delivery trucks are cubed at a high efficiency level while also maintaining a harmonious flow of product. In order to assure that Honda accomplishes both objectives, the company adjusts certain high-volatility truckload and less-than-truckload routes on a continual basis. The results of these efforts were a total avoidance of over 3 million miles of truck travel and 2,540 metric tons of CO₂ emissions in FY2011.

Honda employs three methods to reduce fuel consumption and CO₂ emissions associated with parts shipping logistics:

1

A daily 'Load Planning' process ensures that materials arrive at a standardized lead time to production while keeping trucks fully cubed and eliminating unnecessary transit miles. During FY2011 this practice resulted in the avoidance of over 879,000 miles of truck travel and 1,451 metric tons of CO₂ emissions.

2

A process used to 'release' small volume orders to an existing scheduled delivery or deliveries, thereby eliminating exceptional deliveries that are not efficiently cubed, is used to ensure that trucks do not run unnecessarily. During FY2011, this practice resulted in the avoidance of over 190,000 miles of truck travel and 296 metric tons of CO₂ emissions.

3

Continuous collection of inbound trailer cube information can reveal where a reduced efficiency trend may be starting. Once these areas of potential inefficiency are identified, future orders are evaluated and adjustments are made to reduce the frequency of the route, to combine other freight on the route, or to eliminate routes completely. During FY2011, this practice resulted in the avoidance of over 563,000 miles of truck travel and 875 metric tons of CO₂ emissions.

Innovating Japan Import Flow

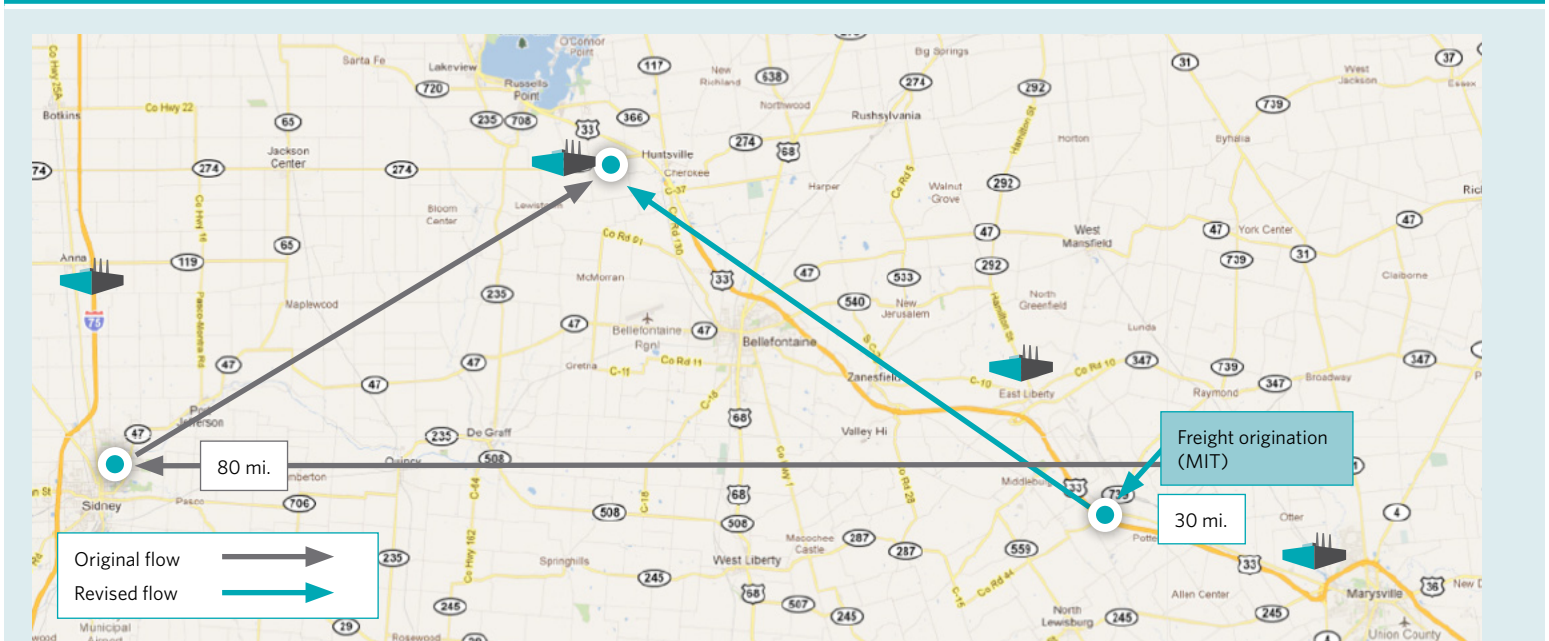
Parts and materials imported from Japan to Honda factories in Ohio flow through an adjacent Marysville Intermodal Terminal (MIT). Honda's North America Logistics team has worked to improve that material flow, which has been in existence for over 20 years, including moving the material handling operation for Honda's Russells Point, Ohio automobile transmission plant from

a site in Sidney, Ohio to a more strategically located site near Honda's plant in East Liberty, Ohio (see illustration below). This new parts flow, implemented in January 2011, will result in a full-year reduction in transit miles from MIT to the materials handling site of more than 102,000 miles and the elimination of approximately 163 metric tons of CO₂.

Purchasing Parts Logistics

(continued)

Reducing Transportation Miles



Result: Reduction of 100 R/T miles by relocating the process

Supplier Symposium

At the 18th annual Honda Environmental, Safety, and Ergonomics Symposium, Honda presented its prestigious Green Factory Environmental Achievement Award to eight North American parts suppliers that have excelled at conserving natural resources,

reducing energy use, and eliminating waste to landfills. In addition to receiving recognition for top environmental achievements, the suppliers attended seminars and roundtable sessions on environmental topics that included everything from energy and waste reduction to environmental compliance.

Manufacturing



Honda operates 14 plants in North America, producing Honda and Acura automobiles, powersports, and power equipment products. In 2010, 87% of the new Honda and Acura automobiles purchased in the U.S. were produced by Honda factories in North America.

OVERVIEW Honda operates 14 manufacturing facilities in North America. Environmental impacts from manufacturing operations include waste generation, water use, energy and natural resource consumption, and emissions of greenhouse gasses, predominantly CO₂, as well as air pollutants.

FOCUS Our work to reduce the environmental impact of our manufacturing operations in North America includes efforts to reduce the energy intensity of production, as well as initiatives to use water and other natural resources more efficiently, and to reduce air emissions and waste generation.

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK	
CO ₂ Emissions	Reduce the energy intensity of manufacturing operations	Automobiles	CO ₂ emissions from automobile production were reduced 3.7% from FY2010, to 727 kg/auto	47
		Powersports Products	CO ₂ emissions from powersports product production reduced 43% from FY2010, to 269 kg/unit	
		Power Equipment	CO ₂ emissions from power equipment production reduced 10.6% from FY2010, to 9.3 kg/unit	
Waste	Achieve near zero (less than 1%) waste to landfill at all North American manufacturing facilities by end of FY2011	10 of 14 plants achieved zero waste to landfill as of March 31, 2011		52
		Total waste to landfills from N.A. manufacturing plants reduced to 0.5% of total manufacturing waste		51
Water Use	Maintain or improve water use intensity of automobile production from FY2008 levels	Water use intensity in automobile production was up 5.1% from the previous year, to 0.82 kgal/unit		54

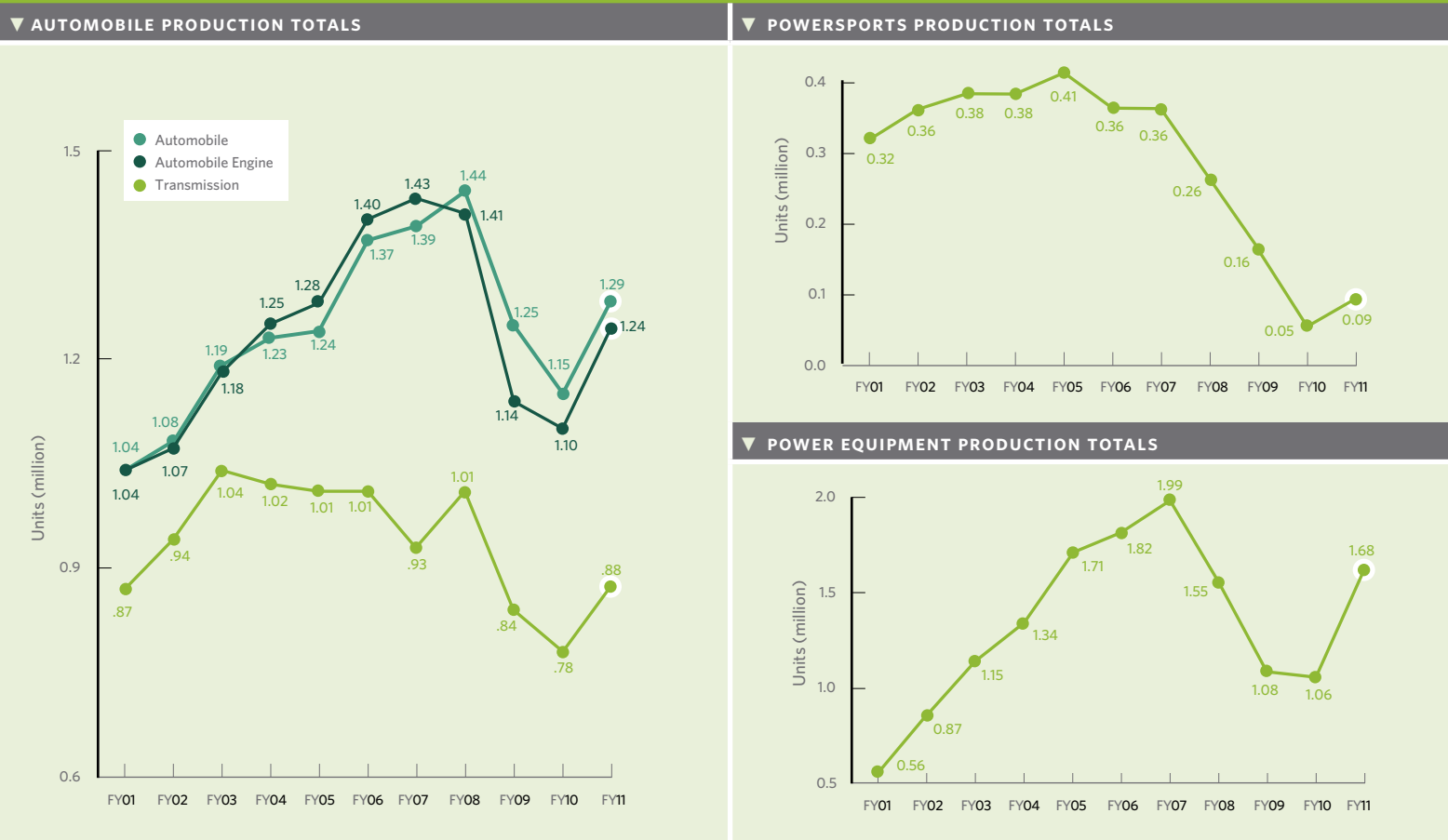
Production Activity

Improving economic conditions resulted in more stability and an increase in production in FY2011 versus the previous fiscal year; however, production remained below full capacity at several facilities during the fiscal year. Due to the fact that manufacturing systems

must remain in operation whenever production is taking place, these reduced production levels at some plants had a negative effect on per-unit measures of energy use, CO₂ emissions, waste, and water use.

Manufacturing Production Activity

Honda Product Manufacturing Results in North America (millions of units)



ISO 14001 Certification

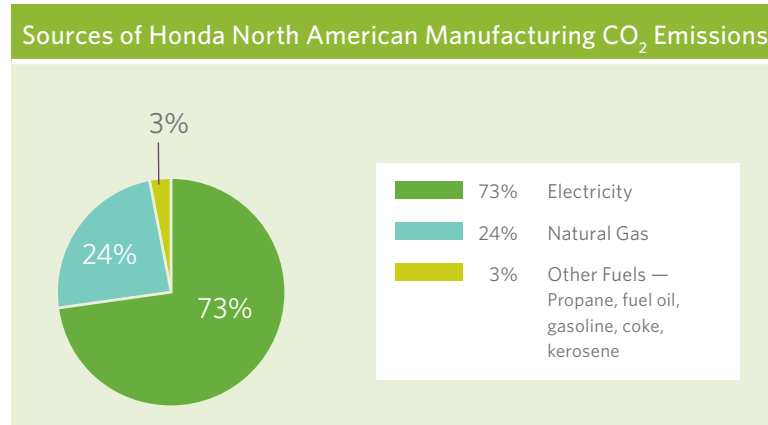
Honda implemented the central element for environmental oversight and management of its North American manufacturing operations in 1998 by making a commitment to achieve and maintain third-party ISO 14001 certification for environmental management at Honda manufacturing operations throughout

the region. Thirteen of the 14 Honda plants operating at the end of FY2011 were certified to the ISO 14001:2004 standard.

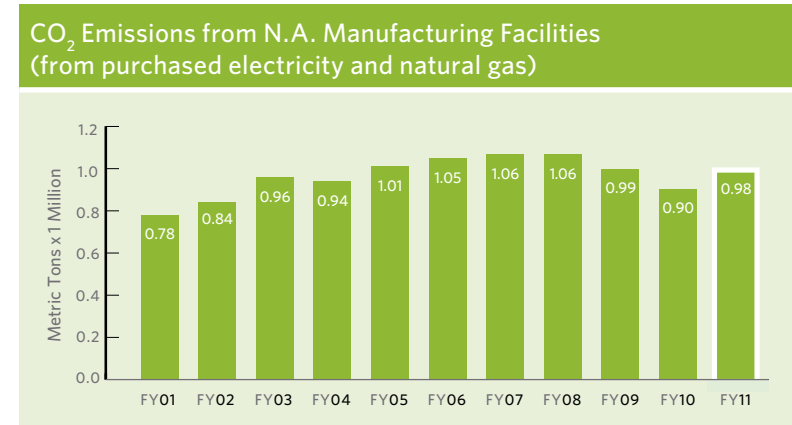
Honda Manufacturing of Indiana, LLC, which started automobile production in the fall of 2008, is scheduled to achieve certification by 2014.

Manufacturing
Production Activity
 (continued)
CO₂ Emissions

CO₂ Emissions



Approximately 97% of CO₂ emissions from manufacturing operations in North America fall into two categories: (1) indirect emissions from the production of electricity purchased and consumed by Honda factories; and (2) direct emissions from their consumption of natural gas. Honda plants use electricity for automation, lighting, motors, air compressors, and cooling. Natural gas is needed for heating and conditioning fresh air, and for manufacturing processes such as melt furnaces and paint curing ovens.



CO₂ emissions from electricity and natural gas consumed by Honda's North American manufacturing operations totaled 0.98 million metric tons in FY2011, an increase of 8.9% from the previous fiscal year.

Reduced production levels in FY2011 continued to affect operating efficiencies. Although production levels increased from FY2010, they remained below levels prior to the economic crisis of late 2008 and 2009. Total CO₂ emissions increased; however, higher production levels compared with the previous fiscal year resulted in a slight improvement in per-unit CO₂ emissions. Much of the loss of efficiency from ongoing lower production was offset by continuing strong efforts to ensure that production equipment was shut down when plants were not operating.

Manufacturing CO₂ Emissions

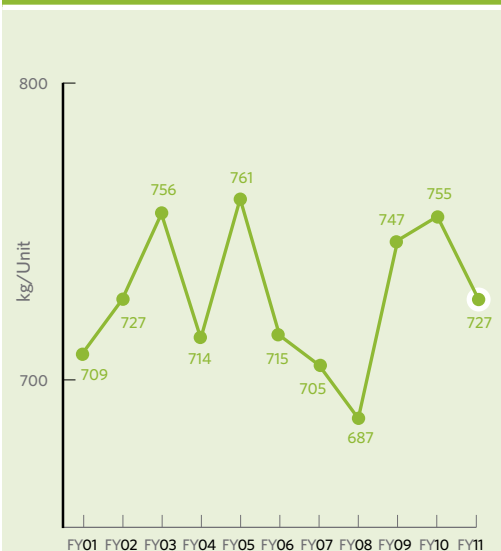
(continued)

CO₂ Emissions (continued)

Automobile Production

CO₂ emissions per unit of automobile production rose 2.5% from the FY2001 baseline and fell 3.7% from the previous fiscal year, to 727 kg. Production of automobiles in FY2011 was up 12%, to 1.29 million units, from the previous fiscal year, but was down 10.3% from FY2008 (pre-Lehman shock) levels.

Per Unit CO₂ Emissions¹ from Automobile Production*

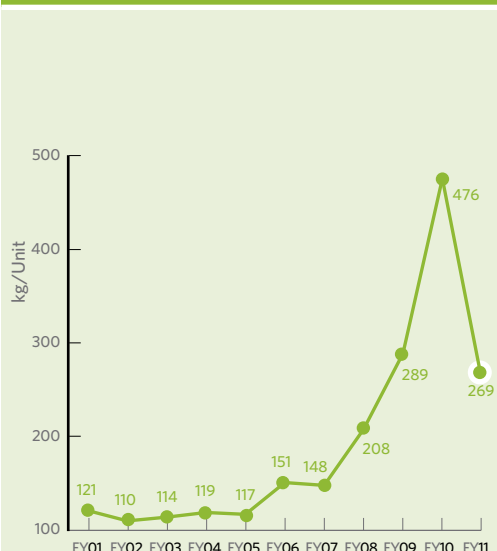


* CO₂ emissions data for automobile production prior to FY2006 includes production of both motorcycles and automobiles in Honda's plants in Mexico.

Powersports Product Production

CO₂ emissions per unit of powersports product produced rose 122.3% from the FY2001 baseline and fell 43.5% from the previous fiscal year to 269 kg. Production of powersports products was up 80%, to about 93,000 units, from the previous fiscal year.

Per Unit CO₂ Emissions¹ from Powersports Product Production*

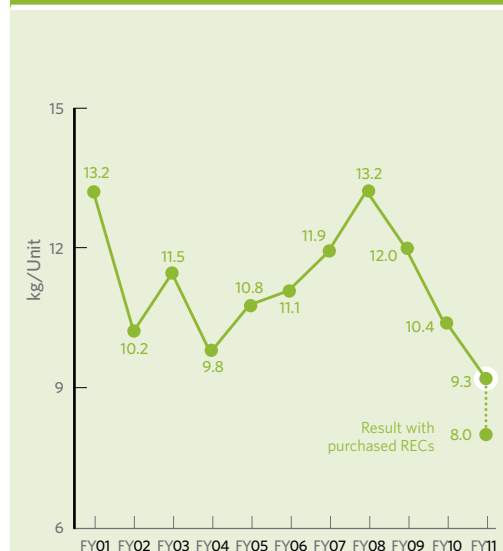


* CO₂ emissions data for powersports production prior to FY2006 includes production of both motorcycles and automobiles in Honda's plants in Mexico.

Power Equipment Production

CO₂ emissions per unit of power equipment production fell 29.5% from the FY2001 baseline and 10.6% from the previous fiscal year, to 9.3 kg, as production of power equipment products was up 58.5%, to 1.68 million units, from the previous fiscal year. Honda Power Equipment purchased Renewable Energy Certificates (RECs) equal to 20% of electricity use during FY2011. The purchase of RECs reduced CO₂ emissions per unit of power equipment production to 8.0kg.

Per Unit CO₂ Emissions¹ from Power Equipment Production



¹ Honda's North American manufacturing operations track CO₂ emissions from fuel combustion and process uses in accordance with guidelines published in The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, revised edition.

Manufacturing Energy Use

Energy Use

Improving the energy efficiency of Honda factories is the single biggest focus of the company's efforts to reduce the environmental impact of its manufacturing operations in North America.

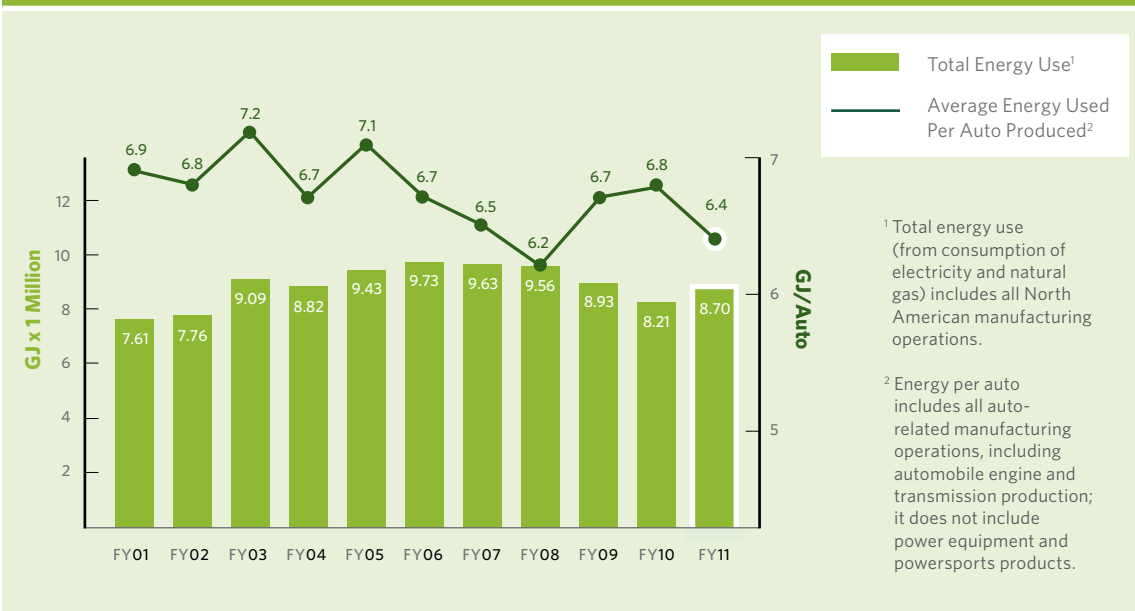
Electricity and natural gas represent approximately 96% of total energy consumption by Honda's North American manufacturing plants. Total electricity and natural gas consumed in all production activity in North America rose 14.2% from the FY2001 baseline and 5.9% from the previous fiscal year, to 8.69 million gigajoules, primarily as a result of higher production volume but with some offset due to ongoing conservation activities.

Energy use per unit of automobile production in North America decreased about 7.2% from the FY2001 baseline and 5.9% from the previous fiscal year, to 6.4 gigajoules, as a result of plants

operating closer to full capacity and ongoing energy-efficiency improvement activities.

In FY2011, the North America region restored some previously reduced auto production volume, which favorably impacted the energy intensity. Slowing production lines had reduced energy efficiency because the entire plant and its processes had to be operating even though fewer units were being produced. Wherever possible, Honda's manufacturing plants worked to offset a significant portion of this reduction in efficiency through efforts to ensure that all equipment was shut down when not needed.

Manufacturing Energy Use (total and per-auto)



Manufacturing Energy Reduction

Energy Reduction Efforts in FY2011

Replacing Centralized Steam

Over the past year at the Marysville Auto Plant — Honda's highest volume automobile plant in the region — centralized steam, used to heat and humidify the building and its operations, was replaced by more efficient localized systems. The plant's centralized steam system had an operational efficiency of 57%, compared to a minimum 80% efficiency for newer heating systems. The elimination of steam at the plant also led to the installation of new "fog" humidification systems to condition the air used in painting automobiles. This new system, using compressed air to create a microscopic fog, is 80% energy efficient and automatically shuts off when not needed. The Marysville, Ohio plant's steam elimination project will result in a significant reduction in energy use and cost, and will reduce CO₂ emissions by an estimated 828 metric tons per year when the project is completed in FY2012.

Real-Time Monitoring Cuts Electricity Use

Real-time monitoring allows associates to see how much energy is being used at any time. This can help to identify equipment that can be turned off during breaks, between production shifts, and when production isn't taking place on weekends. In fact, Honda plants literally "go dark" as associates turn off lights and equipment when going on break, saving significant amounts of energy even over these short periods of time.

In addition, real-time monitoring helps plants understand how energy is being used and which areas or processes use the most energy. These sophisticated systems currently monitor electrical use at auto plants in East Liberty, Ohio; Lincoln, Alabama; Greensburg, Indiana; and Alliston, Ontario; and also at engine plants in Anna, Ohio and Alliston, Ontario.

Advanced Compressed Air Management

Honda plants throughout North America are reducing energy consumption through initiatives that increase the efficiency of compressed air use and by replacing compressed air with alternative energy sources. The magazine article explains how continuous improvements are optimizing the use of compressed air, as are initiatives to reduce air pressure and an aggressive program to eliminate air leaks during regular system maintenance.

In addition, in FY2011, Honda's power equipment plant in Swepsonville, North Carolina; its all-terrain vehicle factory in Timmonsville, South Carolina; and its automatic transmission plant in Russells Point, Ohio saved energy by installing energy-efficient trim compressors, and by installing shutoff valves that stop the airflow when equipment is not in use.

Air Balancing Saves Energy

Air handling requirements change over time with the relocation of processes within a plant. Honda of Canada Mfg., Inc., in Alliston Ontario, Canada, which operates two automobile plants and one engine plant, investigated the heating, ventilating, and air conditioning (HVAC) systems at its two auto plants to measure the balance of air inflow and outflow. The plant also investigated the location of exhaust fans in various departments, especially in areas where processes had changed, and looked for exhaust fans that were running when no production was occurring in their location.

At the end of the air balancing study, the investigating team found ways to reduce airflow by 192,000 cubic feet per minute at the two plants, resulting in an annual energy savings of over 800,000 kilowatt-hours of electricity and 690,000 cubic meters of natural gas.

Manufacturing Energy Reduction

(continued)

Energy Reduction Efforts in FY2011 (continued)

Paint Renovation Cuts CO₂ Emissions

A major body paint renovation project that includes reducing the size of paint booths, and the installation of new robots and control panels, is continuing at Honda's auto plant in East Liberty, Ohio through 2012. The project, started in 2009, will bring significant energy savings by reducing the size of paint booths by 43%, eliminating about half of the painting robots, and upgrading paint curing ovens to increase efficiency. The savings in heating and electrical power will reduce CO₂ emissions by approximately 10,000 tons annually.

New Instrument Panel Painting System Conserves Energy

Construction of a new instrument panel (IP) paint operation at Honda's auto plant in East Liberty, Ohio, which started operating in early 2011, will be the new benchmark for Honda globally with respect to instrument panel coating technology and environmental performance. When it begins operation, the new system will increase paint transfer efficiency and halve CO₂ emissions from the current process. The unique system has dry scrubber technology that uses limestone rather than water to capture "overspray" paint that doesn't adhere to the IP surfaces. Most of the energy savings comes from recycling 90% of the conditioned paint booth air.



New instrument panel painting operation at East Liberty Auto Plant.

HCM Paint Renovation



Reducing the velocity of airflow in Honda's Canada plants' plastics painting operations cut energy use and CO₂ emissions.

A 2010 project in the plastics painting area at Honda's Allison, Ontario auto plant to reduce the velocity of airflow through the paint booths resulted in a reduction in the exhaust airflows, while simultaneously maintaining safety, quality, and delivery parameters. The project team implemented changes to slow airflow through the paint booths, which reduced total airflow by more than 40,000 cubic-feet per minute. The resulting energy savings are more than 1.13 million kilowatt-hours of electricity and 514,000 cubic meters of natural gas per year. These utility savings translate into a reduction in greenhouse gas emissions of more than 1,280 metric tons.

Ohio Auto Plants Earn Energy Star from EPA

Honda's Marysville and East Liberty auto plants in Ohio received Energy Star awards from the U.S. Environmental Protection Agency (EPA) in 2010 for operating energy-efficient plants. This marks the fifth consecutive time that both facilities have earned this recognition, which has been received every year since the program was initiated. The EPA bases the award points on the amount of energy needed to produce an automobile, and takes into account factors such as vehicle size and production volume.

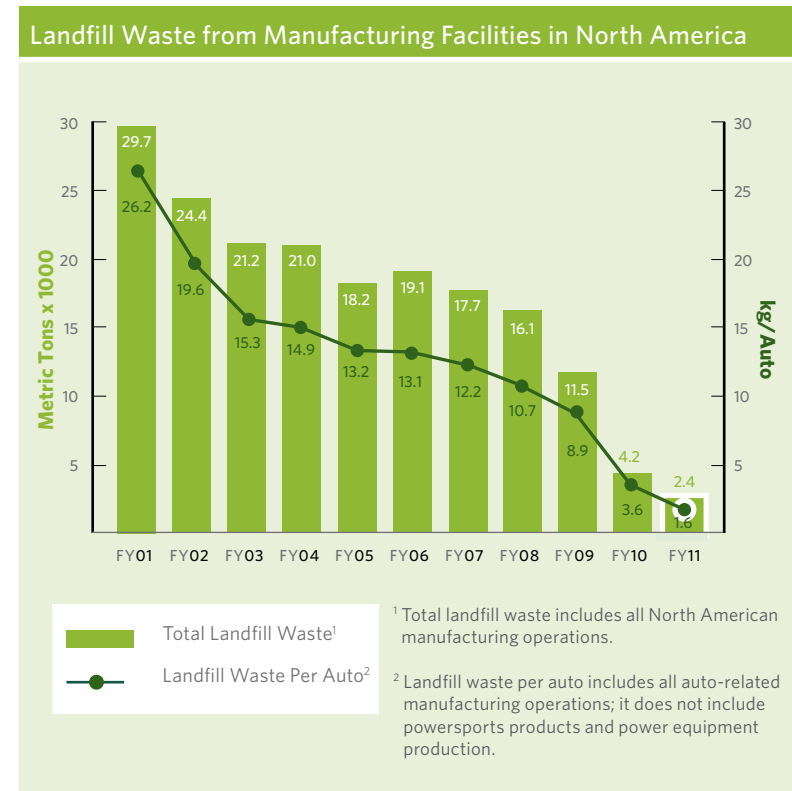
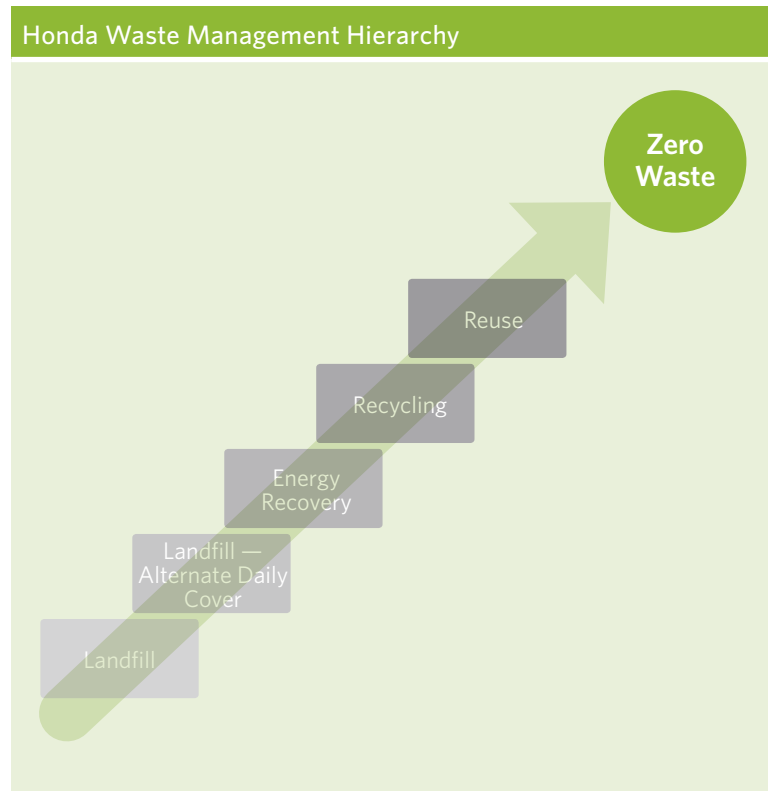
* Note: Plants in Canada and Mexico are not eligible for U.S. EPA Energy Star recognition.

Waste

Viewing solid waste generated by its factories as an inefficient use of raw material, Honda has established a waste management hierarchy for its North American manufacturing operations. Even as Honda pursues its goal to eliminate virtually all waste to landfills by recycling leftover materials, the company also strives to eliminate waste generation from its processes. As part of this effort, Honda

continues to improve overall waste management by moving its efforts up the hierarchy toward the ideal goal of generating no waste from manufacturing. As a result, total landfill waste from manufacturing operations was reduced 91.9% from FY2001 levels, to 2,400 metric tons. Landfill waste per unit of automobile production was reduced 93.9% in the same period.

Manufacturing Waste



Achieving Virtually Zero Waste to Landfills in Manufacturing

Honda set a target in FY2009 to achieve zero waste to landfill — defined as less than 1% of all operating waste, including mineral waste, sent to landfills — at all 14 of its North American manufacturing facilities by April 1, 2011. The target was achieved in FY2011, with 10 of 14 plants achieving absolute zero waste to landfill,

and the average total landfill waste for all 14 plants amounting to less than 0.5% of all operating waste.

This includes Honda Manufacturing of Alabama, LLC, which was the first automobile plant in North America to achieve zero waste to landfill, at the outset of production in 2001.

Manufacturing Waste

(continued)

Honda Zero Waste-to-Landfill Plants in North America			
PLANT	PRODUCTION CAPACITY	NEAR ZERO WASTE-TO-LANDFILL ACHIEVED	
U.S.	Lincoln, AL	300,000 autos / 300,000 V-6 engines	FY2002 (since startup)
	Swepsonville, NC	340,000 power equipment products / 2 million engines	FY2007
	Greensburg, IN	200,000 autos	FY2009 (since startup)
	Tallapoosa, GA	300,000 transmissions	FY2010
	Marysville, OH	440,000 autos	FY2011 ¹
	East Liberty, OH	240,000 autos	FY2011 ¹
	Anna, OH	1.18 million engines	FY2011
	Russells Point, OH	610,000 transmissions / 271,000 gear sets / 73,200 4WD systems	FY2011
	Timmonsville, SC	266,000 ATVs / 310,000 engines	FY2011
Canada	Alliston, Ontario (Plant 1)	195,000 autos	FY2008
	Alliston, Ontario (Plant 2)	195,000 autos	FY2008
	Alliston, Ontario	200,000 4-cylinder engines	FY2009 (since startup)
Mexico	El Salto, Jalisco	50,000 autos / 50,000 engines	FY2003 ²
	El Salto, Jalisco	30,000 motorcycles	FY2003 ²

¹ Honda has introduced aluminum automobile body panels for some models, which benefit the environment by reducing vehicle weight for improved fuel efficiency and reduced greenhouse gas emissions. However, the process of pretreating the panels for painting results in the creation of a wastewater sludge that is subject to EPA regulation. The sludge must either be landfilled as nonhazardous waste or managed as hazardous waste at a permitted hazardous waste facility. Until a recycling, reuse, or recovery method can be identified, Honda has elected to landfill this sludge.

² At Honda's two plants in El Salto, Jalisco, Mexico, waste from cafeterias and break rooms that is not recyclable or compostable is disposed of in landfills, as no more environmentally responsible means of disposal exists.

SUPPLEMENTAL VIDEO

[Click here](#) to view a brief video on Honda's zero waste to landfill achievement in North America

Waste Reduction Initiatives in FY2011

Reduced-Waste Cafeteria Operations



Reusable dishware

Honda's transmission plant in Russells Point, Ohio, and its all-terrain vehicle plant in Swepsonville, South Carolina, introduced washable dishware in their cafeterias as one of the final steps needed to reach zero waste to landfill. Waste from the cafeterias is being separated for composting, recycling, and energy recovery. No cafeteria waste goes to landfills.

Sand Recycling and Reuse

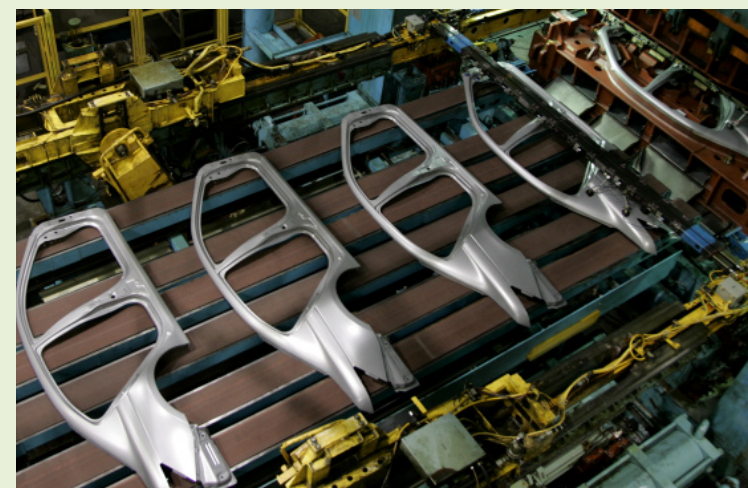
Honda engine and transmission plants in Ohio, Alabama, and Canada have found ways to reuse all spent sand and other mineral materials left over from aluminum and ferrous casting operations. The Anna, Ohio engine plant and Russells Point, Ohio transmission plant completed the transition from the use of recycled sand as residential-use mulch or as daily cover for landfills to its use in concrete, commercial nursery operations, and construction activity. Recycling of the remaining materials moved the leftover sand up Honda's waste hierarchy.



Brake disc sand castings



Engine manifold sand castings



Body-side stampings being produced at Marysville Auto Plant

Reducing Steel Waste

None of Honda's offal (steel scrap) goes into landfills. All of it is recycled, with some transported to the Anna, Ohio engine plant for use in the manufacture of drivetrain components. The balance is shipped to steel recycling facilities. In FY2009, the company started a new initiative at its Marysville Auto Plant to reduce the size of steel sheets (blanks) used to form body parts. Minimizing the generation of steel scrap reduces the environmental impact of material recycling and moves the generation of scrap steel up Honda's waste hierarchy closer to zero waste. Through FY2011 the initiative has been expanded and now includes production at Honda operations in Alliston, Ontario, Canada; East Liberty, Ohio; and Greensburg, Indiana. Efforts to implement this system throughout North America and to introduce it to other Honda plants around the world are ongoing.

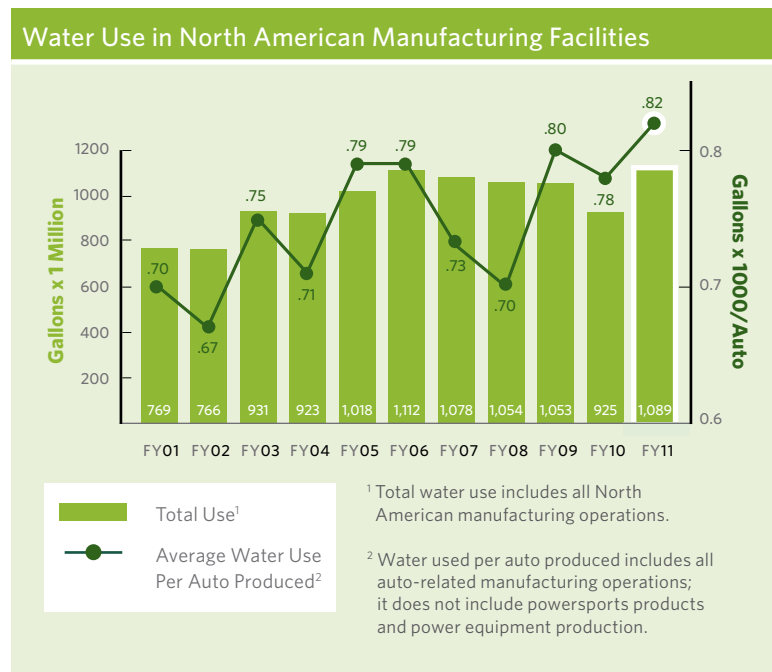
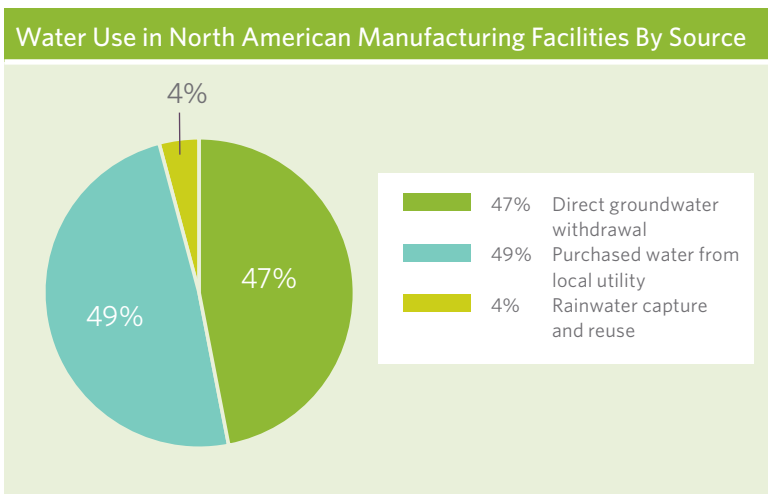
Manufacturing Waste

(continued)

Water Use

Honda's North American plants continued to strive to improve water use efficiency; however, overall water usage increased and water efficiency decreased due to hotter weather and increased production. Total water used for manufacturing in FY2011 rose 17.7% from the previous fiscal year, to 1,089 million gallons. Average water use per unit of automobile production rose 5.1%, or 40 gallons, to 820 gallons, as a result of weather conditions, which required increased water use for facility air conditioning.

Manufacturing
Natural Resources
 Water Use



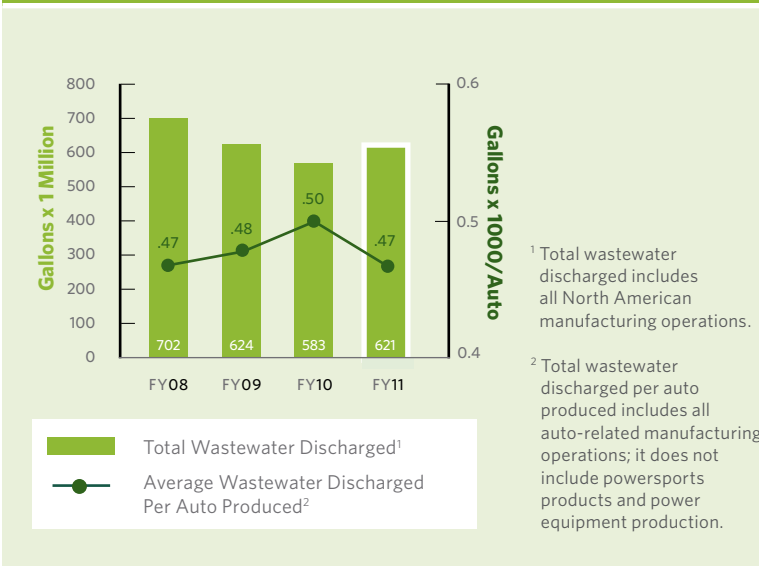
Wastewater Management

Industrial wastewater is generated primarily by painting, surface treatment, and machining operations. Plants that generate industrial wastewater pre-treat the water on-site to reduce the contaminants to below regulated levels before the water is discharged into local municipal wastewater treatment plants. The pretreated wastewater must meet regulatory requirements established at municipal, state, and federal levels. Less than 1% of wastewater is trucked off-site for treatment.

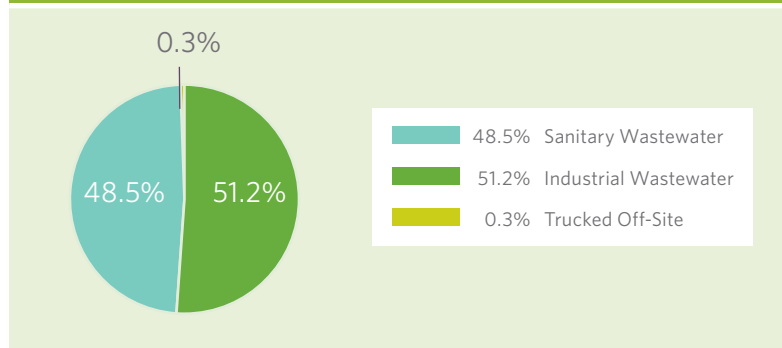
Manufacturing plants also discharge wastewater directly to local waterways. Several plants also have National Pollutant Discharge Elimination Systems (NPDES) permits, which allow the discharge of storm water associated with industrial activities, including cooling tower blow down and discharge from potable water production plants' lime lagoons. The NPDES permits set contaminant limits, and mandates periodic sampling and reporting.

Manufacturing Natural Resources Wastewater Management

Total Wastewater Discharged from N.A. Manufacturing Facilities



Wastewater Discharged from N.A. Manufacturing Facilities



Anna Engine Plant Ozone Wastewater Treatment

The engine plant in Anna, Ohio, the largest automobile engine plant in Honda's global production network, formerly used chlorine dioxide generated on-site in one step of the industrial wastewater treatment process before discharging the water to the local municipal treatment facility. This process required the bulk storage

of hazardous chemicals and the use of more than 1 million gallons of water per year. A project team used advancements in ozone-generating technology to implement a replacement process that eliminated the use of hazardous chemicals and water.

Manufacturing

Natural Resources

Ozone Wastewater
Treatment



Electric Ozone Generator



Wastewater Treatment Plant

Manufacturing Air Emissions

Air Emissions

Honda plants release various “criteria” air contaminants, including volatile organic compounds (VOCs), particulate matter (PM), oxides of nitrogen (NO_x), oxides of sulfur (SO_x), and carbon monoxide (CO). VOC emissions typically come from painting operations. PM emissions usually result from metal casting and finishing processes, and from painting operations. NO_x and CO emissions typically result from the combustion of natural gas and other fuels for heating and process needs, and from the use of engine and full-vehicle testing dynamometers.

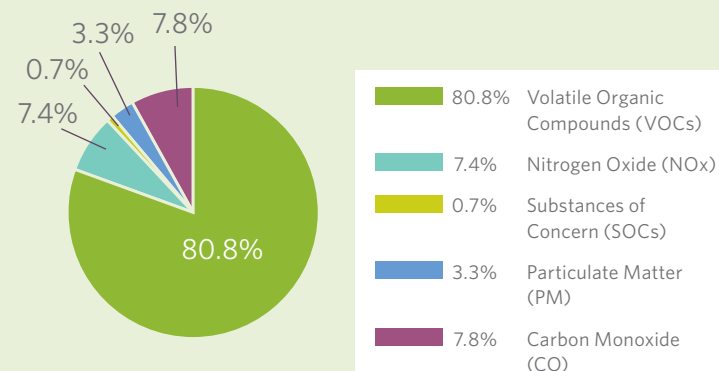
In calendar year 2010, Honda’s North American manufacturing plants released approximately 2,800 U.S. tons of criteria air pollutants. Most of these releases are reportable to local governments through various reporting programs. Overall, 81% of the air contaminants released were VOCs.

Air emissions are permitted and controlled in accordance with applicable laws and regulations. Each plant routinely monitors, tracks, and reports emissions levels to regulatory agencies in accordance with federal, provincial, and state requirements. Honda factories are routinely inspected for compliance with legal requirements.

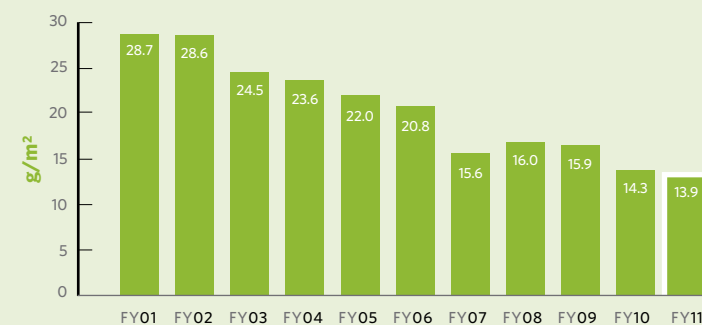
Auto Body Painting VOC Emissions

Auto body painting operations are the primary source of volatile organic compounds (VOC) emissions released from Honda’s North American manufacturing plants. It has always been Honda’s policy to minimize the release of VOCs by adopting less-polluting painting processes whenever possible. VOC emissions from auto-body painting operations in FY2011 were reduced 2.8% from the previous fiscal year and 51.6% from the FY2001 baseline. At 13.9 g/m², VOC emissions in FY2011 were well below the company’s target of 20 g/m².

Makeup of Air Emissions for N.A. Manufacturing Facilities



VOC Emissions from Auto Body Painting in North America



Total VOC emissions data for FY2008-2010 have been recalculated based on corrected data for emissions from production at Honda de Mexico.

Manufacturing Chemical Releases

Chemical Releases

Reducing Chemical Releases — TRI/NPRI Reporting

Honda has reduced its total Toxic Release Inventory (TRI) and National Pollutant Release (NPRI) emissions more than 48% since calendar year 2000, despite significant expansions in production capacity. Automobile-specific TRI/NPRI emissions per unit of production were reduced about 57% in the United States and Canada in the same period. Honda operations in the United States and Canada report total chemical releases annually in accordance with regulatory requirements. In calendar year 2010, total TRI/NPRI emissions increased compared to calendar year 2009 because of increased production. In CY2010, TRI/NPRI emissions per unit of automobile production decreased by 5.8% from CY2009 levels.

In the United States, TRI data are submitted to both state and federal environmental protection agencies. They are available for public review at www.epa.gov. In Canada, NPRI data are submitted to Environment Canada and to the Ontario Ministry of the Environment, and are available for public review at www.ec.gc.ca/pdb/npri.

Total and Per-Auto TRI/NPRI Releases by U.S. and Canada Plants



Ohio Tox-Minus Program

As part of a voluntary commitment to reduce TRI emissions, Ohio-based Honda of America Mfg. is participating in the Ohio EPA's Tox-Minus Program. Honda's two automobile plants and one engine plant in Ohio have committed to reduce total TRI emissions by 25% by the end of calendar year 2011 from a 2005 baseline. Through CY2010, Honda has reduced TRI emissions by 43%, primarily through the innovation of Line 2 painting operations at the Marysville Auto Plant, and the reformulation of some paint materials.

Accidental Spill and Release Prevention, Tracking, and Reporting

Prevention of environmental spills and releases is a key design consideration for all Honda manufacturing facilities. Exterior chemical and wastewater storage tanks and transfer systems are constructed with materials and designs that minimize the risks of leaks and spills. Most exterior tanks and piping systems have backup containment capabilities to recover any leaked or spilled material. Additionally, storage tanks are equipped with alarms to give advance warning of overfilling. Virtually all materials with the potential for release are handled within enclosed buildings.

Underground Storage Tanks

Honda is working to eliminate the use of underground storage tanks and underground piping systems for chemical and petroleum products. Since the construction of the automobile plant in Lincoln, Alabama, in 2001, all new North American plants have utilized only above-ground storage tanks and piping systems for chemicals and petroleum products.

Sales and Service



Supporting Honda products in the marketplace encompasses the shipment of new vehicles from factories to dealers, as well as the supply and distribution of high-quality service parts for the tens of millions of Honda and Acura automobiles, motorcycles, and power equipment products in the hands of its customers in North America.

OVERVIEW

The sales and service of Honda and Acura products requires the movement of both finished products and service parts by trucks and trains traveling millions of miles each year, resulting in the emissions of CO₂ and other byproducts of fuel consumption, as well as waste associated with the packaging of products and parts for shipment.

FOCUS

Reducing waste and CO₂ emissions associated with the packaging and distribution of service parts for Honda and Acura automobile, powersports, and power equipment products continues to be the focus of the company's U.S. distribution, service parts, and packaging departments.

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
CO ₂ Emissions	Reduce CO ₂ emissions associated with the shipment of finished products and service parts	All Honda and Acura automobiles delivered in the U.S. were moved by carriers certified under the U.S. EPA's SmartWay Transport program	60
		Replaced 15 of 210 trucks in American Honda's U.S. fleet with EPA SmartWay Transport-certified trucks	
		CO ₂ emissions from U.S. parts shipments were reduced 813 metric tons through the use of Route Tracker technology	61
		CO ₂ emissions from service parts shipments in the U.S. were reduced 2,400 metric tons through improved cube utilization	60
Waste	Reduce the volume of packaging and shipping materials being sent to landfills	Eliminated 2.2 million pounds of corrugated packaging material	62
		Eliminated 21,000 wood pallets through maximized cube efficiency; and recycled 182,681 pallets	

**Sales and
Service**
**More Efficient
Shipping
Logistics**

Increasing Parts Packing Efficiency Reduces CO₂ Emissions

Honda spends about \$40 million each year in the U.S. on the shipment of parts between manufacturing and warehouse facilities. The primary shipments are from three hub facilities — in Chino, California; Troy, Ohio; and Loudon, Tennessee — to nine parts distribution centers around the country. The company aims to maximize the volume of parts in each transfer shipment

(via truck and rail) by tracking the usage of the shipping cubes used to transport parts.

In FY2011, Honda was able to establish benchmarks and identify areas for improvement, leading to reductions in truck travel by 1.5 million miles, fuel consumption by about 232,000 gallons, and CO₂ emissions by an estimated 2,400 metric tons.

Expanded Use of SmartWay-Certified Carriers



In FY2011, 100% of Honda and Acura automobiles delivered to U.S. dealers were moved by carriers certified under the U.S.

EPA's SmartWay Transport program. In addition, Honda carriers installed alternative energy sources to operate truck hydraulics (during loading and unloading operations). A survey of Honda carrier partners shows that about 95% of Honda and Acura automobiles are being delivered by trucks that do not need the truck's engine to power hydraulic systems, instead using either electric motors or onboard generators.



U.S. EPA SmartWay Transport-certified tractor trailer

Use of Liquid Natural Gas Trucks at Ports

In support of California's "Clean Air Initiative," Honda's U.S. Parts Division in FY2010 began using trucks powered by liquid natural gas (LNG) to deliver containers from the port of Los Angeles to the company's Chino, California parts hub. The use of LNG-powered trucks reduces particulate matter (PM) and nitrous oxide (NO_x) emissions that contribute to air pollution. Use of LNG-powered

trucks can reduce NO_x emissions by more than 50% compared to conventional diesel-powered trucks. Further, the initiative is expected to reduce annual CO₂ emissions by an estimated 18 metric tons. In FY2011, Honda expects to increase the number of containers delivered by LNG-powered trucks by more than 50%. LNG trucks achieve an 86% reduction in NO_x/particulate matter (PM).

Environmental Technology in Trucking

In FY2010, Honda partnered with UPS and Peterbilt Motors Company to become the first automobile company to use a Class-8 hybrid truck in its U.S. fleet. The SmartWay-certified truck is used to distribute Honda and Acura service parts throughout the United States. Use of the hybrid truck has improved fuel economy by 14% compared with a conventional Class-8 diesel truck and reduced

CO₂ emissions by 37 tons, seven tons more than anticipated. In FY2011, Honda purchased two Class-7 hybrid trucks for operations in the U.S. In addition, the company worked with various manufacturers to replace 25 of the 210 trucks in the company's U.S. fleet with EPA SmartWay-certified vehicles. The company plans to replace an additional 109 trucks in FY2012.

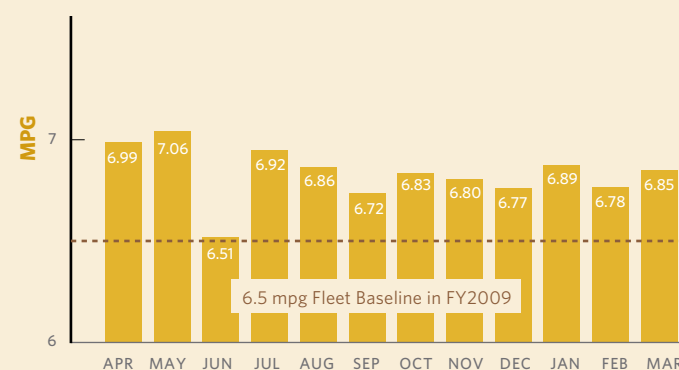
Sales and Service

Cleaner, More Fuel-Efficient Trucks

Tracking Driver Speed to Conserve Fuel

In FY2010, Honda initiated the use of route tracking (Route Tracker/Qualcomm) technology for trucks moving parts from three of its nine parts centers — those in Alpharetta, Georgia; Irving, Texas; and Davenport, Iowa — to Honda and Acura dealers in those regions. Route Tracker technology utilizes an on-board electronic recorder that tracks arrival and departure, engine diagnostics, speed, engine RPMs, hard braking, and idle time. In addition, Honda initiated a driver incentive program, establishing benchmarks for fuel reduction that are tracked monthly and used as the basis for driver rewards. Through monitoring and incentive programs, diesel fuel consumed in the shipment of parts in the region was reduced by 80,000 gallons in FY2011, cutting CO₂ emissions by an estimated 813 metric tons. Honda also has installed route tracking technology on its trucks transporting parts from centers in Torrance, California; Portland, Oregon; French Camp, California; Mt. Laurel, New Jersey; Windsor Locks, Connecticut; and Troy, Ohio to Honda and Acura dealers. With the addition of these trucks to the fuel conservation plan, estimated additional savings will amount to 69,000 gallons of fuel and 700 metric tons of CO₂ in FY2012.

FY2011 Route Tracker Results — Monthly Fleet Fuel Economy (mpg)



Packaging Reduction and Recycling Improvements

Honda's U.S. service parts packaging group has worked to reduce its environmental impact by changing package designs, maximizing cubic space, and increasing the use of returnable packing and shipping material.

Sales and Service Packaging Reduction

Packaging Reduction Initiatives in FY2011	
INITIATIVE	REDUCTION IN FY2011
Packaging changes and material reductions	2,201,632 pounds of corrugated material
Maximizing cubic space through increasing box and pallet quantities	21,000 pallets (approximately 966,000 pounds of wood)
Recycling of pallets	182,681 pallets (8,403,326 pounds of wood) diverted from landfills



The increased use of returnable crates to replace disposable packaging reduces waste and allows for increased shipping density, reducing CO₂ emissions and fuel consumption associated with the sales and distribution of Honda service parts.

Reusable Packaging for Powersports Products

Since 2002, Honda's U.S. Motorcycle Division has been using returnable crates for its U.S.-made powersports products. The "reverse logistics" process includes all U.S. powersports dealers including those in Alaska and Hawaii, all of which are linked to Honda and its supply chain via an interactive computer network.

In FY2009, Honda expanded the program to include the Big Red multi-utility vehicles (MUV) produced in Mexico. The program has eliminated an estimated 84,490 tons of landfill waste since its inception, including 8,592 tons in FY2011.

End-of-Life



While Honda does not directly participate in the disposal of its products, the company is working to make its products easier to recycle, while also taking a direct role in the reduction of waste associated with the disposal of Honda and Acura service parts.

OVERVIEW

The environmental impact of Honda products extends to the disposal or recycling of Honda and Acura products and service parts at the end of their useful life. This includes service parts recovered by Honda and Acura dealerships during service repair and overstock parts in Honda warehouse facilities.

FOCUS

The first and most critical step is a product design that enables efficient dismantling for recycling and reduces the use of harmful substances ([click here](#) for more detail). Additional efforts include projects aimed at increasing the quantity of recycled and remanufactured parts and materials, and more environmentally responsible means of disposing of unused parts and materials.

Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
Waste	Increase the number of re-manufactured parts available for customer purchase	Introduced 44 new re-manufactured parts numbers	64
	Reduce the quantity of parts sent to landfills	Diverted from landfills nearly 60,000 pieces of electronic waste and more than 1.8 million pounds of materials from overstock parts	

End-of-Life

Electronic Waste (E-Waste)

Rigorous overstock disposal procedures for electronic waste (e-waste) and other regulated materials were implemented in American Honda's Service Parts Division at the start of fiscal year 2009. Service parts are evaluated at the time of procurement to determine whether they qualify as e-waste, as OSHA hazards, or as material regulated by the U.S. Department of Transportation as "transportation dangerous" goods. Codes are assigned and used

as filtering criteria to create lists that identify which parts will be destroyed and in what manner. Parts center personnel have been instructed to segregate items that require special handling and to deliver them to qualified regulated materials recycling vendors. Nearly 5% of service parts have been coded for this special handling. In FY2011, over 60,000 pounds of regulated e-waste material was diverted from landfills.

Recycling of Overstock Service Parts

In FY2010, Honda's successful program for recycling parts replaced under warranty was extended to include overstock service parts. The program, which began in December 2006 and utilizes the same

procedures implemented for regulated materials, doubled in FY2011 to 10% of overstocked parts, from 5% in FY2010. In FY2011, more than 1.1 million pounds of this recyclable material was diverted from landfills.

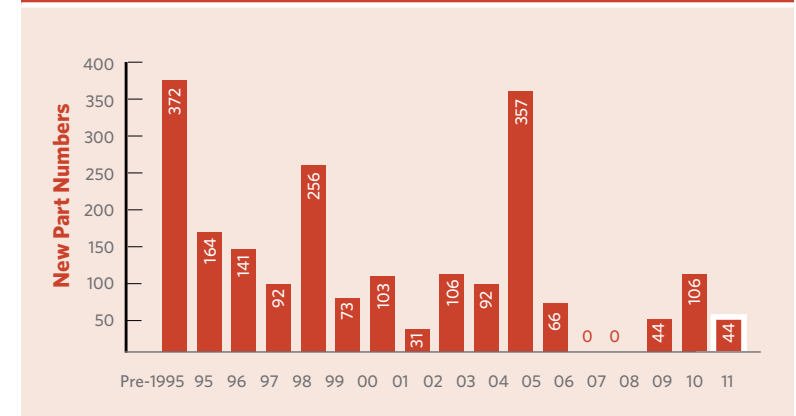
Expansion of Honda's Remanufactured Parts Program

Remanufacturing parts at the end of their useful life removes them from the waste stream and reduces the amount of natural resources required to create new parts. Over the last two decades, Honda has greatly expanded the number of remanufactured parts it produces. Honda continued the pace set last fiscal year by introducing 44 new remanufactured parts offerings, against a plan of 46 parts. Improvements have been made in the speed of preparations to bring new applications to the market, thereby increasing the overall environmental benefits of remanufactured parts. This shorter timeframe is complicated by the need to assess any in-warranty failures completely to ensure no quality issues with use of these parts in repairs. The main focus of new introductions this past year has been on driveshaft applications, with emphasis on late model year offerings.

Additionally, a study of possible candidates to remanufacture A/C compressors is underway, with expectations to finalize plans for program expansion planned for FY2012. With increased stress on the supplier base, due to a variety of material and capacity

shortages worldwide as re-emerging growth in overall parts demand takes place, the timeframe to finalize source selection has also grown.

Additions to Honda's Remanufactured Parts Line in the U.S.



End-of-Life

New Collection Initiative for Aluminum Wheels

In September 2010, Honda launched a core charge program in the U.S. for aluminum wheels. The charge to the Honda or Acura dealer for each new wheel purchased from Honda is recoverable when the parts are returned. The program is expected to significantly increase recycling of aluminum for use in production of future Honda and Acura automobile product components, as well as improve dealer sales and

customer satisfaction. Between the start of the core charge program and the end of the fiscal year, Honda collected 17,629 wheels. Honda expects to increase collections by approximately 3% in FY2012.

Honda's Alloy Wheel Core Return Program



Tire-Derived Fuel (TDF) for Biomass Boilers

In FY2011 Honda Trading America, a Honda company responsible for supply chain management and the export and import of various products and materials, exported nearly 22,574 metric tons of shredded scrap tires to its industrial customers in Japan to be used in biomass boilers, replacing coal and natural gas as an energy source. While the use of scrap tires for energy is not considered by the U.S. EPA as a beneficial use (compared to disposal in landfills), it does provide several advantages, including 35% greater energy production than coal, potentially reduced ash residue compared to

some coals, and lower nitrous-oxide (NOx) emissions compared with high-sulfur coals. Further, scrap tires have presented an environmental challenge in the U.S. for many years. Improperly handled scrap tires present a risk for fire and toxic smoke and, when exposed to water, serve as a breeding ground for disease-carrying insects. As global oil demand increases, TDF remains in high demand with double-digit growth projected in 2012. Since initiation of the program in 2008, export tonnage has grown steadily, increasing 88% in FY2011 over FY2010.

Auto Seat Trims (Laminated Polyurethane Foam)

For the past five years, Honda has been recycling auto seat trimming scraps. The laminated polyurethane foam scrap is resold as an essential raw material used in the surface underlayment industry, a major supply source for producers of carpet padding in the U.S. While 2008 was a peak year for seat trim recycling, with over

1,000 metric tons of scrap, the annual amount of tonnage has decreased and is expected to further decrease as other industries provide higher quality scrap foam at cheaper prices. As a result, the cost of recycling seat trim scraps is increasingly challenging and is expected to become cost prohibitive.

Post-Industrial Bumper Recycling

Since 2000 Honda has been recycling post-industrial bumpers (PIBs) through third-party scrappers. In recent years, all PIBs coming out of five Honda plants in the U.S. and Canada are being reformulated and reused in Honda's own supply chain.

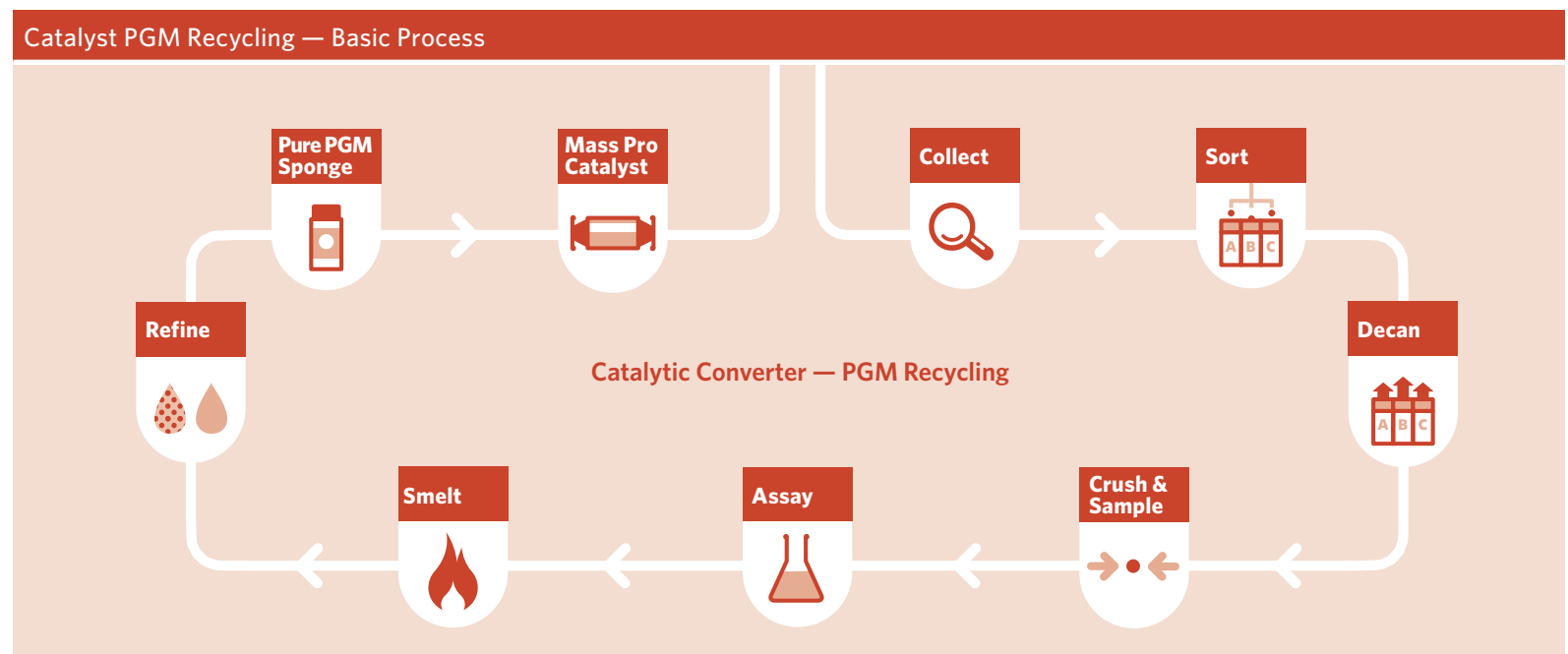
Reformulated PIB pellets are turned into mud and splash guards. In CY2010 a total of 722,175 pounds of material, or the equivalent of 72,000 bumpers, were recycled.

End-of-Life

Catalytic Converters Collection Initiative

Catalytic converters, which are used for emissions control on all vehicles, contain platinum group metals (PGM), which are extremely valuable. Recycling catalysts prevents these precious metals from ending up in landfills and reduces the need to mine PGM. Honda began recycling catalytic converters in December 2002. Catalysts

are collected through warranty replacements and purchased through agreements with scrap yards, auto dismantlers, and other third parties. Since the program's inception, collections have increased from 3,000 units per year to over 300,000 units per year. The program was projected to recycle over 350,000 units in CY2011.



Administration



Honda operates dozens of offices and warehouse facilities in North America and is endeavoring to reduce its environmental impact through “green building” practices and other initiatives aimed at reducing energy and water use and the generation of waste.

OVERVIEW

In addition to our manufacturing plants in North America, Honda operates numerous sales support, service training, and parts warehousing facilities — each a source of energy use and waste production.

FOCUS

Honda has been a leader in its efforts to reduce the impact of administrative operations — reducing waste, improving energy efficiency, and adopting green building standards for both new and existing facilities.


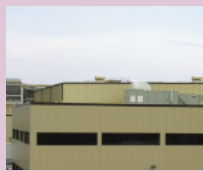


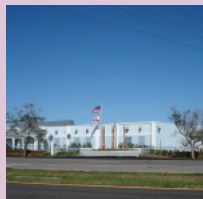
Targets and Results

CATEGORY	FY2011 TARGETS	FY2011 RESULTS	LINK
Green Building	Certify new buildings to U.S. Green Building Council LEED standards	Three additional U.S. facilities achieved LEED green-building certification	68
CO ₂ Emissions	Adopt more energy-efficient processes and deploy more energy-efficient office equipment	Installed new, more energy-efficient computer servers at U.S. headquarters of American Honda	71

Honda is incorporating sustainable concepts into facility construction and operation, including the use of locally harvested and manufactured construction materials, cool roofs, dual-paned glass, high-recycled-content materials, and energy-efficient lighting. In 2011, Honda certified three new facilities under the U.S. and Canada Green Building Councils' Leadership in Energy and Environmental Design (LEED) program. Honda now has 11 LEED-certified green buildings in North America, the most of any automaker operating in the region.



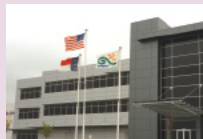



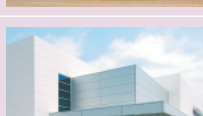
Administration

Green Building Initiatives

Honda Green Buildings in North America					
	FACILITY		CERTIFICATION		DETAIL
Future		Honda Financial Services Charlotte, North Carolina	TBD	TBD	In April 2011, Honda Financial Services broke ground on a new 25,000-square-foot office facility to support its customers in the region, which encompasses North and South Carolina, Maryland, Tennessee, Virginia, and West Virginia. The company will seek LEED certification for the facility once construction is complete.
		Honda Engineering America Powertrain Division Anna, Ohio	Silver (version 2.2)	July 2011	Honda Engineering America's Powertrain achieved LEED certification for its 18,500-square-foot office expansion. Water conservation measures include installation of low-flow toilets and urinals, which reduced the building's water usage by about 30%. Sustainable HVAC system features include enhanced equipment commissioning and refrigeration management. Other sustainable features are energy-efficient lighting controls, installation of cool roofing materials, and indoor air quality management.
New		Honda Canada Headquarters Markham, Ontario	Gold	July 2011	Honda Canada's new 138,000-square-foot head office, one of three buildings on the company's 53-acre campus in Markham, Ontario, utilizes a north-south orientation along with an energy-efficient underfloor air-distribution system and a heat-reflective white roof to reduce energy consumption. Innovative water management at the new facility has reduced potable water consumption by 44%, compared to the company's previous facility. Also, landscape design provides for on-site storm water treatment through the use of bioswales and water collection. During construction of the campus, the company used locally sourced materials where possible, and diverted construction material from landfills, recycling or reusing 75% of total construction materials.
		Honda Manufacturing of Indiana Greensburg, Indiana	Gold	November 2010	Honda Manufacturing of Indiana achieved LEED certification for its 22,978-square-foot Welcome Center. The center includes a lobby, meeting rooms, an auditorium, and locker facilities.
Existing		Honda R&D Marine Engine Research Facility Grant-Valkaria, Florida	Gold	March 2010	Opened in December 2008, the 11,000-square-foot facility is located on 2.08 acres of land bordering the Intercoastal Waterway. In addition to receiving LEED certification, the company has converted about 5% of the two-acre site to a permanent conservation easement to help protect and preserve local wetlands and the wildlife they support. Honda is enhancing the wetlands by reducing the area covered by invasive/exotic species and replacing them with beneficial native vegetative species.

Administration Green Building Initiatives

(continued)

Honda Green Buildings in North America (continued)					
FACILITY		CERTIFICATION		DETAIL	
Existing		Honda Financial Service Mid-Atlantic Facility Wilmington, Delaware	CI Gold	October 2009	This 26,000-square-foot facility achieved LEED-CI Gold Certification for Commercial Interiors in October 2009, the first LEED-certified facility of American Honda Finance Corporation. The facility uses ultra-low-flow lavatory and kitchen fixtures, high-efficiency fluorescent fixtures, and more than 90% of the office appliances are Energy Star rated.
		Northwest Regional Facility Gresham, Oregon	Platinum	June 2009	Honda's first LEED-certified facility was also the first new mixed-use industrial building in the United States to earn Gold certification. It has since become the first LEED Platinum-certified existing building in the automobile industry. The facility is 48% more energy efficient than is required by Oregon's Energy Code.
		Honda Aircraft World Headquarters Greensboro, North Carolina	Gold	December 2008	The 68,134-square-foot office uses steel wall panels with almost 35% recycled content, precision cut at the factory so that no waste was generated at the job site. Water conservation measures included the installation of low-flow toilets and urinals, infrared sensor faucets, and landscaping with native species and plants with low water needs.
		Midwest Consolidation Center Troy, Ohio	Gold	April 2008	The 547,000-square-foot warehouse facility has a reflective roof and energy-efficient lighting. Its second-floor mezzanine was constructed from wood certified by the Forest Stewardship Council.
		Data Center Longmont, Colorado	Silver (version 2.2)	April 2008	Data centers are considered very difficult to certify because of their large energy consumption. The Longmont facility is the first LEED Version 2.2 Silver-certified data center in the United States.
		Honda R&D Central Plant Raymond, Ohio	Gold	April 2008	The central plant at Honda R&D's Ohio Center has rainwater-supplied toilets, a biodiesel-powered emergency generator, and an ice chiller system that reduces peak energy demand from air conditioning by as much as half.
		Acura Design Studio Torrance, California	Gold	March 2008	Opened in May 2007, the Acura Design Studio uses reclaimed water for toilets and irrigation. It also has a highly efficient displacement ventilation system.

Energy & Waste Reduction within Offices

American Honda's nationwide energy efficiency program involves replacing existing warehouse light fixtures and lamps with T5 fixtures, and adding motion sensors. T5s reduce power consumption and generate less heat. Light fixtures in the aisles are on at full strength only when there is activity; otherwise they automatically dim by 50%.

Office and Warehouse Recycling Programs

Office and warehouse recycling, material and waste reduction, and material reuse are encouraged and supported throughout Honda's North American facilities. American Honda's headquarters in Torrance, California has earned recognition from the California Waste Reduction Award Program for 11 consecutive years, beginning in 1999. During the past year, Honda placed an increased emphasis on the reduction and reuse of recyclable materials. The result was an overall decrease in the amount of materials being processed for recycling, from a peak of 4,287,000 pounds in 2006 to 2,140,149 pounds of material in 2010 — a 50% reduction. Rather than recycling cardboard boxes, the Torrance facility makes every attempt to reuse them for shipping, packing, and storage. In addition, the company tracks, stores, and reuses wood pallets wherever possible.

Administration

Energy and Waste Reduction

Reducing Recycling Waste through Reuse at American Honda



Honda Canada made efforts to improve recycling and composting awareness by educating associates and posting signage, resulting in a 79% recycling rate — a 1.1% increase in recycling activity compared with the previous fiscal year. Honda Canada has also removed polystyrene products from its cafeteria and replaced them with compostable plates, bowls, and cups, as well as recyclable cutlery.

Administration

Energy Efficiency Initiatives

Reducing the Environmental Impact of Computing

Virtualization of Servers

According to the EPA, data servers consume about 80% of America's total information technology energy load and 40% of total data center power consumption. In FY2011 Honda continued to reduce its energy consumption and improve its efficiency throughout North America by expanding its use of the state-of-the-art LEED-certified Honda Data Center (HDC), located in Longmont, Colorado.

Honda's Canadian data center function migrated to the HDC in 2010. Through this process, Honda eliminated older and less-efficient servers, consolidated equipment, upgraded to more energy-efficient technology, and increased its sharing of common IT resources in

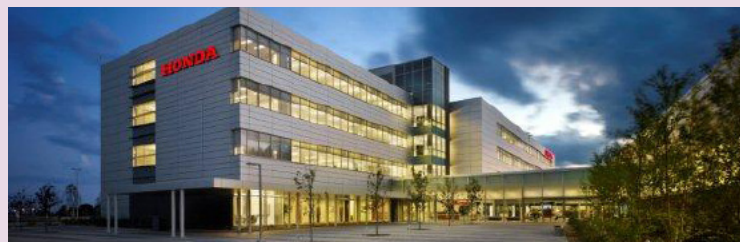
North America. By lowering the number of data centers consuming energy in North America, Honda will reduce its overall CO₂ emissions.

American Honda also continued its server virtualization efforts at the data center. Every server that is virtualized saves approximately 7,000 kWh of electricity and 4 tons of carbon dioxide emissions each year, according to the U.S. EPA. Although the overall number of server instances at the data center grew significantly, through virtualization efforts, American Honda reduced its power utilization 35%, or approximately 6,000 kWh, for the Wintel platforms in CY2010. This effort will continue into FY2012.

Reducing Energy and Paper Use

Energy Use Reduction

Honda Canada's new headquarters is designed to use less energy by utilizing an energy-efficient lighting design and heating system. Accordingly, CO₂ emissions from June to December 2010 were reduced 14% compared to the same period a year ago.



Honda Canada's new LEED-certified headquarters facility in Markham, Ontario

In FY2011, American Honda retrofitted the lighting systems at its North American headquarters in Torrance, California with new energy-efficient technology. The retrofit is expected to reduce annual CO₂ emissions associated with electricity usage by nearly 500 metric tons.

Paper Use Reduction

A pilot program developed by a group of Honda associates led American Honda to a company-wide mandate that all multifunction printer devices default to double-sided, black-and-white printing, resulting in an estimated 38% reduction in paper use since 2009.

Honda Canada discontinued the production of printed model-specific marketing brochures and instead only produces one brochure covering all new models. As a result, paper use for marketing brochures has been reduced 68% versus 2009, as well as reducing the energy use and packing material associated with brochure production and shipping.

Water Use Reduction

Honda Canada's water management system is designed to be environmentally sustainable, including plumbing fixtures that have been selected to reduce water consumption. In addition, a storm water management strategy is designed to achieve a reduction of storm water leaving the site, which improves the quality of storm water, and captures and recycles rainwater to facilitate conservation of drinking water.

Initiatives Planned for FY2012

Desktop Virtualization

American Honda has begun a desktop virtualization project to help the company reduce its CO₂ emissions in FY2012.

During the project, approximately 650 desktop PCs will be replaced with a new “thin client” technology that will:

- require 76% less energy than the replaced desktop PCs
- require less cooling since they produce less heat
- have a longer device life cycle, resulting in less electronic waste

American Honda anticipates that it will reduce the yearly energy consumption by 67% for those who receive the new technology.

Email Upgrades

In FY2012, American Honda also plans to reduce the number of physical servers used for its email infrastructure from 50 to 10 throughout North America. This change is anticipated to have many environmental benefits including:

- reduction in the company’s CO₂ emissions
- an expected 60% reduction of power requirements
- decreased cooling requirements, since fewer servers will produce less heat

Administration

Energy Efficiency Initiatives

(continued)

Honda has a long history of environmental protection activities and initiatives to build harmony with local communities. In relation to biodiversity conservation, Honda has adopted guidelines focusing primarily on the reduction of environmental impact and the effective utilization of resources.

Honda Biodiversity Guidelines

We recognize, under the Honda 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.

Priority Activities:

1

Development of Environmental Technology

We will contribute to the conservation of biodiversity by developing and disseminating technologies for fuel-efficient vehicles, next-generation cars, energy production, and other technologies for the reduction of environmental impacts.

2

Initiatives Based on Corporate Activities

We will work to reduce environmental impacts and ensure the effective use of resources through efficiency improvements.

3

Cooperation with Communities

We will implement community-based activities in cooperation with stakeholders, using expertise accumulated by Honda through its initiatives to protect ecosystems.

4

Disclosure and Sharing of Information

We will share information with society by disclosing the outcomes of our activities.

Established in May 2011

Administration

Biodiversity Initiatives

Administration

Biodiversity Initiatives

(continued)

Habitat for Swallows, Wrens, and Bluebirds

Honda of Canada Mfg., operating two automobile plants and an engine plant in Alliston, Ontario, has planted approximately 60,000 seedling trees and shrubs on 200 acres on the perimeter of its property as part of an ongoing reforestation initiative that serves the dual purposes of providing a visual screen around the manufacturing facility and creating habitat for a variety of wildlife. Birds are naturally flocking to this developing habitat. They also are getting encouragement through the installation of nearly 30 birdhouses for swallows, wrens, and bluebirds. Honda of Canada Mfg. has been working with the Nottawasaga Valley Conservation Authority on this restoration project.



Associates of Honda of Canada Mfg. planted seedling trees and shrubs on the outskirts of its property in Alliston, Ontario, Canada.

Protecting a Nationally Recognized Watercourse

Alongside two auto plants, a major R&D center, and other operations on its 8,200-acre complex near Marysville, Ohio, Honda manages 500 acres of wetlands, 1,400 acres of forests, and 3,000 acres of farmland. Its commitment is to provide a rich habitat for the plants and animals that share this land.

By establishing wetlands to control water flow, Honda is preventing excess sediments from entering watercourses that

feed into the Big Darby Creek, one of the most biologically diverse watercourses in the U.S. Midwest. Honda's commitment to the Big Darby doesn't end there. Adjacent to this Honda property, the Nature Conservancy has created the Big Darby Headwaters Nature Preserve to showcase Big Darby preservation initiatives. In 2010, Honda continued as a major supporter by providing a major grant for this Nature Conservancy project.

Administration Biodiversity Initiatives

(continued)

Mobile Bay Oysters Enjoy New Reef

On January 22, 2011, associates from Honda Manufacturing Alabama joined more than 700 volunteers at Helen Wood Park along Alabama's Mobile Bay to help establish a reef area to provide a natural habitat for sea life and help disperse wave energy as it approaches sensitive marshland and the shore. Bags of oyster shells were lifted and lined along the shore, in hopes of replacing what had been lost, both naturally over time and as a result of the Gulf of Mexico oil spill in 2010. The Restore Coastal Alabama project, with a little help from Honda, hopes to establish 100 miles of reefs and 1,000 acres of marshes in Mobile Bay.



Associates from Honda Manufacturing of Alabama, LLC, volunteering at the Restore Coastal Alabama project

Honda South Carolina Partnership with Environmental Community

In a program called Wildlife and Industry Together (WAIT), Honda of South Carolina Mfg., Inc. (HSC) and its associates have joined in a partnership with the public and private sectors to integrate wildlife habitat into its land management activities. The program matches HSC associates with community partners who share in a wildlife activity, such as creating various wildlife habitats, planting trees, and encouraging butterfly gardens.

The WAIT partners HSC is working with include the South Carolina Wildlife Federation, Duke Power, the South Carolina Department of Natural Resources, and the National Wild Turkey Federation.



Associates of Honda South Carolina Mfg., Inc., engaged in the Wildlife and Industry Together (WAIT) initiative.









Environmental Community Activities

Environmental Education Organizations

Environmental Community Activities

OVERVIEW Honda is always looking for ways to make positive contributions to the communities where it does business, including helping preserve and protect the local environment.

FOCUS The company supports a broad range of community-based environmental education, preservation, and restoration efforts, in the form of corporate charitable giving, foundation giving, in-kind contributions, and company support of volunteer work by Honda associates who take an active role in their communities.

Organizations Supported by Honda		Environmental Education
ORGANIZATION	FOCUS OF INVOLVEMENT AND TYPE OF SUPPORT	
Alabama PALS (People Against A Littered State) Montgomery, Alabama, USA www.alpals.org	A partnership of state and local governments, civic groups, law enforcement, businesses, and industry aimed at educating and fighting against littering.  	
Appalachian Trail Conservancy Harpers Ferry, West Virginia, USA www.appalachiantrail.org	Provides K-12 teachers with professional development training, using the Appalachian National Scenic Trail as a multidisciplinary, educational resource for ecology field studies, classroom curriculum, and service-learning. 	
Aquarium of the Pacific Long Beach, California, USA www.aquariumofpacific.org	Honda is a founding sponsor of this aquarium, whose mission is to instill in people of all ages a sense of wonder, respect, and stewardship for the Pacific Ocean, its inhabitants, and ecosystems. 	
Aullwood Audubon Center Dayton, Ohio, USA http://aullwood.center.audubon.org	Aullwood is an environmental education center in western Ohio whose goal is to promote the protection of birds and other wildlife, and the habitats on which they depend. Honda supports the center's educational outreach to elementary school children. 	
Auntie Litter, Inc. Birmingham, Alabama, USA www.auntielitter.org	Provides educational programs across the state to prevent littering. 	
Boy Scouts — Simon Kenton Council Columbus, Ohio, USA www.skbsa.org	Boy Scouts provides a program that builds character and provides a solid foundation to learn leadership skills and build character. Honda supports the Council's World Conservation summer program focused on recycling, wildlife conservation, water and soil conservation, and renewable energy.  	

 FINANCIAL
SUPPORT












 PRODUCT
DONATION

 ASSOCIATE
VOLUNTEER

 IN-KIND
DONATION

Environmental Community Activities Environmental Education Organizations

(continued)

Organizations Supported by Honda		Environmental Education (continued)
ORGANIZATION	FOCUS OF INVOLVEMENT AND TYPE OF SUPPORT	
Clean Air Champions Ottawa, Ontario, Canada www.cleanairchampions.ca	Clean Air Champions' mission is to improve air quality and reduce climate change by working with high performance athletes to educate and inspire Canadians, primarily youth, to adopt more-sustainable, healthier lifestyles. 	
Clean Fuels Ohio Columbus, Ohio, USA www.cleanfuelsohio.org	This statewide non-profit organization is dedicated to promoting the use of cleaner domestic fuels and fuel-efficient vehicles. Honda supports the organization's educational activities and its Green Fleets Program.  	
Earth Day Indiana Festival Indianapolis, Indiana, USA www.earthdayindiana.org	Educates people on the need and ways they can help protect the environment, conserve natural resources, and live a more sustainable lifestyle. 	
Earth Rangers Woodbridge, Ontario, Canada http://www.earthrangers.org/	Dedicated to educating and inspiring children to Bring Back the Wild™ by protecting biodiversity and adopting sustainable behaviors. Hundreds of thousands of children are reached through interactive live animal shows in schools, at the Royal Ontario Museum, and at community events. 	
Franklin Park Conservatory & Botanical Gardens Columbus, Ohio, USA www.fpconservatory.org	The conservatory promotes environmental appreciation and ecological awareness for visitors throughout Ohio and around the world. Honda supports the conservatory's Children and Family Education Program. 	
Girl Scouts of Ohio's Heartland Council Columbus, Ohio, USA www.gsooh.org	Girl Scouts offers opportunities for girls ages 5-17 to develop leadership, teamwork, and consensus building. Honda supports the program, <i>It's Your Planet — Love It! A Journey2Go Leadership Experience</i> . Activities and events are designed to foster a better understanding of the importance of preserving the earth's natural resources.  	
Greening of Detroit Detroit, Michigan, USA www.greeningofdetroit.com	The Greening's mission is to guide and inspire residents to create a greener Detroit through educational programs, environmental leadership, advocacy, and family gardens. It partners with federal, state, and local agencies, corporations, and foundations to assist neighborhood groups, churches, schools, and families to improve Detroit's ecosystem while teaching the advantages of good nutrition and growing one's own food.  	
Jane Goodall Institute of Canada Toronto, Ontario, Canada www.janegoodall.ca	This institute supports wildlife research, education, and conservation and promotes informed and compassionate action to improve the environment. Objectives include increased Canadian awareness of and compassion for the plight of endangered animals, with a focus on chimpanzees. 	

 FINANCIAL SUPPORT












 PRODUCT DONATION

 ASSOCIATE VOLUNTEER

 IN-KIND DONATION

Environmental Community Activities Environmental Education Organizations

(continued)

Organizations Supported by Honda		Environmental Education (continued)
ORGANIZATION	FOCUS OF INVOLVEMENT AND TYPE OF SUPPORT	
Living Classrooms of the National Capital Region Washington, D.C., USA www.livingclassroomsdc.org	Offers programs to inspire young people to achieve their potential through hands-on education and job training using urban, natural, and maritime resources as “living classrooms.”   	
The Kohala Center Kamuela, Hawaii, USA www.kohalacenter.org	Engages middle and high school students in field science research projects that promote environmental stewardship by addressing ecological issues occurring on the island. 	
Ohio Wildlife Center Powell, Ohio, USA www.ohiowildlifecenter.org	This center is dedicated to fostering awareness and appreciation of Ohio’s native wildlife through rehabilitation, education, and wildlife health studies. Honda’s grant helps support site upgrades as well as supporting the center’s volunteer program.  	
Pee Dee Research and Education Center (Clemson University) Pickens, South Carolina, USA www.clemson.edu/public/rec/peedee	Partners with Clemson University to provide 100 acres of land to grow switchgrass to be used for biofuel research and development. 	
Pinelands Protection Alliance Southampton, New Jersey, USA www.pinelandsalliance.org	The Pinelands Preservation Alliance is the only non-profit organization dedicated solely to the protection of New Jersey’s Pinelands, supporting advocacy and educational programs designed to protect the Pinelands for future generations. 	
Shelby Soil and Water Conservation District Sidney, Ohio, USA www.shelbyswcd.org	Providing leadership, education, and technical assistance in natural resource conservation, Shelby offers the Envirothon, a competition providing teams of high school students an opportunity to test their knowledge of soils, forestry, wildlife, aquatic ecology, and current environmental issues. 	
Wildlife and Industry Together™ (W.A.I.T.™) South Carolina Wildlife Federation Columbia, South Carolina, USA http://www.scwf.org/index.php/education-programs/habitats/wait	W.A.I.T.™ is designed to encourage corporate landowners to integrate wildlife habitat needs into corporate land management decisions. Honda associates have implemented many projects such as a butterfly garden, food plots, bird feeders and houses, and tree plantings.  	

 FINANCIAL SUPPORT















 PRODUCT DONATION

 ASSOCIATE VOLUNTEER

 IN-KIND DONATION

Environmental Community Activities

Environmental Preservation & Restoration

Organizations Supported by Honda		Environmental Preservation & Restoration
ORGANIZATION	FOCUS OF INVOLVEMENT AND TYPE OF SUPPORT	
Alabama Wildlife Center Pelham, Alabama, USA www.awrc.org	Its mission is to rehabilitate injured and orphaned wild birds and return them to the wild. 	
Beach Clean-Up, South Carolina Department of Parks, Recreation and Tourism Columbia, South Carolina, USA http://www.discoversouthcarolina.com	Honda associates and SC DNR utilized Honda Rake / Sand Screen Equipment to support beach clean-up efforts for Myrtle Beach State Park.   	
Cycle Conservation Club of Michigan Coldwater, Michigan, USA www.cycleconservationclub.org	A non-profit organization committed to the conservation of our wild lands while promoting the sport of off-road motorcycling. 	
Gladys Porter Zoo Brownsville, Texas, USA www.gpz.org/ridley.htm	Honda provides products for use by researchers protecting the endangered Kemp's ridley sea turtle. 	
Heal the Bay Santa Monica, California, USA www.healthebay.org	Honda associates volunteer to participate in the annual California Coastal Cleanup Day, removing trash from a local beach.  	
Keep Florence Beautiful/ Adopt A Highway Florence, South Carolina, USA www.cityofflorence.com	Associates volunteer to clean up 2.4 miles of road near the Honda plant three times a year. Honda also provides a cash contribution and provides volunteers to support the City of Florence in the "Great American Clean-Up" campaign.  	
Living Lands & Waters East Moline, Illinois, USA www.livinglandsandwaters.org	This non-profit is dedicated to the protection, preservation, and restoration of the natural environment of the nation's major rivers and their watersheds, and to the expansion of awareness of environmental issues and responsibilities encompassing river systems. 	
Mecklenburg County Parks and Recreation Charlotte, North Carolina, USA http://charmeck.org/mecklenburg/county/ParkandRec/Pages/default.aspx	Honda Associates volunteered in clean-up efforts to support the local community park. 	
Miami County Parks Troy, Ohio, USA www.miamicountyparks.com	Volunteers planted trees at the Hobart Urban Nature preserve.  	

 FINANCIAL SUPPORT

 PRODUCT DONATION













 ASSOCIATE VOLUNTEER

 IN-KIND DONATION

Environmental Community Activities

Environmental Preservation & Restoration

(continued)

Organizations Supported by Honda		Environmental Preservation & Restoration (continued)
ORGANIZATION	FOCUS OF INVOLVEMENT AND TYPE OF SUPPORT	
Mote Marine Laboratory Sarasota, Florida, USA www.mote.org	Mote has been a leader in marine research since its founding in 1955. Today, it incorporates education and outreach for people of all ages from its seven centers for marine research. 	
National Off-Highway Vehicle Conservation Council Great Falls, Montana, USA www.nohvcc.org	This organization is dedicated to promoting responsible off-highway vehicle recreation management and resource protection. It works in partnership with private and public land managers and recreation planners, providing educational, safety, ethics, environmental and character-building programs for all OHV users.  	
The Nature Conservancy — Ohio Chapter Dublin, Ohio, USA www.nature.org/ohio	The mission of the Nature Conservancy is to preserve the plants, animals, and natural communities that represent the diversity of life on earth by protecting the lands and waters they need to survive. Honda has supported the Ohio Chapter's establishment of the Big Darby Creek Headwaters Nature Preserve, stewardship, and volunteer programs.  	
Ohio Department of Transportation Columbus, Ohio, USA www.dot.state.oh.us	Honda associates in Raymond participate in the state's Adopt-a-Highway program, cleaning a section of highway near the Honda facility. 	
Padre Island Peregrine Falcon Survey Bozeman, Montana, USA www.earthspan.org	Honda has donated products to assist scientists studying Peregrine falcons in their natural habitat. 	
Protecting Our Waterways Piqua, Ohio, USA	Thirty volunteers participated in the "Clean Sweep of the Miami River" event. 	
Restore Coastal Alabama Mobile Bay, Alabama, USA www.nature.org	Honda and 40 associate volunteers joined forces with The Nature Conservancy to construct oyster shell reefs in Mobile Bay to protect the shoreline. Partners included the Alabama Coastal Foundation, Mobile Baykeeper, and the Ocean Foundation.   	
San Bernardino National Forest Service Association Big Bear, California, USA www.fs.fed.us/r5/business-plans/san-bernardino/financials/success-sbnfa.html	Since 1993, this group has worked to complement the mission of the U.S. Forest Service. It develops new resources and partnerships that create opportunities, particularly through the efforts of volunteers, for conservation, education, and recreation that add value to the forest's role as public land. 	



FINANCIAL SUPPORT



PRODUCT DONATION






ASSOCIATE VOLUNTEER



IN-KIND DONATION

**Environmental
Community
Activities**
**Environmental
Preservation &
Restoration**

(continued)

Organizations Supported by Honda		Environmental Preservation & Restoration (continued)
ORGANIZATION	FOCUS OF INVOLVEMENT AND TYPE OF SUPPORT	
Save Our Beach Seal Beach, California, USA www.saveourbeach.org	Honda provided a cash contribution and associate volunteers to support beach clean-up efforts.  	
Tigers for Tomorrow Atalla, Alabama, USA www.tigersfortomorrow.org	This exotic animal park and rescue preserve is a “last stop” for exotic animals, which will live the rest of their lives at the park. 	

 FINANCIAL SUPPORT

 PRODUCT DONATION

 ASSOCIATE VOLUNTEER

 IN-KIND DONATION

Environmental Technology Milestones

1972-2001



1972

- Honda announces CVCC (Compound Vortex-Combustion Controlled), the first engine technology to meet U.S. Clean Air Act standards without the need for a catalytic converter.

1973

- Honda introduces 4-stroke marine engines that are cleaner, more fuel-efficient, and quieter than the 2-stroke outboard motors standard at the time. Honda has manufactured only 4-stroke outboard motors since 1973.

1974

- First car to meet U.S. Clean Air Act without the use of a catalytic converter solely through engine performance: the 1975 Honda Civic CVCC.

1977

- The Civic tops the U.S. EPA's list of America's most fuel-efficient cars.

1986

- The Civic CRX-HF is the first mass-produced 4-cylinder car to break the 50-mpg fuel economy mark.

1989

- Honda becomes the first automaker in America to use waterborne basecoat paint in mass production.

1990

- VTEC (Variable Valve Timing and Lift Electronic Control) — Honda's foundational technology for achievements in low emissions, high fuel-efficiency, and high performance, is introduced in the U.S. in the Acura NSX.

1995

- First gasoline low-emission vehicle (LEV) in the industry is introduced in California: the 1996 Honda Civic.
- Fuel economy leadership puts four Honda models on the U.S. EPA's list of the 10 most fuel-efficient cars.

1996

- The Honda Civic HX Coupe with a continuously variable transmission is the only automatic transmission vehicle to make the U.S. EPA's top-10 list of fuel-efficient cars.

1997

- First CARB-certified gasoline ultra-low-emission vehicle (ULEV) is introduced: the 1998 Honda Accord.
- Honda becomes the first automaker to introduce low-emission vehicle (LEV) technology voluntarily in mass-market vehicles (Honda Civic) throughout the U.S. and Canada.
- World's first 360-degree inclinable mini 4-stroke engine for handheld power equipment is introduced by Honda. It is more fuel efficient and virtually smoke free, with ultra-low noise.

- First advanced battery-powered electric vehicle is introduced and leased to customers: the 1997 Honda EV Plus.

1998

- U.S. EPA recognizes the 1998 Honda Civic GX natural gas vehicle as the cleanest internal combustion engine it has ever tested.
- Honda introduces ultra-quiet portable inverter generators that achieve substantially higher fuel economy and lower emissions than conventional generators.
- Honda becomes the first company to introduce an entire line of high-performance outboard motors that meet U.S. EPA emission standards proposed for the year 2006.

1999

- First CARB-certified gasoline super-ultra-low-emission vehicle (SULEV) in the industry is introduced: the 2000 Honda Accord.
- Honda introduces FCX-V1 and FCX-V2 prototype fuel cell electric vehicles.
- First gas-electric hybrid vehicle is introduced in North America: the 2000 Honda Insight.

2000

- First 50-state ultra-low-emission vehicle (ULEV) is introduced: the 2001 Civic.

- First product of any kind receives the Sierra Club Excellence in Environmental Engineering Award: the 2000 Honda Insight.

- First vehicle certified as an advanced technology partial zero-emission vehicle (AT-PZEV) by California's Air Resource Board (CARB): the 2001 Civic GX.

2001

- First production motorcycle certified to meet CARB's 2008 emission standards, the Honda Gold Wing, is sold.
- Honda is the first mass-market automaker to offer an entire lineup of cars and light trucks that meet or exceed low-emissions vehicle (LEV) standards.
- First solar-powered hydrogen production and fueling station for fuel cell vehicles built and operated by an automaker opens at Honda R&D Americas' Los Angeles Center.
- America's first zero-waste-to-landfill auto plant opens in Lincoln, Alabama.
- Honda introduces FCX-V3 prototype fuel cell electric vehicle.
- Honda introduces first personal watercraft to meet 2006 EPA emissions standards: 2002 AquaTrax F-12 and F-12X.

Environmental Technology Milestones

2002 - present



2002

- First application of hybrid technology to an existing mass-market car: the 2002 Civic Hybrid.
- First hydrogen-powered fuel cell vehicle to receive both U.S. EPA and CARB certification for commercial use, and the first to meet applicable federal motor vehicle crash safety standards: Honda FCX.
- Honda is first with an entire lineup of personal watercraft (PWC) powered by 4-stroke engine technology.
- World's first commercial application of a fuel cell electric vehicle: a Honda FCX is leased to the city of Los Angeles.

2003

- First hybrid vehicle certified as an advanced technology partial zero-emission vehicle (AT-PZEV) by the CARB: 2002 Civic Hybrid.
- Honda begins experiments with a hydrogen Home Energy Station (HES).
- Honda develops breakthrough fuel cell stack that starts and operates at temperatures below freezing while improving fuel economy, range, and performance with reduced complexity.

2004

- FCX vehicles are leased to the cities of San Francisco and Chula Vista, and the South Coast California Air Quality Management District.

- The 2005 FCX, Honda's second-generation fuel cell vehicle, is certified by the U.S. EPA as a Tier 2 Bin 1 (ZEV) vehicle and by the CARB as a zero-emission vehicle (ZEV).
- First V-6 hybrid car is introduced: the 2005 model year Honda Accord.
- FCX with cold-weather start capability is leased to state of New York, the first fuel cell customer in the northeastern U.S.
- Union of Concerned Scientists gives Honda its "Greenest Automaker" award.

2005

- World's first fuel cell family, Jon and Sandy Spallino, take delivery of the first fuel cell electric vehicle leased to an individual customer.
- First natural gas home refueling device, Phill, is offered for lease in California with Honda Civic GX natural gas vehicle.
- Introduction of Honda Variable Cylinder Management (VCM) technology, the first cylinder deactivation system for an overhead cam (OHC) V6 engine: the 2006 Odyssey minivan.
- Honda introduces the iGX, a revolutionary, intelligent, computer-controlled general-purpose engine. It sets an even higher standard for fuel efficiency and quiet operation.
- The 2006 Civic hybrid introduced 4th-generation Honda IMA technology with 50 mpg combined EPA city and highway fuel economy.

2006

- Honda Soltec, LLC, established for production and sales of Honda-developed CIGS solar panels in Japan.
- Retail sales of natural-gas-powered Civic GX to retail consumers expanded from California to New York State.
- Honda develops plant-based biofabric for use in automobile interiors.
- Honda announces it will aim for a 5% improvement in its U.S. corporate average fuel economy (CAFE) from 2005 levels by 2010.
- North American debut of Honda FCX Concept with more compact, powerful, and efficient V Flow stack points toward an all-new Honda fuel cell electric vehicle to be introduced in 2008.

2007

- Union of Concerned Scientists names Honda the "greenest automaker" for the fourth consecutive time in its biennial report on automakers' environmental performance.
- World debut of the FCX Clarity next-generation fuel cell electric vehicle, powered by a more powerful, efficient, and compact new Honda V Flow fuel cell stack.
- Began testing of 4th generation experimental hydrogen Home Energy Station.

2008

- 2008 Civic GX tops the American Council for an Energy Efficient Economy's "Green Car" list for the fifth straight year.

- Honda begins delivery of its next-generation zero-emissions FCX Clarity fuel cell car to retail customers in Southern California.

2009

- The 2010 Honda Insight is launched in the U.S. and Canada as North America's most affordable mass-produced gas-electric hybrid automobile.

2010

- Began operation of next-generation prototype Honda Solar Hydrogen Station at Honda R&D Americas' Torrance, California facility.
- Honda earned the top ranking for the 10th consecutive year in the ACEEE's annual rating of America's greenest vehicles.
- Honda introduces first affordable sports hybrid: the two-seat CR-Z.
- American Honda launches Honda Electric Vehicle Demonstration Program with the first public test drive of a Fit EV prototype and an Accord test vehicle outfitted with Honda's new two-motor plug-in hybrid system.
- Honda named America's "greenest automaker" for the fifth consecutive time by the Union of Concerned Scientists.

2011

- Honda launches 9th generation Civic lineup including the 41mpg Civic HF, a new Civic Natural Gas, and new 44mpg Civic Hybrid, the most fuel-efficient sedan in America.

North American Corporate Profile

Capital Investment

\$21 billion

Employment

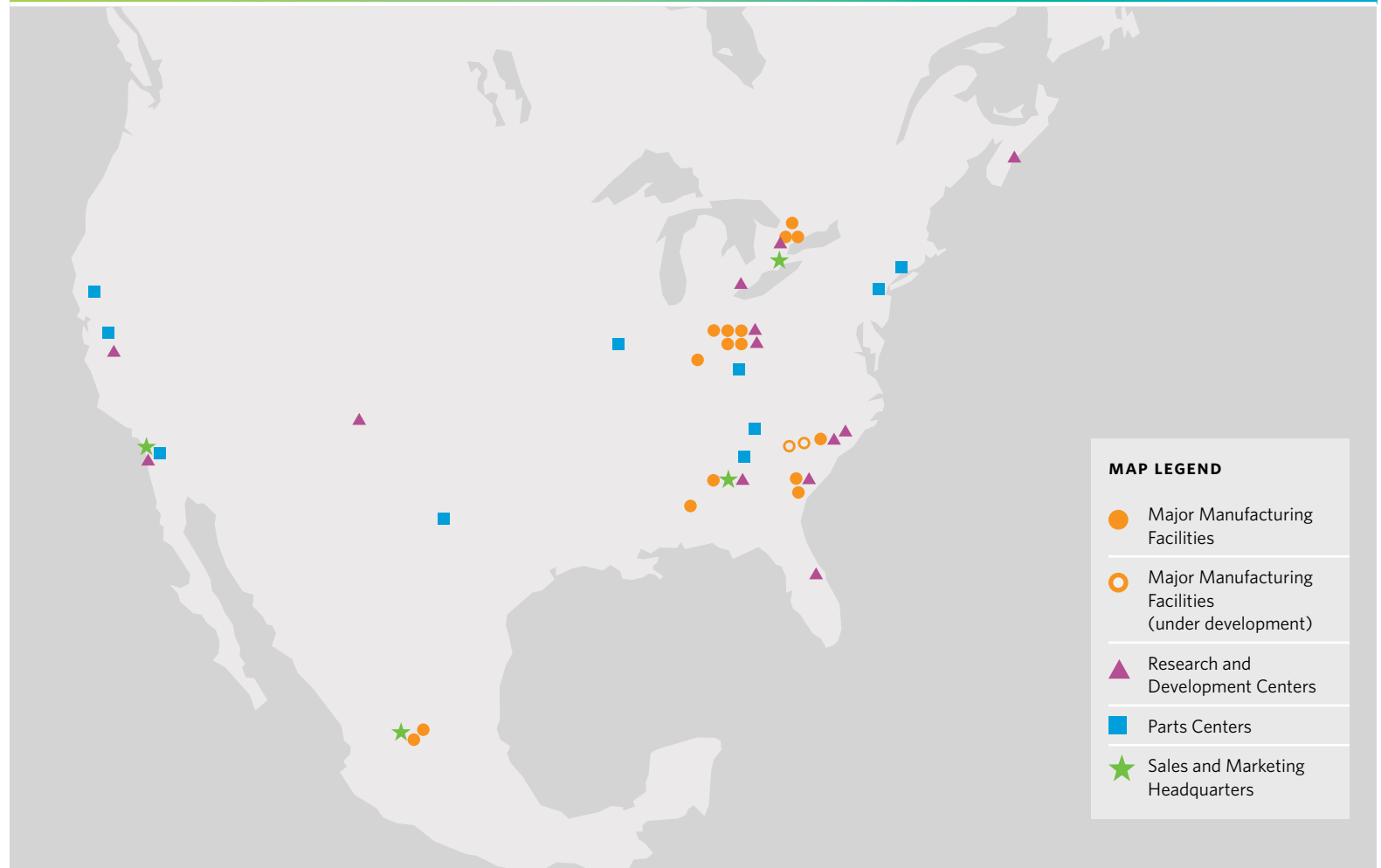
Approximately
30,000 associates

Parts Purchases

More than \$17.5 billion in parts and materials purchased from more than 600 North American original equipment suppliers

Honda develops, manufactures, sells, and services a diverse range of automobile, power equipment, and powersports products in North America. This is Honda's single largest market for the production and sales of Honda and Acura automobiles. As such, Honda's North American region plays a critical role in the company's global effort to reduce its environmental impact, particularly in automobile production and in-use CO₂ emissions.




Key North American Locations



LINK TO GLOBAL INFO

[Honda's global corporate profile](#)
GO

Additional Information

	United States	Canada	Mexico
Additional information on Honda and Acura products can be found at:	 www.honda.com	 www.honda.ca	 www.honda.com.mx
Honda companies covered in this report:	American Honda Motor Co., Inc. American Honda Finance Corp. Honda North America, Inc. Honda of America Mfg., Inc. Honda Manufacturing of Alabama, LLC Honda Power Equipment Mfg., Inc. Honda of South Carolina Mfg., Inc. Honda Transmission Mfg. of America, Inc. Honda Manufacturing of Indiana, LLC Honda Engineering North America, Inc. Honda R&D Americas, Inc. Honda Trading America Corp. Honda Precision Parts of Georgia, LLC Honda Aircraft Company, Inc. Honda Aero, Inc.	Honda Canada, Inc. Honda of Canada Mfg., a division of Honda Canada, Inc. Honda R&D Americas, Inc. (Canada) Honda Canada Finance, Inc. Honda Trading Canada, Inc.	Honda de Mexico, S.A. de C.V.

All trademarks, trade names, service marks, and logos referenced herein belong to their respective companies. All images contained herein are either owned by American Honda Motor Co., Inc., or used under a valid license. It is a violation of federal law to reproduce these images without express written permission from American Honda Motor Co., Inc., or the individual copyright owner of such images. Specifications, features, illustrations, and equipment shown in this report are based upon the latest information available at the time of document release. Although descriptions are believed to be correct, accuracy cannot be guaranteed.

©2011 American Honda Motor Co., Inc.

www.corporate.honda.com