2017 Accord Hybrid

2016 North American Environmental Report

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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, 2015 and ended March 31, 2016 (FY16).

BLUE SKIES FOR OUR CHILDREN

To learn more, visit:

csr.honda.com

On the Cover

Set against the backdrop of the Honda Blue Skies for Our Children logo, the 2017 Accord Hybrid, which uses a new generation of Honda's innovative two-motor hybrid system, is the first in a series of new electrified vehicles that also will include the Clarity series of vehicles featuring fuel cell, battery electric and plug-in hybrid powertrain technologies. These products are part of Honda's effort to substantially grow sales of electrically powered vehicles as a central component of its vision for ultra-low carbon mobility.

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.

Electronic format

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A Letter from the President & CEO

Honda believes in the power of original thinking and technology to make people's lives better. From an environmental perspective, we are aggressively pursuing innovations that will help reduce CO_2 emissions, which is society's most pressing environmental challenge.

On a global scale, we have a goal to halve our total company CO_2 emissions from 2000 levels by 2050. As an interim target, we are working to reduce by 30 percent the average CO_2 emissions from Honda's global fleet of automobiles, power equipment and powersports products by 2020 compared to 2000 levels. As a key part of this effort, Honda will promote the adoption of electrified vehicles, including hybrids, plug-in hybrids, battery-electric and fuel cell vehicles, and will seek to grow sales of electrified vehicles to two-thirds of our global sales by 2030.

In North America, the relatively low cost of gasoline is impacting customers' buying decisions. This includes increased consumer preference for SUVs and pickups, as well as a decline in demand for more fuel-efficient and electrified vehicles. Honda, however, is maintaining its long-term vision for the development and sale of advanced environmental technologies. This year, we launched a redesigned and reengineered 2017 Accord Hybrid featuring a next-generation version of our two-motor hybrid system that helped the Accord earn the highest EPA fuel economy ratings of any midsize hybrid sedan.

The Accord Hybrid is at the forefront of our strategy to increase sales of electrified vehicles in North America. It will be followed by the all new Clarity series, the first vehicle in the industry to offer fuel cell, battery electric and plug-in hybrid powertrains on one platform. We will begin sales of the Clarity Fuel Cell in late 2016, followed by introduction of the Clarity Plug-In and Clarity Electric in 2017. The Clarity Plug-In will be the volume leader in the series, sold in all 50 U.S. states and anticipated to offer a rated all-electric driving range in excess of 40 miles. We are also making ongoing investments in our manufacturing facilities to ensure our ability to produce advanced electrified vehicles in increasing volumes.

Of course, our efforts at reducing Honda's environmental impact and promoting a more sustainable society are not limited to our products. We are pursuing environmental innovation across all aspects of our business with a strong focus on improving efficiency and reducing CO_2 emissions and waste at every stage of the product life cycle. In the area of "green dealer" efforts, more than 100 dealers have already reduced their CO_2 emissions by more than 10 percent, and we are proud that two of those are the only two electric-grid neutral automobile dealers in America, producing more electricity from on-site renewable sources than they consume from public utilities. And in the "green factory" area, we have cut the CO_2 emissions intensity of automobile manufacturing by 28 percent compared to FY2009 levels, and we are operating 18 manufacturing plants in North America with virtually zero waste sent to landfills.

These are examples of our broad-ranging effort to reduce our environmental impact and contribute to the creation of a more sustainable society. We are pleased to bring you this, our twelfth annual North American Environmental Report, and encourage you to provide us with your thoughts and suggestions on how we can improve this report in the future.

Sincerely,

Toshiaki Mikoshiba
President & CEO, Honda North America, Inc.
Chairman, Honda North American Environmental Committee

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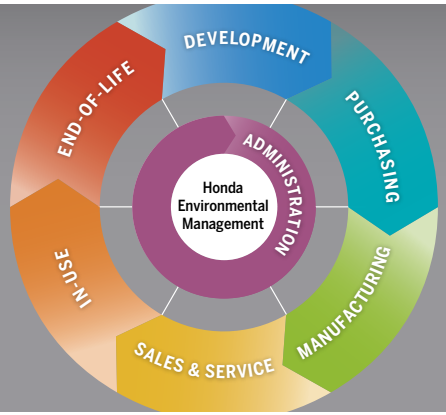
2016 Executive Summary

The following summarizes the most significant findings of this year's report and is organized by the various stages of the product life cycle. Honda recognizes the Life Cycle Assessment model as a critical tool for understanding, measuring and minimizing the impact of its products on the environment.



Product Development

CATEGORY	PRODUCT	FY2016 RESULTS
Recyclability	Autos	• Maintained a 90% level of design recyclability for all Honda and Acura automobiles.
	Powersports and Power Equipment	• Maintained a 95% level of design recyclability for all powersports and power equipment products.
Volatile Organic Compounds (VOCs)	Autos	• Honda is endeavoring to eliminate PVC from its vehicle interiors. Eleven of the 15 Honda and Acura car and light truck models sold in the U.S. or Canada in FY2016 had PVC-free interiors.
Fuel-Efficient Technology	Autos	• Introduced more fuel-efficient powertrains including new small-displacement turbo engine technology on the 2016 Honda Civic and a new generation of Honda's two-motor hybrid system on the 2017 Accord Hybrid. Both models achieved the highest EPA fuel economy ratings in their respective market segments.

Purchasing

CATEGORY	PRODUCT	FY2016 RESULTS
"Green Purchasing"	All Products	• Honda is endeavoring to more fully measure the environmental impact of its products, including in the supply chain. In FY2016, the number of Honda's North America suppliers providing CO_2 emissions data to Honda was expanded to 299 companies comprising 95% of all Honda's new-vehicle parts purchases in the region (on a dollar value basis).
"Green Logistics"	All Products	• Ongoing efforts to minimize emissions from the shipment of new-vehicle parts resulted in nearly 2,500 metric tons of CO_2 emissions being avoided in FY2016.

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2016 Executive Summary

Manufacturing

CATEGORY	PRODUCT	FY2016 RESULTS
CO_2e Emissions	Autos	• The CO_2 emissions intensity of automobile manufacturing was down 10% from the previous year and 28% from FY2009 levels to 537 kilograms per unit of production (kg/unit).
	Powersports	• The CO_2 emissions intensity of powersports product manufacturing was down 4% from the previous year to 72 kg/unit.
	Power Equipment	• The CO_2 emissions intensity of power equipment product manufacturing was down 8% from the previous year and 40% from FY2009 levels to 7.2 kg/unit.
Waste	All Products	• Solid waste from manufacturing operations rose 0.7% versus year-ago totals to 156,000 metric tons due in part to record levels of automobile production in FY2016. • Waste sent to landfills was down 83% versus last year and 92% from FY2001 levels to just 2,300 metric tons in FY2016.
Water		• Total water used in manufacturing rose 13% from the previous year as a result of temporary measures taken at the company's Lincoln, Alabama plant.
VOC Emissions		• VOC emissions in the painting of automobiles rose 2.1% to 14.4 g/m^2 but remained well below the company's targeted maximum of 20 g/m^2.

Sales & Service

CATEGORY	PRODUCT	FY2016 RESULTS
CO_2 Emissions	Autos	• The CO_2 emissions intensity of new automobile shipments in the U.S. were reduced 4.3% from the previous fiscal year and 14.2% from the FY2009 baseline.
	All Products	• The CO_2 emissions intensity of shipping service parts in the U.S. was reduced 10% from the previous year and 43.3% from the FY2009 baseline.
Waste	All Products	• Waste sent to landfills from U.S. parts distribution facilities has been reduced 91.5% from the FY2009 baseline to less than half of one percent of total waste generated by these facilities.
"Green Dealers"	All Products	• Honda launched its "green dealer" environmental awards program in FY2012 and through the end of FY2016 had enrolled 400 U.S. Honda and Acura dealers with 106 having received awards for achieving at least a 10% reduction in energy use.

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In-Use

CATEGORY	PRODUCT	FY2016 RESULTS
Fuel Economy and CO_2 Emissions	Autos	• Honda's U.S. fleet-average fuel economy rose 6.9% from the the previous year to 37.1 miles per gallon (mpg). For comparison, the average fuel economy of all light-duty vehicles in the U.S. was up 1.6% to 31.2 mpg in the same period. • Honda's fleet average CO_2 emissions fell 6.5% from the previous model year to 239 grams per mile (g/mi) compared to 284 g/mi for all U.S. light-duty vehicles.
	Powersports	• The fleet-average fuel economy of Honda's U.S. on-road motorcycle fleet was up 11.5% from the previous year and 66.4% from the model year 2000 baseline to 83.2 mpg.
	Power Equipment	• The fleet average CO_2 emissions of Honda's U.S. power equipment products were virtually unchanged from the previous year.
Criteria Air Pollutants	Autos	• NMOG + NO_X emissions for Honda's U.S. automobile fleet in model year 2015, at 0.073 g/mi, were unchanged from the previous year.
	Powersports Products	• HC + NO_X emissions for Honda's U.S. motorcycles were up slightly in the Class III and Off-Road categories and were unchanged in Class I and Class II. All remained below applicable federal and state regulatory requirements.
	Power Equipment	• HC + NO_X emissions for Honda's U.S. power equipment products in model year 2015 remained relatively stable compared to recent years and were below applicable federal and state regulatory requirements.

End-of-Life

CATEGORY	PRODUCT	FY2016 RESULTS
Waste	E-waste, overstock and remanufactured parts	• Honda continued efforts to work with its U.S. dealers to increase the recycling of certain vehicle components including batteries, catalytic converters and aluminum wheels. In FY2016, the company implemented a new core charge program for certain types of engines and collected more than 4,000 engines through the program.

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Environmental Management

Overview

In 1992, we released the Honda Environmental Statement, which serves as a guideline for all environmental initiatives, in order to articulate the basic stance we had developed until then to reduce environmental impact at every stage in the life cycle of our products, rather than limiting the scope to the design/development and production stages.

In addition, for Honda to further promote the above-mentioned environmental initiatives and continue to be a company that society wants to exist, we established the Honda Environmental and Safety Vision in 2010. Aimed at the realization of the joy and freedom of mobility and a sustainable society where people can enjoy life as is declared in this vision, each of Honda's global business sites is engaging in the reduction of all kinds of environmental impacts from the aspects of both production-based and corporate activities, beginning with greenhouse gas emissions, which are considered to be a cause of climate change, and energy and resource use.

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.

Established and announced in June 1992

Honda Environmental and Safety Vision

Realizing "the Joy and Freedom of Mobility" and "a Sustainable Society where People Can Enjoy Life"

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Environmental Management

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.

World Environmental and Safety Strategy Committee
The World Environmental Committee determines annual plans for implementing conservation activities on a global level based on the company's medium-term business plans determined by the Executive Council. The company's president and CEO currently chairs the committee.

North American Environmental Committee
Regional environmental committees for each of six Honda regional operating groups, including the North American Environmental Committee, discuss and evaluate annual achievements under the plan and then, based on the results, create new targets and plans. The North American Environmental Committee is chaired by the company's North American president and CEO and includes members of the company's regional operating board representing the United States, Canada and Mexico.

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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;
- systems for recycling products, components and manufacturing byproducts, in order to minimize landfill waste; and
- triple-checked vehicle emissions testing to assure automobile emissions compliance.

From long-term planning to daily operations, Honda strives to understand the risks of environmental impact and to make prudent decisions to minimize impacts wherever possible. Honda North America, Inc., a subsidiary of Honda Motor Co., Ltd., serves as auditor, helping to ensure that Honda's various subsidiary companies and its affiliated suppliers in the North America region are in compliance with all applicable environmental laws and regulations. It also provides support to those companies in determining and implementing best practices for Honda's environmental management activities in the region.

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.

North American Environmental-Related Fines

During the fiscal year that ended March 31, 2016, Honda had no environmental-related fines in North America.

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Addressing Global Climate Change and Energy Use

2020 Product CO_2 Emissions Reduction Targets

Reducing global CO_2 emissions from our products is a necessary step in combating climate change and energy use issues, which is why Honda established voluntary targets for reducing the CO_2 emissions intensity of its products by 2020. The company is aiming for a 30 percent reduction in the global average CO_2 emissions intensity of Honda automobiles, motorcycles and power equipment products, compared with FY2001 levels. These targets are an interim step toward the company's longer term goal of cutting total company CO_2 emissions in half by 2050, compared to FY2001 levels. This ambitious goal includes not only new products but all Honda products in operation.

Honda aims to steadily reduce CO_2 emissions by progressively promoting three strategies: (1) reducing emissions through increasing the efficiency of internal combustion engines; (2) reducing emissions by introducing environmentally innovative technologies and increasing energy diversity; (3) and eliminating emissions through the use of renewable energy and total energy management.

2020 Product CO_2 Emissions Reduction Targets[1]

Global average CO_2 emitted by Honda products

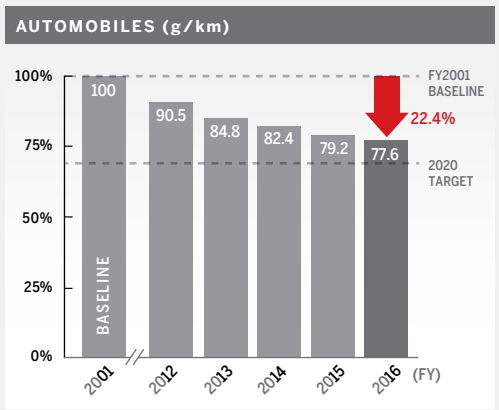
Automobiles
30% reduction
30% reduction (g/km CO_2) from FY2001 levels by 2020

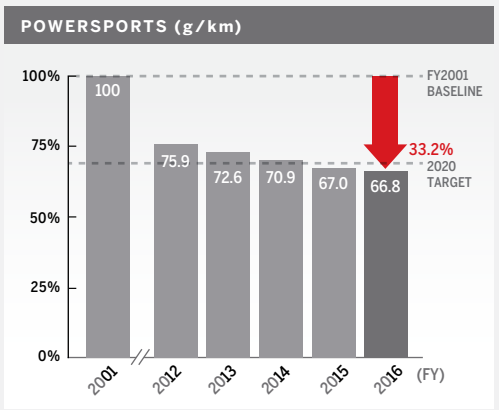
Powersports
30% reduction
30% reduction (g/km CO_2) from FY2001 levels by 2020

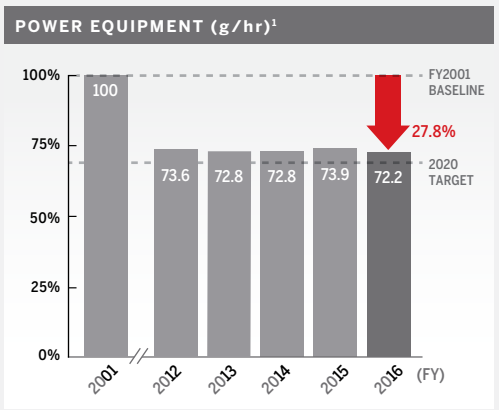
Power Equipment
30% reduction
30% reduction (kg/hr CO_2) from FY2001 levels by 2020

[1] Scope of compilation includes Japan, China, North America, Europe, Asia & Oceania and South America and it covers more than 90% of units sold by Honda worldwide for each of motorcycles, automobiles and power products.

Progress Toward Global 2020 CO_2 Emissions Reduction Targets







[1] CO_2 emissions for power equipment products were calculated using average usage time and required output for each engine up until FY2015. In order to ensure greater precision in these calculations, since FY2016 Honda has used usage time and required output in consideration of the users of each product, with all previous years retroactively restated with 2001 as the base year.

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Honda's Approach to Climate Change Policy

Honda recognizes climate change as a serious environmental concern with significant consequences for all of society. For years, the company has been, and remains, firmly committed to mitigating climate change impacts throughout our broad array of corporate activities. While improving the fuel efficiency of our products and developing non-petroleum fueled alternatives are perhaps the most visible of these activities, significant efforts have been made to improve manufacturing and logistics activities as well.

Honda takes a portfolio approach in developing technologies to address climate change. By pursuing multiple pathways, Honda can better address the environmental challenges of each market as well as the needs of individual consumers. Solving an environmental challenge as complex as global climate change requires concerted efforts by industry, government and consumers alike. First and foremost, we recognize that a successful GHG reduction program ultimately requires consumer acceptance of the technologies developed to reduce GHG emissions. Using this philosophy as a foundation, Honda takes the following positions on current climate change-related policy issues:

Honda's Approach to Climate Change Policy in North America

Public Policy Initiatives	Honda's Position
Federal Fuel Economy (CAFE) and Vehicle Greenhouse Gas Emissions (GHG) Standards	Honda was among the earliest supporters of, and was a signatory to, the White House initiatives to have one national program that harmonized fuel economy and GHG emissions standards for model year 2012-2016 and 2017-2025 vehicles. In today's marketplace, a nationwide set of technology-neutral, performance-based standards, such as the CAFE and GHG standards, helps drive innovative ideas to reduce fuel consumption and carbon emissions. Any future changes made to CAFE and vehicle GHG standards, such as changes made as part of the agencies' Mid-Term Evaluation process, should be based on sound science, and provide equitable treatment to all vehicle types and sizes.
Incentives	Incentives implemented by government entities can be constructive in stimulating nascent and expensive technologies, such as those used in fuel cell vehicles, battery-electric vehicles and plug-in hybrid electric vehicles. Incentives should be technology neutral, performance based and limited in duration. Both financial incentives, such as consumer tax credits, and non-financial incentives, such as HOV lane access for advanced-technology vehicles, are proven to stimulate demand and enlarge the market for those types of automobiles. At the same time, the non-financial HOV incentive should be balanced with the original purpose of the carpool lanes, namely traffic congestion mitigation and air-quality improvement. Newly constructed High Occupancy Toll (HOT) lanes — as well as those converted from existing HOV lanes — should see advanced technology incentives commensurate with current HOV lane incentives in the particular state (such as cost-free access).

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Honda's Approach to Climate Change Policy cont'd

Public Policy Initiatives	Honda's Position
Renewable Fuels Biofuels, Ethanol and Flex Fuel Vehicles	Renewable fuels offer promising opportunities to displace petroleum and have the potential to reduce GHG emissions. However, some renewable fuels are more effective at achieving this objective and more sustainable and economically viable than others. Biofuels research continues to advance, as does the scientific understanding of both positive and adverse impacts of its use. Complex and vexing challenges related to biofuels use, such as indirect land use and "food versus fuel" impacts, are important considerations in assessing their broader social value. Compatibility with existing and future products, a viable distribution network and a refueling infrastructure are all critical considerations. • EPA's approval of a waiver allowing the sale of E15 was premature and does not meet the criteria detailed above. Specifically, given blends in excess of 10% are not inherently compatible with legacy vehicles, small engine products and motorcycles, the government must assure that legacy fuels remain in the marketplace and provide for effective safeguards to prevent misfueling by consumers. • Ethanol does offer the promise of higher octane levels which, along with the octane added at the refinery, is important to meet the fueling needs of advanced internal combustion engines. • Drop-in fuels, fuels that can be used without major changes to the fueling infrastructure, such as bio-butanol, are promising alternatives to ethanol, as they would obviate many of the problems that manufacturers, distributors, providers and consumers currently face with mid-level ethanol blends.
Macro-Economic Drivers	While regulatory mandates are one way of achieving reduced GHG emissions, a carbon tax or cap-and-trade program are market-based tools that may be more efficient in achieving a similar goal. Both approaches have precedent, but must be implemented in thoughtful ways that spread the burden equitably, avoid windfalls and are reasonable to administer.
California Air Resources Board (CARB) Zero-Emission Vehicle (ZEV) Mandate	The ZEV mandate requires automakers to sell zero-emission technology vehicles in California and nine other states that have adopted the standards. Because the level of customer acceptance of these new technology vehicles is highly disparate across different geographic regions, and still unclear overall, the ZEV mandate should be structured to provide greater flexibility to promote the full array of advanced, zero-emission technology options. Honda believes it is fundamentally too early to rely on any single technology toward long-term goals of reducing GHG emissions and petroleum consumption. Basing a regulatory framework on environmental benefits rather than technology types would yield comparable social benefits, yet do so in a way that fosters creative engineering solutions for meeting our mid-century climate goals. In order to succeed, zero-emission vehicle policies mandating adoption of these technologies must be complemented by state policies aimed at building out new fueling infrastructure, reducing other market barriers and encouraging technology adoption by consumers. All states mandating the technology should be committed to providing robust financial and non-financial incentives to help foster market interest and acceptance.

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Risks and Opportunities of Climate Change and Energy Use

Based on Honda's global assessment of environmental risks, our North American management team is constantly surveying future environmental, economic and social needs in the North American region in an effort to anticipate the effect of these needs on our business. Virtually every future risk carries with it an opportunity, and anticipating and responding quickly to these risks and opportunities gives Honda the greatest degree of flexibility to ensure the sustainability of its business.

We are focusing here on three key risk areas: Air Quality, Climate Change and Energy Security

Key Areas of Risk Management	Risks and Opportunities
Air Quality There are three primary elements to air-quality impacts that Honda monitors: precursors to smog (localized health effects), particulate matter (localized health effects and contributor to climate change) and carbon monoxide (local health effects). Virtually every combustion engine product Honda makes is regulated with respect to one or more of these impacts.[1]	• Honda has aggressively met or exceeded emissions standards, frequently prior to regulatory requirements, and has worked cooperatively with regulatory agencies to continuously reduce harmful emissions. • While dramatic improvements have been made during the past 30 years and new priorities (such as climate change) have emerged, air-quality regulations continue to become more stringent. In 2014, the EPA set stringent new "Tier 3" emissions standards to harmonize with California's aggressive LEV III standards. Honda strongly supported this effort. • Honda does not anticipate that future emissions standards through 2025 pose significant threats to its business, nor do they represent a significant competitive advantage for Honda.
Climate Change and Energy Security The growing demand from society for cleaner, more fuel-efficient products and alternative sources of energy, along with stringent new fuel economy and greenhouse gas emissions requirements in the U.S. and Canada, pose a significant challenge to the auto industry to accelerate the development and deployment of new technologies while meeting customers' expectations for vehicle performance, utility, safety, reliability and affordability.	• Honda is focused on climate change (greenhouse gas emissions) in all of its business activities, in particular in the development of more fuel-efficient and alternative-fuel products. Many of these efforts to reduce climate impacts provide energy security benefits as well. • Honda took a cooperative role in new U.S. fuel economy and greenhouse gas regulations for the period 2012-2025. While these new regulations pose a substantial challenge with respect to the introduction and marketing of new and potentially costly technologies, we embrace the challenge of meeting these new standards by leveraging our capabilities in the areas of fuel-efficient propulsion systems, reduced auxiliary loads, reduced running resistance (improved aerodynamics and lightweighting) and alternative-energy technologies.

[1] With the exceptions of engines used in competition, and of power product and marine engines in Mexico, which are not regulated by the government.

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Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions

Honda has long pursued a "portfolio approach" to addressing both greenhouse gas emissions and energy issues, a strategy that encompasses multiple technology pathways and seeks to comprehensively address the challenges associated with the deployment of new energy and vehicle 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 and the unique challenges to the marketability of each technology.

In terms of environmental impact, tailpipe emissions represent only a portion of a vehicle's carbon emissions. Additional emissions result from the extraction, refining and transporting of fuel used by the vehicle. A well-to-wheels assessment is necessary to account for these emissions. It is also critical for comparing vehicle technologies that run on different fuels, such as electrically powered vehicles that draw a large portion of their power from stationary sources.

OPPORTUNITY FOR IMPROVEMENTS IN THE SOCIAL VALUE DIMENSIONS COMPARED TO CURRENT INTERNAL COMBUSTION ENGINE (ICE) VEHICLES

VERY GOOD
GOOD
FAIR
CHALLENGING

MARKETABILITY COMPARISONS TO CURRENT ICE VEHICLES

VERY GOOD
GOOD
FAIR
CHALLENGING

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				
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	Honda's effort
Improved Gasoline Internal Combustion Engine	VERY GOOD	FAIR	GOOD	VERY GOOD	VERY GOOD	VERY GOOD	VERY GOOD	Honda is broadly applying advanced engine technology, including low-friction-engine features, variable valve timing, variable displacement and direct injection. Over the past few years, Honda introduced an advanced lineup of efficient engines and transmissions that includes more efficient direct-injected engines, continuously variable transmissions (CVTs) and dual clutch transmissions. The 2016 Honda Civic, for example, saw the introduction of an all-new 2.0L i-VTEC DOHC in-line 4-cylinder engine, as well as a new 1.5L 16-valve direct injection turbocharged engine.
	There remain significant opportunities to further improve the fuel efficiency of the gasoline internal combustion engine (ICE). Even with potential modest increases in vehicle miles travelled, fuel-efficiency improvements directly correlate with reductions in both greenhouse gas emissions and petroleum use. Improved ICE presents the greatest short- to mid-term overall social benefit because of its existing high volumes and broad market acceptance and fueling infrastructure.			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.				

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Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions cont'd

	Social Values			Marketability				
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	Honda's effort
Natural Gas Vehicles	VERY GOOD	UNCERTAIN	VERY GOOD	CHALLENGING	FAIR	GOOD	GOOD	Honda began selling natural gas vehicles in 1998 to U.S. fleet customers, extending sales to retail customers in 2001. Over a 17-year period, the company brought four generations of the Civic Natural Gas to the U.S. market, selling in excess of 16,000 natural gas-powered Civics to fleet and retail customers. Honda announced in June 2015 that it would discontinue sales of the Civic Natural Gas in the U.S. based on limited market demand. Honda continues to market natural gas vehicles in Asia, and Honda continues to evaluate the technology for its potential to address environmental issues
	Natural gas is an abundant, inexpensive, domestic fuel.			Public refueling stations remain the single biggest obstacle to the widespread adoption of light-duty natural gas vehicles.				
	Since natural gas is a domestic alternative to petroleum, it is excellent for energy security.			The cost premium for natural gas vehicles is roughly the same as that of a hybrid automobile, with the potential for further reductions. Over time, this cost premium can be recouped by the lower fuel cost of natural gas.				
	Recent research into the "well-to-tank" portion of natural gas emissions has raised concerns about the true "well-to-wheels" greenhouse gas benefits of natural gas vehicles. Uncertainty remains about the quantity of methane leakage that occurs during natural gas extraction. Continued attention should be paid to the methods of extracting natural gas to ensure there are no substantial negative environmental or public health impacts.			In mainstream products, particularly sedans and smaller vehicles, vehicle utility, such as cargo space, can be negatively impacted by the space required for fuel storage.				
				Natural gas vehicles offer performance, safety and comfort on par with their gasoline counterparts.				
Diesel	GOOD	FAIR	GOOD	GOOD	FAIR	VERY GOOD	FAIR	Honda is actively developing advanced diesel engine technology and markets its technology in places such as Europe, where the technology is more appealing due to diesel fuel prices that are significantly lower than gasoline prices.
	Modern diesel engines can meet stringent emissions standards.			Diesel engines typically cost significantly more than their gasoline counterparts. In some markets outside North America, diesel fuel is taxed at a lower level than gasoline, resulting in lower prices, so the fuel savings can offset that cost. In North America, diesel fuel is usually more 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.				
	Diesel contains 13% more carbon than gasoline, eroding some of the CO_2 emissions benefits of the engine's higher efficiency, resulting in a score of "fair" for GHG reduction.			In recent years, diesel technology has seen improvements in a number of areas, including performance and noise.				
	Diesel engines offer up to 30% fuel-efficiency gains over current ICE technology, which is good for energy security.							

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Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions cont'd

	Social Values			Marketability				Honda's effort
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
Biofuels	VERY GOOD	CHALLENGING-VERY GOOD	GOOD	CHALLENGING-VERY GOOD	GOOD-VERY GOOD	VERY GOOD	FAIR	All Honda and Acura vehicles, as well as the company's motorcycle and power equipment products, are capable of operating using E10 (10% ethanol in gasoline). From model year 2015, every Honda and Acura automobile is capable of operating on E15. Honda is urging the U.S. EPA to take steps to prevent the misfueling of small engine products and legacy vehicles with mid-level ethanol (greater than 10%).
	Depending upon their feedstocks, land use changes and production processes, the greenhouse gas emissions from biofuels vary significantly. Certain 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. There is concern about the volume of sustainable biofuels. From a policy perspective, prudence may suggest they be reserved for other forms of transportation, such as commercial aviation, that have limited electrification options.			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 containing ethanol are less appealing to consumers since they must refuel more frequently due to their lower energy content per gallon of fuel.				
Hybrid Electric Vehicles (HEVs)	VERY GOOD	GOOD	GOOD	VERY GOOD	FAIR	VERY GOOD	VERY GOOD	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 technology to increase its efficiency and performance and, in 2013, launched a new two-motor hybrid system for the 2014 Accord Hybrid, which received the highest EPA fuel economy rating of any five-passenger sedan in America. A next-generation version of this system was introduced in the 2017 Accord Hybrid in June 2016, delivering both increased performance and fuel efficiency. Acura, Honda's luxury automobile brand, is employing a three-motor hybrid design in its new Acura NSX supercar, and a similar hybrid architecture in a version of its RLX flagship sedan under the banner of Sport Hybrid Super-Handling All Wheel Drive (Sport Hybrid SH-AWD).
	Hybridization can significantly increase fuel efficiency by utilizing the engine in its most efficient operating band, as well as using energy captured during deceleration and braking for motive power. These significant improvements in efficiency directly result in significant GHG reductions and corresponding reductions in gasoline consumption (Energy Security).			The cost premium versus gasoline-only vehicles remains the most significant barrier to broader market appeal. Hybrid automobiles are increasingly viewed as mainstream technology with a high level of appeal and with performance, safety, and utility nearly on par with conventional ICEs.				

HONDA

Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions cont'd

	Social Values			Marketability				Honda's effort
	AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
Plug-In Hybrid Electric Vehicles (PHEVs)	VERY GOOD	VERY GOOD	VERY GOOD	FAIR	CHALLENGING	VERY GOOD	VERY GOOD	Honda gained significant market experience and customer feedback from its recent Accord Plug-In. Experience with that model is informing the upcoming Clarity plug-in full size sedan, slated to launch in the U.S. market in 2017. The new PHEV is expected to receive an all-electric rating range in excess of 40 miles, more than three times that of the 2014-2015 Accord Plug-In. Together with other OEMs that make both PHEVs and BEVs, Honda has shown that PHEVs can have significant environmental benefits with a smaller battery pack than a BEV, while overcoming range concerns and other limitations currently facing BEV technology.
	PHEVs use both gasoline and electricity. Both the on-board (gasoline) and remote (electricity) GHG emissions must be accounted for in the overall evaluation of PHEVs. Honda supports a "well-to-wheel" approach for evaluating all technologies (including gasoline and diesel). Regulations reducing the CO_2 intensity of the grid would be beneficial. Using grid-based electricity in place of gasoline results in reduced consumption, enhancing energy security.			While most PHEVs can utilize conventional 120V AC electricity, not all consumers have consistent access to off-street parking with electricity in close proximity. Cost remains a significant barrier to broader marketability. The incremental fuel savings between HEVs and PHEVs is not sufficient to offset the incremental PHEV costs, based on current battery and gasoline costs. Federal- and state-level efforts to reduce the CO_2 intensity of the grid are helpful. Plug-in hybrids offer similar utility and performance to conventional hybrids.				
Battery Electric Vehicles (BEVs)	VERY GOOD	VERY GOOD	VERY GOOD	CHALLENGING	CHALLENGING	CHALLENGING	VERY GOOD	Honda was first to market an advanced battery electric vehicle in the U.S., the Honda EV Plus, between 1997 and 2003. The EV Plus used advanced NiMH batteries. Honda began leasing the Fit EV, with a 118 MPGe EPA highway fuel economy rating, to consumers in California, and in early 2013 expanded its marketing to select East Coast markets in Massachusetts, Connecticut, Maryland, New York and New Jersey. Honda is currently offering lease extensions as well as used-vehicle leases as the MY13 and MY14 Fit EVs become available. These vehicles are providing valuable technical, market and infrastructure feedback to Honda as it prepares its next BEV, slated for launch in 2017. Honda has initiated and/or joined several research projects investigating smart charging, energy grid services and other potential ancillary benefits of connecting EVs with the U.S. electric grid.
	BEVs use grid electricity for motive power. The stationary source (powerplant) GHG emissions must be accounted for in the overall evaluation of BEVs. Cleaning up the emissions from powerplants is an ongoing challenge. Increasing the generation of electricity from renewable energy sources and reducing reliance on CO_2-intensive sources such as coal are examples of grid mix shifts that can make BEVs more environmentally attractive. BEVs substitute energy from the electric grid (or, in certain cases, distributed renewable generation) for petroleum consumption, enhancing energy security.			BEVs require access to consistent, off-street parking and the installation of specialized charging equipment with 240V AC circuitry. With respect to "full functionality," BEVs have limited range and long recharge times. Further, range can vary substantially based upon environmental conditions (temperature, humidity, etc.). Although electricity costs are lower than gasoline costs on a per-mile basis, the higher initial costs of advanced batteries remain a challenging obstacle to marketability on a broad scale. BEVs can excel in the attributes of quiet and responsive driving, which are appealing to consumers.				

HONDA

Improving Fuel Efficiency and Reducing Greenhouse Gas Emissions cont'd

Fuel Cell Electric Vehicles (FCVs)

Social Values			Marketability				Honda's effort
AIR QUALITY	GHG REDUCTION	ENERGY SECURITY	INFRA-STRUCTURE	COST	FULL FUNCTION	APPEAL	
VERY GOOD	VERY GOOD	VERY GOOD	CHALLENGING	CHALLENGING	GOOD	VERY GOOD	
On a well-to-wheels 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 hydrocarbons. Either of these two methods replaces petroleum.			The cost of fuel cell technology and the very limited refueling infrastructure remain significant barriers, though California has made a significant commitment to helping foster a fueling station network. Fuel cell vehicles deliver performance, utility, comfort and driving range virtually on par with conventional gasoline-powered automobiles.				Honda's all-new FCV, the Clarity Fuel Cell, launches in California in late 2016. The new full-size sedan, which comfortably seats five, is anticipated to obtain a range rating in excess of 300 miles and takes less than five minutes to refuel. Honda is working to advance not only FCV 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. In July 2013 Honda and General Motors announced an agreement to co-develop next-generation fuel cell system and hydrogen storage technologies, aiming for the 2020 time frame. In late 2014, Honda announced an investment of nearly $14 million in FirstElement Fuel to further accelerate the network of public hydrogen refueling stations in California.

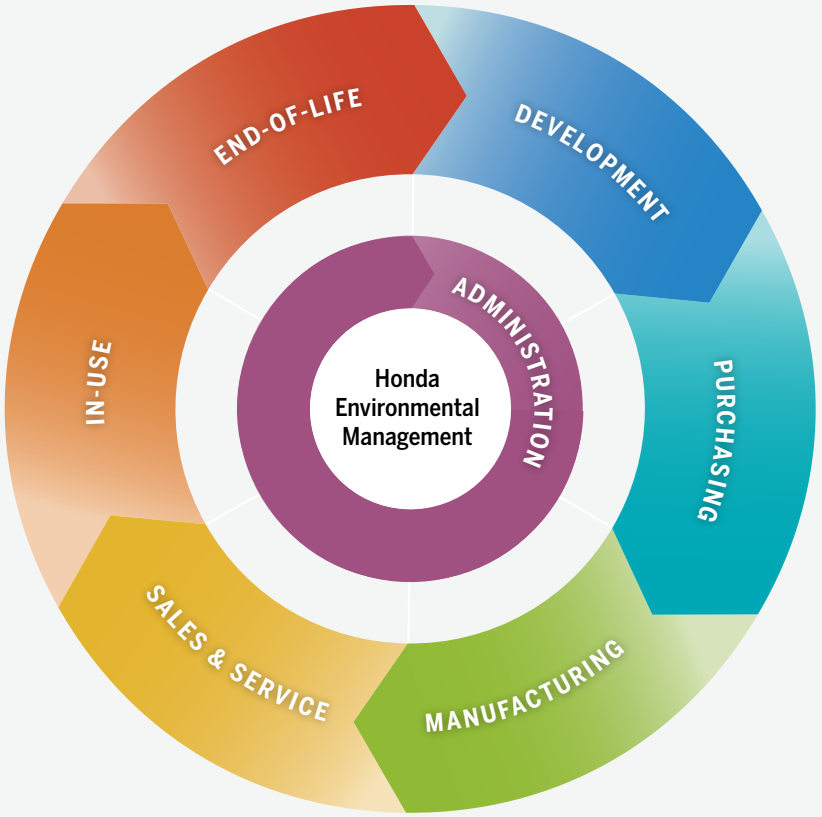
Technologies that apply to all vehicles, regardless of fuel or type of powertrain

Reducing Running Resistance

Social Values	Marketability	Honda's effort
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.	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.	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 automobiles introduced over the past several years have used increasing amounts of high-strength lightweight steel and ultra-high-strength steel, which typically accounts for half or more of a new Honda or Acura vehicle's body structure. The company is continually exploring methods of reducing weight, including new materials and methods of body design, while maintaining high levels of safety performance and customer value.

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.



DEVELOPMENT

Honda's R&D operations in North America are its largest outside of Japan. Engineers and designers are focused on creating products that reduce environmental impacts throughout the complete cycle of the products, including CO_2 emissions during customer use and also reductions in the use of nonrecyclable materials and potentially toxic substances such as in-cabin VOCs.

PURCHASING

Honda works with more than 650 new-vehicle component suppliers in North America that produce and ship tens of millions of parts to Honda plants in the region each year. Reducing their environmental impact, especially CO_2 emissions, is an area of increasing effort and focus for Honda.

MANUFACTURING

Honda operates 18 plants in North America producing upwards of 4 million products each year, including more than 90% of the Honda and Acura cars and light trucks sold in the region. On a global basis, manufacturing accounts for roughly 10% of the lifecycle CO_2 emissions of an automobile and is a major area of focus, along with reduction in waste, water use and toxic substances.

SALES & SERVICE

Honda is focused on cutting CO_2 emissions from the transport of Honda and Acura products from manufacturing plants to dealers, and on reducing the energy use and emissions at the point of sale through its "green dealer" initiatives. Honda is also working to reduce CO_2 emissions from the transport of service parts, as well as reducing waste from the packaging and storage of parts.

IN-USE

CO_2 emissions from the consumption of fuel during customer use is the single greatest environmental impact of Honda products. Honda is working to reduce in-use CO_2 emissions through continued improvements in product fuel efficiency and advances in low-carbon alternative fuels and powertrains. Honda is also working to reduce air pollutants emitted from its products during customer use.

END-OF-LIFE

Honda works to design products that are easy to disassemble and process for recycling at the end of their useful life, to reduce the use of potentially harmful substances that can become part of the waste stream after disassembly, and also to increase the use of recycled and remanufactured parts to reduce waste.

ADMINISTRATION

Honda operates dozens of offices and warehouse facilities in North America and is working to improve its energy efficiency and also to reduce waste and other impact from administrative activities. This includes leading efforts in the area of "green building" design and certification.

Designing Products with the Environment in Mind

Environmental factors are considered early and in each phase of the design and development process 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 footprint, 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).

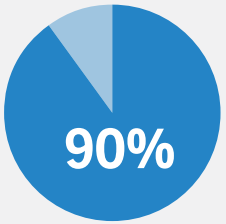
Product Recyclability

In accordance with its global standard for the development of Honda products, the company has achieved and is committed to maintaining a minimum 90 percent level of design recyclability[1] for all Honda and Acura automobiles, and a minimum 95 percent level of design recyclability[1] for all powersports and power equipment products sold in North America. As of 2004, all new Honda and Acura automobiles had met or exceeded the 90-percent 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.

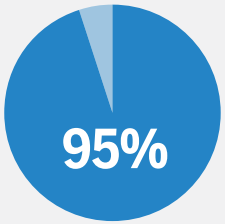
[1] Honda's calculation of product recyclability is based on the ISO standard 22628, titled "Road Vehicles Recyclability and Recoverability Calculation Method," which bases its estimates on existing, proven treatment technologies and takes into account the mass of materials recycled, reused, recovered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

MINIMUM LEVELS OF DESIGN RECYCLABILITY[1]

Automobiles



Powersports & Power Equipment



Reducing Substances of Concern (SOCs)

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

Compliance with Hazardous Material Regulations

In accordance with Honda's efforts to manage chemical substances in its products, the company for years has worked with its supply chain to guarantee compliance with the European Union's REACH (Registration, Evaluation, Authorization, and Restriction of Chemicals) regulation for products produced in North America for export to Europe. Together, the targeted Honda manufacturing facilities and the North American supply chain have been responsive and accountable to the REACH regulation, enabling Honda to ascertain the content percentage amount of the substances at the article level to confirm and report compliance. Today, chemical management activities within the company are expanding as Honda continues to monitor global regulations that impact products produced in North America. During FY2014, Honda, with the cooperation of its supply base, began to gather material data on all parts and products. This enhanced strategy helps address the complexity of the evolving hazardous material regulation requirements.

- **International Material Data System (IMDS):**
  On a global basis, starting in April 2010, Honda began to receive material data sheet submissions in IMDS from the 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 on a corporate-wide basis, which registers and classifies chemical substances. All suppliers providing products, parts and materials to any Honda manufacturing entity are required to enter material data into the IMDS.
- **Honda Chemical Substances Management Standard:**
  The Honda Chemical Substances Management Standard (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, and in FY2015 has been revised to also include requirements for packaging of all parts and products as well as parts alone. Honda is committed to reducing and, if possible, eliminating SOCs in all products, in accordance with global regulations.
- **Supplier SOC 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, Honda's SOC policies and regional expectations. All suppliers are expected to reference the Manual for pertinent information regarding Honda's chemical management policies.

Reducing PVC in Honda and Acura Automobiles

Honda's goal is to have a PVC-free material construction for interiors on all of its vehicles. Through the end of FY2016, vehicles with PVC-free interiors are the Honda Accord Coupe and Accord Sedan, Odyssey, Pilot, Ridgeline and the Acura NSX, TLX, RDX, MDX, ILX and RLX. 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, technical barriers, quality and cost present a challenge to its total elimination.

Air Quality/Cabin VOC

In line with Honda's strategy to reduce the use of hazardous or potentially harmful substances in its products, Honda is also working to more adequately measure and predict levels of in-cabin VOCs.

- 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 2007.
- Honda will continue its efforts to reduce cabin VOCs and to improve air quality in the cabins of all its vehicles.

New Products and Technologies

2016 Honda Civic

In the fall of 2015, Honda introduced the tenth-generation Civic, the company's top selling model globally and a perennial best seller in North America, including 17 consecutive years as the top selling car in Canada and U.S. sales exceeding 300,000 units annually in 14 of the past 20 years.

The 2016 Civic Sedan and Coupe in the U.S. and Canada are offered with two all-new and more fuel-efficient engines, including the first North American application of Honda direct-injected, downsized turbocharged engine technology. Further, the new Civic reflects some of Honda's latest thinking with respect to vehicle design, including new methods of body construction that minimize vehicle weight while improving aerodynamics and delivering top-in-class collision safety and fuel efficiency ratings.

- Both the 2.0-liter normally aspirated engine and 1.5-liter turbocharged engine offered in the Civic Sedan and Civic Coupe have numerous design features aimed at reducing weight and internal friction. Among these are a die-cast aluminum block and cylinder head, heat-forged and micro-polished steel crank shaft, ion-plated piston rings, plateau honed piston walls and piston skirts with a low-friction molybdenum coating.
- The 1.5-liter direct-injected turbocharged engine utilizes Dual Variable Valve Timing and a low-inertia, mono-scroll turbo with electronically controlled wastegate to deliver high-torque performance across the engine's operating range. Sodium-filled exhaust valves further aid efficiency by increasing cooling efficiency, while the highly precise air-fuel mixture enabled by the engine's direct-injected fuel system allows for more complete burning of fuel for improved efficiency and reduced emissions.

1.5-Liter Direct-Injected Turbocharged Engine

- Both engines are mated to a continuously variable transmission (CVT) that pairs outstanding responsiveness with efficiency superior to that of a conventional stepped automatic transmission.

2016 Honda Civic — Body Construction

- The new Civic platform is composed of 59 percent high- and ultra-high-strength steels (14 percent ultra-high strength), compared to 55 percent (7.3 percent ultra-high strength) on the previous model, aiding both collision safety performance and weight. Body weight was reduced 68 pounds versus the previous model.
- A new custom in-die tempering process for the lower portion of the B-pillars and rear frame rails allows for the creation of soft zones within an ultra-high-strength hot-stamped steel part to aid collision performance while cutting 15.6 pounds of weight.
- The Civic's body design was optimized through advanced computer simulations and extensive wind tunnel testing. Critical design elements for improved aerodynamic efficiency include a flush-mounted windshield, narrower A-pillars, a less steeply raked rear window, wheel strakes, specially shaped exhaust silencers and extensive underbody covers.
- As a result of these measures, the 2016 Civic unibody is 68 pounds lighter with 12 percent less aerodynamic drag and a 25 percent increase in torsional rigidity.

- The 2016 Civic Sedan has earned the highest EPA fuel economy ratings in the U.S. compact sedan market: 31/41/35 mpg (city/highway/combined) for 2.0-liter models and 31/42/35 mpg for 1.5-liter turbocharged models. All models achieve LEV3-ULEV 125/LEV3-SULEV 30 emissions compliance.

New Products and Technologies cont'd

2017 Accord Hybrid

In July 2016 Honda introduced a freshened 2017 Accord using a next-generation two-motor hybrid system, achieving an EPA fuel economy rating of 49/47/48 mpg, the highest for any mid-size hybrid sedan. The system marries a highly efficient 2.0-liter Atkinson cycle engine to a powerful electric propulsion motor and a generator motor.

Unlike competing hybrid powertrains, Honda's two-motor system operates without the need for a conventional transmission or torque converter, instead using a very simple set of gears to connect the gasoline engine and electric motors, and a lockup clutch to connect the engine to the front wheels under certain circumstances, such as steady state cruising at highway speeds.

2017 Accord Hybrid — Operating Modes

With three operating modes the innovative two-motor system allows the vehicle to operate as an electric vehicle for short durations, as a series hybrid vehicle under most driving circumstances, and as a parallel hybrid during steady-state cruising.

EV MODE

In EV Mode, the Accord operates like a battery-electric vehicle: the electric propulsion motor provides motive power drawing energy from the lithium ion battery pack.

HYBRID DRIVE MODE

In Hybrid Drive modes, the propulsion motor provides motive power drawing energy from the batteries. The gasoline engine powers the generator motor, which provides power to the battery pack or directly to the propulsion motor as needed.

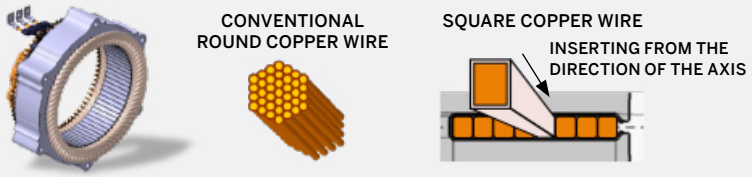
ENGINE DRIVE MODE

In Engine Drive Mode, the engine is connected to the drive axle via lock-up clutch, providing power directly to the drive wheels, with supplemental power provided by the electric propulsion motor

- The Atkinson cycle engine features Honda's first exhaust heat recovery system, which shortens the time it takes for the engine coolant to heat up, thereby accelerating the start of EV Drive Mode.
- The next-generation hybrid system's Power Control Unit (PCU) integrates the ECU and power semiconductor functions and is 23 percent smaller and 27 percent lighter than the previous unit.
- A new Intelligent Power Unit (IPU) containing the lithium ion battery pack has an integrated battery ECU, a smaller and lighter DC-DC converter and improved battery cooling efficiency. The new IPU is 33 percent smaller and 12.8 percent lighter than the previous unit and allows for a 0.8 cubic foot increase in trunk space.
- An improved electro-servo brake system increases maximum regenerative braking force by 25 percent, allowing for greater energy recovery when decelerating or braking, which improves total system efficiency.

2017 Accord Hybrid — Propulsion Motor Square Wire Design

The propulsion motor adopts a square wire design that increases the packaging density, allowing for more wire in a given area. The new motor is 23 percent smaller and lighter with peak output up 6 pound-feet of torque and 11 additional kilowatts of power.



Learn more online

2017 Honda Accord

New Products and Technologies cont'd

2017 Honda Ridgeline

In June 2016, Honda introduced the second generation of its Ridgeline pickup. Like the original, the new Ridgeline utilizes a car-like unibody construction as opposed to the body-on-frame design of traditional trucks. The 2017 Ridgeline features a more aerodynamic body design with a 15 percent improvement in aerodynamic efficiency versus the original. Further, the increased use of high- and ultra-high-strength steel, comprising 58.2 percent of the body construction, along with the application of a magnesium steering hangar beam, aluminum hood and aluminum front and rear bumper beams, has reduced body weight by as much as 78 pounds compared to the previous model.

The Ridgeline is powered by a direct-injected V6 engine mated to a 6-speed automatic transmission. All-wheel-drive models utilize Honda's latest and most advanced fully automatic i-VTM4 AWD system, which is 22 pounds lighter than the previous system with reduced mechanical drag and increased performance. While delivering highly competitive midsize truck capabilities, including a class-leading 1,584-pound payload capacity and 5,000-pound towing, the Ridgeline has earned EPA fuel economy ratings of 18/25/21 mpg (city/highway/combined) for AWD models and 19/26/22 for two-wheel-drive versions, at the top of the midsize truck segment.

Green Purchasing Guidelines

In 2001, Honda created "Green Purchasing" guidelines to guide its environmental conservation activities in the area of purchasing. In 2011, Honda's North American Purchasing group worked with parent company Honda Motor Co., Ltd. to revise the original guidelines, focusing on improved tracking and a reduction in the environmental impact beyond primary suppliers throughout the extended supply chain.

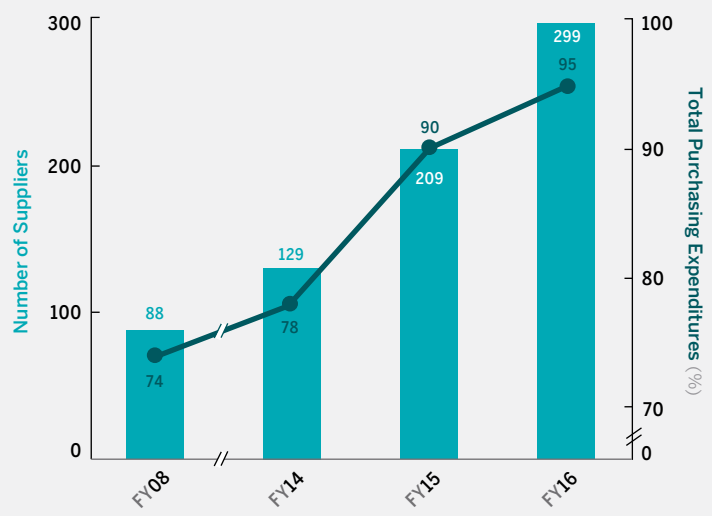
The guidelines, which apply to all parts and materials suppliers around the world, consistently communicate Honda's expectations, enabling Honda to provide customers with worldwide products that have a minimal environmental footprint.

This activity supports Honda's goal of a 10-percent reduction target in the CO_2 emissions intensity of new-vehicle parts manufacturing in North America by 2020, compared to 2008 levels.

Supply Chain Environmental Initiatives

1. Management activities that ensure environmental control during the manufacturing and transporting of products, parts and materials
2. Activities to reduce greenhouse gas emissions in all corporate areas
3. Parts and material proposals to achieve weight reduction and reduce energy usage
4. Compliance with various laws and regulations, as well as the Honda Chemical Substance Management Standard

NORTH AMERICAN ORIGINAL EQUIPMENT PARTS SUPPLIERS REPORTING CO_2e EMISSIONS



Supply Chain Greenhouse Gas Initiative

Honda initiated the Greenhouse Gas Initiative in FY2011 to develop a more comprehensive picture of the challenges associated with tracking and reporting greenhouse gas emissions data in its supply chain. In FY2016 Honda continued to increase the number of suppliers reporting CO_2 emissions data to Honda, which grew to nearly 300 of the company's roughly 600 North American suppliers, representing 95 percent of the company's total North American new parts purchasing expenditures. Honda continues to work with suppliers to improve accuracy of data being reported, and also to realize reduction in energy use and CO_2 emissions within its supply chain.

Environmental Purchasing 6-Region Meeting

Honda again held its six region environmental meeting in February 2016. The meeting took place in Japan at the Purchasing Global Plaza in Utsunomiya. A key part of the meeting was to begin to strategize developing Sustainability initiatives that incorporate Environmental activities. One key characteristic is "One Team, One Voice" in order to maintain unified communication and awareness throughout the entire global supply chain.

Parts Logistics Initiatives

Responding to Market Changes

Honda continues to minimize its environmental impact from parts logistics by continuously evaluating part volumes and flows and finding opportunities to reduce, eliminate, or avoid unnecessary miles in the supply chain while remaining flexible to meet customer demand. In addition to our continued reengineering of the transportation network along with daily activities to improve trailer space utilization, we are evaluating non-traditional freight volumes that incorporate shipments from second- and third-tier suppliers and shipments of service parts, which can be incorporated into Honda's network. Those activities netted a positive impact starting in 2013.

Reducing Fuel Consumption and CO_2 Emissions

During FY2016, through continued load planning, dynamic release of small orders and continuous freight volume evaluation, Honda significantly reduced truck miles and CO_2 emissions.

Cube Utilization Efforts

ACTION	FY16 RESULTS	
	TRUCK MILES AVOIDED	CO_2 EMISSIONS AVOIDED
Daily Load Planning to ensure material arrives at required time while fully cubing trucks.	1,024,819 miles	1,595 metric tons
Dynamic release of small volume orders onto available trailer space.	118,126 miles	184 metric tons
Pulling ahead freight from non-aligned production days, collaborating non-OEM freight and combining routes.	453,347 miles	705 metric tons

Development of Alternative-Fuel Utilization in Honda Logistics

Honda has established a public on-site compressed natural gas (CNG) fueling station adjacent to its Marysville, Ohio auto plant to support the use of CNG trucks in local transportation routes. Trucks using this station can fuel locally and travel to and from pick-up sites using less than a tank of CNG. The incorporation of CNG-powered tractors in FY2016 resulted in the replacement of 931,914 gallons of diesel fuel with 1.16 million gasoline gallons equivalent of CNG and a reduction in CO_2 emissions of 1,447 metric tons.

Consolidation of U.S. and Canada Parts Deliveries to Mexico

Efforts to further consolidate the deliveries of components from suppliers in the U.S. and Canada to Honda's plants in Mexico in FY2016 resulted in the elimination of 284 trailer deliveries, 284,600 miles of truck and rail travel avoided, and a reduction in CO_2 emissions of 440 metric tons.

HONDA

CO_2e Emissions

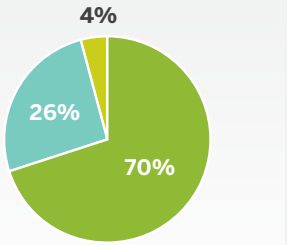
Approximately 97 percent of CO_2e emissions from manufacturing operations in North America fall into two categories: (1) indirect emissions from the production of electricity purchased and consumed by Honda factories; and (2) direct emissions from consumption of natural gas. Honda plants use electricity for automation, lighting, motors, air compressors and cooling. Natural gas is needed for heating and conditioning fresh air, and for manufacturing process equipment such as melt furnaces and paint curing ovens.

In FY2016, total CO_2e emissions from these two categories were reduced 4.1 percent despite all-time record levels of automobile production in North America and the addition of two new manufacturing plants.

In FY2016, the CO_2e emissions intensity of manufacturing automobiles, power equipment and power sports products were reduced, primarily due to "greening" of the electricity grid supplying manufacturing operations (see next page).

CO_2e Emissions from Manufacturing in North America

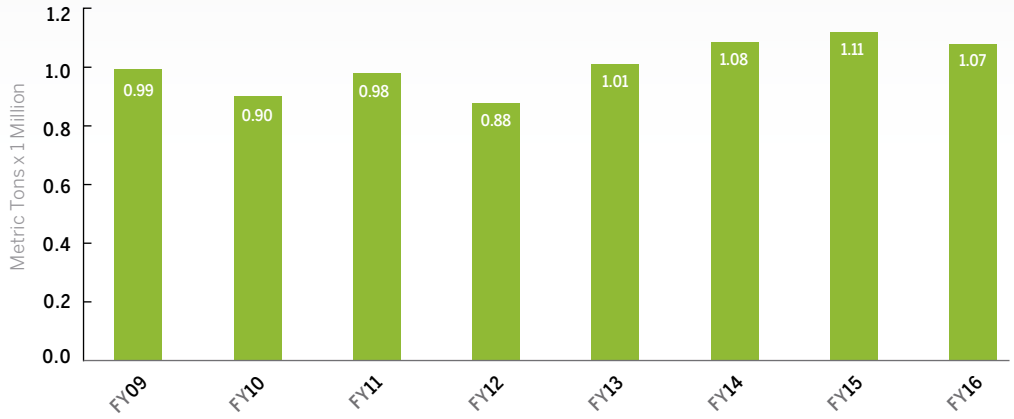
SOURCES OF CO_2e EMISSIONS



70%	Electricity
26%	Natural Gas
4%	Other Fuels and process emissions

TOTAL CO_2e EMISSIONS FROM MANUFACTURING (FROM PURCHASED ELECTRICITY AND NATURAL GAS)[1]

FY16 RESULTS **4.1% decrease in CO_2e emissions vs. previous year**



[1] Total CO_2e emissions (from consumption of electricity and natural gas) includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. CO_2e emissions at the Guadalajara, Mexico plant are allocated between automobile and motorcycle production based on sales value.

HONDA

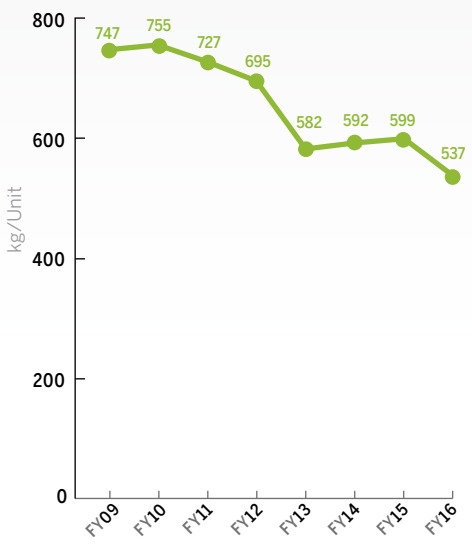
CO_2e Emissions cont'd

Per-Unit CO_2e Emissions (Emissions Intensity)

AUTOMOBILE MANUFACTURING[1]

FY16 RESULTS

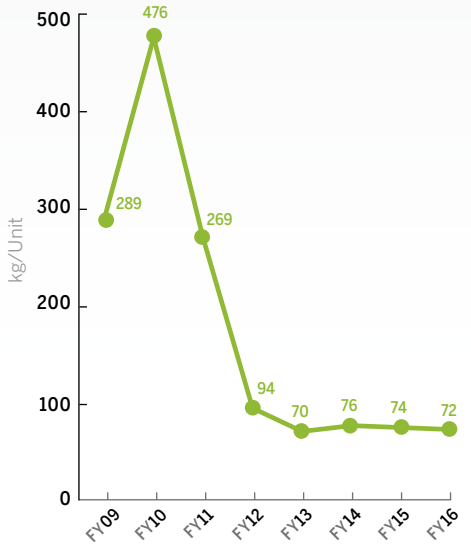
10% decrease vs. previous year



POWERSPORTS PRODUCT MANUFACTURING[1]

FY16 RESULTS

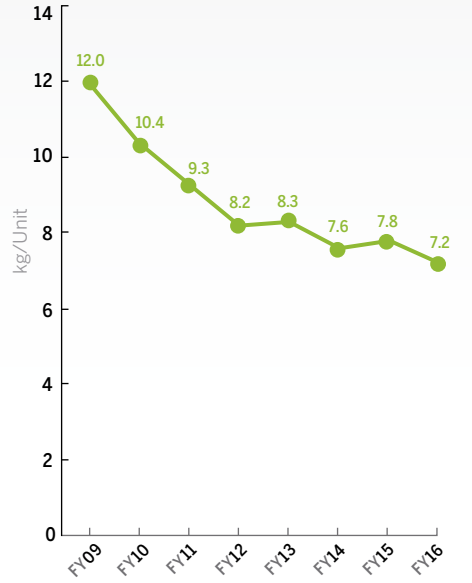
4% decrease vs. previous year



POWER EQUIPMENT PRODUCT MANUFACTURING[1]

FY16 RESULTS

8% decrease vs. previous year



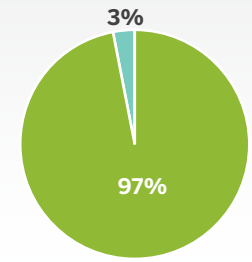
[1] Emissions from plants in Guadalajara, Mexico are allocated between automobile and motorcycle production based on sales value. Electricity emission factors updated to eGRID2015 Version 1.0 year 2012 GHG Annual Output Emission Rates (U.S. plants); 2016 Canada NIR, Annex II, Tables AII-1-A11-13; year 2013 (Canada plants); Programa GEI Mexico — Factor de emision electrico 2014 (Mexico plants).

Energy Use

Electricity and natural gas represent approximately 97 percent of total energy consumption by Honda's North American manufacturing plants. Auto manufacturing operations were able to improve the energy intensity of auto manufacturing despite ongoing expansion of plant operations and increasing automation. Total energy use remained essentially level, as increases due to expansion of operations and higher production levels were offset by energy efficiency activity and warmer weather.

Energy Consumption

ENERGY USE BY SOURCE



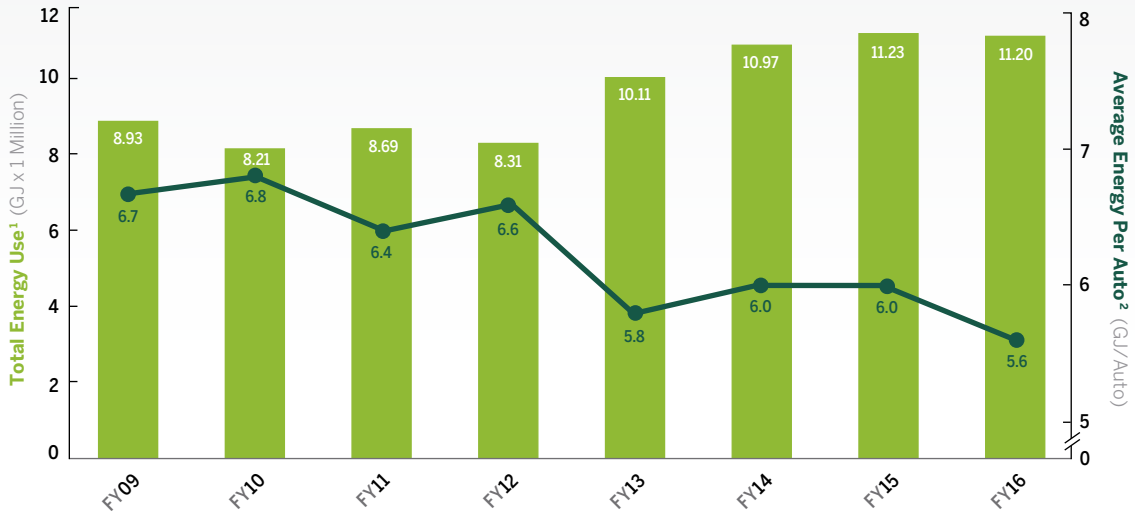
97%	Electricity and Natural Gas
3%	Other Fuels Propane, fuel oil, gasoline, coke, kerosene and others

ENERGY USE IN MANUFACTURING (TOTAL AND PER AUTO)

FY16 RESULTS

Total Energy Use:
No change vs. previous year

Energy Use Per Auto:
6.7% decrease vs. previous year



[1] Total energy use (from consumption of electricity and natural gas) includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. Total energy use at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

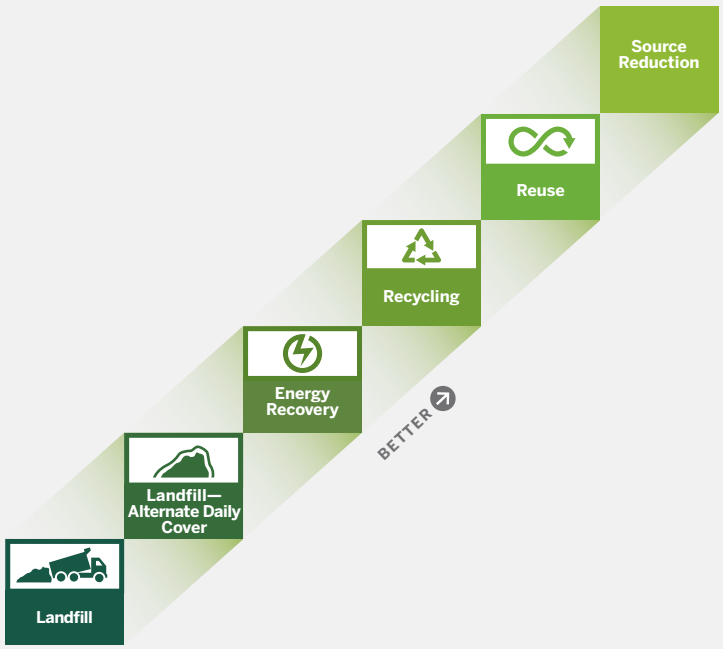
[2] Energy used per auto encompasses all auto-related manufacturing activity, including automobile engines and transmissions produced in North America; it does not include power equipment, powersports and aviation manufacturing operations. Energy use at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

HONDA

Waste

Honda strives to prevent the generation of waste at its manufacturing plants, viewing it as inefficient use of raw materials. Total solid waste generation remained stable despite increased production. Total solid waste per unit of automobile production decreased, primarily due to stabilizing automobile production in Celaya, Mexico and increased production. Honda has created a hierarchy that ranks waste management methods based on environmental preference (see illustration below). Use of waste for energy recovery is preferable to landfill, and recycling/reuse is preferable to energy recovery. Honda's management strategy is based on this hierarchy along with the distinct characteristics and regulatory requirements associated with each waste product.

WASTE MANAGEMENT HIERARCHY



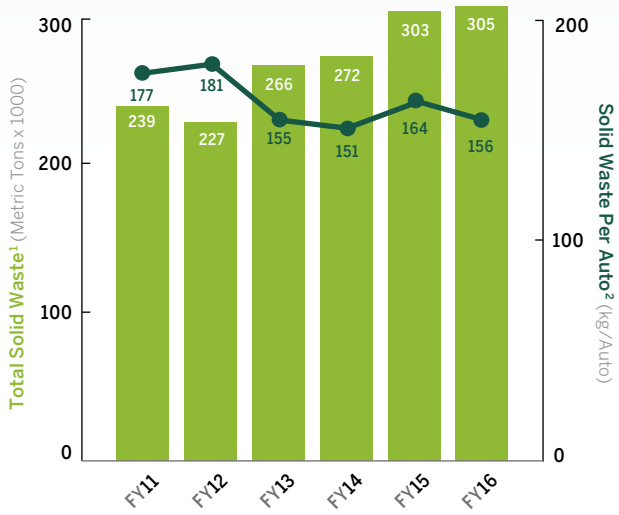
Waste from Manufacturing Operations

SOLID WASTE FROM MANUFACTURING IN NORTH AMERICA

FY16 RESULTS

Total Solid Waste:
0.7% increase vs. previous year

Solid Waste Per Auto:
4.9% decrease vs. previous year



[1] Total waste includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. Waste at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

[2] Waste per auto includes all auto-related manufacturing operations; it does not include powersports, power equipment and aviation manufacturing operations. Waste at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

HONDA

Waste cont'd

Honda set a target in FY2009 to achieve virtually zero waste to landfill — defined as less than 1 percent of all operating waste — for all North American auto, powersports and power equipment manufacturing operations. This goal was achieved from FY2011 to FY2014; however, landfill waste increased to 4.5 percent of all operating waste in FY2015 due in large measure to issues related to the start of production operations at the Celaya, Mexico auto plant. The initial start-up issues at the Celaya, Mexico auto plant have been resolved and Honda has again achieved virtually zero landfill for its manufacturing operations in North America.

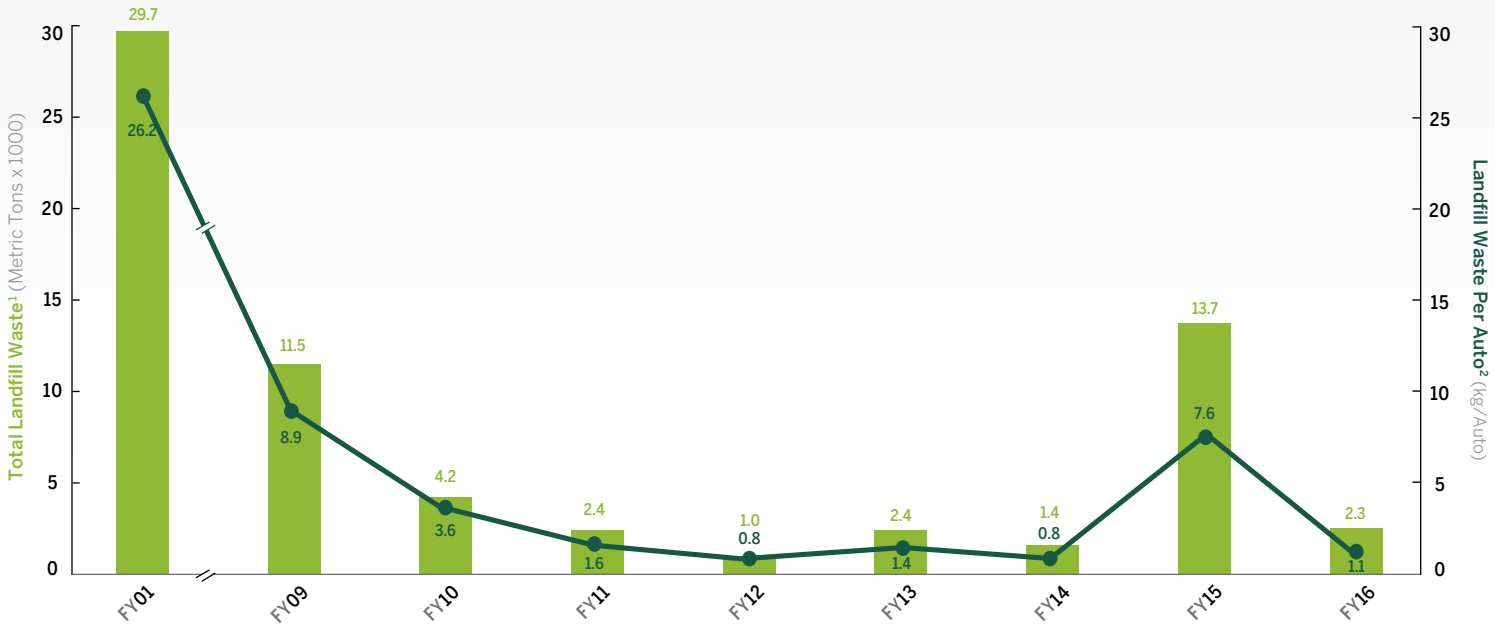
Honda Zero Waste to Landfill Initiative

LANDFILL WASTE FROM MANUFACTURING FACILITIES IN NORTH AMERICA

FY16 RESULTS

Total Landfill Waste:
- 92% decrease vs. baseline (FY01)
- 83% decrease vs. previous year

Landfill Waste Per Auto:
- 96% decrease vs. baseline (FY01)
- 86% decrease vs. previous year



[1] Total landfill waste includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. Landfill waste at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

[2] Landfill waste per auto includes all automobile-related manufacturing operations; it does not include powersports, power equipment and aviation manufacturing operations. Landfill waste at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

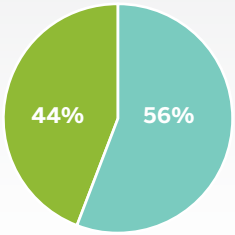
HONDA

Water Use

Honda's North American plants' water efficiency was severely impacted by operational problems. In FY2016, total water use and auto water use intensity increased significantly due to problems at two manufacturing sites. The Lincoln, Alabama auto manufacturing plant experienced mechanical problems with water supply tower overflow controls. The Anna, Ohio engine plant experienced capacity issues with the on-site water plant due to the hot summer. Temporary countermeasures resulted in increased water use.

Water Use

WATER USE BY SOURCE



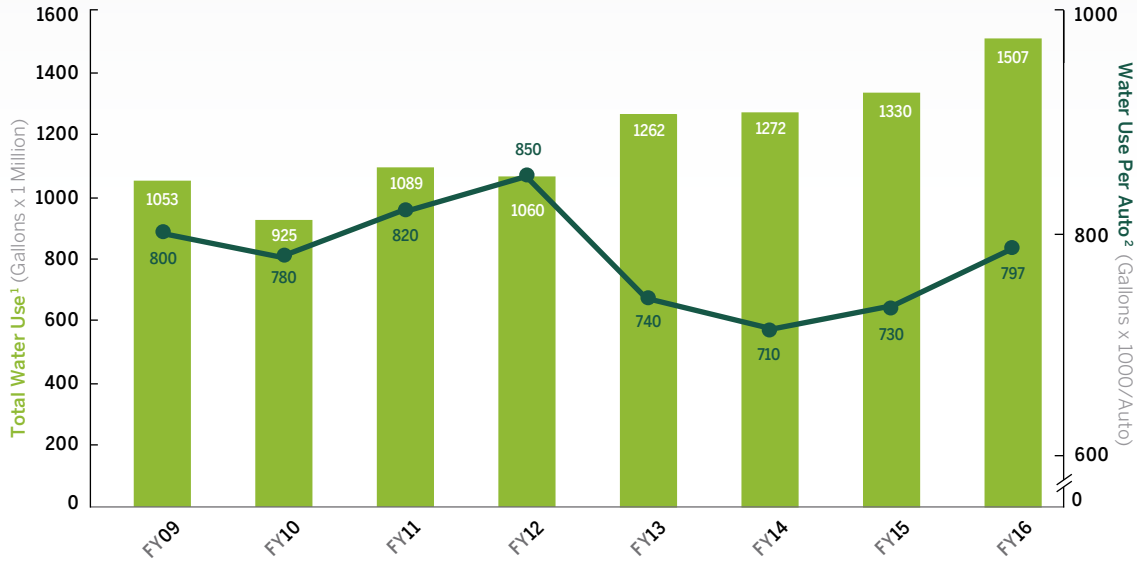
56%	Purchased from Local Utilities
44%	Direct Ground Water Withdrawal
< 1%	Rainwater

WATER USE IN NORTH AMERICAN MANUFACTURING FACILITIES

FY16 RESULTS

Total Water Use:
13% increase vs. previous year

Water Use Per Auto:
9.2% increase vs. previous year



[1] Total water use includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. Water use at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

[2] Water use per unit of automobile production includes all automobile, automobile engine and automobile transmission production in North America; it does not include powersports, power equipment and aviation manufacturing operations. Water use at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

Water Use cont'd

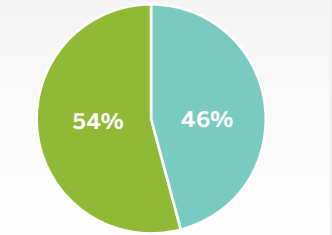
Wastewater Management

Domestic wastewater is generated from the use of restrooms, water fountains, cafeteria operations and air conditioning related to associate (employee) comfort. Industrial wastewater is generated primarily from painting, surface treatment and machining operations. Plants that generate industrial wastewater pre-treat the wastewater on site to reduce the contaminants to below regulated levels before the water is discharged into local municipal wastewater treatment plants. The pre-treated wastewater must meet regulatory requirements established at municipal, state and federal levels. Less than one percent of wastewater is trucked off-site for treatment.

Manufacturing plants also discharge wastewater directly to local waterways under National Pollutant Discharge Elimination System (NPDES) permits. These permits allow the discharge of storm water associated with industrial activities, water plant lime sedimentation basin discharge, cooling tower blow down and air conditioning condensate discharge. The NPDES permits set contaminant limits and mandate periodic sampling and reporting.

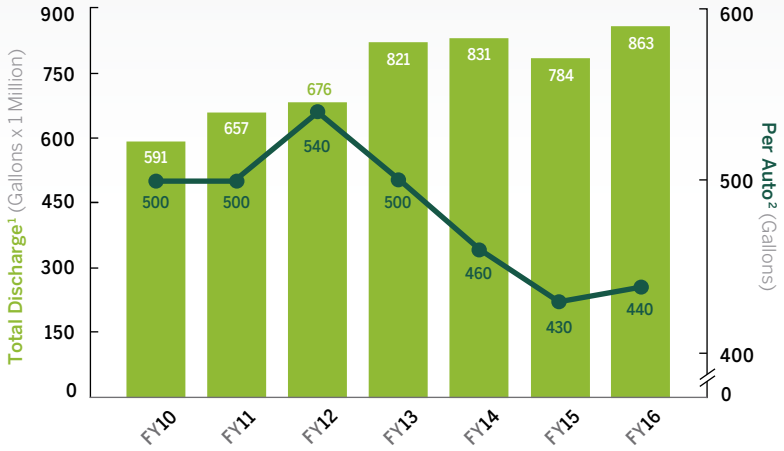
Wastewater Discharge and Disposal

WASTEWATER DISCHARGED FROM N.A. MANUFACTURING FACILITIES



46%	Domestic Wastewater
54%	Industrial Wastewater
< 1%	Trucked Off-Site

INDUSTRIAL WASTEWATER DISCHARGED FROM NORTH AMERICAN MANUFACTURING FACILITIES



FY16 RESULTS

Total Discharge:
10% increase vs. previous year

Per Auto:
2.3% increase vs. previous year

[1] Total wastewater discharged includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. Wastewater discharged at the Guadalajara, Mexico plant is allocated between automobile and motorcycle production based on sales value.

[2] Total wastewater discharged per unit of automobile production includes all auto-related manufacturing operations in North America; it does not include powersports, power equipment and aviation manufacturing operations.

HONDA

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.

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 U.S. federal and state and Canadian provincial government requirements. Honda factories are routinely inspected for compliance with legal requirements.

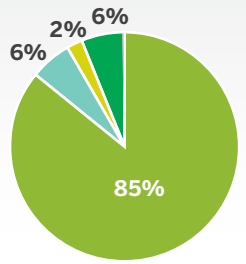
VOC Emissions from Auto Body Painting

Auto painting operations are the primary source of volatile organic compound (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 FY2016 were well below the company's targeted maximum of 20 g/m^2.

Air Emissions

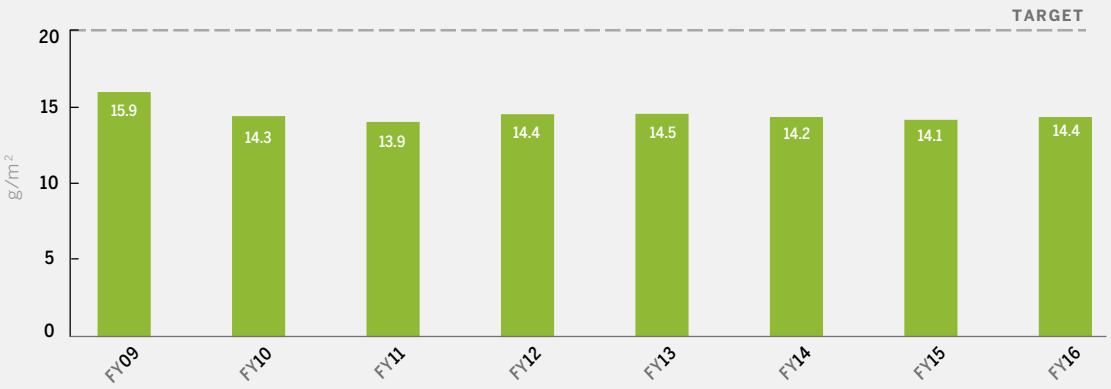
In calendar year 2015, Honda's North American manufacturing plants released approximately 4560 metric tons of criteria air pollutants. Overall, 85 percent of the air contaminants released were VOCs.

MAKEUP OF AIR EMISSIONS FOR N.A. MANUFACTURING FACILITIES



85%	Volatile Organic Compounds (VOCs)
6%	Nitrogen Oxide
2%	Carbon Monoxide
6%	Sulfur Oxides
< 1%	Particulate Matter

VOC EMISSIONS FROM AUTO BODY PAINTING IN NORTH AMERICA

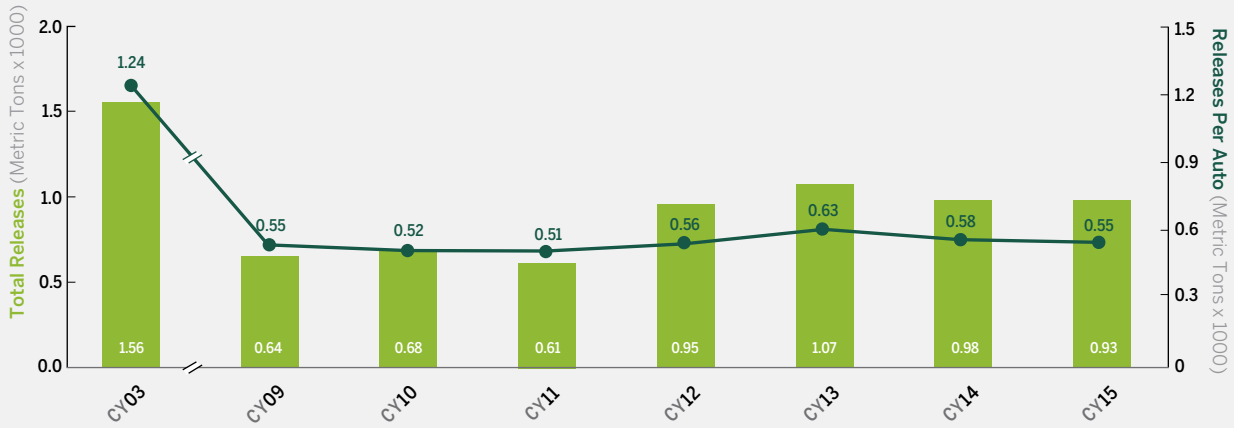


FY16 RESULTS

2.1% increase vs. previous year

Chemical Releases

TOTAL AND PER-AUTO TRI/NPRI RELEASES FROM PLANTS IN THE U.S. AND CANADA [1]



FY16 RESULTS

Total Releases:

- **5.1% decrease vs. previous year**
- **40% decrease vs. baseline (CY03)**

Releases Per Auto:

- **5.2% decrease vs. previous year**
- **56% decrease vs. baseline (CY03)**

[1] Total TRI/NPRI per auto includes all TRI/NPRI reported emissions from all U.S. and Canada auto-related manufacturing operations, including automobile engines and transmissions.

Honda has reduced its total Toxic Release Inventory (TRI) and National Pollutant Release Inventory (NPRI) emissions by about 40 percent since calendar year 2003, despite significant expansions in production capacity. Automobile-specific TRI/NPRI emissions per unit of production were reduced about 56 percent in the United States and Canada in the same period.

Reducing Chemical Release — TRI/NPRI Reporting

Honda operations in the United States and Canada report total chemical releases annually in accordance with regulatory requirements. 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 http://www.ec.gc.ca/inrp-npri.

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 help minimize the risks of leaks and spills. Most exterior tanks and piping systems have backup containment capabilities to help 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. Learning from accidental releases is critical to preventing future occurrences. Therefore, Honda tracks all significant incidents. Major incidents undergo root-cause analysis, and Honda uses the information to improve operations.

Distribution of Honda Products

Through shifts to more efficient modes of transport and other initiatives, Honda is working to reduce CO_2 emissions from the shipment of its products from Honda plants to Honda and Acura dealers in the U.S. Since FY2009, Honda has achieved a 14.2 percent reduction in the CO_2 emissions intensity of automobile shipments in the U.S.

Modal Shifts

The vast majority of Honda and Acura automobiles that are produced in North America are moved from the company's plants by train to railheads, where they are transferred, primarily by truck, to Honda and Acura dealers. Rail shipments offer significantly more energy efficiency and reduced CO_2 emissions compared to truck transport. In FY2016, 78.9 percent of all Honda and Acura automobiles manufactured in the U.S. or arriving at U.S. ports were transported by train, compared to 70.0 percent in FY2015, 82.2 percent in FY2014 and 80.5 percent in FY2013.

Further, in FY2016, Honda began the exclusive use of CNG-powered trucks for the shipment of vehicles from its Lincoln, Alabama plant to the nearby Talladega, Alabama rail yard, which is anticipated to further reduce CO_2 emissions.

CO_2 Emissions from the Transportation of Service Parts in the United States

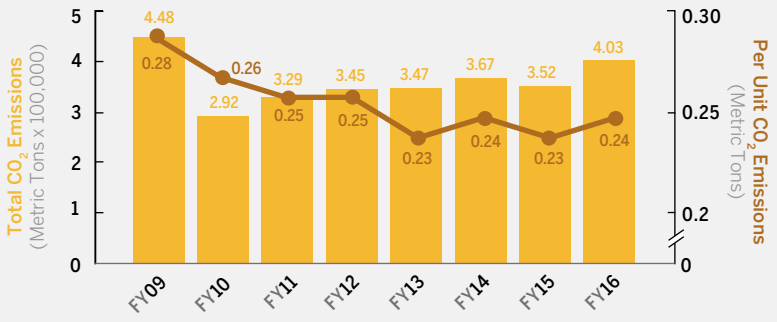
Honda also endeavors to reduce CO_2 emissions associated with the distribution of service parts from its supplier factories to its warehouses and, ultimately, to dealerships. These efforts include the use of more fuel-efficient trucks, the shift from truck to rail for cargo shipment, more efficient packing of tractor trailers and the reengineering of drive routes for improved efficiency. As a result, Honda has reduced the CO_2 emissions intensity of U.S. service parts shipments by 43.3 percent from FY2009 levels.

CO_2e EMISSIONS OF AUTOMOBILE SHIPMENTS IN THE U.S.

FY16 RESULTS

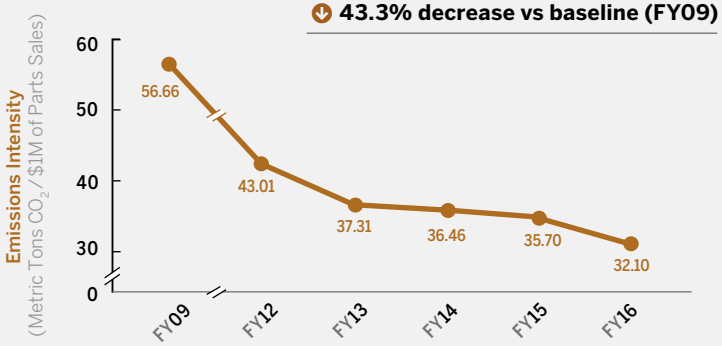
Total Emissions:
- 14.4% increase vs. previous year
- 10.0% decrease vs. baseline (FY09)

Per Unit Emissions:
- 4.3 increase vs. previous year
- 14.2 decrease vs. baseline (FY09)



CO_2 EMISSIONS INTENSITY OF U.S. SERVICE PARTS SHIPMENTS

FY16 RESULTS
- 10% decrease vs. previous year
- 43.3% decrease vs baseline (FY09)



HONDA

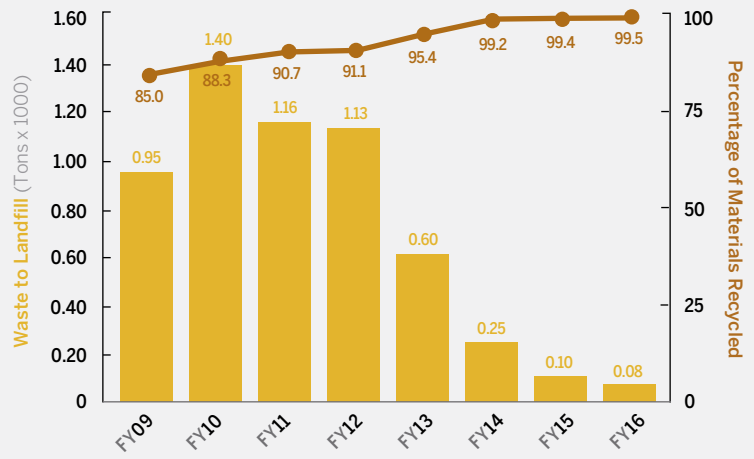
Zero Waste to Landfill Parts Distribution Centers

Honda operates nine parts distribution centers and three hub facilities in the United States. The company's goal is to achieve zero waste to landfill for all 12 of these facilities. This ongoing effort to reduce, reuse and recycle waste material resulted in more than 16,000 tons of packaging and shipping material being diverted from landfills in FY2016. Waste material sent to landfills from Honda's U.S. parts distribution facilities has been reduced 91.5 percent, from 950 tons in FY2009 to just 80 tons in FY2016, with only 0.5 percent of total waste sent to landfills in FY2016.

FY16 RESULTS

- **20% decrease vs. previous year**
- **91.5% decrease vs. baseline (FY09)**

WASTE TO LANDFILL FROM U.S. PARTS CENTERS

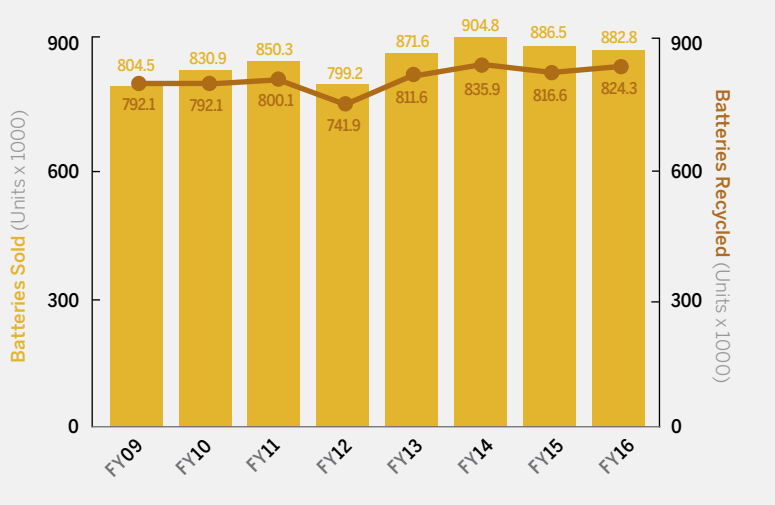


Recycling Improvements

Service Parts Recycling

In partnership with its U.S. Honda and Acura automobile dealers, American Honda has developed a continually expanding service parts recycling program. A variety of service parts are recycled, including batteries, wheels and other parts containing precious metals, glass, copper and plastic.

BATTERY RECYCLING IN THE U.S.



Honda and Acura 'Green Dealer' Program

American Honda launched a 'Green Dealer' program in FY2012 to help independently owned and operated Honda and Acura automobile dealers in the U.S. reduce their environmental impact. In FY2014, the program was extended to motorcycle and power equipment dealers. The program recognizes dealers who implement recommended sustainable practices with three award levels — Silver, Gold and Platinum. The award criteria are based on a verified reduction in energy use and a rigorous point system that incorporates environmental improvement measures. Professional engineers evaluate dealerships' environmental performance and recommend strategies for reducing their environmental impact.

At the end of FY2016, over 400 U.S. Honda and Acura dealers across all product lines were enrolled in the program and 106 received an award. Improvement made at these dealerships resulted in a total annual reduction of 12,500 tons of CO_2 and cumulative annual operating cost reduction of more than $2.5 million.

Honda's Green Dealer Guide and a list of U.S. dealers who have earned the Honda or Acura Environmental Leadership Award are listed on greendealer.honda.com.

The program offers three achievement levels:

Award Criteria[1]

	SILVER AWARD	GOLD AWARD	PLATINUM AWARD
Existing Facilities (more than 3 years old)	30 points 10% energy use reduction	45 points 30% energy use reduction	60 points 50% energy use reduction
Recent Facilities/ Renovations (less than 3 years old)	40 points	55 points	70 points
New Builds	Based on Environmental Leadership Design Guidelines for Honda Dealership Image Program[2]		
Fast Track to Platinum — LEED certification by U.S. Green Building Council[3] or "Electric Grid Neutral"[4]			

[1] Full program details and energy reduction requirements subject to change as the program changes and grows. [2] Award is based on existing energy-efficiency measures only since energy reduction cannot be measured. [3] U.S. Green Building Council is not affiliated with American Honda Motor Co., Inc. [4] "Electric Grid Neutral" = When averaged over a year, a dealership uses zero net grid electricity by offsetting its grid electric use with on-site renewable generation.

Honda and Acura 'Green Dealer' Program cont'd

Green roof at Headquarter Honda in Clermont, Florida

Sharing our dream with others

To establish Honda's leadership in dealership sustainability, the 93-page Honda 'Green Dealer' Guide was created. This guide synthesizes three years of program development, providing a blueprint for reducing both operating costs and energy use in auto dealerships. To benefit society, the Honda 'Green Dealer' Guide was released to the public as well, intended to help dealers across all brands and commercial buildings with similar energy needs. The guide will be updated as necessary to reflect new technology advancements.

Honda and Acura dealers who received the Environmental Leadership Award implemented numerous environmental best practices such as:

- Replacing lighting with LEDs
- Installing motion sensors that turn lights off when not in use
- Replacing older air conditioning and heating systems with more energy-efficient equipment
- Setting thermostats at optimal temperatures Installing solar panels
- Adding rainwater collection systems, and planting native vegetation to reduce irrigation water use.

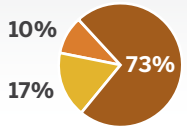
HONDA

Automobiles

Fuel Efficiency

According to the latest government research, nearly three quarters of a typical vehicle's life-cycle GHG emissions occurs during in-use operation. As fuel economy continues to improve, the relative impact of in-use of products will decline.

SOURCES OF AUTOMOBILE LIFE CYCLE GHG EMISSIONS[1]



- **73%** Product In-Use
- **17%** Upstream Fuel Production
- **10%** Product Manufacturing

[1] Source: Argonne National Laboratory's GREET 2015 life-cycle emissions model. Results shown for a model year 2016 conventional gasoline vehicle.

Understanding MPGs and GHGs

While most consumers think about fuel economy as the pair of numbers on a new vehicle window label, in truth there are multiple sets of related data used by government agencies and the auto industry. Because they have similar names, differentiating them can sometimes be difficult. Below is a summary of what they are, and how they differ from each other.

Corporate Average Fuel Economy (CAFE) (miles per gallon): Federal law requires that the fuel economy of each model be evaluated in a laboratory by running vehicles on a treadmill-like "dynamometer" over specific government test procedures. These tests, designed in the mid-1970s to mimic "typical" driving, are written into law. Yet because vehicles and the driving environment have both changed substantially over the past four decades, the resulting "CAFE MPG" value is higher than what consumers achieve on today's roads. CAFE MPG values are used by government agencies regularly, but are generally not used or seen by consumers.

Adjusted (or "Window Label") Fuel Economy (miles per gallon): Recognizing that CAFE MPG values do not accurately reflect real-world fuel economy, the government over the years developed a series of adjustment factors to bring CAFE results more in line with consumers' on-road experience. Recently, EPA added additional test procedures (known as the "five-cycle test") to further improve the accuracy of window label fuel-economy ratings.

GHG Emissions (grams per mile): In 2012, the government began regulating vehicle greenhouse gas emissions. Because burned fuel emits CO_2 (approximately 19.6 pounds per gallon of gasoline), there is a close relationship between fuel consumption and greenhouse gas emissions. However, other opportunities — such as improving A/C systems to reduce refrigerant leakage — can improve a vehicle's GHG performance independent of fuel economy. Like CAFE values, GHG emissions levels reflect the vehicle's performance over a predetermined laboratory test procedure and are thus used for complying with regulations. While these values are regularly assessed by the industry and government agencies, they do not reflect the real-world emissions performance of the vehicle.

Adjusted GHG Emissions (grams per mile): While the GHG Emissions value (above) is based on a laboratory test procedure, the Adjusted GHG value reflects the vehicle's environmental performance in real-world conditions. These values are now included on new vehicle fuel economy window labels.

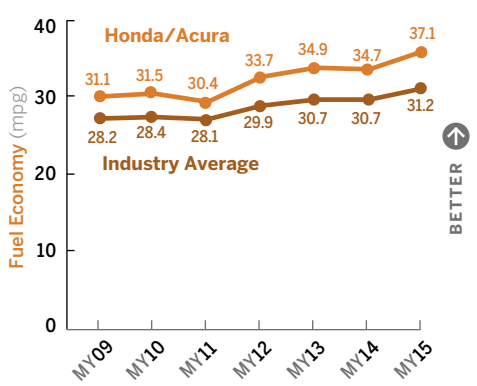
A VEHICLE THAT ACHIEVES 163 G/MI[2] WOULD HAVE A FUEL ECONOMY OF:	MPG	
	CAFE FUEL ECONOMY	WINDOW LABEL FUEL ECONOMY RATING
Without A/C-based GHG improvements	54.5	approx. 40
With A/C-based GHG improvements	approx. 50	approx. 37

[2] The federal government set vehicle GHG standards such that the overall fleet in 2025 was expected to average 163 g/mi CO_2-equivalent.

Automobiles cont'd

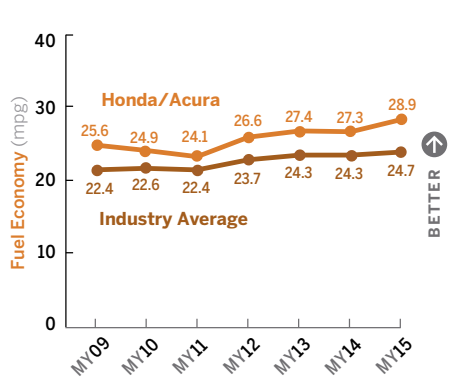
Corporate Average Fuel Economy (CAFE) and EPA "Window Label" Fuel Economy

U.S. CAR AND LIGHT TRUCK FLEETWIDE UNADJUSTED FUEL ECONOMY BY MODEL YEAR[1, 2]



MY15 RESULTS
- 6.9% improvement vs. previous year
- 18.9% better than industry average

U.S. CAR AND LIGHT TRUCK FLEETWIDE ADJUSTED FUEL ECONOMY BY MODEL YEAR[2]



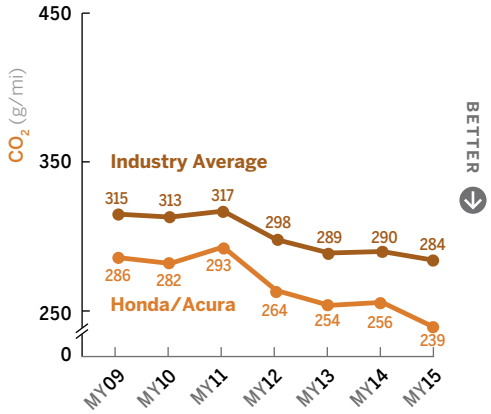
MY15 RESULTS
- 5.9% improvement vs. previous year
- 17.0% better than industry average

[1] 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.

[2] Source: U.S. Environmental Protection Agency: Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2015, published December 2015 (Tables 4.2, 4.4, and 9.1)

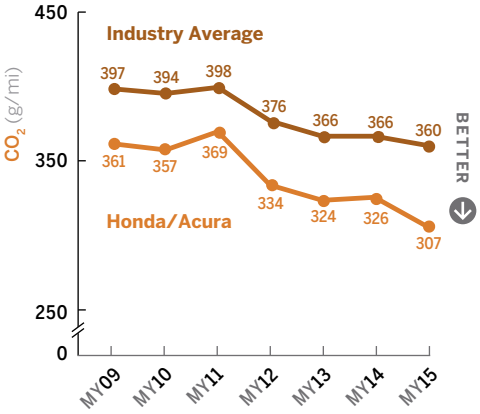
Fleetwide CO_2 Emissions of U.S. Automobiles

U.S. CAR AND LIGHT TRUCK UNADJUSTED COMPOSITE CO_2 EMISSIONS BY MODEL YEAR[1]



MY15 RESULTS
- 6.6% improvement vs. previous year
- 15.8% better than industry average

U.S. CAR AND LIGHT TRUCK ADJUSTED COMPOSITE CO_2 EMISSIONS BY MODEL YEAR[2]



MY15 RESULTS
- 5.8% improvement vs. previous year
- 14.7% better than industry average

[1] Source: U.S. Environmental Protection Agency: Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2015, published December 2015 (Table 4.5)

[2] Source: U.S. Environmental Protection Agency: Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2015, published December 2015 (Table 4.3)

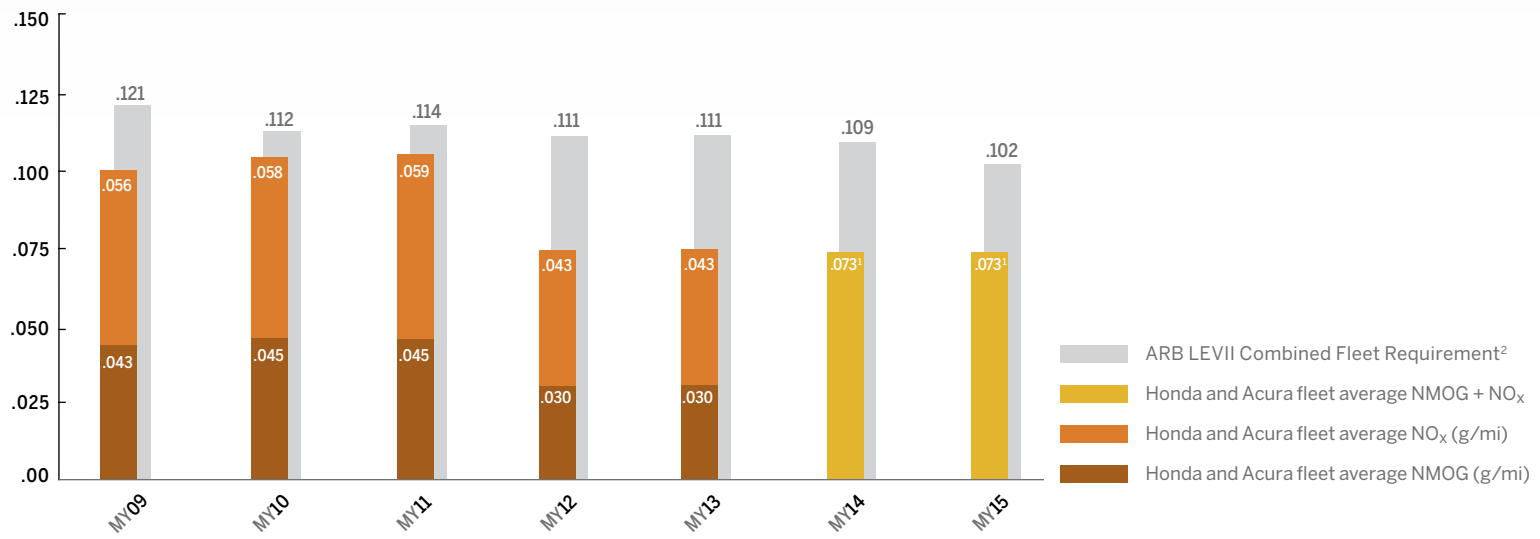
HONDA

Automobiles cont'd

Tailpipe Emissions

Non-methane organic gases (NMOG) tailpipe emissions are a pre-cursor to smog. The California Air Resources Board (CARB) regulates NMOG under the Low-Emissions Vehicle (1996 and later), Low-Emissions Vehicle II (2004 and later) and Low-Emission Vehicle III (2015 and later) emissions standards. Honda has been very aggressive in reducing its fleet emissions below the California standards.

FLEETWIDE NMOG + NO_X EMISSIONS VS ARB FLEET REQUIREMENT (CALIFORNIA)[1]



[1] Source: Honda's submitted NMOG reports to the California Air Resources Board, and NO_X reports to EPA.

[2] Standards are now based on combined NMOG + NO_X. Prior to MY2014, only a NMOG standard was applicable. Estimated NMOG + NO_X levels are shown here for comparison purposes only.

HONDA

Powersports Products

Fuel Efficiency

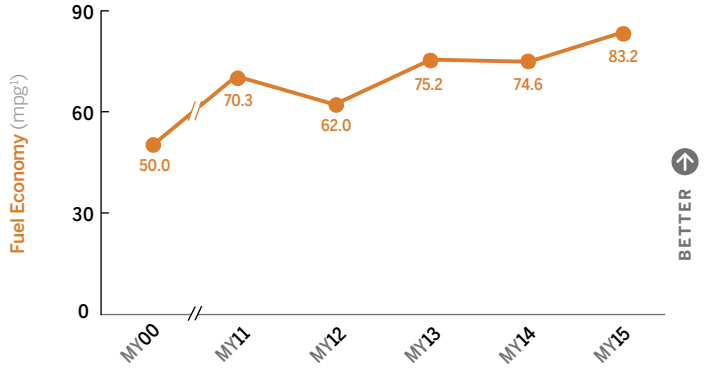
Since 2000, Honda has achieved a 66 percent improvement in the fleet-average fuel economy of on-road motorcycles sold in North America[1], primarily through the expanded use of programmable electronic fuel injection (PGM-FI) and changes in its model mix to smaller, more fuel-efficient products.

The Honda NC700X is an easy-to-ride adventure motorbike, designed for comfortable long-distance riding. It features an an available Dual Clutch Transmission mated to a 670cc liquid-cooled parallel twin engine with fuel economy of 64 mpg.

U.S. MOTORCYCLE FLEET AVERAGE FUEL ECONOMY BY MODEL YEAR

MY15 RESULTS

- **11.5% improvement vs previous year**
- **66.4% improvement vs baseline (MY2000)**



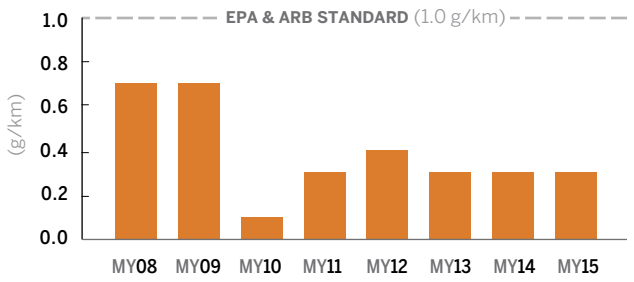
[1] Honda calculation using U.S. EPA exhaust emissions data. FY00-09 data are based on actual sales, while 2010 and later are based on production volumes. Some MY production is sold in later years (ex: a 2009 MY motorcycle that is sold new in 2011) and was omitted by the earlier method.

Powersports Products cont'd

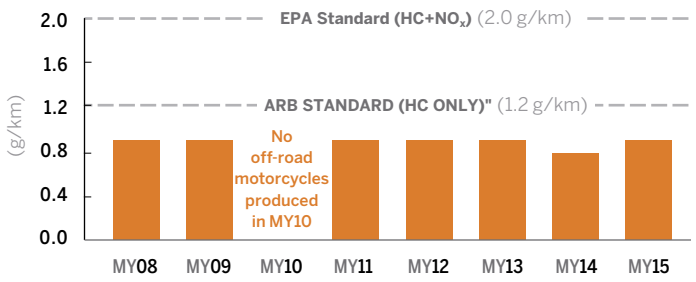
Tailpipe Emissions for Motorcycles, All-Terrain Vehicles (ATVs) and Utility Vehicles (UTVs)

In model year 2015, Honda substantially outperformed both U.S. EPA and California Air Resources Board (ARB) requirements for hydrocarbon (HC), nitrogen oxides (NO_x) and carbon monoxide (CO) exhaust emissions. In model year 2015, Honda also outperformed both EPA and CARB requirements for evaporative emissions and fuel permeation.

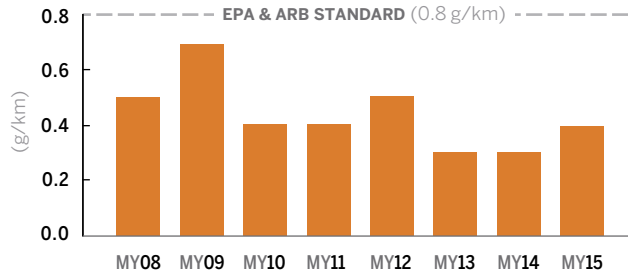
CLASS I AND II MOTORCYCLE FLEET EMISSIONS[1]



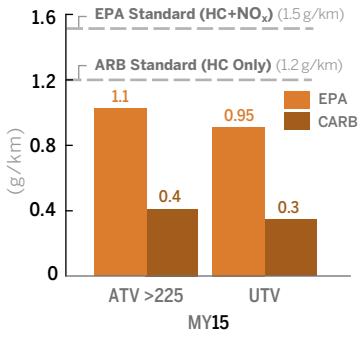
OFF-ROAD MOTORCYCLE FLEET HC+NO_x EMISSIONS[1]



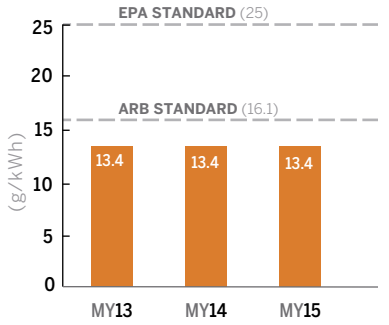
CLASS III MOTORCYCLE FLEET HC+NO_x EMISSIONS[1]



CHASSIS DYNO CERTIFIED ATV & UTV HC+NO_x EMISSIONS[1]



ENGINE DYNO CERTIFIED <225 CC ATV EMISSIONS (HC+NO_x)[1]



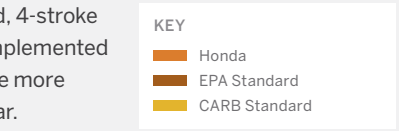
[1] Source: Honda internal test data

HONDA

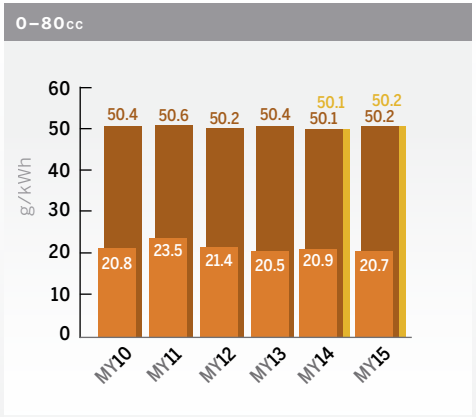
Power Equipment Products

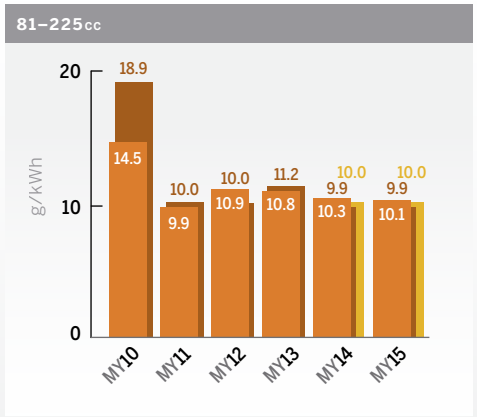
Criteria Air Pollutants for Honda Engines Sold in the U.S.

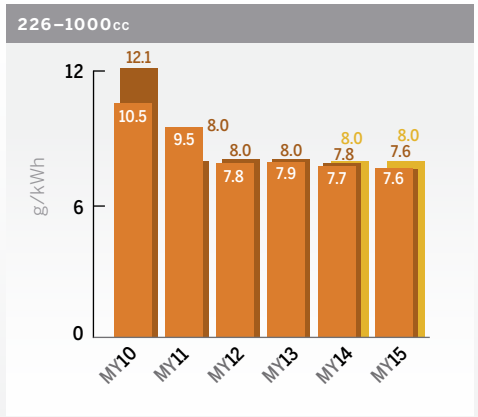
Honda achieves HC+NO_x emissions substantially below U.S. EPA standards for 0-80cc engines due to its use of advanced, 4-stroke engine technology with multi-position carburetors. Honda's 81-225cc engines are slightly above the stringent standard implemented in 2012 but are compliant through the use of credits. The last segment of Honda engines, 226-1000cc, is slightly below the more stringent 8 grams/kWh standard (implemented in 2010). Honda was able to reduce these emissions compared to last year. With respect to carbon monoxide (CO) emissions, Honda power equipment products are significantly below EPA and CARB standards for all engine categories.



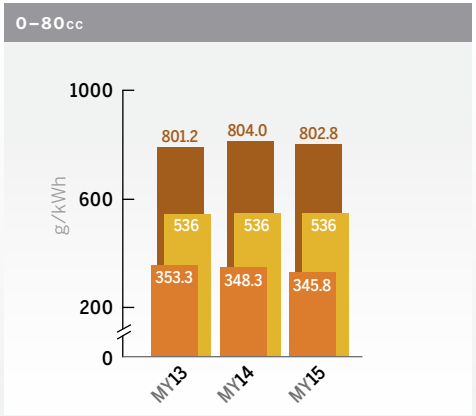
FLEET AVERAGE: HC+NO_x EMISSIONS

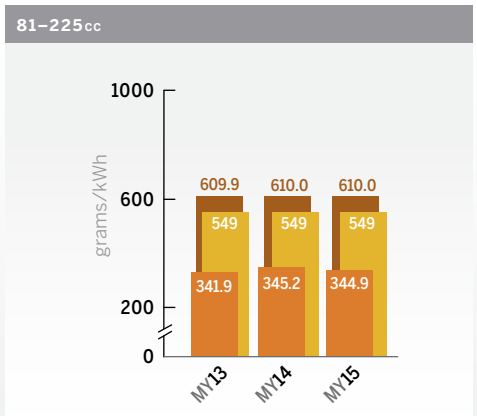


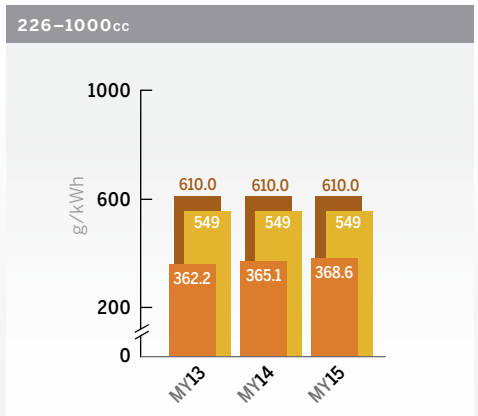




FLEET AVERAGE: CO EMISSIONS





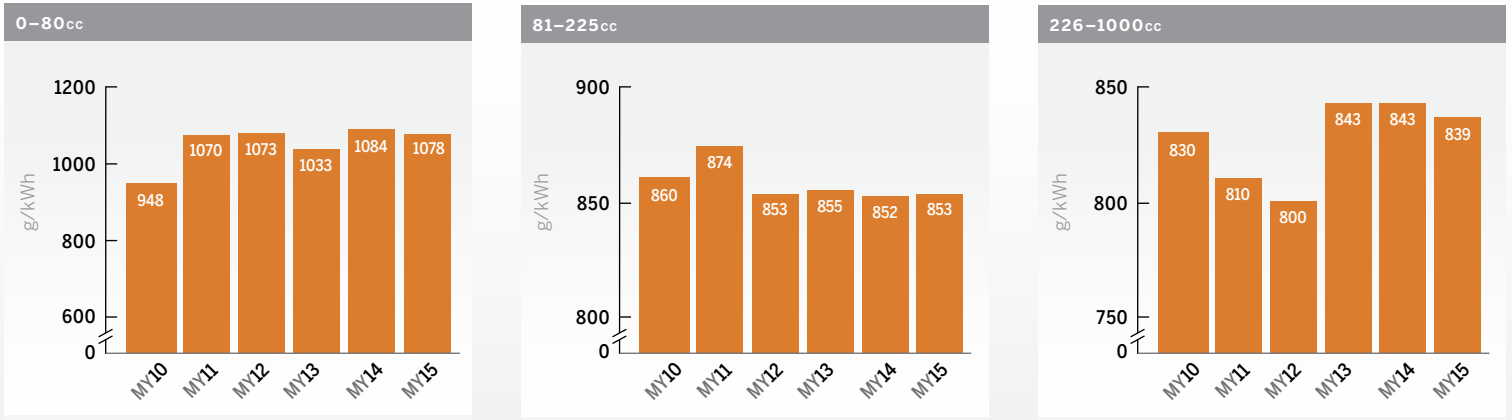


HONDA

Power Equipment Products cont'd

Criteria Air Pollutants for Honda Engines Sold in the U.S. cont'd.

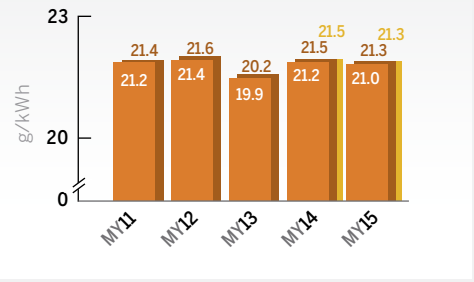
FLEET AVERAGE: CO_2 EMISSIONS



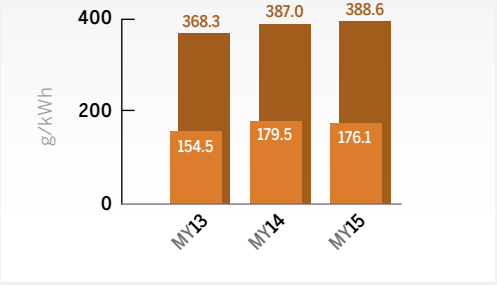
Criteria Air Pollutants, CO and CO_2 Emissions for Marine Engines Sold in the U.S.

Honda achieves emissions below U.S. EPA standards for Marine Outboards due to its use of advanced, 4-stroke engine technology.

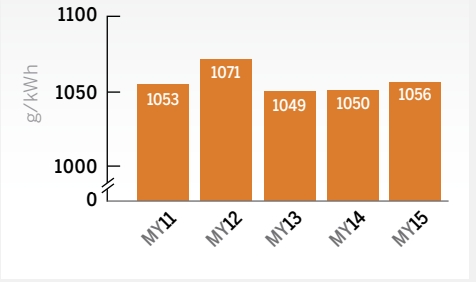
FLEET AVERAGE: HC+NOx EMISSIONS (MARINE)

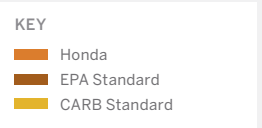


FLEET AVERAGE: CO EMISSIONS (MARINE)



FLEET AVERAGE: CO_2 EMISSIONS (MARINE)





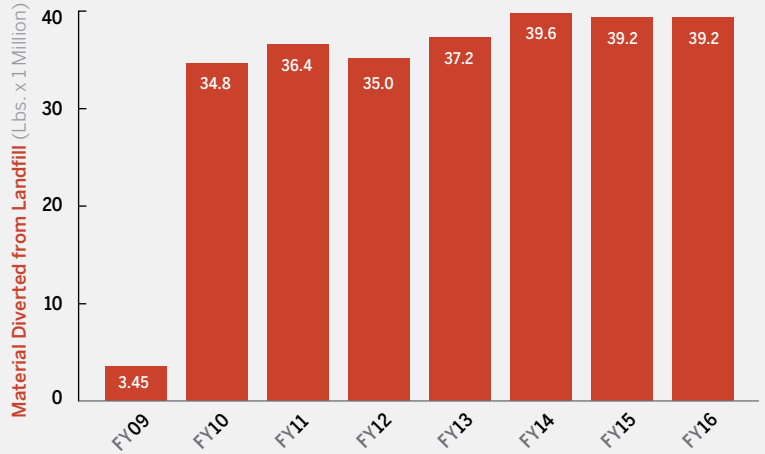
HONDA

Recycling of Warranty and Overstock Service Parts and Electronic Waste (E-Waste)

Honda's program for recycling overstock service parts utilizes the same procedures that are in place for regulated materials, such as universal or hazardous waste. Codes are assigned and used, filtering criteria to create lists that identify which parts will be destroyed and in what manner. Items that require special handling are segregated and delivered to qualified regulated materials recycling vendors. A similar process is utilized for recycling parts replaced under warranty. Parts that do not require further failure analysis are directed back to Honda and are then placed in their respective scrap collections. Due to transportation concerns, no regulated parts are returned by dealerships to Honda. American Honda's Service Parts Division maintains rigorous procedures for the disposal of electronic waste (e-waste). Service parts are evaluated at the time of procurement to determine whether they qualify as e-waste, as OSHA hazards or as "transportation dangerous" material regulated by the U.S. Department of Transportation. Nearly 5 percent of service parts have been coded for this special handling.

FY2016 Result: 39.23 million pounds of recyclable material from electronic waste, warranty parts and overstock service parts were diverted from landfills.

MATERIAL FROM E-WASTE, WARRANTY PARTS AND OVERSTOCK PARTS DIVERTED FROM LANDFILLS (LBS. x 1 MILLION)



Aluminum and Steel Wheels

Honda operates a core charge program in the U.S. for aluminum wheels and in FY2013 added steel wheels to this program. The charge to the Honda or Acura dealer for each new wheel purchased from Honda differs by construction material and is recoverable when the parts are returned.

FY2016 Result: Honda collected 69,958 wheels, including 44,668 aluminum wheels and 25,290 steel wheels, using this program.

Engine Components

In FY2016, Honda added a core charge program for certain engines in the U.S. The charge to the Honda or Acura dealer for selected new engines purchased from Honda is recoverable when the parts are returned. Engine parts numbers to be included in the program also have a returnable packaging that can be used up to three additional times for other new engines.

FY2016 Result: Honda collected 4,388 engines using this program.

Catalytic Converters

Catalytic converters, which are used for emissions control on all automobiles, contain platinum group metals (PGMs), which are extremely valuable. Recycling catalytic converters prevents these precious metals from ending up in landfills and reduces the need to mine PGMs. Honda began recycling catalytic converters in December 2002. In FY2012, Honda ceased collections through warranty replacements and instead implemented a core charge program similar to the company's aluminum wheel program.

FY2016 Result: Honda recycled 539,375 catalytic converters.

Recycling Rare Earth Materials from Hybrid Batteries

Honda recycles nickel-metal hydride (NiMH) batteries from its hybrid vehicles in North America. The batteries are sent to a specialized recycling plant in Japan. In FY2013, Honda established the world's first process to reuse rare earth metals extracted from nickel-metal hydride batteries for use in new NiMH batteries, reducing the need to mine for scarce natural resources. Honda also extracts rare earth metals from various used parts.

FY2016 Result: Honda recycled 17,125 nickel-metal hydride batteries.

HONDA

North American Corporate Profile

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 CO_2 emissions.

Key North American Locations

Capital Investment
More than $21 billion

Employment
Approximately 33,000 associates

Parts Purchases
More than $25 billion in parts and materials purchased annually from more than 650 North American original equipment suppliers

MAP LEGEND

- Major Manufacturing Facilities
- Research and Development Centers
- Parts Centers
- Sales and Marketing Headquarters

HONDA

Additional Information

	United States	Canada	Mexico
Additional information about Honda and Acura products can be found at:	 **www.honda.com**	 **www.honda.ca**	 **www.honda.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.

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