HONDA

2017 North American Environmental Report

Honda Clarity Series: (L-R)
2018 Clarity Plug-in Hybrid, 2017 Clarity Electric and 2017 Clarity Fuel Cell

BLUE SKIES FOR OUR CHILDREN

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Table of Contents

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, 2016 and ended March 31, 2017 (FY2017).

To learn more, visit:

csr.honda.com

On the Cover

The Honda Clarity Series provide customers with a well-equipped, premium, midsize vehicle with a range of ultra low-carbon powertrain options to suit their lifestyle needs. This Honda trio of dedicated, advanced technology vehicles, along with the expanded application of two- and three-motor hybrid systems to our core models, is aimed at accelerating the deployment of advanced electrified powertrain technology and bringing electrified vehicles further into the mainstream.

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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Data worksheet

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To navigate this report

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Use the left and right arrow keys on your keyboard to move between pages.

In full-screen mode (accessible from the "View" tab on the Adobe toolbar), left-click to move to the next page, right-click to move to the previous page.

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A Letter from the President & CEO

I would like to first thank our customers and many stakeholders for their continued support of Honda, and express our gratitude to those who are reading this report for their continued interest in our efforts to create a more sustainable future for our customers and for society.

Based on our strong desire to be a company that society wants to exist, Honda established an ambitious initiative to rapidly advance the deployment of electrified vehicle technology and has announced its intention to have two-thirds of our global vehicle sales from electrified vehicles by 2030.

In North America, we have a critical role to play in this effort, and more than half of the new models we introduce over the next several years will be electrified. The low cost of gasoline and the continuing trend toward larger light truck products increases our challenge to develop more fuel-efficient vehicles that offer new value to customers.

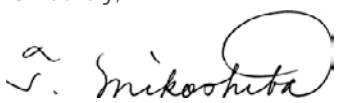
One strong example of this effort is our new Clarity series of vehicles, which offer customers the choice of plug-in hybrid, battery electric and fuel cell powertrains in one sophisticated, spacious and affordable five-passenger sedan. The Clarity series is at the forefront of our effort to bring electrified vehicles into the mainstream, and we are targeting U.S. sales of 75,000 Clarity vehicles over the next four years. At the same time, we are advancing the efficiency of existing, high-volume models, and you will find details on those efforts in the Product Development section of this report.

We also are making critical investments in our capacity to manufacture electrified vehicles in North America. With the launch of a new 2018 Accord Hybrid, our Ohio manufacturing operations are taking on new responsibilities to produce key electrified powertrain systems. We will look to expand these capabilities to other plants in North America in the coming years as we expand the use of Honda hybrid and plug-in hybrid technologies to our core models, including light-truck products.

Of course, our efforts to minimize Honda's environmental footprint extend beyond the products we make to all elements of our business, including manufacturing, purchasing and shipping logistics, product sales and service support and other operations, all of which are addressed in this report.

As a society, we continue to grapple with the environmental impacts of our fossil fuel dependent economies and mobility systems. As a mobility company, it is Honda's responsibility to help address these issues with innovative thinking, technologies and product designs. Through this report and other communications, we will endeavor to inform you of our efforts and of the challenges that remain. I sincerely appreciate your interest in this report, in Honda, and in our progress toward a more sustainable mobility future.

Sincerely,



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

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Green Conference

Honda has always placed a high value on the ability of its associates to improve processes 'at the spot'. This means that associates that are most familiar with a process generally have the best ideas on how to improve it.

In 2016, Honda spotlighted the efforts made by associates to improve the environmental performance of their processes by implementing the inaugural Honda Green Conference North America.

Teams submitted their projects for consideration in the Honda Green Conference North America, ranging from ideas covering climate change mitigation, energy and water use reduction, pollution reduction, 3Rs (reduce, reuse, recycle) waste mitigation, biodiversity impact and nature conservation, environmental outreach and education.

Through the 98 projects submitted for consideration in the North America competition, associates were able to reduce or eliminate the use of 43.4 million gallons of water, 8.2 million kWh of energy and 281,000 gallons of solvents and other chemicals. In addition 65,266 metric tons of CO_2 emissions were kept out of the atmosphere.

Fifteen teams were selected by the North American Environmental Committee to showcase their green initiatives in Torrance, Calif. Teams presented their projects before a panel of judges, with one team selected to represent North American during the Honda Green Conference Global in Japan.

The North American team, which brought together associates from Honda of Canada Mfg., Honda of America Mfg. and Honda Engineering North America, went on to win the global event with their Part in Part Grip & Flip project. The process allowed a smaller part, previously made by a supplier, to be made while the CR-V's upper tailgate skin was stamped. The new part was made using a leftover piece that would otherwise be discarded.

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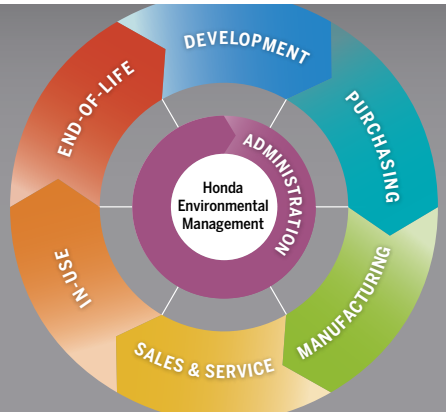
2017 Executive Summary

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	FY2017 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's goal is to have a PVC-free material construction for interiors on all of its vehicles. Through the end of FY2017, 12 of the 15 Honda and Acura car and light truck models sold in the U.S. or Canada had PVC-free interiors.
Fuel-Efficient Technology	Autos	• Honda introduced the Clarity Series — hydrogen fuel cell, plug-in hybrid and electric — with the goal of U.S. sales reaching 75,000 vehicles in the first four model years.

Purchasing

CATEGORY	PRODUCT	FY2017 RESULTS
"Green Purchasing"	All Products	• In FY2017, data was gathered from 299 OEM parts suppliers comprising 95% of Honda's total North American OEM parts purchases (on a dollar basis) and the emission intensity of parts production was reduced 23.5% compared to the FY2010 baseline.
"Green Logistics"	All Products	• Use of alternative fuel (CNG) in Ohio transportation routes, resulted in a reduction of CO_2 emission of 1,154 metric tons.

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2017 Executive Summary

Manufacturing

CATEGORY	PRODUCT	FY2017 RESULTS
CO_2e Emissions	Autos	• The CO_2 emissions intensity of automobile manufacturing rose 2% from the prior year but remains 27% below the baseline FY2009 levels, at 547 kilograms per unit of production (kg/unit).
	Powersports	• The CO_2 emissions intensity of powersports product manufacturing rose 4.9% from the prior year but is 74% below the baseline FY2009 levels, at 75 kg/unit.
	Power Equipment	• The CO_2 emissions intensity of power equipment product manufacturing was down 8.4% from the previous year and 45% from the baseline FY2009 levels to 6.6 kg/unit.
Waste	All Products	• Solid waste from manufacturing operations rose 3% versus year-ago totals. • Total waste sent to landfill is 1.2% and remains 87% below FY2000. Honda landfill waste is the result of limited waste-to-energy options in Mexico and regulatory restraints in the U.S. due to aluminum paste wastewater treatment sludge.
Water		• Water use per auto (gallon/unit) remained stable compared to last year but has risen over the last several years as a result of Honda's continued growth in the NA Region.
VOC Emissions		• VOC emissions from body painting, at 14.9 g/m^2, were up 3.5% vs. the previous year but still well below the company's targeted maximum of 20 g/m^2.

Sales & Service

CATEGORY	PRODUCT	FY2017 RESULTS
CO_2 Emissions	Autos	• The CO_2 emissions intensity of U.S. automobile shipments, at 0.26 metric tons, rose 6.9% from the previous year but remain 7% below the baseline FY2009 levels.
	All Products	• Honda has reduced the CO_2 emissions intensity of U.S. service parts shipments by 46.6% from FY2009 levels.
Waste	All Products	• The ongoing effort to reduce, reuse and recycle waste material resulted in more than 14,000 tons of packaging and shipping materials being diverted from landfills in FY2017.
"Green Dealers"	All Products	• Honda launched its "green dealer" environmental awards program in FY2012 and through the end of FY2017 had enrolled more than 600 U.S. Honda and Acura dealers, while 150 have received awards, including three electric-grid neutral dealers.

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2017 Executive Summary

In-Use

CATEGORY	PRODUCT	FY2017 RESULTS
Fuel Economy and CO_2 Emissions	Autos	• Honda's U.S. fleet-average fuel economy remained virtually the same as last year at 36.9 miles per gallon (mpg), which is 13.5% higher than the industry average fuel economy of 32.5 mpg for the same period. • Honda's fleet average CO_2 emissions remain nearly the same as last year at 241 grams per mile (g/mi) compared to 256 g/mi in 2014.
	Powersports	• Relative to model year 2000, Honda has achieved a 66% improvement in the fleet-average fuel economy of on-road motorcycles sold in North America.
	Power Equipment	• The fleet average CO_2 emissions of Honda's U.S. power equipment products were virtually identical to the previous year.
Criteria Air Pollutants	Autos	• NMOG + NO_X emissions for Honda's U.S. automobile fleet in model year 2016 , at 0.078 g/mi was nearly identical to the last four years of 0.073 g/mi.
	Powersports Products	• HC + NO_X emissions for Honda's U.S. motorcycles were up slightly for Class I and Class II and down slightly for Class III. All remained below applicable federal and state regulatory requirements.
	Power Equipment	• HC + NO_X emissions for Honda's U.S. Power equipment remained stable compared to recent years and were below applicable federal and state regulatory requirements.

End-of-Life

CATEGORY	PRODUCT	FY2017 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 FY2017, the company diverted from landfill 43.9 million pounds of recyclable material from electronic waste, warranty parts and overstock service parts, a 12% increase from the prior year.

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Environmental Management

Overview

In 1992, we released the Honda Environmental Statement, a corporate guideline aimed to articulate our core environmental position: reduce environmental impact at every stage in the life cycle of our products, not simply the design, development and production stages. In 2010, we furthered this initiative by establishing the Honda Environmental and Safety Vision. Aimed at the realization of the joy and freedom of mobility and a sustainable society where people can enjoy life, today each of Honda's global business sites embraces this philosophy with ongoing efforts to reduce our collective environmental footprint. From production- and corporate activity-based impacts, to greenhouse gas emissions, energy consumption and resource use, environmental management is fundamental to our mission.

Honda Environmental and Safety Vision

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

Established and announced in June 1992

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.

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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.

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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, 2017, Honda paid a fine of $1,037,100 to the state of California for an issue related to off-road motorcycle and ATV ignition maps.

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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% 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; meeting these 2050 targets will require new products that emit at 80-90% below FY2001 levels.

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; and (3) eliminating emissions through the use of renewable energy and total energy management.

2020 Product CO_2 Emissions Reduction Targets

Global average CO_2 emitted by Honda products

30% reduction

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

30% reduction

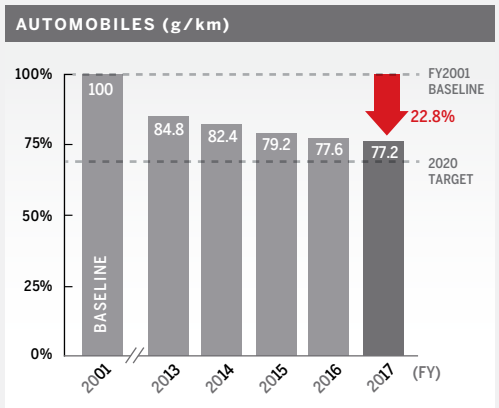
Powersports
30% reduction (g/km CO_2) from FY2001 levels by 2020

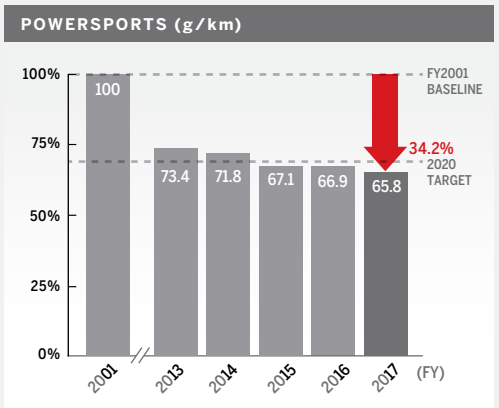
30% reduction

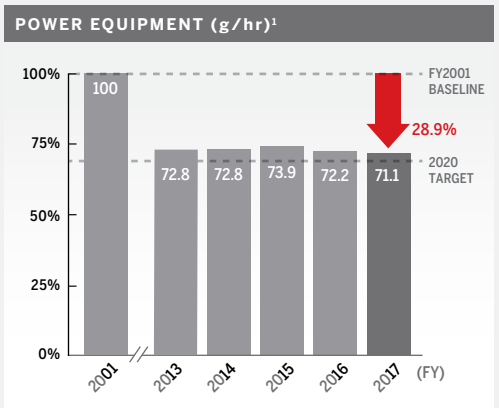
Power Equipment
30% reduction (g/hr CO_2) from FY2001 levels by 2020

Regions covered: Automobiles — Japan, North America, Europe, Asia and Oceania, China, Latin America (more than 90% of global sales); Motorcycles — Japan, North America, Europe, Thailand, India, China, Indonesia, Vietnam, Brazil, Philippines, Malaysia, Pakistan (more than 90% of global sales); Power Equipment — All products sold in all regions.

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 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 a single program that harmonized fuel economy and GHG emissions standards for model year 2012-2016 and 2017-2025 vehicles. Honda continues to support the "One National Program" framework. 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 have a sound scientific basis and provide equitable treatment to all vehicle types and sizes. Additionally, setting targets through 2030 could facilitate the long lead times and planning required in the auto industry. Honda supports discussions for the post-2025 period that could lead to better harmonization and integration among many programs, including the federal CAFE and GHG programs, as well as regional programs such as the California standards and the Section 177 states that follow those standards.
Decarbonization of Transportation Fuels	Honda has consistently asserted that fuel and vehicle pathways need to be evaluated on a "well to wheel" basis. The seismic shift in the industry towards electrified vehicles will only be effective if the electric grid is substantially decarbonized. Although Honda can work to consume renewable fuels for our operations (factories, offices, etc.), electricity, hydrogen, gasoline and diesel can be decarbonized when used as transportation "fuels[1]." Public policy efforts in this area may take many forms, including: cap and trade, low carbon fuel standards and clean power plans. Honda's endorsement of these policies depends, of course, on the specifics of each proposal, but generally we are supportive of efforts to reduce the carbon content of transportation fuels. These decarbonization efforts are the responsibility of the fuel providers.
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).

[1] Neither hydrogen nor electricity are technically "fuels" but energy carriers. We use the term "fuel" to mean the form of energy on-board the vehicle used in propulsion.

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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, sustainable and/or economically viable than others at achieving this objective. 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, since 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 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 still unclear, particularly in climatic regions which are not hospitable to certain technologies, 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 both infrastructure and 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 their effects on our business. Virtually every future risk carries with it an opportunity, and anticipating and responding quickly 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 addresses: precursors to smog (localized health effects), particulate matter (localized health effects and contributor to climate change) and carbon monoxide (localized 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 Society's growing demand 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 the issues of climate change (greenhouse gas emissions) and energy security in all of its business activities, and particularly in the development of more fuel-efficient and alternative fuel products. • Honda took a cooperative role in recent U.S. fuel economy and greenhouse gas regulations covering the period 2012-2025. While these 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 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] Except for engines used in competition, and PE/Marine engines that are not regulated in Mexico.

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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. This strategy 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 regarding their potential benefits to society and their unique marketability challenges.

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, although mitigation of these are the responsibility of the fuel producer. 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, direct injection and turbocharging. In the past several years, the company has begun introducing new downsized direct-injected turbocharged engines for some of its most popular car models in North America, including Civic, CR-V and Accord; as well as more efficient transmissions, including 9- and 10-speed units on newer light truck models, including Pilot and Odyssey.
	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 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 continues to evaluate the technology for its potential to address environmental issues.
	Natural gas is an abundant, inexpensive, domestic fuel. Since natural gas is a domestic alternative to petroleum, it is excellent for energy security. 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.			Public refueling stations remain the single biggest obstacle to the widespread adoption of light-duty natural gas vehicles. The cost premium for natural gas vehicles is roughly the same as that of a hybrid automobile, with the potential for further reductions. Over time, this cost premium can be offset by the lower fuel cost. 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. Natural gas refueling infrastructure will need to be built-out in order for these vehicles to be viable for the consumer market.				
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 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. Diesel engines offer up to 30% fuel-efficiency gains over current ICE technology, which is good for energy security.			Diesel engines typically cost significantly more than their gasoline 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. In recent years, diesel technology has seen improvements in a number of areas, including performance and noise.				

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	
Biofuels	VERY GOOD	CHALLENGING-VERY GOOD	GOOD	CHALLENGING-VERY GOOD	GOOD-VERY GOOD	VERY GOOD	FAIR	All Honda and Acura automobiles, as well as the company's motorcycle and power equipment products, are capable of operating using E10 (10% ethanol in gasoline). 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 (greater than 10%) ethanol blends.
	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 that lack alternative options.			Infrastructure varies significantly: ethanol requires new infrastructure for transporting 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 the fuel's lower per-gallon energy content.				
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 its Accord Hybrid. A second-generation system was introduced in the 2017 Accord Hybrid in June 2016, delivering both increased performance and fuel efficiency, and a third-generation system is being applied to the redesigned 2018 Accord Hybrid in early 2018. This same technology will be utilized in a dedicated new hybrid model also launching in 2018. Acura, Honda's luxury automobile brand, is now employing a three-motor hybrid design, marketed as Sport Hybrid Super-Handling All Wheel Drive™, in three of its six models: the Acura RLX sedan, the MDX seven-passenger SUV, and the NSX high-performance sports car.
	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 meaningful 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 sedan, slated to launch in the U.S. market late in 2017. The new Clarity Plug-In Hybrid is expected to receive an all-electric range rating in excess of 42 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 grid-based electricity. Honda supports a "well-to-wheels" approach for evaluating all technologies (including gasoline and diesel). Accordingly, both the on-board (gasoline) and remote (electricity) GHG emissions must be accounted for in the overall evaluation of PHEVs. OEMs are accountable for the environmental performance of their vehicles; utilities should be accountable for the grid. 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. PHEV marketability could be improved with greater build-out of public and workplace charging infrastructure. 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. 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 in 2012, and in early 2013 expanded its marketing to select East Coast markets. The company will launch its new Clarity Electric with an 89-mile EPA range rating, in late 2017 to consumers in California and Oregon. 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 significantly 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. Extension of range and performance enhancement and capability requires the addition of more batteries with significant packaging and weight penalties.				

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. 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 is making a significant commitment to helping foster a fueling station network. Fuel cell vehicles deliver performance, utility, comfort, refueling time and driving range virtually on par with conventional gasoline-powered automobiles.				Honda's all-new FCV, the Clarity Fuel Cell, launched in California in late 2016. The new full-size sedan, which comfortably seats five, has an EPA range rating of 366 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 2016, Honda and GM announced a joint venture to co-produce a new generation fuel cell system in Brownsville, Michigan by 2020. In late 2014, Honda also announced an investment of $13.8 million in FirstElement Fuel to further accelerate the network of public hydrogen refueling stations in California.

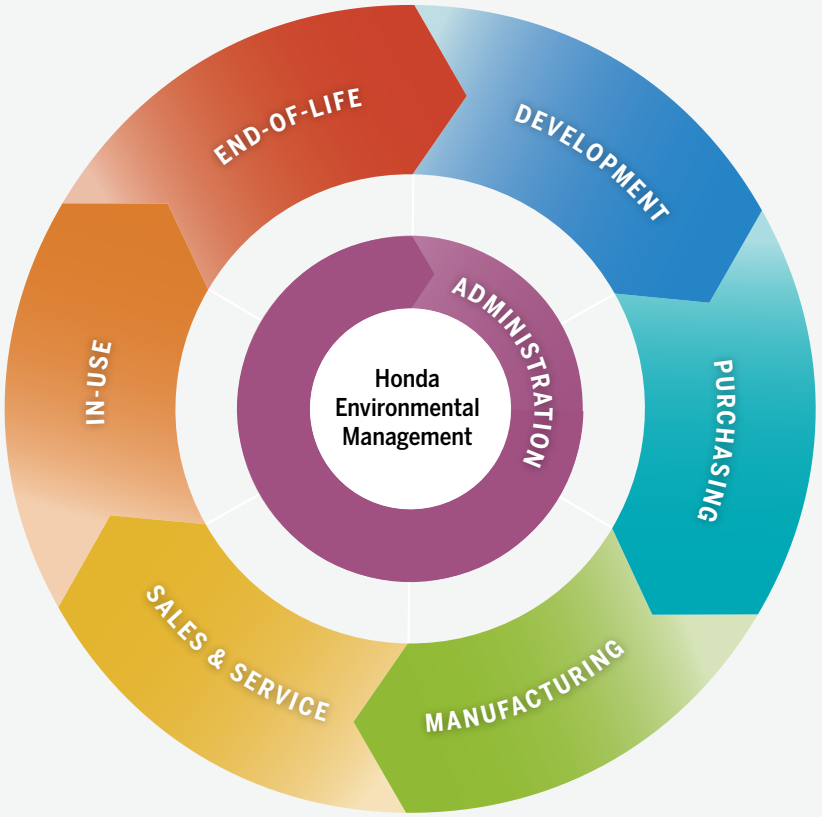
TECHNOLOGIES THAT APPLY TO ALL VEHICLES, REGARDLESS OF FUEL OR TYPE OF POWERTRAIN

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 in vehicle body structures. The redesigned 2018 Accord, launching in the fall of 2017, utilizes 29 percent ultra-high-strength steel, the highest percentage ever for a mass-produced Honda vehicle. The company is continually exploring methods of reducing weight, including new materials and design, to reduce weight 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

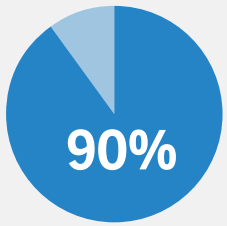
Environmental factors are considered early and in each phase of the design and development process of every Honda and Acura product. In component design and in the selection of materials, Honda looks for opportunities to reduce a product's total environmental footprint, including its impact at the end 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

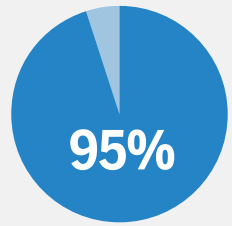
In accordance with its global standard for the development of Honda automotive products, the company has achieved and is committed to maintaining recyclability and recoverability levels as shown below since 2004:

MINIMUM LEVELS OF DESIGN RECYCLABILITY[1]

Automobiles



Powersports & Power Equipment



Honda's recyclability and recoverability calculation methods are based on a standard widely adopted by automobile manufacturers (ISO 22628) to determine the level of recyclability and recoverability in any particular vehicle.

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.

Managing Substances of Concern (SOCs)

Honda's efforts to manage 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. Beginning in 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 that remain on the final products sent 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: The Honda Chemical Substance 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 is revised twice per year and addresses automotive, powersports and power equipment requirements. In FY2015, revisions included 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 reviewed 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 FY2017, the vast majority of Honda and Acura models had PVC-free interiors. Where PVC is still employed, primarily in more affordable products where the cost of implementation was determined to be prohibitive, Honda continues to investigate cost-effective alternatives to PVC. Although Honda has minimized the number of vehicle parts containing PVC, technical barriers, quality and cost present a challenge to its total elimination.

MODEL	PVC INTERIOR CONTENT
2017 Honda Fit	Sunvisor, manual transmission shift knob
2017 Honda Civic	None
2017 Honda Accord	None
2017 Honda Clarity	None
2017 Honda HR-V	Sunvisor
2017 Honda CR-V	Sunvisor
2017 Honda Odyssey	None
2017 Honda Pilot	None
2017 Honda Ridgeline	None
2017 Acura ILX	None
2017 Acura RLX	None
2017 Acura RDX	None
2017 Acura MDX	None
2018 Acura NSX	None

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

Steven Center, vice president of the Connected and Environmental Business Development Office at American Honda Motor Co. introduces the new Clarity Plug-In Hybrid and Clarity Electric at the 2017 New York International Auto Show on Wednesday, April 12 2017.

Honda Clarity Series

In FY2017, Honda began the launch of its Clarity series of electrified vehicles, beginning with the introduction of the Clarity Fuel Cell in late 2016. Before the end of calendar year 2017, Honda will have launched the Clarity Electric with customers in California and Oregon and the Clarity Plug-In Hybrid in all 48 contiguous U.S. states.

The Clarity series is at the forefront of Honda's effort to grow sales of electrified vehicles. The Clarity platform takes a "3-in-1" approach to alternative fuel vehicle design, giving customers a choice of advanced, low-emissions powertrains, based on their driving needs and energy profile, in a comparatively affordable, spacious and premium-contented five-passenger sedan.

Clarity Electric Platform

The Clarity Electric offers customers an electric vehicle that received an EPA driving range rating of 89 miles using a 161-horsepower electric motor that draws its power from a 25.5 kilowatt hour (kWh) lithium-ion battery pack. Total recharge time is just over three hours at 240 volts, and with available DC fast charging the Clarity Electric can achieve an 80-percent charge in as little as 30 minutes. It carries an EPA fuel economy rating of 126/103/114 MPGe (city/highway/combined).

Clarity Fuel Cell

Lease of the Clarity Fuel Cell began in California in December 2016 with a lease price of $369/month for 36 months, including a 20,000 mile/year mileage allowance and benefits including up to $15,000 of hydrogen fuel, 24/7 roadside assistance and 21 days of rental car fees to support customers' travel outside areas with a hydrogen refueling infrastructure.

The Clarity Fuel Cell has an EPA driving range rating of 366 miles, the highest of any zero-emissions vehicle, with a standard refueling time of 3-5 minutes. Its Honda-developed fuel cell stack is 33 percent smaller with a 60 percent increase in power density compared to the previous stack in the FCX Clarity. The compact fuel cell system — the stack, electric propulsion motor and power delivery unit (PDU) — are located within the engine compartment, providing for a more spacious interior and advancing the potential for the application of FCV technology to other conventionally packaged vehicles.

Clarity Plug-In Hybrid

The Clarity Plug-In will be marketed in all 48 contiguous U.S. states and is expected to be the volume leader in the Clarity series, where Honda is targeting sales of 75,000 Clarity vehicles over a roughly four-year period. It utilizes Honda's two-motor hybrid powertrain technology that helped it receive an EPA all-electric driving range rating of 47 miles and, by using its hyper-efficient 1.5-liter Atkinson-cycle engine primarily to generate electricity and, under certain circumstances, as a direct source of motive power, an EPA combined driving range rating of 340 miles. The 181-kilowatt electric motor is the vehicle's main source of motive power, using energy supplied by the engine and by the 17 kWh battery pack. The Clarity Plug-In has a recharge time of 2.5 hours at 240 volts and is anticipated to earn an EPA combined fuel economy rating of 110 MPGe.

The Clarity Plug-In shares its spacious and premium-contented five-passenger cabin with other models in the series.

New Products and Technologies cont'd

10th Generation Honda Accord

In FY2017, Honda shared details for its new 10th-generation Accord, launching in the fall of 2017. The new Accord will utilize two new downsized turbo charged engines — a 1.5-liter turbo paired with a highly efficient continuously variable transmission (CVT) and a 2.0-liter turbo with i-VTEC® valvetrain paired with a new Honda-developed 10-speed automatic transmission. The engines replace the previous model's normally aspirated 2.4 liter 4-cylinder engine with CVT and 3.5-liter V-6 with 6-speed automatic transmission. Utilizing design features such as a low-inertia turbine and electronic waste gate to minimize turbo lag, the new engines offer improved fuel efficiency and highly responsive and refined power delivery.

The 2018 Accord is the second Honda model to utilize Honda's newly developed 10-speed automatic transmission (10AT), following its application in upper grades of the redesigned 2017 Honda Odyssey minivan. The new 10AT, manufactured in the company's Tallapoosa, Georgia plant, is 22 pounds lighter than the 6-speed automatic it replaces, with a 68 percent wider overall gear ratio range, a 43 percent lower first gear, for improved launch performance, and a 17 percent taller top gear, for high-efficiency cruising.

The new Accord's fuel efficiency is further aided by a more aerodynamic shape and lighter body structure, 29 percent of which is ultra-high-strength steel, the most extensive application of this weight-saving material in a mass-produced Honda vehicle. Despite its larger interior, the new Accord is expected to be 145 to 175 pounds lighter than its predecessor with a three percent improvement in aerodynamic efficiency and anticipated top collision-safety ratings. EPA fuel economy ratings, while not final at the time of this report's publication, were anticipated to increase roughly 10 percent compared to the outgoing model.

2018 Accord Hybrid

A new 2018 Accord Hybrid, to be manufactured by Honda in its Ohio plant using domestic and globally sourced parts, and launching in early 2018, will utilize the third generation of Honda's two-motor intelligent Multi-Mode Drive (i-MMD) hybrid powertrain.

Advances to battery performance and cost, engine efficiency and overall were key development goals. An improved 2.0-liter Atkinson Cycle engine achieves thermal efficiency of 40 percent, the highest for any mass-produced Honda gasoline internal combustion engine. Moreover, the system's two electric motors are the world's first permanent magnet motors that do not use heavy rare-earth metals in their design.

Learn more online
2018 Honda Accord

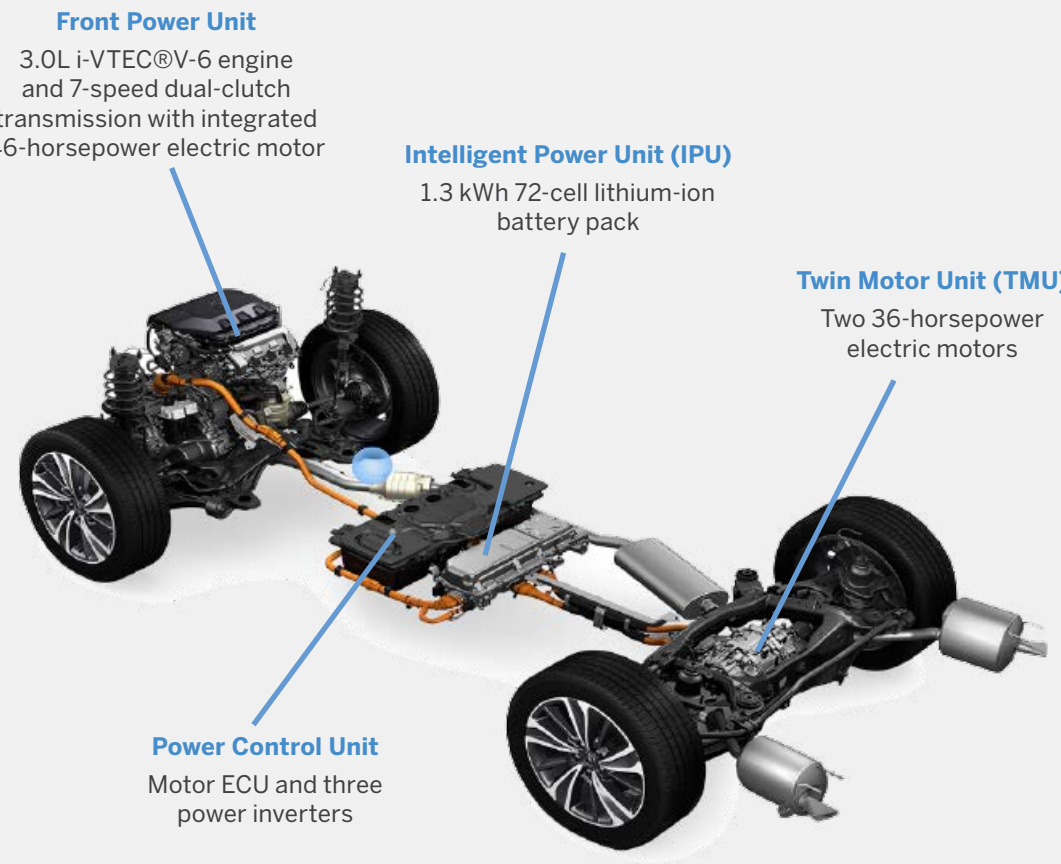
New Products and Technologies cont'd

2018 Acura MDX Sport Hybrid SH-AWD™

Acura introduced its three-motor hybrid powertrain, called Sport Hybrid Super-Handling All Wheel Drive™ (Sport Hybrid SH-AWD™) on the 2014 Acura RLX sedan. A more advanced version of the system was applied to the Acura NSX sports car, launched in 2016. In FY2017, Acura introduced a third model utilizing this technology: the 2018 Acura MDX Sport Hybrid. The MDX Sport Hybrid, a three-row luxury SUV, delivers approximately 10 percent more power (+31 horsepower) and should receive a 45-percent higher EPA city fuel economy rating (+8 mpg) compared to its gasoline-only counterpart.

2018 ACURA MDX HYBRID

Acura Sport Hybrid SH-AWD utilizes its electric motors not only for regenerative braking and power delivery, like other hybrids, but also for handling performance via torque vectoring — the dynamic apportionment of electric motor torque to the right and left wheels to create a yaw, or turning, moment. In the 2018 Acura MDX Sport Hybrid, the system consists of a two rear-mounted electric motors (Twin Motor Unit) providing power to the left and right rear wheels. This enables electric all-wheel-drive performance and improved handling response via rear-wheel torque vectoring. A third motor, integrated with the 7-speed dual-clutch transmission, supplements the 3.0-liter V-6 engine in powering the front wheels. Energy captured during braking and deceleration is utilized to recharge the 1.3 kilowatt per hour (kWh) battery pack, which is mounted under the floor to preserve interior space.



2018 Acura MDX Sport Hybrid platform

Learn more online

2018 Acura MDX Sport Hybrid

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 to include 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.

Supply Chain Environmental Initiatives

1	Management activities that ensure environmental control during the manufacturing and transportation 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

Supply Chain Greenhouse Gas Initiative

Honda works with more than 610 original equipment manufacturer (OEM) parts suppliers in North America. CO_2e missions from suppliers' factories producing the parts that go into Honda vehicles are the second largest source of life-cycle GHG emissions from Honda's products and business operations, after product in-use emissions and emissions from Honda's own factories.

Honda is aiming for a 10 percent reduction in GHG emissions from its North American automotive supply chain by 2020 compared to 2010 levels, with a targeted 1% reduction each year.

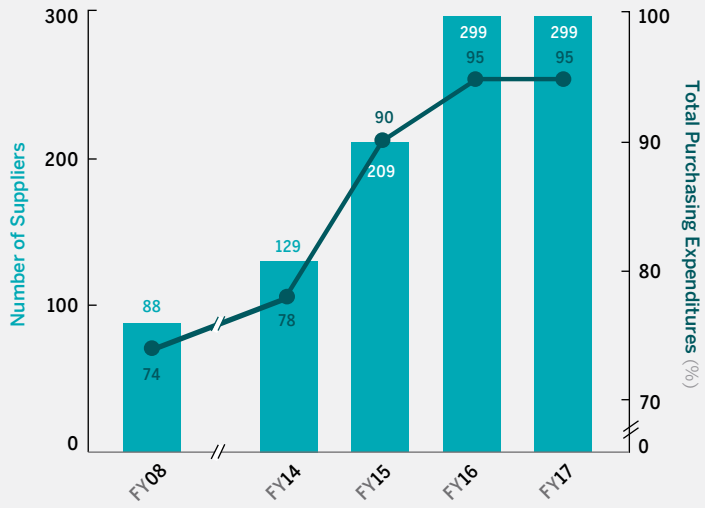
To meet this goal, in FY2011 Honda initiated the Supplier Greenhouse Gas Initiative to begin collecting data on indirect CO_2 emissions from the consumption of energy (CO_2e) in OEM suppliers' plants. The program includes regular monitoring of supplier performance, and for those deemed to be at risk of not meeting established objectives, suppliers participate in an internal risk mitigation program. Suppliers' top-level management are involved in verifying their energy management process.

Green Purchasing Guidelines cont'd

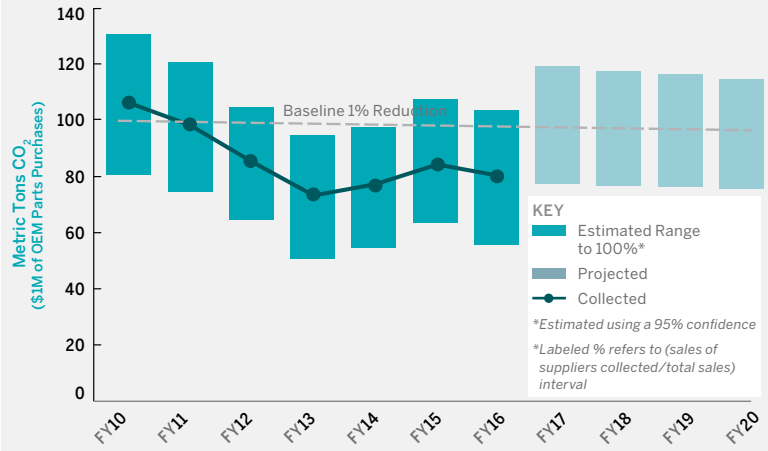
Through the end of FY2017, 299 suppliers comprising 95 percent of parts purchases, measured in dollars, were reporting CO_2e emissions data to Honda.

FY2017 Results: the emission intensity of parts production was reduced 23.5 percent compared to the FY2010 baseline.

NORTH AMERICAN SUPPLIERS REPORTING CO_2e EMISSIONS



CO_2e EMISSIONS BY NORTH AMERICAN OEM PARTS SUPPLIERS[1]



[1] CO_2e emissions from consumption of electricity and natural gas from suppliers of OEM parts for automobiles manufactured by Honda. Electricity emission factors: 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).

go sustainable energy

Parts Logistics Initiatives

In addition to its efforts to reduce CO_2 emissions from supplier plants, Honda continues its work to minimize the environmental impact from the shipment of these parts to Honda's assembly plants, continuously evaluating part volumes and flows and finding opportunities to reduce, eliminate, or avoid unnecessary truck miles travelled while maintaining flexibility to meet customer demand.

In addition to the continued reengineering of the transportation network along with daily activities to improve trailer space utilization, Honda is evaluating non-traditional freight volumes that include 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 FY2017, 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	FY17 RESULTS	
	TRUCK MILES AVOIDED	CO_2 EMISSIONS AVOIDED
Daily Load Planning to ensure material arrives at required time while fully cubing trucks.	1,601,195 miles	2,322 metric tons
Dynamic release of small volume orders onto available trailer space.	126,180 miles	183 metric tons
Pulling ahead freight from non-aligned production days, collaborating non-OEM freight and combining routes.	1,188,195 miles	1,719 metric tons
Daily Route Adjustments to optimize truck utilization are rapidly made in response to daily fluctuations in parts volumes due to production scheduling.	254,463 miles	3685 metric tons
OEM & MRO Route Sharing by shipping products which are not typically OEM-related, such as Maintenance, Repair and Operating products.	31,545 miles	46 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 FY2017 resulted in the replacement of 797,873 gallons of diesel fuel with 996,576 gasoline gallons equivalent of CNG, a reduction in CO_2 emissions of 1,154 metric tons.

Improving Efficiency of Parts Shipments throughout North America

In FY2016, Honda began to consolidate the deliveries of components from suppliers in the U.S. and Canada to Honda's plants in Mexico. In FY2017 these efforts were further amplified with a program that improved the efficiency of shipping transmissions from the company's Celaya, Mexico plant to its Anna, Ohio engine plant. Initial shipment of transmissions from Mexico is done by rail, allowing Honda to ship more transmissions in each container, above the weight limits for over-the-road (OTR) transport by truck. The containers are then deconsolidated at the rail terminal in Marion, OH for final delivery by truck.

FY2017 Results: these activities resulted in the elimination of 339 trailer deliveries (up from 284 in FY2016), 339,678 miles of truck and rail travel avoided (up from 284,600 miles in FY2016), and a reduction in CO_2 emissions of 1,154 metric tons (up from 440 in FY2016).

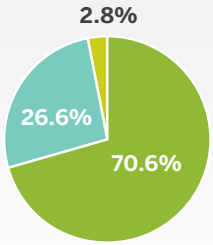
CO_2e Emissions

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 FY2017, total CO_2e emissions from these two categories rose just 3.0 percent despite all-time record levels of automobile production in North America. In FY2017, the CO_2e emissions intensity of manufacturing automobiles, and power sports products increased, primarily due to the warmer temperatures that increased the use of chillers and electricity usage.

CO_2e Emissions from Manufacturing in North America

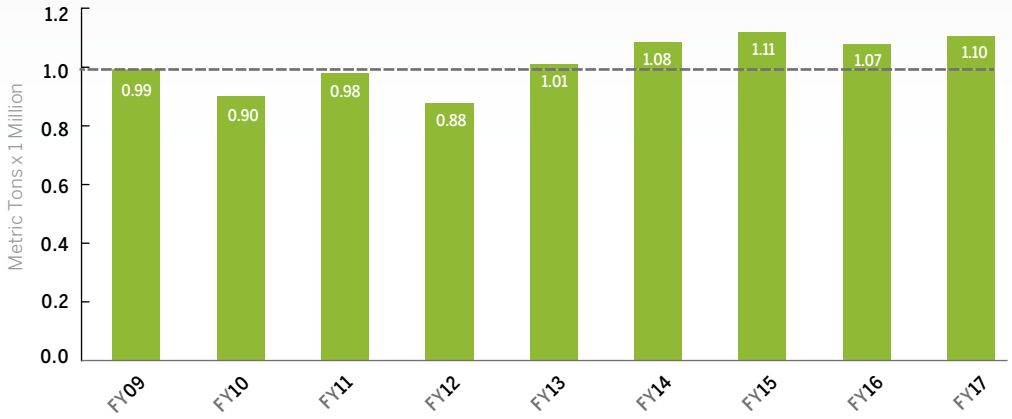
SOURCES OF CO_2e EMISSIONS



70.6%	Electricity
26.6%	Natural Gas
2.8%	Other Fuels and process emissions

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

FY17 RESULTS **3.0% increase 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

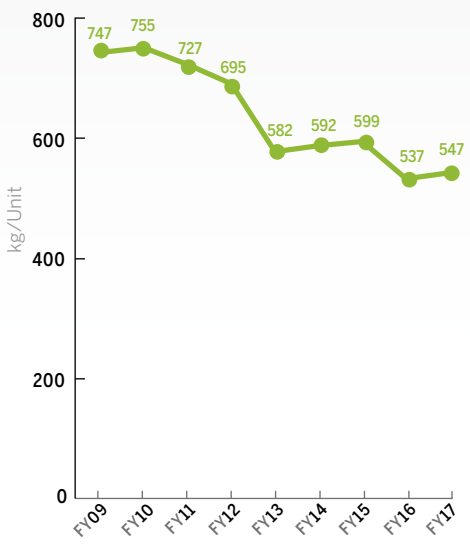
CO_2e Emissions cont'd

Per-Unit CO_2e Emissions (Emissions Intensity)

AUTOMOBILE MANUFACTURING[1]

FY17 RESULTS

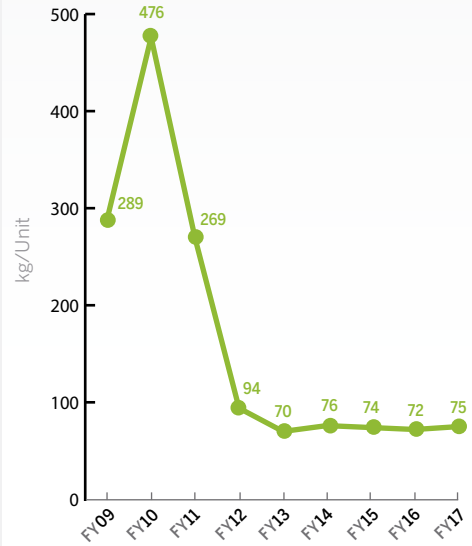
2% increase vs. previous year



POWERSPORTS PRODUCT MANUFACTURING[1]

FY17 RESULTS

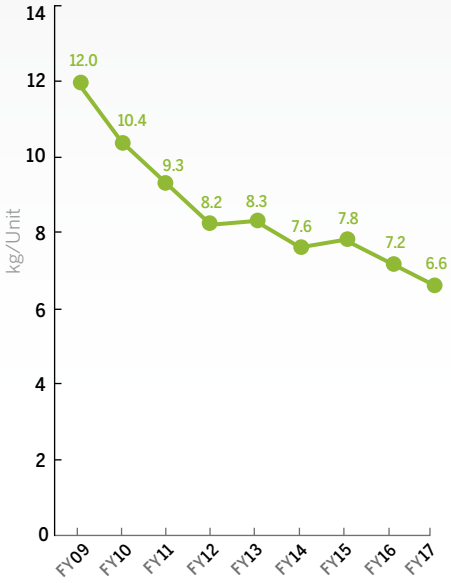
4.9% increase vs. previous year



POWER EQUIPMENT PRODUCT MANUFACTURING[1]

FY17 RESULTS

8.4% 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).

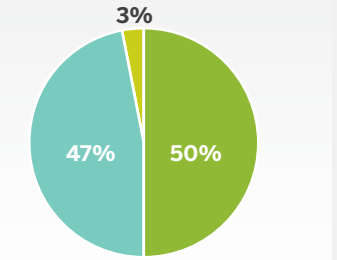
HONDA

Energy Use

Electricity and natural gas represent approximately 97% 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 and per-unit energy use increased due to plant expansion and weekend work attributed to new model launch preparations. This expansion and increased energy usage without increasing the number of vehicles produced resulted in both an overall increase in energy usage and per-unit energy use.

Energy Consumption

ENERGY USE BY SOURCE



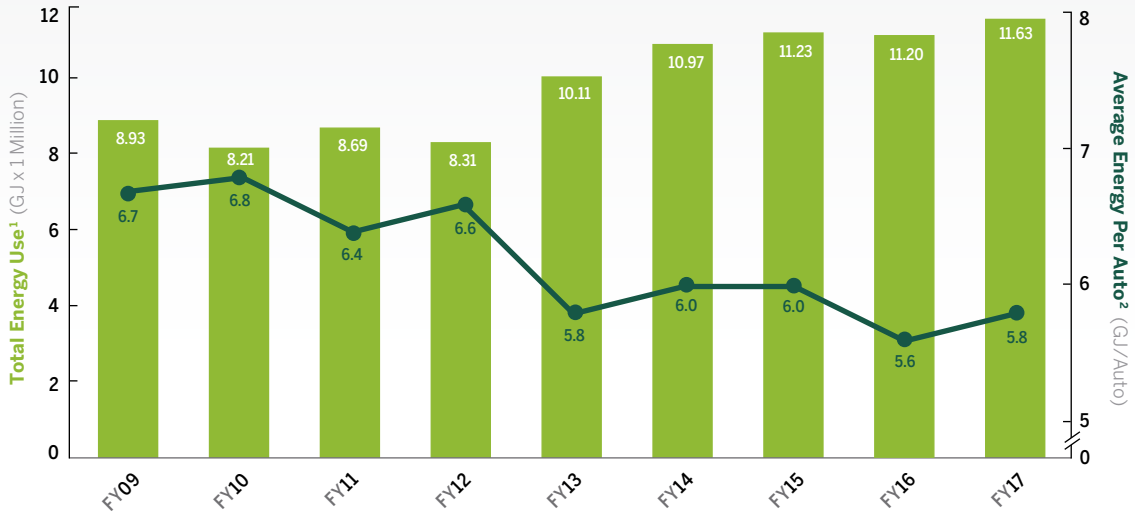
50%	Natural Gas
47%	Electricity
3%	Other Fuels Propane, fuel oil, gasoline, coke, kerosene and others

ENERGY USE IN MANUFACTURING (TOTAL AND PER AUTO)

FY17 RESULTS

Total Energy Use:
3.9% increase vs. previous year

Energy Use Per Auto:
3.2% increase 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.

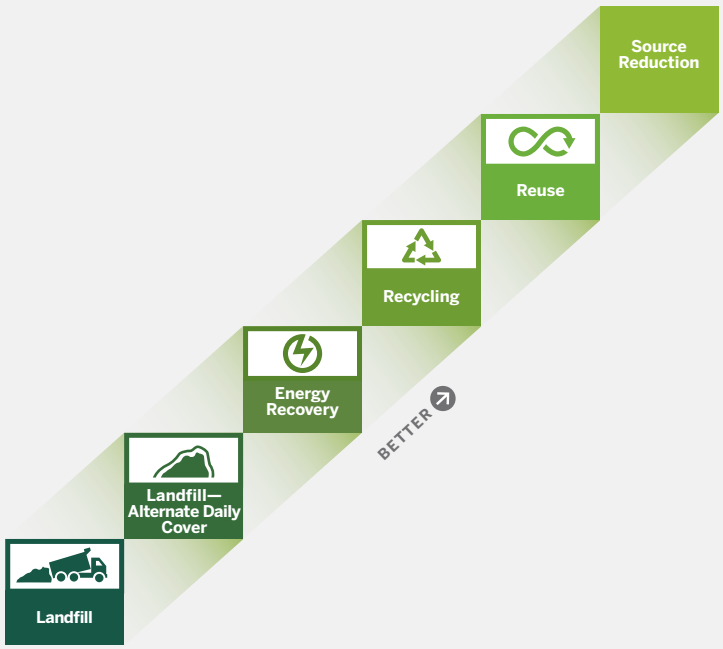
[2] Energy used per auto encompasses all auto-related manufacturing activity, including automobile engines and transmissions produced in North America; it does not include power equipment, powersports and aviation manufacturing operations. Energy use at the Guadalajara, Mexico plant is allocated between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

HONDA

Waste

Honda strives to minimize waste in manufacturing and, where possible, to reduce its environmental impact. Honda's management strategy is based on 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. Through this methodology, the company has substantially reduced waste to landfills (see next page). With respect to solid waste creation, FY2017 levels remained stable despite increased production, while solid waste per unit of automobile production decreased, primarily due to stabilizing automobile production in the company's Celaya, Mexico plant and more efficient utilization of plant capacity across the region.

WASTE MANAGEMENT HIERARCHY



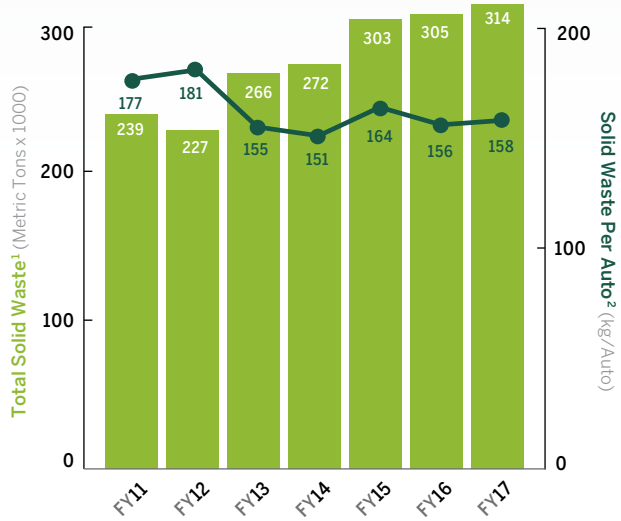
Waste from Manufacturing Operations

SOLID WASTE FROM MANUFACTURING IN NORTH AMERICA

FY17 RESULTS

Total Solid Waste:
3.0% increase vs. previous year

Solid Waste Per Auto:
0.1% increase 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.

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. Following a temporary increase in FY2015, due in large measure to issues related to the start of production operations at the company's Celaya, Mexico auto plant, Honda is again operating with virtually zero waste to landfills for its manufacturing operations in North America. Total and per-auto waste levels rose in FY2017 primarily due to the lack of waste-to-energy options in Mexico resulting in some waste being sent to landfill.

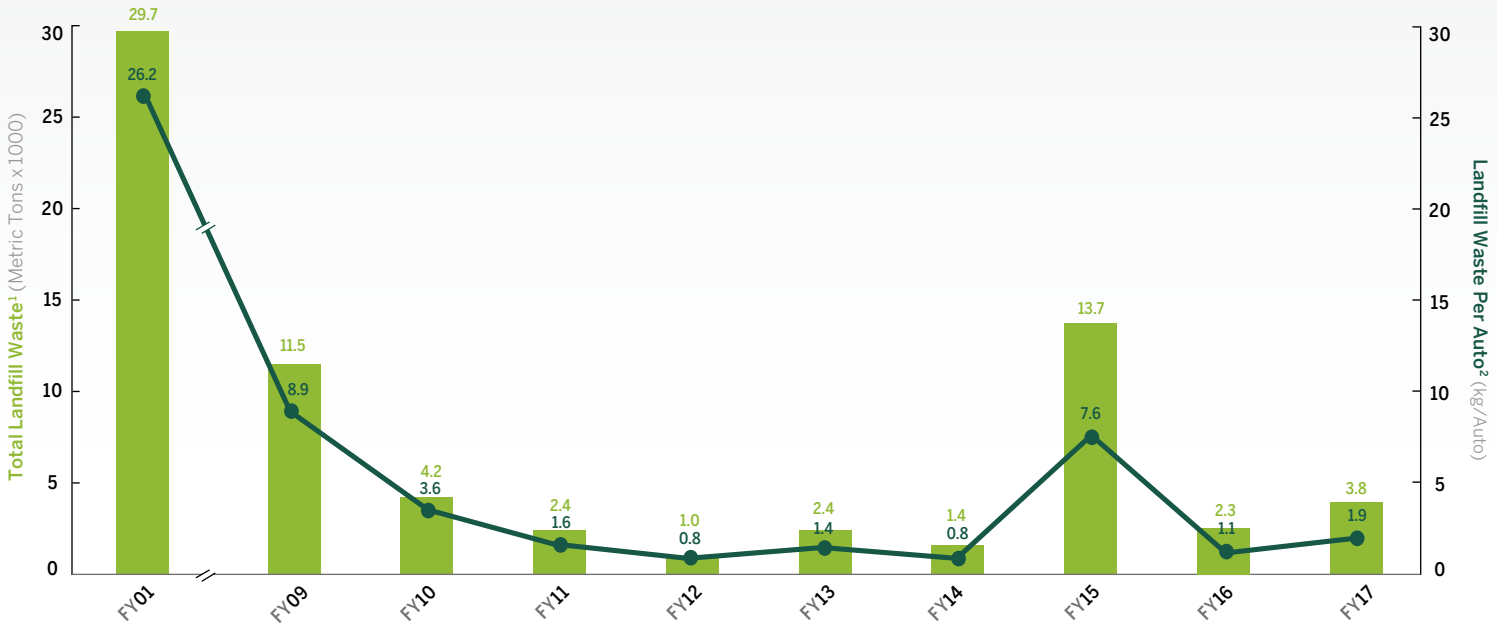
Honda Zero Waste to Landfill Initiative

LANDFILL WASTE FROM MANUFACTURING FACILITIES IN NORTH AMERICA

FY17 RESULTS

Total Landfill Waste:
- 87% decrease vs. baseline (FY01)
- 65.3% increase vs. previous year

Landfill Waste Per Auto:
- 93% decrease vs. baseline (FY01)
- 72.7% increase vs. previous year



[1] Total landfill waste includes all automobile, powersports, power equipment and aviation manufacturing operations in North America. Land II 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.

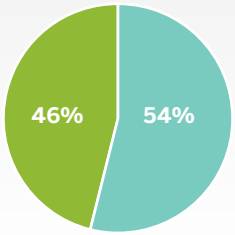
HONDA

Water Use

Honda's North American plants' water efficiency continues to be impacted by continued growth in the North American region. In FY2017, total water use and water use intensity per automobile increased due to the number of warmer days which increase the use of water in plant cooling towers.

Water Use

WATER USE BY SOURCE



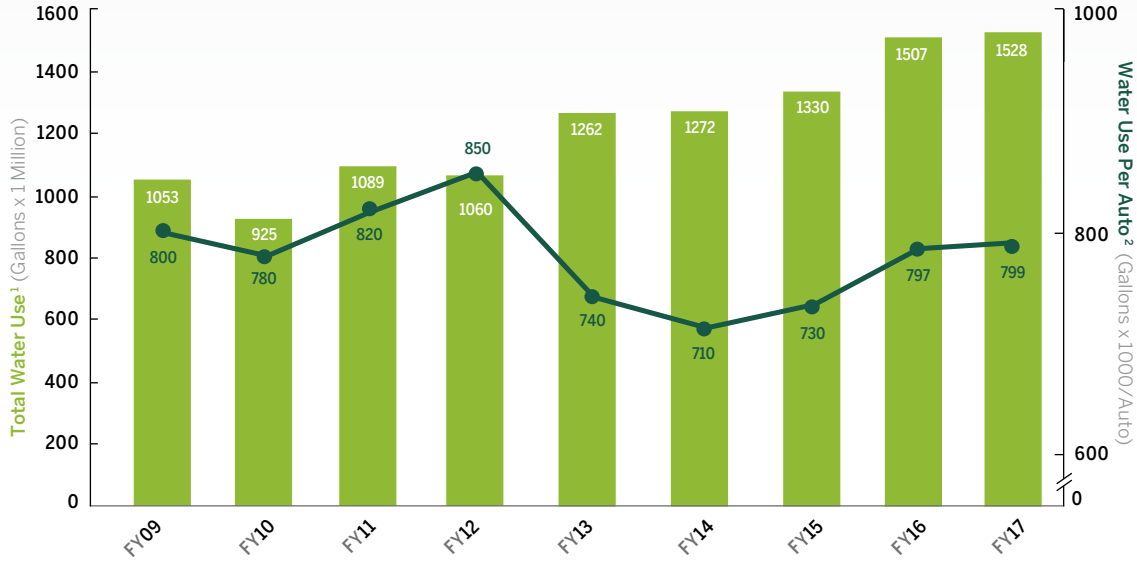
54%	Purchased from Local Utilities
46%	Direct Ground Water Withdrawal
< 1%	Rainwater

WATER USE IN NORTH AMERICAN MANUFACTURING FACILITIES

FY17 RESULTS

Total Water Use:
1.4% increase vs. previous year

Water Use Per Auto:
0.3% 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.

HONDA

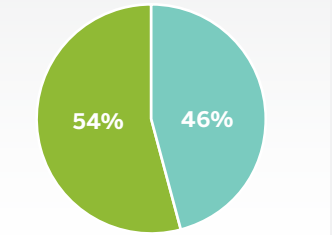
Water Use cont'd

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.

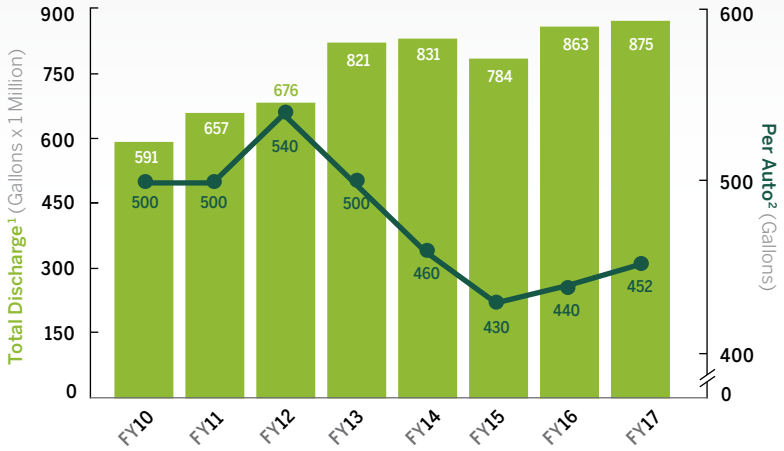
Wastewater Discharge and Disposal

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



FY17 RESULTS

Total Discharge:
1.4% increase vs. previous year

Per Auto:
2.7% 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.

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.

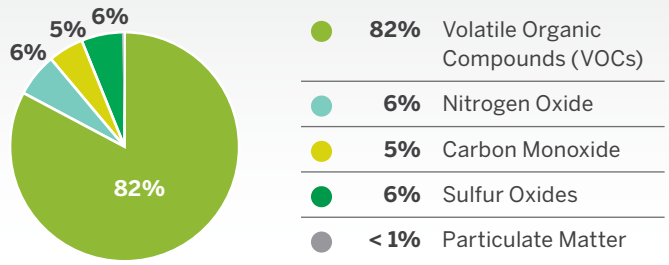
VOC Emissions from Auto Body Painting

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 FY2017 were well below the company's targeted maximum of 20 g/m^2.

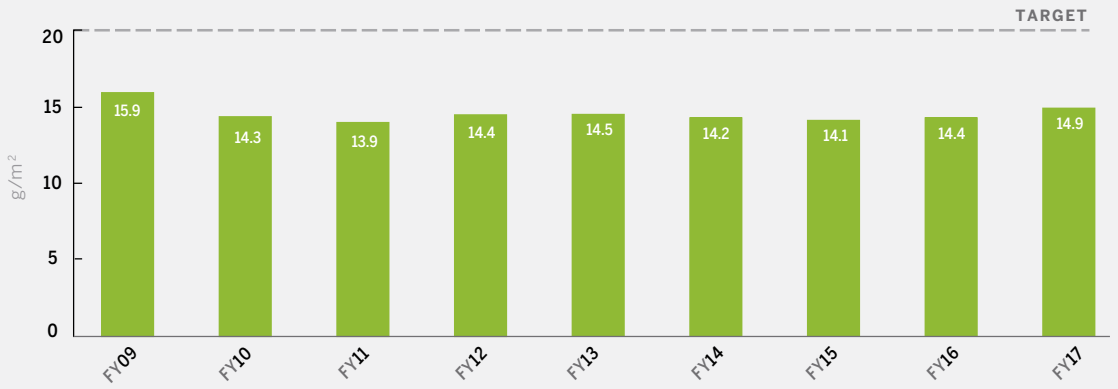
Air Emissions

In calendar year 2016, Honda's North American manufacturing plants released approximately 4817 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



VOC EMISSIONS FROM AUTO BODY PAINTING IN NORTH AMERICA



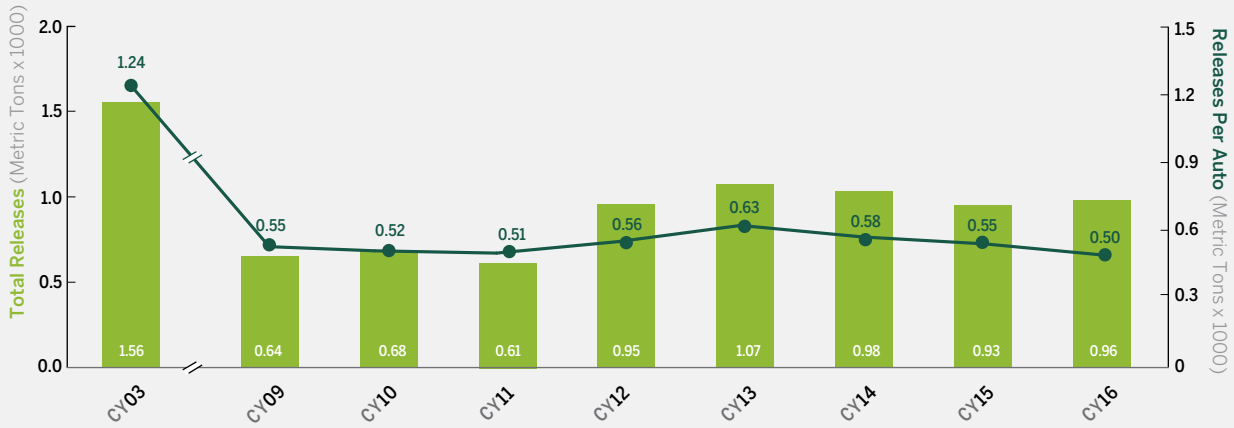
FY17 RESULTS

3.5% increase vs. previous year

HONDA

Chemical Releases

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



FY17 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% since calendar year 2003, despite significant expansions in production capacity. Automobile-specific TRI/NPRI emissions per unit of production were reduced about 56% 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 FY2017, 81.0 percent of all Honda and Acura automobiles manufactured in the U.S. or arriving at U.S. ports were transported by train, compared to 78.9 percent FY2016, 70.0 percent in FY2015 and 82.2 percent in FY2014. FY2017 increases are primarily driven by increased rail, ocean and truck miles to transport vehicles from the Mexico plant to US destinations.

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

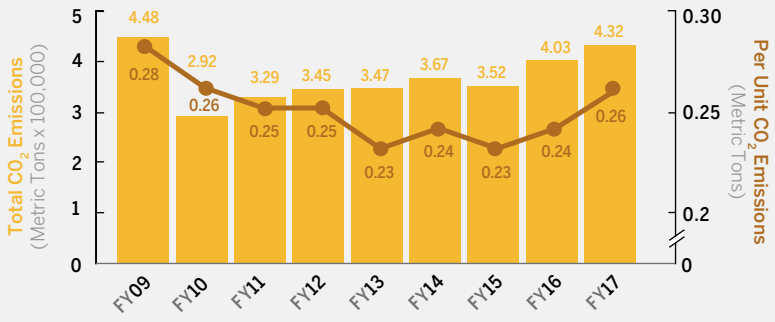
Honda also endeavors to reduce CO_2 emissions associated with the distribution of service parts from its supplier factories to its warehouses and, ultimately, to dealerships. These efforts include the use of more fuel-efficient trucks, the shift from truck to rail for cargo shipment, more efficient packing 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 46.9 percent from FY2009 levels.

CO_2e EMISSIONS OF AUTOMOBILE SHIPMENTS IN THE U.S.

FY17 RESULTS

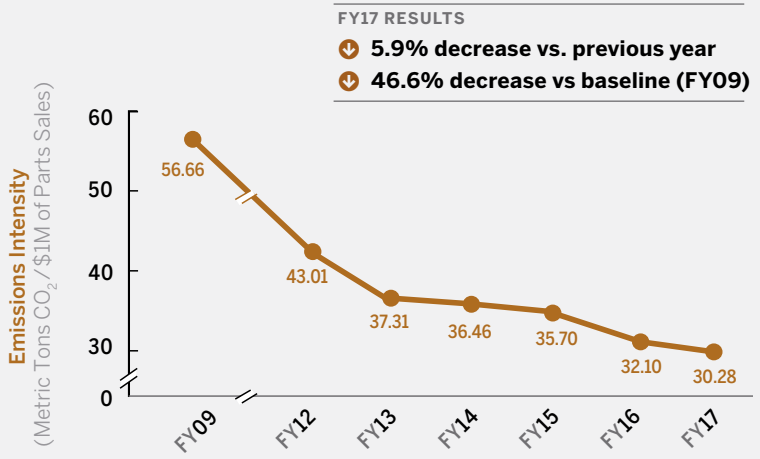
Total Emissions:
- 5.7% increase vs. previous year
- 3.6% decrease vs. baseline (FY09)

Per Unit Emissions:
- 6.9 increase vs. previous year
- 7.1 decrease vs. baseline (FY09)



CO_2 EMISSIONS INTENSITY OF U.S. SERVICE PARTS SHIPMENTS

FY17 RESULTS
- 5.9% decrease vs. previous year
- 46.6% decrease vs baseline (FY09)



HONDA

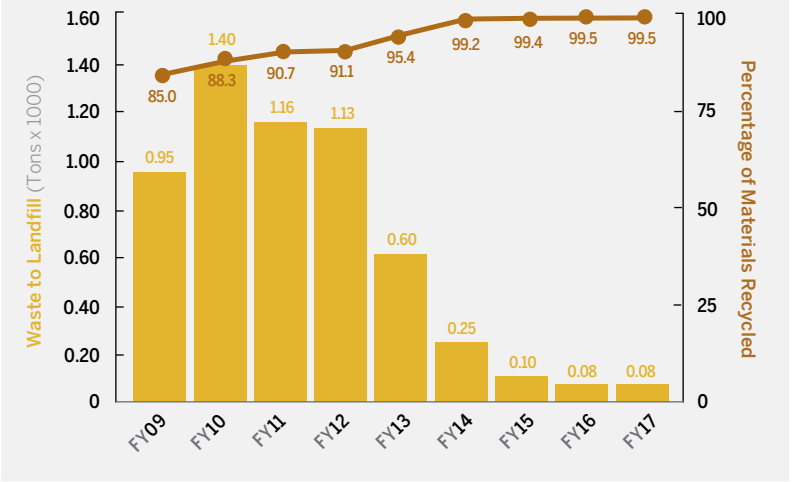
Zero Waste to Landfill Parts Distribution Centers

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 14,000 tons of packaging and shipping material being diverted from landfills in FY2017. Waste material sent to landfills from Honda's U.S. parts distribution facilities has been reduced 99 percent, from 950 tons in FY2009 to just less than eight tons in FY2017, with only 0.05 percent of total waste sent to landfills in FY2017.

FY17 RESULTS

91.5% decrease vs. baseline (FY09)

WASTE TO LANDFILL FROM U.S. PARTS CENTERS



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 and more than 150 have received an award. Improvement made at these dealerships resulted in a total annual reduction of 17,000 tons of CO_2 and cumulative annual operating cost reduction of more than $7.5 million.

Three award winners have earned the distinction of being electric grid neutral. These dealers produce as much or more energy from renewable energy sources than they consume from their local electric utilities over a one-year measurement period.

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	40 points 10% energy use reduction	60 points 30% energy use reduction	80 points 50% energy use reduction
New Builds and Major Renovations	40 points	60 points	80 points
Fast Track to Platinum — "Electric Grid Neutral"			

[1] Full program details and energy reduction requirements subject to change as the program changes and grows. "Electric Grid Neutral" means that when averaged over one year, the dealership offsets its grid electric use with an equal amount of on-site renewable generation exported to the grid.

Honda and Acura Green Dealer Program cont'd

The solar roof at Brandfon Honda in Brandford, Conn. is one of the methods used by the dealership to be electric grid neutral.

Sharing our dream with others

To establish Honda's leadership in dealership sustainability, the Honda Green Dealer Guide was created in 2012 and updated in 2017. This guide provides step-by-step guidance to implement systems and technologies that help dealers achieve their carbon and water reduction goals. 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.

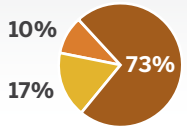
HONDA

Automobiles

Fuel Efficiency

According to the latest government research, approximately 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 manufacturing 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 to quantify environmental performance. 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 Federal law requires that the fuel economy of each model be evaluated in a laboratory by running vehicles on a treadmill-like "dynamometer" using 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 typically 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 using 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.

A VEHICLE THAT ACHIEVES 175 G/MI[2] WOULD HAVE A FUEL ECONOMY OF:	MPG	
	CAFE FUEL ECONOMY	WINDOW LABEL FUEL ECONOMY RATING
Without A/C-based and off-cycle GHG improvements	50.8	approx. 39
With A/C-based and off-cycle GHG improvements	approx. 47	approx. 36

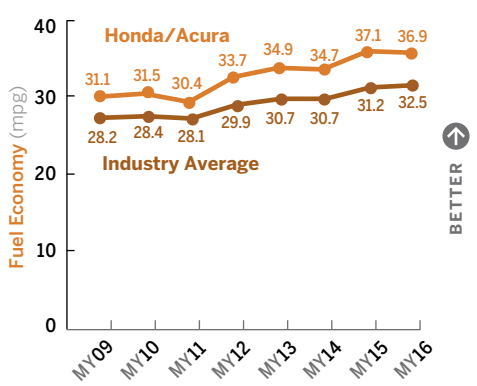
[2] Vehicle GHG standards set by the federal government are expected to result in a 2025 fleet average of 175 g/mi CO2 equivalent. Numbers shown here are EPA estimates as indicated in Table 10.3 of the joint-agency Draft Technical Assessment Report, published July 2016.

HONDA

Automobiles cont'd

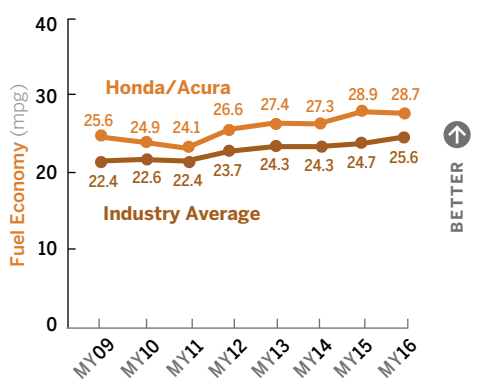
Corporate Average Fuel Economy (CAFE) and EPA "Window Label" Fuel Economy

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



MY16 RESULTS
- 0.3% decrease vs. previous year
- 13.5% better than industry average

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



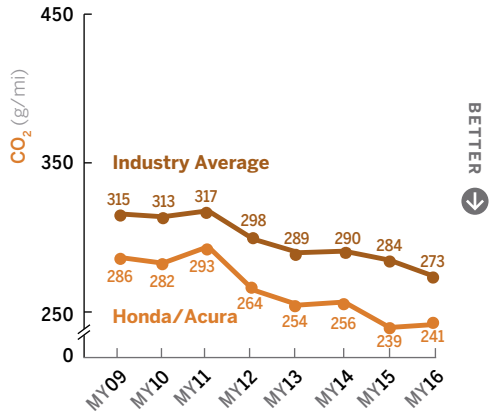
MY16 RESULTS
- 0.7% decrease vs. previous year
- 11.7% better than industry average

[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 2016, published November 2016 (Tables 4.2, 4.4, and 9.1).

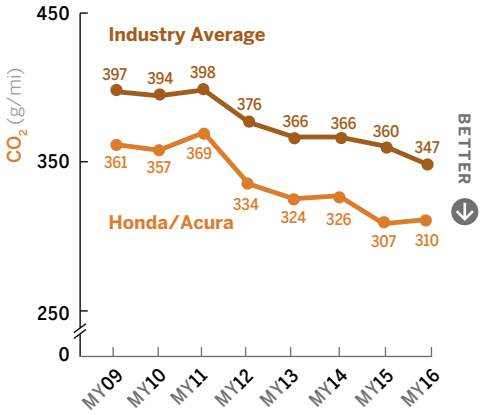
Fleetwide CO_2 Emissions of U.S. Automobiles

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



MY16 RESULTS
- 0.4% increase vs. previous year
- 11.7% better than industry average

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



MY16 RESULTS
- 0.6% increase vs. previous year
- 10.7% better than industry average

[1] Source: U.S. Environmental Protection Agency: Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2016, published November 2016 (Table 4.5).
[2] Source: U.S. Environmental Protection Agency: Light-Duty Automotive Technology, Carbon Dioxide Emissions, and Fuel Economy Trends: 1975 through 2016, published November 2016 (Table 4.3).

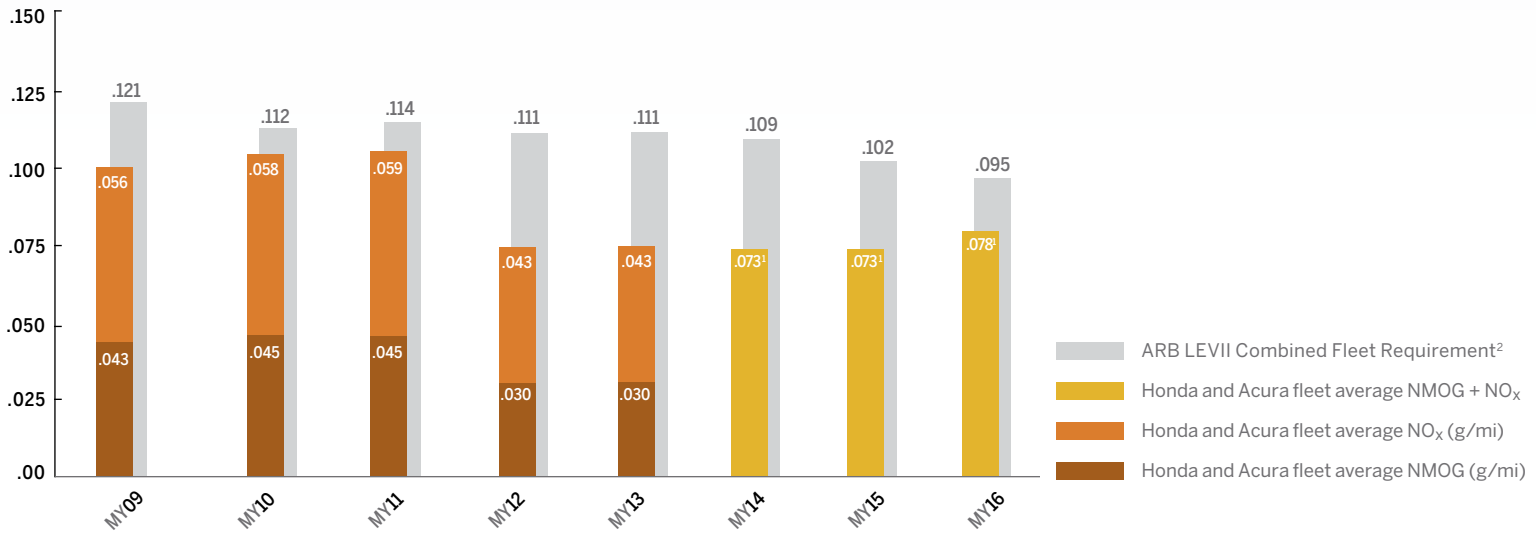
HONDA

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) and Low-Emissions Vehicle II (2004 and later) emissions standards. Honda has been very aggressive in reducing its fleet emissions below the LEV and LEV II 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

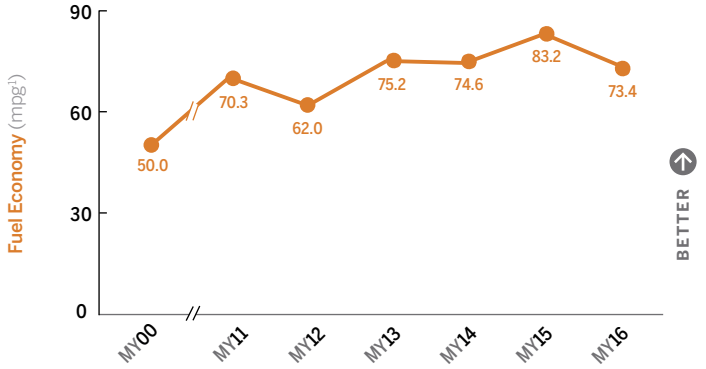
Relative to Model Year 2000, Honda has achieved a 46.8 percent improvement in the fleet-average fuel economy of on-road motorcycles sold in North America,[1] primarily through the expanded use of programmable electronic fuel injection (PGM-FI) and changes in its model mix to smaller, more fuel-efficient products.

The 2017 Honda Rebel 500 mixes old- and new-school style and is engaging and fun to ride but still achieved a laboratory estimated 67 MPG.

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

MY16 RESULTS

- **11.7% decline vs previous year**
- **46.8% improvement vs baseline (MY2000)**



[1] Honda calculation using U.S. EPA exhaust emissions data. FY00-09 were based on actual sales, while 2010 and later data 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.

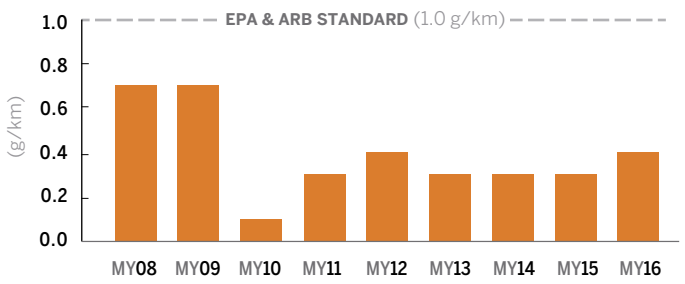
HONDA

Powersports Products cont'd

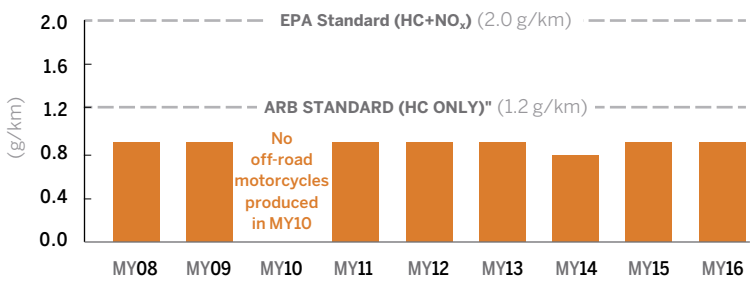
Tailpipe Emissions for Motorcycles, All-Terrain Vehicles (ATVs) and Utility Vehicles (UTVs)

In model year 2016, 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 2016, Honda also outperformed both EPA and CARB requirements for evaporative emissions and fuel permeation.

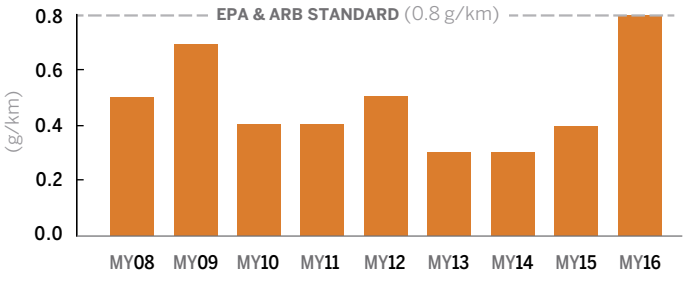
CLASS I AND II MOTORCYCLE FLEET EMISSIONS[1]



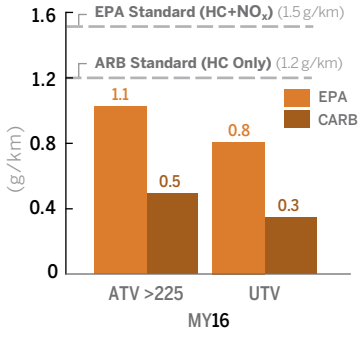
OFF-ROAD MOTORCYCLE FLEET HC+NO_x EMISSIONS[1]



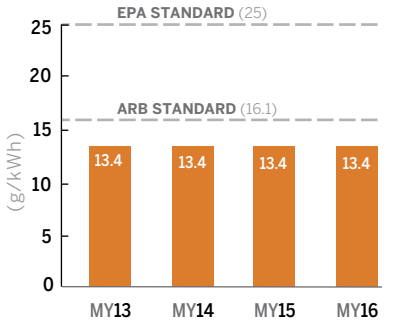
CLASS III MOTORCYCLE FLEET HC+NO_x EMISSIONS[1]



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



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



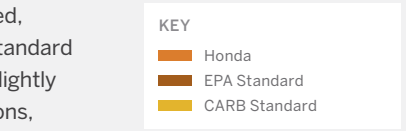
[1] Source: Honda internal test data.

HONDA

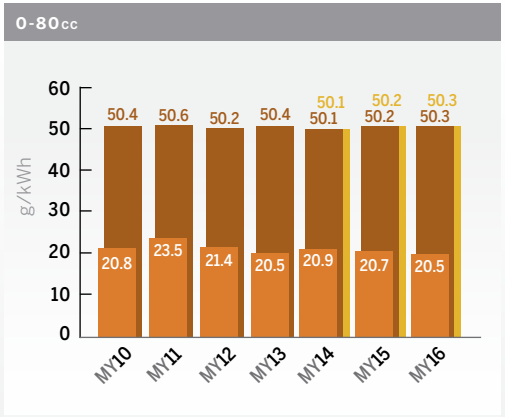
Power Equipment Products

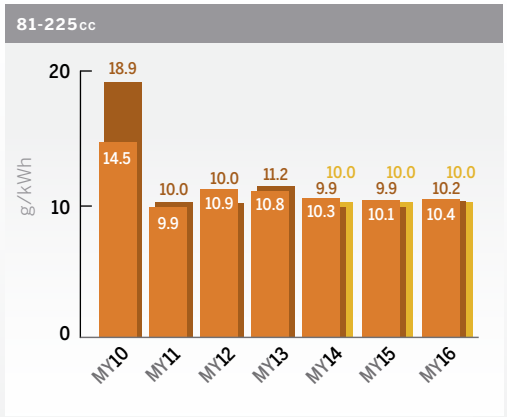
Criteria Air Pollutants for Honda Engines Sold in the U.S.

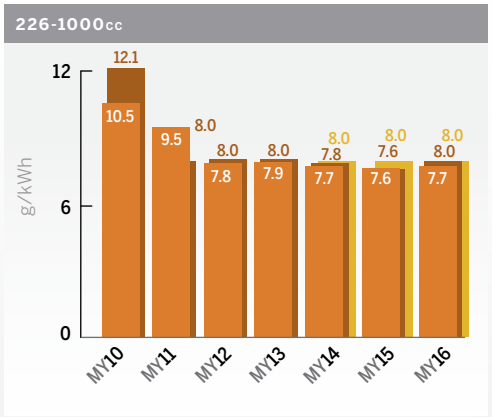
Honda achieves HC+NO_x emissions substantially below U.S. EPA standards for 0-80cc engines due to its use of advanced, 4-stroke engine technology with multi-position carburetors. Honda's 81-225cc engines are slightly above the stringent standard implemented in 2012 but are compliant through the use of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



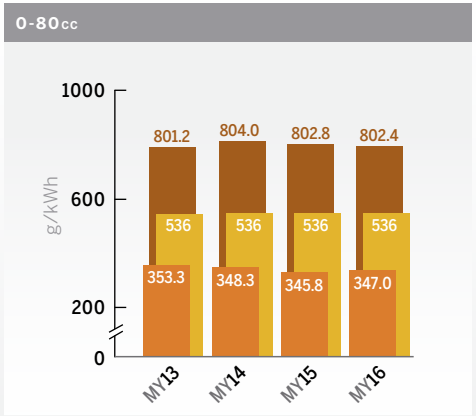
FLEET AVERAGE: HC+NO_x EMISSIONS

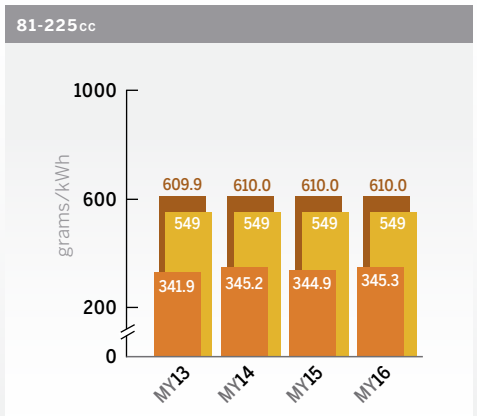


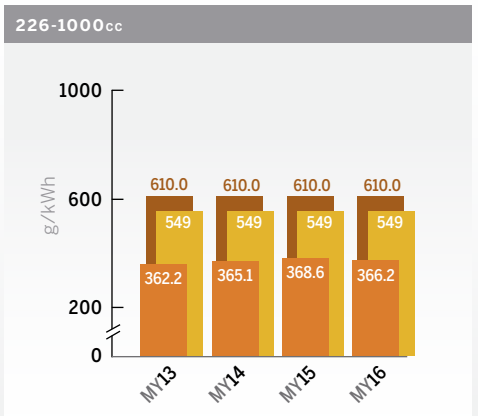




FLEET AVERAGE: CO EMISSIONS





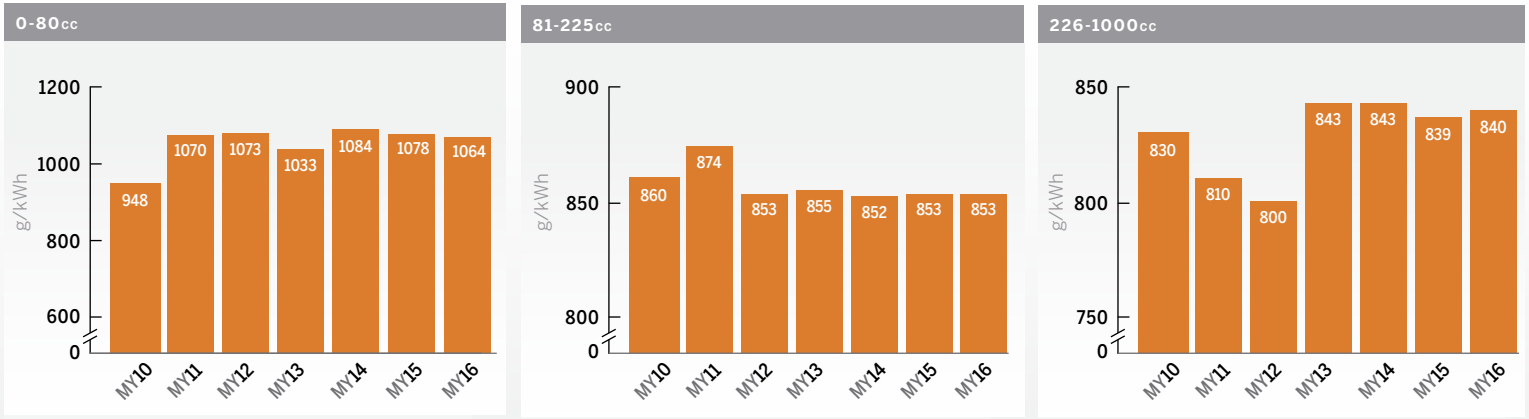


HONDA

Power Equipment Products cont'd

CO_2 Emissions for Honda Engines Sold in the U.S.

FLEET AVERAGE: CO_2 EMISSIONS

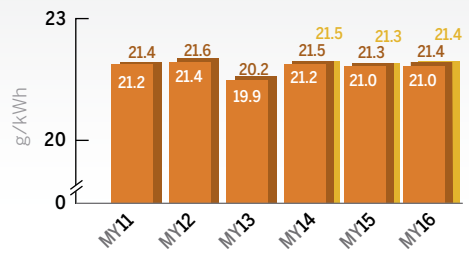


Criteria Air Pollutants for Marine Engines Sold in the U.S.

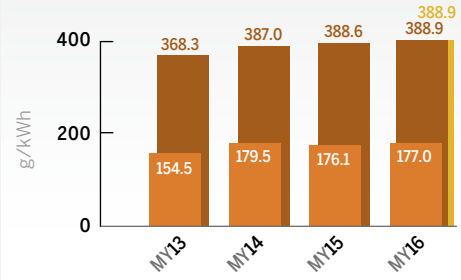
Honda achieves emissions below U.S. EPA standards for Marine Outboards due to its use of advanced, 4-stroke engine technology.

KEY
- Honda
- EPA Standard
- CARB Standard

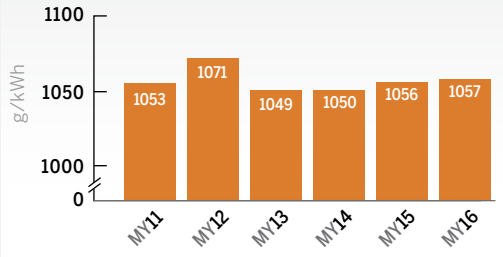
FLEET AVERAGE: HC+NOx EMISSIONS (MARINE)



FLEET AVERAGE: CO EMISSIONS (MARINE)



FLEET AVERAGE: CO_2 EMISSIONS (MARINE)



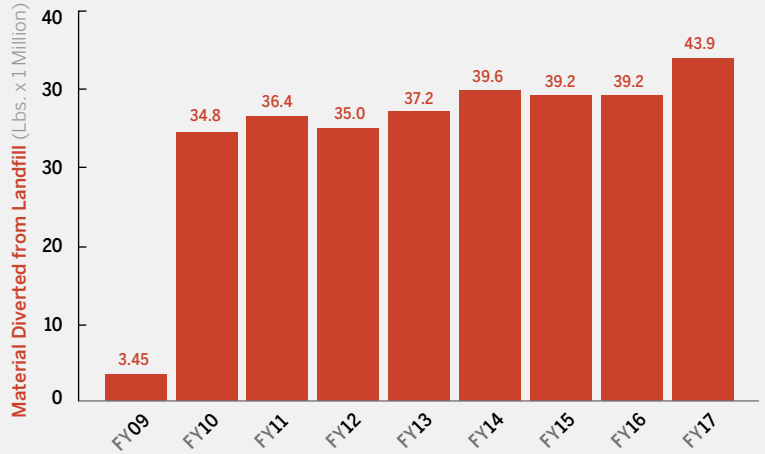
HONDA

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 five percent of service parts have been coded for this special handling.

FY2017 Result: 43.9 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)



HONDA

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.

FY2017 Result: Honda collected 90,714 wheels, including 59,684 aluminum wheels and 30,850 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.

FY2017 Result: Honda collected 7,099 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.

FY2017 Result: Honda recycled 766,113 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.

FY2017 Result: Honda recycled 9,181 nickel-metal 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 $38 billion in parts and materials purchased annually from more than 610 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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