



2010 HARLEY-DAVIDSON MOTOR COMPANY

# SUSTAINABILITY STRATEGY REPORT





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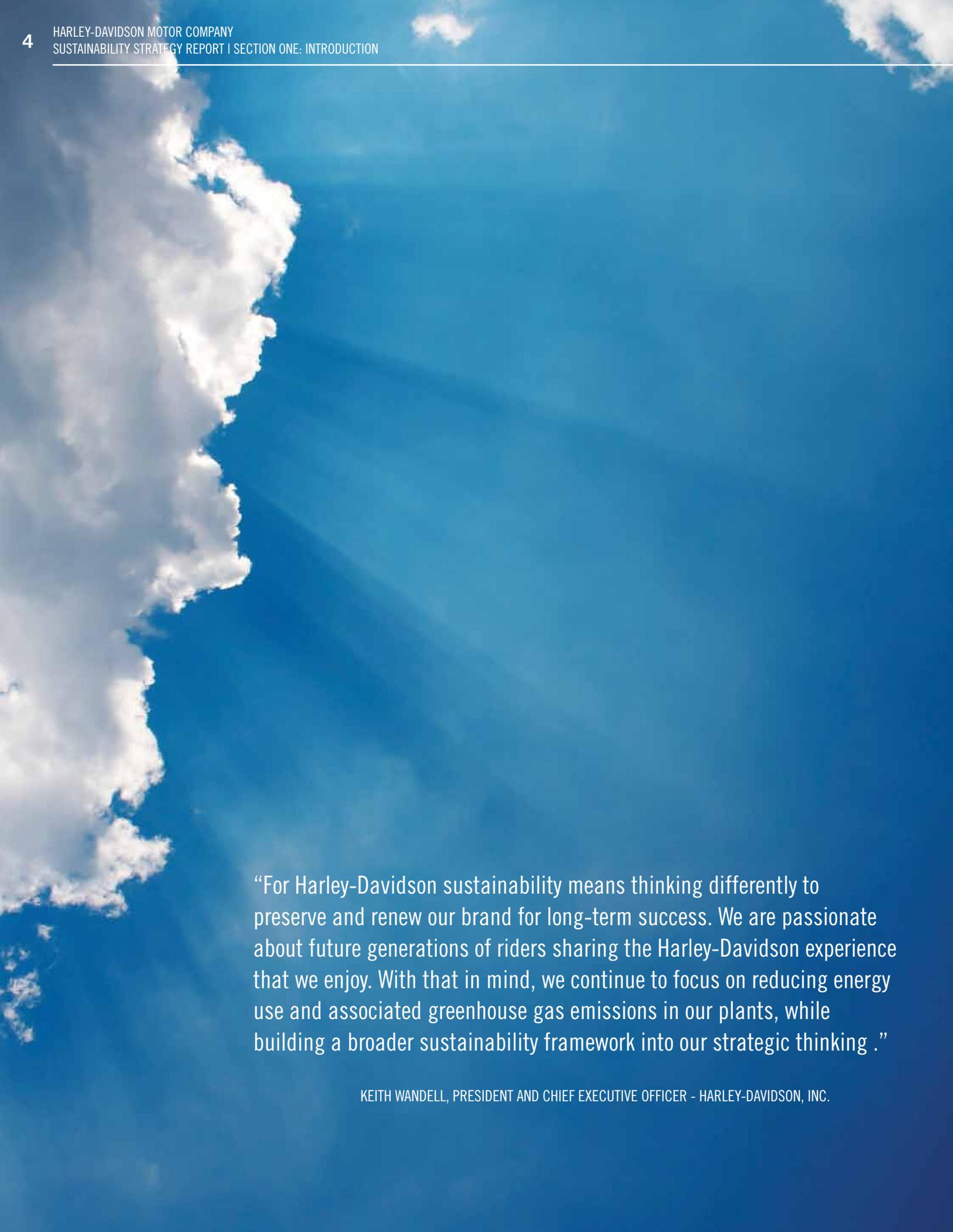
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**SECTION ONE**

# **INTRODUCTION**



“For Harley-Davidson sustainability means thinking differently to preserve and renew our brand for long-term success. We are passionate about future generations of riders sharing the Harley-Davidson experience that we enjoy. With that in mind, we continue to focus on reducing energy use and associated greenhouse gas emissions in our plants, while building a broader sustainability framework into our strategic thinking .”

KEITH WANDELL, PRESIDENT AND CHIEF EXECUTIVE OFFICER - HARLEY-DAVIDSON, INC.

WE WANT PEOPLE TO RIDE HARLEY-DAVIDSON®  
MOTORCYCLES FOREVER.

SUSTAINABILITY IS ONE OF OUR FOUR STRATEGIC PILLARS, ALONG WITH GROWTH,  
LEADERSHIP DEVELOPMENT AND CONTINUOUS IMPROVEMENT.



**TO GUIDE OUR SUSTAINABILITY EFFORTS, WE'VE IDENTIFIED THE FOLLOWING VISION:**

## TO PRESENT THE FUTURE FOR THE BRANDS IN A WAY THAT BRINGS SOCIAL AND ENVIRONMENTAL RESPONSIBILITY ALONG FOR THE RIDE.

This vision encourages all Harley-Davidson<sup>1</sup> employees to understand and embrace the challenge and opportunity of sustainability. We want future generations to enjoy the riding experiences we enjoy. This is our goal and to deliver it means preserving and renewing our brand for the future, just as we have done repeatedly for the past 107 years.

Evidence that the Earth has been heating up and greenhouse gas (GHG) concentrations in the atmosphere have risen has placed increased scrutiny on how individuals and businesses impact the environment. Harley-Davidson recognizes global climate change as a significant environmental issue facing the world today. We believe that climate change presents a range of challenges and opportunities for our company. For our operations, we seek to go beyond environmental compliance to take actions that reduce energy and water consumption, waste generation and related GHG emissions associated with our manufacturing facilities.

Harley-Davidson is taking a number of steps to prepare for the transition to a lower-carbon economy. Innovation driven by sustainability-based change imperatives will create exciting opportunities for Harley-Davidson and its products.

What does this mean in terms of our products? It means we are planning ahead and evaluating technology-driven enhancements in order to meet customer demands and anticipated regulatory developments. Consumers continue to shift from larger vehicles to smaller more fuel efficient vehicles, including motorcycles.

Harley-Davidson will always be committed to premium, cool vehicles that provide the authentic, emotional experience we want. This is not about getting out of the gas engine business, this is about caring about all stakeholders in the way we live our business, in line with our beliefs.

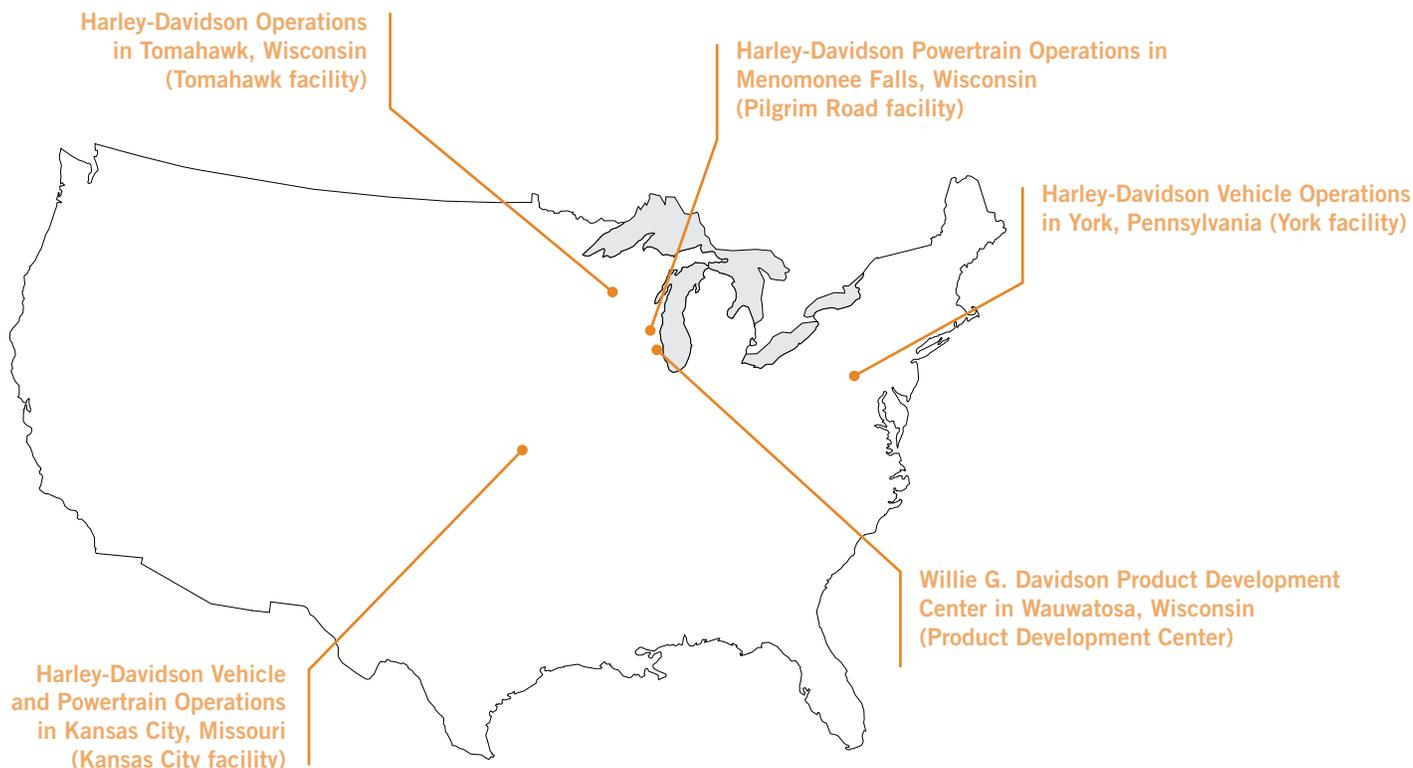
<sup>1</sup> Harley-Davidson, Inc. is the parent company of the group of companies doing business as Harley-Davidson Motor Company and Harley-Davidson Financial Services. Harley-Davidson Motor Company produces heavyweight custom, touring and cruiser motorcycles.



SECTION TWO

# GREENHOUSE GAS EMISSIONS

HARLEY-DAVIDSON MOTOR COMPANY OPERATES FOUR MANUFACTURING FACILITIES AND ONE RESEARCH AND DEVELOPMENT FACILITY, AS OF DECEMBER 31, 2010:



These facilities manufacture motorcycle engines, transmissions and components and perform final assembly. They range in size from approximately 100,000 square feet at our Tomahawk facility to over 1,000,000 square feet at the York facility. Harley-Davidson does not own manufacturing facilities outside the United States of America, with the exception of low volume assembly facilities in Brazil and, as of 2011, India.

The majority of GHG emissions associated with Harley-Davidson operations are related to energy usage at our facilities (primarily natural gas and gasoline). In 2009, our facilities consumed approximately \$9,000,000 worth of energy in the form of liquid fuels and natural gas, resulting in approximately 55,000 metric tons of GHG emissions. For 2010, our facilities consumed approximately \$7 million worth resulting in approximately 46,000 metric tons of GHG emissions.

Harley-Davidson is continually working to reduce the environmental impact of its manufacturing facilities, including ongoing efforts to reduce waste generation, water and energy use and associated greenhouse gases emissions. Harley-Davidson Motor Company has compiled GHG data for the years 2004 through 2010 for our manufacturing facilities.<sup>2</sup>

<sup>2</sup> Harley-Davidson previously owned facilities associated with Buell Motorcycle Company. These operations were closed in late December 2009 and are included in the GHG data through 2009. International facilities are not included in the GHG data.



## DIRECT EMISSIONS FROM MANUFACTURING 2004–2010

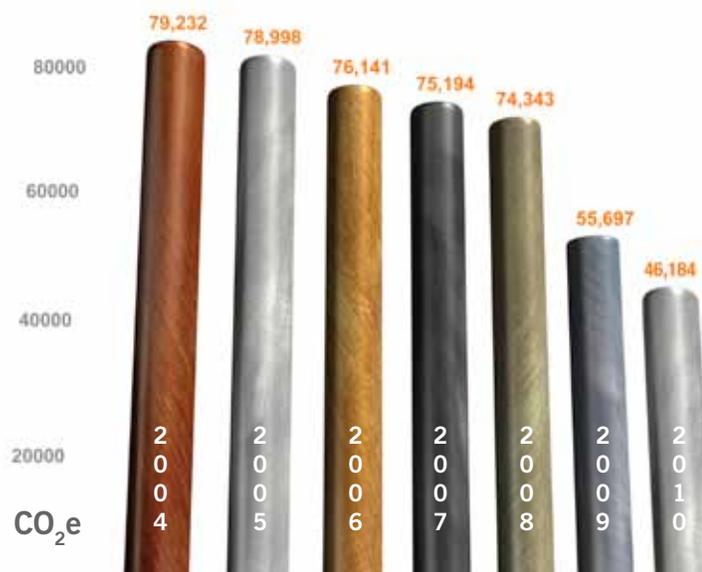
We have used the GHG Protocol Corporate Standard to prepare the GHG data. The protocol was prepared by a multi-stakeholder partnership of businesses, non-governmental organizations, governments, and others convened by the World Resources Institute and the World Business Council for Sustainable Development.

Harley-Davidson reports information on emissions of three GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), all as CO<sub>2</sub>e. Our GHG data consists of direct emission sources (Scope 1) from manufacturing and research and development facilities. GHG emissions from indirect sources, such as purchased electricity (Scope 2) and purchased materials (Scope 3) are not considered part of the data at this time. GHG estimates for emissions from operation of individual motorcycles are also not included.

The primary GHG in our data are CO<sub>2</sub> emissions from combustion of natural gas, gasoline and fuel oil. As shown in Figure 1, Harley-Davidson Motor Company decreased its annual GHG emissions from 79,232 metric tons in 2004 to 46,184 metric tons in 2010.

Due to energy reduction projects, reductions in operational footprint at our Wisconsin powertrain operations and York assembly facility, along with other factors, GHG emissions have been reduced in our manufacturing operations by a total of 68,837 metric tons 2005-2010 compared to the amount had GHG emissions remained at 2004 levels.

## HARLEY-DAVIDSON MOTOR COMPANY TOTAL SCOPE 1 GREENHOUSE GAS EMISSIONS





**SECTION THREE**

**REGULATORY  
AND STRATEGIC  
ANALYSIS**



Regulation designed to address climate change, particularly GHGs like CO<sub>2</sub>, is expected to have a significant impact in the next five to 10 years. While regulation at the state, federal and international levels remain in flux, proposed and final regulations have the potential to significantly affect the motorcycle industry. This section describes federal GHG regulations as well as those in Wisconsin, Pennsylvania and Missouri, where Harley-Davidson has manufacturing facilities. International initiatives, including in the European Union and Japan, are also discussed due to their leading impact on regulatory trends.

## FEDERAL GREENHOUSE GAS REGULATIONS

While the American Clean Energy and Security Act was passed in the House of Representatives and the Clean Energy Jobs and American Power Act was introduced in the Senate in 2009, no federal legislation regulating greenhouse gases has yet been enacted in the U.S. Both bills contained vehicle performance standards applicable to motorcycles and proposed a cap and trade system for GHG emissions, and would have potentially required changes to Harley-Davidson's manufacturing facilities. More recently, following the 2010 Congressional elections, legislation has been proposed that would prevent the U.S. EPA from continuing to regulate GHG emissions as it has begun to do.

### U.S. EPA GHG Reporting Rule and Endangerment Findings

While federal legislation has not passed, on October 30, 2009, the U.S. EPA issued a reporting rule that requires certain sources to begin tracking emissions for six GHG pollutants, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O), beginning January 1, 2011, with the first annual reports due to U.S. EPA by March 31, 2012. The rule specifically identified motorcycle manufacturing facilities as subject to the reporting rule on a per facility basis if emissions from stationary fuel consumption sources (e.g., industrial boilers) at a facility are 25,000 metric tons of CO<sub>2</sub>e or more. Currently, no Harley-Davidson facilities exceed this threshold.

In addition, engine emissions reporting is required for CO<sub>2</sub> beginning with model year 2011, with CH<sub>4</sub> added for model year 2012 and N<sub>2</sub>O for model year 2013. This reporting is folded into the existing engine emissions certification process under the Clean Air Act (CAA). Engine manufacturers have been tracking CO<sub>2</sub> emissions but were previously not required to report them.

The U.S. EPA rule has been challenged in the federal courts, but its monitoring and reporting requirements remain in effect (though U.S. EPA has extended certain deadlines, and, as mentioned above, Congress may take action to prevent U.S. EPA from pursuing regulation at all).

In addition, on December 7, 2009, U.S. EPA Administrator Lisa Jackson signed two Findings for GHGs—the “Endangerment Finding” and the “Cause and Contribute Finding”—that apply to motor vehicles (including motorcycles). These findings put forth the U.S. EPA’s position that GHGs are a threat to public health and welfare. The immediate effect of these Findings is minimal, as they impose no substantive requirements on their own. However, they were the necessary precursor to U.S. EPA regulation of GHG emissions from motor vehicles. These findings have been challenged in federal courts, but have not been stayed.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) subsequently issued a light-duty vehicle rule that, while not applicable to motorcycles, is the first federal rulemaking regulating GHGs. Due to the definitional structure of the CAA, once GHGs are regulated as pollutants under the mobile source provisions of the CAA, it is EPA’s position that those same “pollutants” are subject to regulation under the permitting requirements for stationary sources. Consequently, all major sources of GHGs (e.g., emissions sources at manufacturing facilities) would be subject to permitting obligations, including emission control requirements for new and modified sources. However, U.S. EPA also issued a “tailoring” rule to significantly increase the applicability thresholds. The practical effect of these rulemakings may be to potentially subject Harley-Davidson’s manufacturing facilities to permitting and emissions control requirements for GHGs at some point in the future.



## STATE GREENHOUSE GAS INITIATIVES



There were no significant legislative or regulatory developments in 2010 in the three states in which Harley-Davidson maintains manufacturing facilities (Wisconsin, Pennsylvania and Missouri).

While Wisconsin is a member of the Midwest Greenhouse Gas Accord, the only regulatory impact at this time is for facilities emitting 100,000 tons or more per year of CO<sub>2</sub> to report those emissions to the WDNR. Emissions for Harley-Davidson's manufacturing facilities in Wisconsin are below this limit. In January 2010, Assembly Bill 649 proposed reducing the CO<sub>2</sub> reporting threshold from 100,000 tons per year (tpy) to 10,000 tpy and requiring WDNR to promulgate rules with respect to motor vehicle emissions and a low carbon fuel standard for transportation fuels. The bill did not pass.



The Kansas City Vehicle and Powertrain Operations is located in Kansas City, Missouri. Missouri did not sign the Midwest Greenhouse Gas Accord though its governor did sign portions of the prior Midwest Governors' Association Accord, and, like Wisconsin, is a member of The Climate Registry. Missouri has not considered greenhouse gas regulations or legislation.

Harley-Davidson's York Vehicle Operations is located in York, Pennsylvania. In past years Pennsylvania has pursued several means of regulating GHGs. In 2008, it enacted the Pennsylvania Climate Change Act requiring reports on the impact of climate change as well as any economic opportunities presented by reduction of GHGs. In addition, the Climate Change Act requires Pennsylvania's Department of Environmental Protection (PADEP) to submit a climate change action plan to the governor and to compile an annual inventory of GHGs emitted within the state by all sources. Also, like Wisconsin and Missouri, Pennsylvania is a member of The Climate Registry. Pennsylvania is also an 'official observer' of the Regional Greenhouse Gas Initiative (RGGI), a cooperative effort by several Northeast and Mid-Atlantic states to reduce CO<sub>2</sub> emissions through development of a regional cap and trade program, initially applying only to electric power generating facilities.





## INTERNATIONAL DEVELOPMENTS

Harley-Davidson motorcycles are sold worldwide and international regulations impact our business. The European Union (EU) and certain Latin American countries have promulgated CO<sub>2</sub> and fuel consumption on-vehicle labeling regulations effective 2014 and 2013, respectively. Also, CO<sub>2</sub> outputs for motor vehicles in grams per kilometer (g/km) are linked to taxation and registration requirements in Spain.

In addition to on-vehicle labeling for consumers, 'corporate averaging' of CO<sub>2</sub> output (g/km) across product lines will also be required. This latter concept is similar to the manner in which the U.S. EPA and the California Air Resources Board implemented their hydrocarbon and nitrogen oxides standards for motorcycles in the United States. It is also likely that Japan and other countries will be influenced by the EU standards.

Japan's End-of-Life Vehicle (ELV) Recycling Law came into force in January 2005. Under this law, automobile manufacturers are responsible for recovery, recycling and appropriate disposal with respect to automobile shredder residue, air bags, fluorocarbons and hazardous materials. However, the ELV Recycling Law does not cover motorcycles. Harley-Davidson Japan, a subsidiary of Harley-Davidson Inc., voluntarily launched a motorcycle recycling program in October 2005. The program was the first of its kind in the automobile and motorcycle industries and is at no cost to the consumer. The EU also has an ELV directive applicable to automobiles, and we anticipate that motorcycles will ultimately be included in recycling and end-of-life directives in the EU by sometime after 2015. This will also mandate an appropriate labeling system for plastics, metals and materials that are readily recyclable.

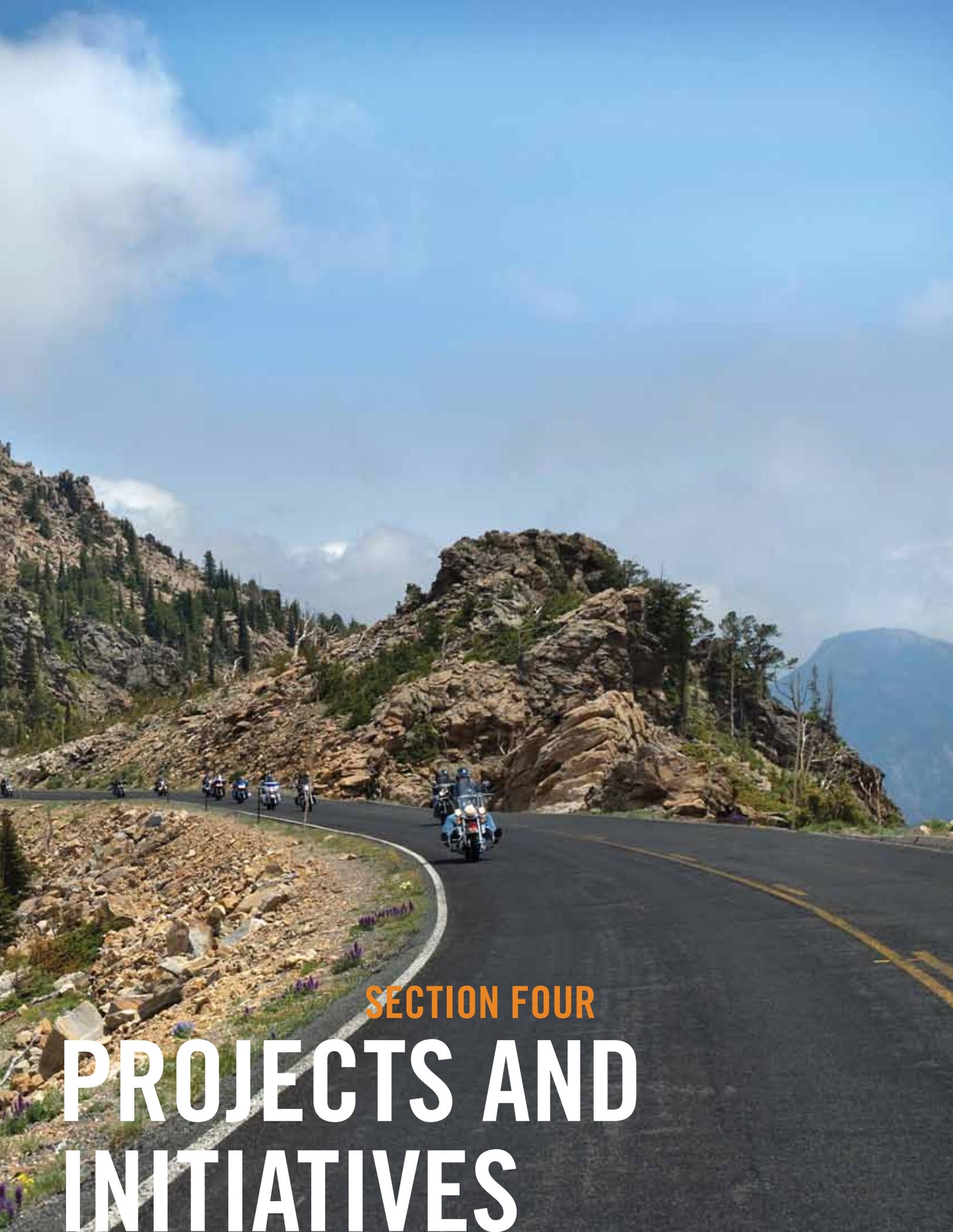
## COMMERCIAL RISKS AND CHALLENGES

Because the implementation of a specific CO<sub>2</sub> regulation could occur in combination with additional reductions in currently regulated tailpipe pollutants (hydrocarbons and NOx for example), rigorous technical challenges emerge for vehicle manufacturers. Ironically, improving engine combustion efficiency and exhaust gas after-treatments (such as catalyst technologies) can lead to an increase in CO<sub>2</sub> output. Therefore, additional development and research will be required to find ways to simultaneously reduce CO<sub>2</sub> emissions and other pollutants. This may require motorcycle manufacturers to develop and adapt the types of advanced technologies that are often employed in the automotive sector. Some of these technologies, such as variable valve timing and weight reduction schemes, have already been used on motorcycles. However, as CO<sub>2</sub> emission standards become more rigorous, potential changes to the products themselves could become more significant requiring new and innovative motorcycle designs.

Concerns over climate change are expected to lead to lower tailpipe emission limits. Product planning and design will be required in the years ahead to meet the challenges posed by the possible regulations. In addition, energy security and availability and its related costs affect all aspects of our manufacturing operations, including our supply chain. This has an adverse affect on the cost to manufacture motorcycles. Higher utility rates have prompted us to revisit and implement energy-efficiency actions. We have several facilities with rich histories (some over 50 years old) in Milwaukee, Wisconsin and York, Pennsylvania that are located in cold weather areas. We have implemented numerous improvements at these facilities to reduce energy use and associated operating costs.

Physical risks to our business operations as identified by the Intergovernmental Panel on Climate Change and other expert bodies include scenarios such as sea level rise, extreme weather conditions and resource shortages. Extreme weather may disrupt the production and supply of natural gas, a fuel necessary for the manufacture of motorcycles. Supply disruptions raise market rates and jeopardize the continuity of manufacturing production. To minimize the risk of production interruptions, Harley-Davidson Motor Company has conducted a risk analysis and has established propane backup systems at its facility located in Tomahawk, Wisconsin, which has a single supply pipeline for natural gas. Harley-Davidson Motor Company has also established firm natural gas delivery contracts at other locations.





**SECTION FOUR**

**PROJECTS AND  
INITIATIVES**



Harley-Davidson is continually working to reduce the environmental impact of our operations, including on-going efforts to reduce waste and increase recycling, and reduce water use and energy consumption. This section highlights a handful of the numerous projects undertaken throughout Harley-Davidson in 2010 to do more good.



## WASTE REDUCTION AND RECYCLING

### Motorcycle Delivery System

During 2010, a new motorcycle delivery system was developed that was fully implemented in early 2011 across the Harley-Davidson U.S. dealer network in the 48 contiguous states. The previous shipping system used metal and corrugated cardboard crates for each bike. Some of those materials had a one-time use while the skids were reused an average of five times before being discarded. Also, fewer motorcycles could fit on a single trailer, making for more deliveries. By using redesigned trailers with two levels to load motorcycles, more bikes can fit in each shipment. The motorcycles that were previously boxed for protection will now be strapped to sturdy metal carriers and covered with fabric bags. Unlike the pallets and crates used in the past, these carriers are built to be reused for countless deliveries. The straps and fabric bags are the only items not reused for shipping.



*Nylon Plug*



*EPDM Rubber*



*Styrofoam/Plastic*

### **Kansas City Facility**

Waste reduction initiatives at the Harley-Davidson Kansas City facility were implemented on a pilot basis for plastics, Styrofoam, nylon and EPDM rubber. This pilot resulted in an annual reduction of landfilled waste of greater than 21 tons and remaining process areas are being evaluated for expansion of this recycling program. In addition, a collaboration with a local glass recycler resulted in nearly 16 tons of glass being recycled in 2010. The recycled glass is converted to a feedstock for fiberglass manufacture. The Kansas City facility has also implemented a paper recycling program that has resulted in the elimination of waste paper to landfill in excess of 19 tons per year.

### **Pilgrim Road Facility**

The Pilgrim Road facility reduced used coolant use by 68 percent over 2009 levels. In addition, Pilgrim Road implemented new recycling programs for aerosol cans, used oil filters, swarf (fine metal shavings) and additional paper and mixed recyclables.

### **Tomahawk Facility**

Several initiatives at the Tomahawk facility have resulted in waste reductions and lower emissions. For example, conversion to acrylic instead of urethane paints reduced waste solvent from line flushes; improved transfer efficiency has reduced emissions of VOCs and hazardous air pollutants (HAPs); and installation of recirculation tanks has reduced waste paint generation.

### **HDFS Paperless Initiative**

Harley-Davidson Financial Services has implemented several process changes resulting in less paper use. By providing account application, contracts, and monthly statements electronically, HDFS has not only made the financing process easier for dealers and customers, it generated close to \$100,000 in costs savings.

### **Electronic Board of Directors Books**

2010 saw the pilot test and implementation of electronic Board of Directors books delivered to secure iPads. Rather than providing each member of the Board of Directors with large binders of materials, the material is now pushed electronically to iPads, complete with annotation features and other enhancements that not only save paper, but are more user-friendly to the Directors than the hardcopy version.



## WATER USE IMPROVEMENTS

### Facility Water Balance

Using water sub-metering data in 2010, the Kansas City facility performed a water balance to evaluate water usage in the various process areas. This resulted in the identification of several processes where excessive water use was occurring. Based upon the data obtained from this annual study, several malfunctioning components were identified that ultimately led to significant water savings for the factory.



*Sub-metering of water at various process areas*

### Pilgrim Road Permeable Paving

A large area of the parking lot at our Pilgrim Road facility was replaced with permeable asphalt, which enables storm water to percolate and reduces runoff. In addition, a rain garden swale was installed. Rain gardens serve to collect and retain storm water and allow natural infiltration processes to occur.

## ENERGY CONSUMPTION REDUCTIONS

### Chiller Upgrade

Moving from reciprocating to centrifugal compressor technology on the chilled water loop at the Kansas City facility is estimated to reduce annual electrical use by 1.25 million kWh with a corresponding estimated annual savings of \$100,000.



*Centrifugal Chillers*

### LED Light Fixtures

Moving from sodium vapor exterior lighting in the parking lots at Kansas City facility to LED fixtures will result in an estimated annual reduction of 182,000 kWh annually and a cost savings of \$14,000 per year.



*LED Lighting Fixture—Parking Lot*

### Cold Testing

Both Pilgrim Road and Kansas City operations have migrated from hot-engine testing to a cold test process that uses no fossil fuel and has no criteria air pollutant emissions. This resulted in estimated annual reductions of over 80 metric tons of CO<sub>2</sub> emissions and over 1,400 lbs of criteria air pollutants (assuming normal, full-year engine testing operations).

### Cooling Fan Upgrades

Robots at the Tomahawk facility were upgraded with a modified automatic servo cooling fan. The project paid for itself in less than a year due to energy savings, and also resulted in a quieter work area and longer life expectancy for the fans.



### **York Restructuring**

During 2010, significant components of the restructuring and consolidation project at the York facility were completed. These included eliminating chrome and zinc plating lines, consolidating manufacturing operations, and demolishing no longer needed structures and other projects, which resulted in significant energy savings with more to be completed in 2011.

### **Test Track Consolidation**

In 2010, the full vehicle testing facilities were consolidated from three locations to one, the Arizona Proving Grounds. APG utilizes an ice plant thermal storage system instead of a conventional chiller, at an estimated 30-40% energy savings. The system creates ice during low demand night hours that is depleted through melting during the day. All space cooling as well as cooling air for high-demand test cells is handled by the system.

### **HDFS Electrical Savings**

By taking steps to match facility heating, cooling and lighting schedules with the times employees were working, HDFS achieved over \$200,000 in electrical costs savings in 2010. Facility startup times were optimized, allowing one HDFS location to reduce its HVAC run times by 55% and another location by nearly 70%. Both facilities also made changes to lighting sensors to improve correlation with occupancy and natural light.



## OTHER PROJECTS

### Harley-Davidson Europe

HDE implemented recycling initiatives resulting in a 50% savings, changed all general office lighting to switch off after 20 minutes of inactivity, installed LCD dimmable lights and has all gardening waste from landscape maintenance composted.

### Harley-Davidson Australia

HDA selected three winning projects to implement in 2010 based on ideas generated from the entire staff. As a result, the HVAC system has been put on a 7 day / 24 hour programmed timer to optimize heating and cooling cycles for energy savings. Also, all printers were defaulted to double-sided printing (Harley-Davidson Japan also made this switch, which is the default utilized by the majority of HDMC printers), and a system will be installed to utilize captured rainwater for the bike wash.

### Mean Green Teams (MGT)

In 2010, a cross-functional group of Kansas City employees formed the Mean Green Team with an interest in supporting sustainability initiatives. The MGT has coordinated several sustainability programs including the glass recycling and expanded, plant-wide recycling programs described above. HDE also established an MGT in 2010 and MGTs at other Harley-Davidson facilities will follow.



### Kansas City Employee Garden

In 2010, the H.O.G. Memorial Garden was launched, the brain-child of local Kansas City employee T.J. Dixon. The garden was a 0.5 acre tract of land that was cultivated and cared for by a core group of employees in support of the Harvesters Plant-a-Row Program. The garden yielded a mix of vegetables including potatoes and onions that were donated to Harvesters in August.

### Harley-Davidson Foundation

The Harley-Davidson Foundation has supported the Milwaukee-based Urban Ecology Center for many years. In 2010, the Foundation completed a five year funding commitment to establish the first satellite education program at Washington Park, which serves 18 neighborhood public schools and over 15,000 students. In addition to continuing to support this program, the Foundation has committed to a new five year start-up grant to establish another UEC satellite program in the Menomonee Valley that will also use the nearby Harley-Davidson Museum® grounds.

In 2010, the Foundation also sponsored an energy fair for employees and residents who live near our Juneau Avenue headquarters. During the event, approximately 2,300 compact fluorescent bulbs (CFLs) were distributed free to more than 100 households and discounted CFLs were also made available to Milwaukee-area employees through a partnership with a local hardware store. The registration of these 7,300 CFLs on RelightUS had the calculated annual impact of reducing energy bills an estimated \$37,000, saving approximately 323,200 kWh of energy and preventing the emission of nearly 400 tons of CO<sub>2</sub>.

