

# SUSTAINABILITY STRATEGY REPORT

2011



WE PRESERVE AND RENEW THE FREEDOM TO RIDE

# CONTENTS

## 03. Section One: Introduction

## 06. Section Two: Projects and Initiatives

07. Waste Reduction and Recycling

10. Water Use Improvements

11. Energy Consumption Reductions

12. Other Projects

## 13. Section Three: Emissions Data

15. Direct Emissions from Manufacturing 2004 – 2011

## 16. Section Four: Regulatory and Strategic Analysis

17. Federal Greenhouse Gas Emissions Regulations

19. State Greenhouse Gas Emissions Initiatives

19. International Developments

20. Commercial Risks and Challenges



# 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. Our Sustainability vision is simple: We preserve and renew the freedom to ride.”

KEITH WANDELL, CHAIRMAN, PRESIDENT & CEO – HARLEY-DAVIDSON, INC.



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

## **H-D SUSTAINABILITY: WE PRESERVE AND RENEW THE FREEDOM TO RIDE**

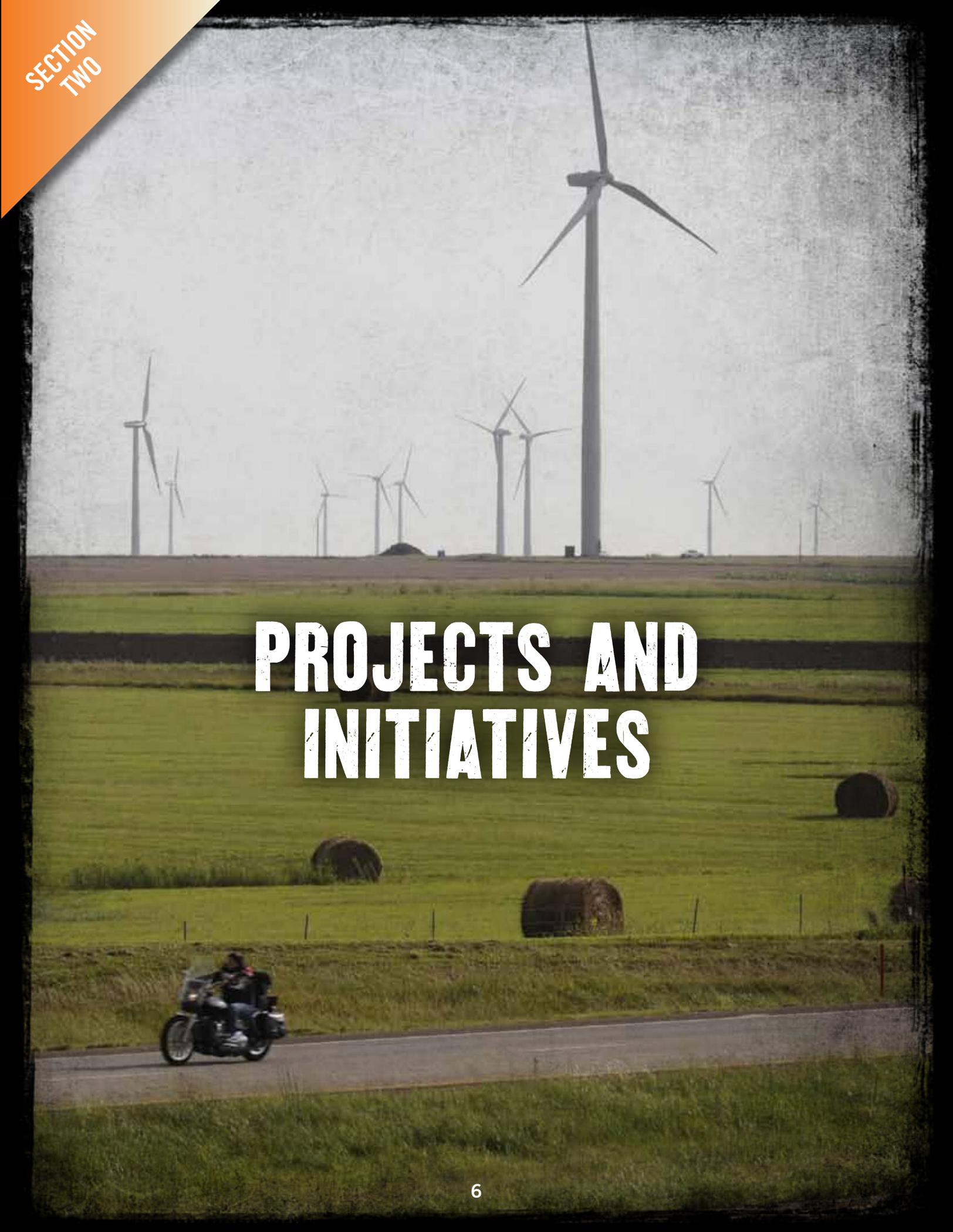
- **We are committed to preserving and renewing our brand and experience for future generations of global customers through shared value creation and inclusion.**
- **We seek ways to improve the quality of their lives, the strength and vibrancy of their local communities, and the health and welfare of our planet.**
- **We ride with our customers and continually find ways to reduce waste, energy consumption and emissions.**
- **We support growing the sport of motorcycling with an emphasis on rider and community safety, preservation of riding destinations around the world, and community development efforts.**

Our sustainability 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, and to deliver it means preserving and renewing our brand for the future, just as we have done repeatedly for the past almost 110 years.

Harley-Davidson recognizes that corporations today need to be more resourceful and responsible with respect to environmental and social impacts. For our operations, we seek to go beyond environmental compliance to take actions that reduce energy and water consumption, waste generation and related greenhouse gas (GHG) emissions associated with our manufacturing facilities. For purposes of this report, we provide information about our direct (Scope 1) GHG emissions from our U.S. manufacturing plants. This year we are also providing our indirect (Scope 2) GHG emissions from our U.S. manufacturing plants.

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 our products and customers.

<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.



# PROJECTS AND INITIATIVES

Harley-Davidson is continually working to reduce the environmental impact of our operations, including ongoing efforts to reduce waste and increase recycling, and reduce water use and energy consumption. This section highlights a handful of the numerous projects undertaken by our U.S. manufacturing plants in 2011.

## WASTE REDUCTION AND RECYCLING



Harley-Davidson manufacturing facilities aspire to reach zero landfill status. We have identified a best-in-class target for overall recycling/WTE (non-landfill) of 90% or better. We're not there yet, but we have made significant progress!

Progress in 2011 was supported primarily by new recycle streams, and also through better segregation of existing streams to increase recycling rates. In 2011, York recycled 1,084 tons of new streams. This is approximately a 23% increase over the quantity of the previously recycled waste streams in 2010. Kansas City recycled or re-used 47.4 tons of new streams in 2011 above the existing 1,500 tons per year. This is approximately a 9% increase over 2010. And our Pilgrim Road facility reduced the amount of trash hauled to landfill by 35% by increasing the amount of recycling of common items like bottles and cans, and by sending approximately four tons of compostable material from the cafeteria to Growing Power, an urban farm. Tomahawk successfully piloted a plastics recycling program for the excess material generated during the molding process, which we expect to expand in 2012.

### Plastics Recycling

In 2011, the York facility began recycling additional plastic wastes, moving beyond just plastic bottles. This resulted in the recycling of approximately 10.6 tons of plastic materials, including plugs, caps, and drums. Further, plastic battery caps used to protect the terminals during shipment from the supplier to the plant were returned to the battery supplier for reuse.



The Tomahawk plant ran a successful pilot to recycle the plastic purgings that are a waste generated in the molding process. Due to the low value of the material on the secondary market and the low cost to dispose of this material, along with the more remote location of our Tomahawk facility, it has been a challenge to identify viable reuse/recycle outlets for this material. Tomahawk will continue to recycle the purgings while exploring opportunities for recycling additional plastic wastes from the molding process.



### Concrete and Carpeting Recycling

In 2011, approximately 140 linear feet of 4-ft high, 10-inch thick concrete wall was removed from the Kansas City facility. Normally, this concrete would have gone to a construction and debris (C&D) landfill. However, it was diverted from landfill for recycling (35 tons). Similarly, at York concrete removed in conjunction with taking out a chain conveyor system was diverted from landfill for recycle/reuse (1,072 tons).



Also, several areas of the Kansas City plant were re-carpeted. Normally the carpet would have been sent to the landfill but approximately 5 tons of carpet and padding were sent for recycling. In addition, our Product Development Center undertook a recarpeting project in 2011 in which the old carpet was recycled and the new carpeting squares installed were made with 43-46% post-industrial recycled material.

### Waste-to-Energy

In November 2011, the Kansas City facility entered into a waste-to-energy (WTE) agreement with Systech/LaFarge North America (national Portland cement manufacturer) in Sugar Creek, Missouri. At the present time, we send non-standard size wood pallets, rubber matting, styrofoam, nylon and EPDM rubber fuel tank plugs and miscellaneous plastics and other combustibles to the WTE facility. In 2011, this resulted in landfill diversion of 4 tons.

### Food Waste Composting

In April 2011, Kansas City entered into a food waste diversion program in conjunction with Missouri Organics Recycling (a local, commercial food waste composting company). The program was initially implemented for the cafeteria and kitchen food waste. In 2011, this resulted in landfill diversion of nearly 3.4 tons. Also, our Pilgrim Road facility sent approximately four tons of compostable material from the cafeteria to Growing Power, an urban farm.



### **Creative Re-uses**

In 2011, the Kansas City plant's participation in the By-Products Synergy Group resulted in a regional jewelry manufacturer using excess cork composite tabs and PVC tubes being used for local school art and architecture projects. In addition, a local municipality is reusing empty five-gallon #5 plastic jugs (previously containing de-ionized water) as containers for an emergency water supply. In 2011, these creative reuses resulted in landfill diversion of 0.5 tons.

### **Process Improvements**

We increased the amount of grinding swarf recycled at our Pilgrim Road facility, reducing our swarf to landfill by 31%. We also improved how we recycle metal aluminum chips. Using a team approach and applying problem solving techniques to find root cause and fix issues with our chip wringer, by the close of 2011 it was returned to full operation. The benefit to using the wringer is to more effectively segregate and dry higher value aluminum chips while recovering coolant for reuse.



### **York Restructuring and Consolidation Activities**

In 2011, the majority of the west campus was demolished, with metals and other recyclables being segregated and sorted as part of this project. This resulted in significant quantities of materials being diverted from landfill to recycling and reuse: 16,928 tons of scrap metal and 11,660 cubic yards of material reused as clean fill.

## WATER USE IMPROVEMENTS



### Kansas City Facility Water Balance

Using water sub-metering data in 2011, a facility-wide water balance was conducted to evaluate water usage in the various process areas. This resulted in the identification of a malfunctioning water supply valve at the Fab Washer. Repair of the valve resulted in a 94% decrease in water use at this process (5000 gpd vs 300 gpd).

### Pilgrim Road Powder Coat Line

The Pilgrim Road facility closed its flood gates and brought its water use down to a trickle in 2011. Thanks to a new powder coat paint system installed in the beginning of 2011, Pilgrim Road is saving nearly five million gallons of water annually.

By redesigning the process, Pilgrim Road is using less water and putting less water down the drain and into the sewers. (And the new process also saves the Company nearly \$10,000 annually on its water bill.)

A key change to the new system makes all the difference: it only pulls water when it needs it. The old system used a continuous flow of water, which spilled unused water down the drain. The new system uses sensors that automatically take water in as needed and shut off the flow when it's not needed. The new system averages 2.6 gallons per minute, compared to the 34.6 gpm of one of its predecessors. Put another way, the amount of water saved annually could fill 125,000 bathtubs!

### York Restructuring

As part of the restructuring and consolidation at our York facility, the stormwater basin was modified to allow sediments to settle within the basin forebays instead of being released further downstream in the watershed, which will result in less impact and stress to aquatic life via the basin geometry. Prior to the addition of the forebays, sediment could be resuspended during subsequent storm events and discharged. The aquatic vegetation promotes embankment stability and nutrient removal, creates habitat and reduces water warming. The basin modification provides an overall cleaner discharge resulting in a healthier downstream watershed.



*Basin 1 along route 30 shows vegetation and multi-level retention basin.*

In addition, restructuring eliminated one industrial wastewater treatment plant on-site and allowed the discharge of non-contact cooling water to be reduced by approximately 35 million gallons as compared to 2010 volumes.

## ENERGY CONSUMPTION REDUCTIONS



### Pilgrim Road and Tomahawk Heat Reuse

The completion of a new powder coat line that uses residual heat for baking ovens to warm the water for the powder coat washers has increased our energy efficiency. This new line has reduced our consumption of natural gas from a baseline of 30 MMCF to 28 MMCF, a reduction of 7%. In addition, the Tomahawk facility is installing a new paint line which will incorporate the recirculation of already heated air during the winter months.

### Kansas City and Tomahawk Lighting Retrofits

In order to improve energy consumption, the exterior building lighting (metal halide lamps) at our Kansas City plant were retrofitted with high efficiency LED lamps. Inside the building, the high power consuming T12 fluorescent lighting in the Frame and Clear powder paint areas were retrofitted with high efficiency T5 lighting. At Tomahawk, efforts continued to convert interior lighting from high pressure halides to T8 fluorescent lighting.

The move to LED lighting resulted in an estimated energy reduction of 76% over the existing lighting with a corresponding estimated annual cost savings of nearly \$18,000.



*Exterior Roof line LED  
Building Illumination*



*Exterior Ground Level LED  
Building Illumination*

The move from T12 to T5 lamps in the Frame and Clear Powder paint areas is estimated to result in energy reduction of 51% over the existing lighting with a corresponding estimated annual cost savings of over \$9,000.



### York Automatic Lighting Control Project

The automatic internal/external lighting control project reduces the consumption/usage of electricity by facilitating automatic shutoff for lighting during unoccupied periods and utilizing programmable controls for interior and exterior lighting systems. The project provides the facility with a robust system that can be manually or automatically controlled to only provide lighting as necessary for safe operations in specific areas of the facility. Harley-Davidson estimates the project will provide a reduction of approximately 513,000 kwh in electricity usage annually. The projected cost savings is \$40,000 annually.

## OTHER PROJECTS

### York Tour Bus Parking

The addition of the bus parking spaces reduces emissions by allowing buses to stage within sight of the Tour Center's entrance, eliminating the need to idle while waiting for guests to depart. In addition, indirect benefits were realized through the reduction of single occupant vehicle trips (reducing emissions and fuel consumption) and the associated demand for dedicated parking facilities. Previously buses would need to idle and/or circulate the parking area if sufficient parking was not available and/or to provide prompt service to their tour groups. The dedicated bus parking spaces eliminate this need, resulting in reduced greenhouse gas emissions and fuel consumption.

### Printer / Copier Deployment

Printer/copiers at the York campus were replaced with fewer, multi-functional printers, utilizing the standard corporate hardware and supplier. This print strategy reduced the York facility to under 25 multi-functional devices from approximately 115 devices. In addition to the cost savings from reducing the number of units, the program further reduces ink usage and paper generation. All units throughout the company have been configured to default to print black and white and print 2-sided.

### Kansas City Electric Vehicle Supply Equipment (EVSE)

The Kansas City plant was among a group of entities selected in the Kansas City metro area to receive electric vehicle supply equipment (EVSE) through a U.S. Department of Energy grant. The EVSE is installed and operational and is located in the motorcycle parking in the south employee parking lot near the tour center. The EVSE is capable of charging at both Level 1 (110V) and Level 2 (220V) capacities. The general public (including all plant personnel) is permitted to use the EVSE at any time at no charge through the end of 2013.



### Leading Local Sustainability Business Organizations

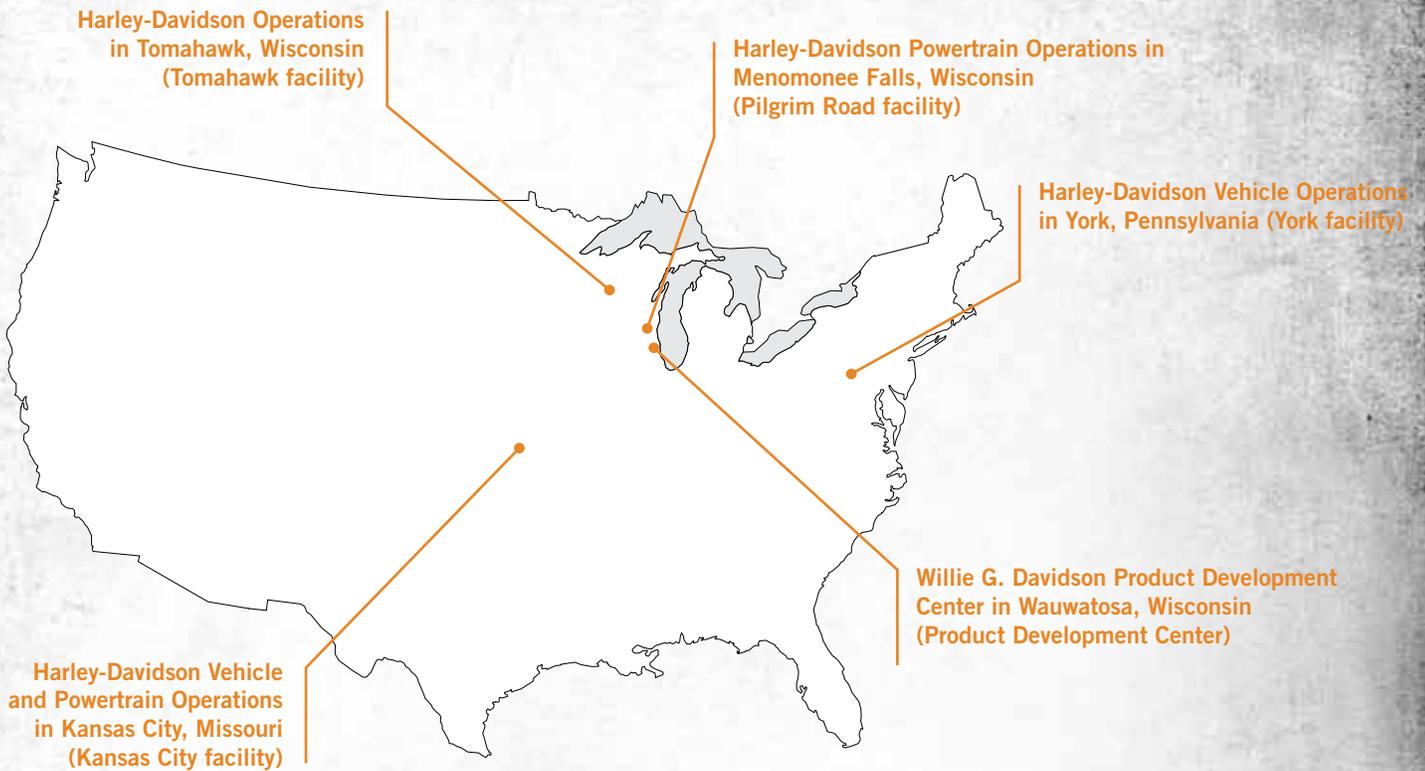
The Kansas City plant has been a staunch community advocate of the sustainability not-for-profit organization Bridging the Gap (BTG). Through our affiliation with BTG, we were a founding member of the Environmental Excellence Business Network (EEBN) and a participant in the Kansas City Regional By-Product Synergy (BPS) Initiative. In 2011, Bruce Bowers, Kansas City Environmental Manager, was asked by Bridging the Gap and the City of Joplin to present a summary of BPS successes from the KC By-Product Synergy Initiative.

Along with Hallmark, Kansas City Power & Light (KCPL), Boulevard Brewing Company, and others, H-D KC was a founding member of the EEBN. The EEBN is a network of environmental professionals and business people who all share a common goal: making sustainable business decisions that protect our natural resources and make good business sense. The Kansas City plant has hosted several EEBN events where our sustainability and environmental initiatives have been highlighted.

# EMISSIONS DATA



**H**ARLEY-DAVIDSON MOTOR COMPANY OPERATES FOUR U.S. MANUFACTURING FACILITIES AND ONE RESEARCH AND DEVELOPMENT FACILITY, AS OF DECEMBER 31, 2011:



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 almost 1,000,000 square feet at our Pilgrim Road facility. (Harley-Davidson also operates two 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 these U.S. facilities (primarily natural gas and secondarily electricity). The combined consumption of energy at these facilities resulted in approximately 42,000 metric tons of direct (Scope 1) GHG emissions in 2011. In addition, these facilities used 196,229,893 KWH of electricity, which corresponds to 130,518 metric tons CO<sub>2</sub>e of indirect (Scope 2) 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 GHG emissions. As part of this effort, Harley-Davidson Motor Company has compiled Scope 1 GHG data for the years 2004 through 2011 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 yet included in the GHG data.

## DIRECT EMISSIONS FROM MANUFACTURING 2004-2011

Harley-Davidson follows the GHG Protocol Corporate Standard. The protocol was prepared by a multi-stakeholder partnership of businesses, nongovernmental 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 quantified as CO<sub>2</sub> equivalents (CO<sub>2</sub>e). Our GHG data consists of direct emission sources (Scope 1) from manufacturing and research and development facilities. For 2011, as noted above, we are also reporting our GHG emissions from indirect sources (i.e., purchased electricity (Scope 2)). Indirect value chain emissions from transportation, purchased materials and the like (Scope 3) are not evaluated at this time. GHG estimates for emissions from operation of individual motorcycles are also not included in the information reported here.

The primary GHG in our Scope 1 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 42,152 metric tons in 2011.

As a result of decreased motorcycle production, Harley-Davidson's energy reduction projects, reductions in the operational footprint at our Wisconsin powertrain operations and York facility, and other factors, GHG emissions have been reduced in our manufacturing operations by a total of 105,915 metric tons over the 2005-2011 time period, as compared to what would have been emitted had Scope 1 GHG emissions remained at 2004 levels.

## HARLEY-DAVIDSON MOTOR COMPANY SCOPE I GREENHOUSE GAS EMISSIONS



# 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 affect the motorcycle industry.

Notably, in December 2011 at the United Nations sponsored meeting in Durban, South Africa, almost 200 countries agreed to draft a new global emissions treaty by 2015. The three largest emitters of greenhouse gases – the United States, China and India – all agreed to be legally bound to reduce their emissions.

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 EMISSIONS REGULATIONS**

No federal legislation regulating greenhouse gas emissions has yet been enacted in the U.S. Past proposed bills have contained vehicle performance standards applicable to motorcycles, along with a cap and trade system for GHG emissions. Such legislation would require changes to Harley-Davidson's manufacturing facilities. More recently, the U.S. EPA took direct action to regulate GHG emissions, specifically proposing rules to require permitting of GHG emissions and to restrict GHG emissions from new light-duty vehicles and new power plants. The ultimate fate of these rules will foretell the shape of GHG regulation in the United States, and could ultimately impact Harley-Davidson's operations.

### **U.S. EPA Reporting Rule**

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.

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. U.S. EPA's CO<sub>2</sub> database may in the future be used to implement CO<sub>2</sub> fuel economy standards for motorcycles.

### **U.S. EPA Endangerment Finding**

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 establish the basis for the U.S. EPA's position that GHGs are a threat to public health and welfare. The immediate effect of the findings was 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, and a decision is anticipated later in 2012.

### **U.S. EPA and NHTSA Tailpipe Rule**

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) subsequently issued a light-duty vehicle rule (the “Tailpipe Rule”) that, while not directly applicable to motorcycles, was the first federal rulemaking regulating GHG emissions. The model underlying this rulemaking is not readily applicable to motorcycles and we will continue to monitor and comment as appropriate on regulatory developments.

### **U.S. EPA Tailoring Rule**

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 stationary sources of GHGs (e.g., emissions sources at power plants, manufacturing facilities, etc.) 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 for large sources. Although these rules have also been challenged in federal court, 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 EMISSIONS INITIATIVES

There were no significant legislative or regulatory developments in 2011 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 Wisconsin Department of Natural Resources.

Missouri did not sign the Midwest Greenhouse Gas Accord. Missouri has not considered greenhouse gas regulations or legislation.

In past years, Pennsylvania has pursued several means of regulating GHG emissions. 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 GHG emissions. 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. Pennsylvania is 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 that go into effect over the next couple of years. Also, CO<sub>2</sub> outputs for motor vehicles in grams per kilometer (g/km) are linked to taxation and registration requirements in Spain. Significant work remains to be done on the new EU framework for motorcycle certification, putting the current effective date of January 1, 2014 (revised from 2013) at risk.

In addition to on-vehicle labeling for consumers, "corporate averaging" of CO<sub>2</sub> output (g/km) across product lines may 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 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 emissions (hydrocarbons and NOx for example), rigorous technical challenges emerge for vehicle manufacturers. Therefore, additional development and research are required to find ways to simultaneously improve efficiency and reduce CO<sub>2</sub> and other emissions. This may require motorcycle manufacturers to develop and adapt the types of advanced technologies that are often employed in the automotive sector. 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 ultimately lead to regulation of lower tailpipe emission limits for motorcycles. 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 Harley-Davidson's 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 our motorcycles. Supply disruptions raise market rates and jeopardize the continuity of our manufacturing production. Harley-Davidson has taken numerous steps to minimize the risk of production interruptions.



