SUSTAINABILITY REPORT
WE PRESERVE AND RENEW THE FREEDOM TO RIDE

2015
LETTER FROM LEADERSHIP

At Harley-Davidson, our Sustainability Vision is simple - We preserve and renew the freedom to ride. This vision was born out of our purpose to fulfill dreams of personal freedom.

As a company with a 113-year legacy, we think in generational terms. Our legacy is far more than the path we’ve walked - it’s the path we’re on. We are passionate about making a difference in society and preserving one key reason people ride – to experience and be immersed in the beauty of our natural environment. This is why sustainability is so important at Harley-Davidson.

Our Sustainability Strategy is long-term and right now. It is about making a difference on environmental impacts and social causes today, always with an eye to a better future.

Our focus is on reducing our environmental impact across our entire value chain, from our design decisions and material selections to how our suppliers process raw materials and how we manage our factories. It encompasses how our dealers help protect the environment and what happens to motorcycles after many years of miles and smiles. That's why we are committed to:

• Investing in innovative new technologies, manufacturing processes and products that continue to lower our environmental impact – generating less waste, using less energy and creating fewer greenhouse gases
• Engaging customers and dealers in causes that preserve and renew the great outdoors for future generations through, for example, a partnership with The Nature Conservancy and our Renew the Ride program of tree planting across the globe
• Partnering with suppliers to implement processes and utilize alternate materials that reduce waste and energy consumption

We are also strengthening and expanding our collective reach for meaningful social improvements by:

• Investing in the vitality of communities that are home to Harley-Davidson’s operations across the globe, focusing on the issues of health, education and the environment
• Enabling the charitable spirit of our employees, suppliers, dealers and customers through giving and volunteer opportunities that make a difference in people’s lives

Together, and with passion, the family that is Harley-Davidson across the world is driving our tremendous legacy forward by embracing the obligation to preserve and renew the freedom to ride for generations to come.

Thank you for your interest in Harley-Davidson and our sustainability efforts.

Sincerely,

Matt Levatich
President and CEO of Harley-Davidson, Inc.
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INTRODUCTION
For Harley-Davidson,

**SUSTAINABILITY MEANS THINKING DIFFERENTLY TO PRESERVE AND RENEW OUR COMPANY FOR LONG-TERM SUCCESS.**

We are passionate about future generations of riders sharing the Harley-Davidson experience we enjoy. Our purpose is clear:

**WE FULFILL DREAMS OF PERSONAL FREEDOM.**

And from that our sustainability vision is simple:

**WE PRESERVE AND RENEW THE FREEDOM TO RIDE.**

<table>
<thead>
<tr>
<th>We Preserve and Renew the Freedom to Ride</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Environmental Sustainability Strategy</strong></td>
</tr>
<tr>
<td>Waste Reduction and Recycling</td>
</tr>
<tr>
<td>Energy Efficiency</td>
</tr>
<tr>
<td>Resource Conservation</td>
</tr>
</tbody>
</table>

Our sustainability vision encourages all Harley-Davidson employees to understand and embrace the challenge and opportunity of sustainability. We want future generations to enjoy the riding experiences we enjoy. Delivering those experiences means preserving and renewing our brand for the future.

Harley-Davidson is implementing actions to support our areas of focus for environmental and social sustainability across our entire business. Our integrated approach to embedding sustainability across the company is led by our internal executive sustainability advisory committee with oversight from the Sustainability Committee of our Board of Directors.
REDUCING OUR ENVIRONMENTAL IMPACT
Harley-Davidson establishes annual targets for waste and energy at its manufacturing facilities, seeking continuous improvement year over year. Our other facilities have started establishing improvement targets as well, with an initial emphasis on improving recycling rates. Environmental data for waste, energy, water and other factors is reported in the Environmental Data section of this report (Section 4).

**REDUCING WASTE TO LANDFILL AND IMPROVING RECYCLING**

For our U.S. manufacturing operations, we have an aspirational goal of zero waste to landfill with a 2016 target of less than 5% waste to landfill and being virtually zero (less than 2%) by 2022. For 2015, we achieved our goal of ≤6% waste to landfill, improving on the prior year’s 7.9% performance.

2015 highlights include:
- A composting program for cafeteria generated waste at our Juneau Avenue headquarters, Willie G. Davidson Product Development Center and Powertrain Operations - Pilgrim Road
- Full implementation of the near net forging project for gear parts (discussed in 2014 report); reducing the amount of steel turnings per engine by 1.43 lbs at our Powertrain Operations - Pilgrim Road facility
- Expanding GTX recycling at Tomahawk Operations, with an estimated impact of reducing landfill disposal by 36,000 pounds per month
- Reusable cup discount programs at our Milwaukee-area facilities. Powertrain Operations - Pilgrim Road saved ~36,000 paper coffee cups in 2015
- Vehicle Operations - York reduced its % to landfill from 3.0% in 2014 to 2.4% in 2015 by diverting wastewater treatment plant sludge and fender dampening material to a waste to energy (WTE) facility
- Vehicle Operations - York donated more than 45,000 pounds of furniture and equipment to five different non-profit organizations
- Vehicle and Powertrain Operations - Kansas City secured landfill alternatives for all production and industrial/general waste and is consistently zero waste to landfill (not including episodic construction/demolition wastes)
- At HDFS, about 30% of our customers enrolled in electronic billing, saving paper and reducing our environmental footprint. We have set a target of 50% electronic billing by the end of 2016. Similarly, electronic signatures significantly reduce paper usage. Today, at Harley-Davidson Financial Services, approximately 80% of contracts submitted by dealers are e-signed

**REDUCING ENERGY CONSUMPTION**

Harley-Davidson’s U.S. manufacturing plants joined the Department of Energy’s Better Buildings Better Plants program in 2013, making the pledge to reduce our energy intensity 25% by 2022. Through 2015, we have achieved just over a 5% reduction, with 2015 results relatively flat to 2014. To make continued progress against this goal:
- Replaced parking lot, roadway, and exterior building lighting fixtures with LED lighting at the Willie G. Davidson Product Development Center, installed LED lighting throughout the Powertrain Operations - Pilgrim Road facility and upgraded from fluorescent to LED at the Kansas City office areas
- Upgraded electrical monitoring system at the Powertrain Operations - Pilgrim Road facility to enable consumption analysis and reporting in Powertrain Operations - Pilgrim Road facility
- Implemented a project to eliminate operation of two 125-hp pumps
- The York factory replaced two larger boilers with three smaller more efficient boilers with an expected 30% reduction in energy consumption, and completed its chiller replacement project with an estimated 20% improvement in energy usage
- Completed second phase of project to replace aged, inefficient air compressors at the Vehicle and Powertrain Operations - Kansas City facility with new compressors
NEW PRODUCTS

Preserving the riding environment is important to us. That’s why we’re developing products that address environmental issues while providing the kind of visceral, no-excuses riding experience our customers expect.

The Street 500 motorcycle, launched in 2014, continues to deliver the best fuel economy of any motorcycle within our product offerings - featuring combined city/highway fuel economy of 64 miles per gallon. The Street 750 also provides 50 miles per gallon for combined city/highway.¹

Over the last five years, we have deployed technologies, primarily calibrations, to reduce CO₂ emissions across all of our motorcycles. As a result, from 2011 to 2015 the average CO₂ emitted per mile per new motorcycle sold decreased approximately 4%.

In addition, our first electric motorcycle – Project LiveWire™ was unveiled in June 2014. Through the Project LiveWire Experience tour that ran through 2015, nearly 30,000 customers provided feedback on this groundbreaking new motorcycle. This includes more than 11,000 people who took demo rides. While not for sale, Project LiveWire was designed to capture riders’ expectations of an electric Harley-Davidson® motorcycle.

We know there is a strong future for our traditional products. An electric Harley-Davidson® motorcycle is one of the ways we are exploring how to grow the diverse family of Harley-Davidson riders while helping preserve and renew the freedom to ride in our long term approach to sustainability.

¹. Estimated from fuel economy tests on a sample motorcycle from the corresponding family conducted by Harley-Davidson under ideal laboratory conditions. Not all motorcycle models undergo fuel economy testing. Fuel economy and mileage may vary among motorcycle models within a family. Your mileage may vary depending on your personal riding habits, weather conditions, trip length, vehicle condition and vehicle configuration and other conditions. Break-in mileage may vary]
3

IMPROVING OUR SOCIAL IMPACT
To achieve our social sustainability goals, we are focused on creating a positive social impact on communities globally that are home to Harley-Davidson operations. We’re also expanding the reach and impact of customers and dealers on social issues essential to the business.

**STRENGTHENING COMMUNITIES HOME TO COMPANY OPERATIONS**

In 2015, The Harley-Davidson Foundation contributed more than $3.7 million to support local communities aligned with our focus areas of health, education, and environment.

Harley-Davidson employees and the Harley-Davidson Foundation contributed more than $1.4 million to United Way in 2015. United Way is a global organization that works to improve lives by mobilizing the caring power of communities, focusing on improving education, helping people achieve financial stability, and promoting healthy lives.

### THE HARLEY-DAVIDSON FOUNDATION AND HARLEY-DAVIDSON EMPLOYEE UNITED WAY CONTRIBUTIONS

<table>
<thead>
<tr>
<th>Year</th>
<th>Foundation Contributions</th>
<th>Employee Contributions</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>$1,257,297</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>$1,367,011</td>
<td>$1,374,862</td>
</tr>
<tr>
<td>2012</td>
<td>$1,504,188</td>
<td>$1,541,257</td>
</tr>
<tr>
<td>2013</td>
<td>$1,541,257</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td></td>
<td>$1,439,729</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Harley-Davidson Foundation’s support of the Milwaukee-area Hunger Task Force is a great example of our commitment to local communities. In 2013, Harley-Davidson formed a partnership with Hunger Task Force that includes a $2.475 million donation from The Harley-Davidson Foundation over the next three years to fund the continued operation of the Hunger Task Force Farm in Franklin, Wisc. The farm grows vegetables and fruits on 139 acres of farmland, six acres of orchards and 20 acres of tree nursery. The food grown is delivered to food pantries, soup kitchens and senior centers in Southeastern Wisconsin.
EXPANDING THE REACH AND IMPACT OF CUSTOMERS AND DEALERS

Harley-Davidson’s base of customers, dealers and fans generates tremendous support for social issues core to the business. The company has key partnership programs to drive significant benefits for health, education and the environment.

**Health: Muscular Dystrophy Association Results**

One of Harley-Davidson’s long-standing partnerships is with the Muscular Dystrophy Association, the world’s leading nonprofit health agency dedicated to finding treatments and cures for muscular dystrophy, amyotrophic lateral sclerosis (ALS) and other neuromuscular diseases. Since 1980, Harley-Davidson’s family of dealers, customers, employees, suppliers and H.O.G. chapters has raised more than $96 million for kids and adults living with muscular dystrophy and related muscle diseases.

A total of more than $3 million was donated to MDA in 2015 by Harley-Davidson’s family of stakeholders. The annual Milwaukee Black-N-Blue Ball, which attracted a crowd of 1,300 guests, raised more than $915,000.

**Health: Operation Personal Freedom**

About one-third of new H-D® motorcycle sales in the U.S. are to veterans. We are proud to support them in their quest for strength, freedom and independence.

The Operation Personal Freedom program features a Harley-Davidson MotorClothes collection with 10% of the sales supporting Wounded Warrior Project® efforts and various dealer events across the country focused on welcoming and celebrating our military heroes. As part of the company’s nearly 100 years of support to the men and women who defend our country and our freedom, in 2014 we announced an alliance with Wounded Warrior Project that focuses on raising awareness of post-traumatic stress disorder.

In 2015, a total of more than $1.1 million was donated to Wounded Warrior Project from Harley-Davidson Motor Company, dealers, customers, and The Harley-Davidson Foundation.

In addition to donations, 10,300 qualified members of the military (active and veteran) were trained to ride through the Learn to Ride for Free program. This offer will continue into 2016 for current and former members of the U.S. military and First Responders (Police, Fire and EMS).

For more information visit [h-d.com/americanheroes](http://h-d.com/americanheroes)
Health: Pink Label

Inspired by the countless riders and passengers we have met on the road who have been impacted by breast cancer, Harley-Davidson developed the Pink Label collection of riding gear and apparel. Year-round, 3% of each Pink Label item sold is donated to breast cancer support organizations. In 2015, more than $500,000 was donated to our three partners: the National Breast Cancer Foundation, Young Survival Coalition and ABCD: After Breast Cancer Diagnosis. Each of these organizations offers national reach, a solid reputation and a distinct approach to providing empowerment and support to those facing breast cancer, including free online tools, helplines and face-to-face mentoring. Since the inception of the Pink Label program, Harley-Davidson Motor Company and its dealers have donated more than $1.8 million to breast cancer support organizations committed to providing empowerment and support to those facing and recovering from breast cancer.
**Environment: Renew the Ride™**

The Harley-Davidson Renew the Ride™ program gives dealers, customers, employees and other stakeholders a way to support the environment through activities such as tree planting and donations to The Nature Conservancy’s Plant a Billion Trees program.

Harley-Davidson has a goal of planting 50 million trees worldwide by 2025. This goal will be met by rallying the Harley-Davidson community to protect the great outdoors, because the environment is key to our sport of motorcycling.

Through the end of 2015, we supported the planting of more than 400,000 trees in the United States, Brazil and China through collaboration with The Nature Conservancy.

In 2015, Harley-Davidson employees in Carson City, NV and York, PA participated in motorcycle rides and raised money to help plant more than 300 trees.

A collection of Renew the Ride T-shirts is available in the United States with a portion of the proceeds going to plant trees.

For more information, please visit [www.harley-davidson.com/renewtheride](http://www.harley-davidson.com/renewtheride).
ENVIRONMENTAL DATA
Harley-Davidson Motor Company operates four U.S. manufacturing facilities and one research and development facility. Environmental data from these facilities are included in all of the metrics reported here.

With this report, we are providing environmental data from 2010-2015 on energy consumption, Scope 1 and 2 greenhouse gas emissions, waste generation and recycling, water consumption and environmental compliance (fines and penalties). These facilities account for the majority of our operational environmental impacts and environmental data for these facilities have been tracked since at least 2008.

These facilities manufacture and assemble motorcycle engines, transmissions and components and perform final vehicle assembly. They range in size from approximately 100,000 square feet at the Tomahawk facility to almost 1,000,000 square feet at the Pilgrim Road facility. The U.S. manufacturing and R&D facilities identified above were included in our original emissions calculations, and that scope has been maintained for all of the 2010-2015 data reported here. While not included at this time in our reported data, Harley-Davidson also operates two lower volume assembly facilities in Brazil and India, and a wheel manufacturing subsidiary plant in Australia. Also not included are the Harley-Davidson, Inc. corporate headquarters in Milwaukee, as well as the Harley-Davidson Financial Services facilities and all sales offices and international subsidiary offices, the majority of which are leased.1

1 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 data. Scope 2 emissions factors for the 2012 and 2013 calculations are from the 8th ed., Version 1.0 Subregion File (Year 2009 data), and prior to that the eGRID2010 was utilized for 2010-2013 and Scope 1 emissions factors for CO2, CH4 and N2O from combustion of gasoline, diesel and natural gas were obtained from the default list of values in Table 1 of the WRI GHG Protocol, Version 3.0 (Dec. 2007). For 2014, factors are taken from the eGrid 9th ed. (2014) Version 1.0 Subregion File (Year 2010 data) and 40 CFR pt 98 Tables A-1, C-1 and C-2. And for 2015 the eGRID2012 (October 2015) factors were applied.
ENERGY & GREENHOUSE GASES EMISSIONS

The majority of greenhouse gas (GHG) emissions associated with these Harley-Davidson facilities are related to energy use (natural gas and electricity). In this section, we report the energy consumed (in GJ) by the U.S. facilities identified above and the resulting direct (Scope 1) and indirect (Scope 2) GHG emissions, as further described below. Indirect value chain emissions from transportation, purchased materials, etc. (Scope 3) are not currently evaluated. GHG estimates for emissions from company and consumer use and operation of individual motorcycles are also not included in the information reported here.

Within the organizational and operational boundaries described above, Harley-Davidson reports information on emissions of three GHGs: carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O), all quantified as CO₂ equivalents (CO₂e). (Emissions associated with refrigerants (fugitive) and propane (e.g., forklifts, testing backup system) are not calculated; emissions associated with gasoline combustion for final vehicle testing at our vehicle assembly plants are included.)

The primary GHG in our reported Scope 1 data are CO₂ 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 36,058 in 2015.
ENERGY & GREENHOUSE GASES EMISSIONS

Energy Consumption

(Energy Consumption)

<table>
<thead>
<tr>
<th>(GJ)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELECTRICITY</td>
<td>738,830</td>
<td>702,906</td>
<td>656,285</td>
<td>660,528</td>
<td>690,118</td>
<td>652,831</td>
</tr>
<tr>
<td>NATURAL GAS</td>
<td>818,625</td>
<td>746,878</td>
<td>642,258</td>
<td>718,702</td>
<td>748,970</td>
<td>709,280</td>
</tr>
<tr>
<td>FUELS</td>
<td>8,154</td>
<td>6,853</td>
<td>7,192</td>
<td>5,916</td>
<td>4,769</td>
<td>5,119</td>
</tr>
<tr>
<td>TOTAL</td>
<td>1,565,609</td>
<td>1,456,637</td>
<td>1,305,735</td>
<td>1,385,146</td>
<td>1,443,858</td>
<td>1,367,230</td>
</tr>
</tbody>
</table>

Direct (Scope 1) & Indirect (Scope 2) GHG Emissions

(Direct (Scope 1) & Indirect (Scope 2) GHG Emissions)

<table>
<thead>
<tr>
<th>(tCO₂e)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCOPE 1</td>
<td>46,184</td>
<td>42,152</td>
<td>36,987</td>
<td>40,738</td>
<td>38,012</td>
<td>36,058</td>
</tr>
<tr>
<td>SCOPE 2</td>
<td>127,444</td>
<td>124,318</td>
<td>120,547</td>
<td>120,591</td>
<td>128,926</td>
<td>110,976</td>
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<tr>
<td>TOTAL</td>
<td>173,628</td>
<td>166,470</td>
<td>157,534</td>
<td>161,329</td>
<td>166,938</td>
<td>147,034</td>
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</tbody>
</table>

WASTE GENERATION & RECYCLING

(Waste Generation & Recycling)

<table>
<thead>
<tr>
<th>(tonnes)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL WASTE</td>
<td>16,859</td>
<td>14,628</td>
<td>12,373</td>
<td>14,043</td>
<td>14,584</td>
<td>16,843</td>
</tr>
<tr>
<td>RECYCLED</td>
<td>13,586</td>
<td>12,148</td>
<td>10,563</td>
<td>12,091</td>
<td>12,494</td>
<td>14,737</td>
</tr>
<tr>
<td>% RECYCLED</td>
<td>81%</td>
<td>83%</td>
<td>85%</td>
<td>86%</td>
<td>86%</td>
<td>87.5%</td>
</tr>
<tr>
<td>% TO LANDFILL</td>
<td>-</td>
<td>-</td>
<td>13%</td>
<td>9.4%</td>
<td>7.9%</td>
<td>6.0%</td>
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OTHER ENVIRONMENTAL DATA

(Other Environmental Data)

Water Consumption

(Water Consumption)

<table>
<thead>
<tr>
<th>(m³)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>WATER</td>
<td>482,056</td>
<td>367,193</td>
<td>349,610</td>
<td>387,946</td>
<td>294,599</td>
<td>315,784</td>
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</table>

Environmental Fines & Penalties Assessed

(Environmental Fines & Penalties Assessed)

<table>
<thead>
<tr>
<th>(US$)</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>FINES/PENALTIES</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
Regulation designed to address climate change, particularly GHGs like CO₂, is expected to increase significantly in the next 5 to 10 years. While regulations 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 2015 after four years of negotiations, the parties to the U.N. Framework Convention on Climate Change reached agreement at the 21st Conference of the Parties (COP 21) held in Paris, France, thus fulfilling the commitment made in 2011 by nearly 200 countries to draft a new global emissions treaty by the end of 2015. This section describes the Paris Agreement as well as pertinent GHG regulations in the U.S., the European Union and Japan.

PARIS AGREEMENT (COP 21)

The Paris Agreement and associated decisions reaffirm the previously stated goal of limiting global temperature increase to below 2 degrees Celsius (while urging efforts to keep below 1.5 degrees), establishes binding commitments by all parties to make “nationally determined contributions” and pursue domestic measures to achieve them, commits the countries to regularly report on their emissions and progress, and requires the parties to engage in international emissions trading, among other decisions and commitments. Prior to the conference, more than 180 countries (producing more than 90% of global emissions) had submitted intended nationally determined contributions. All countries are required to submit emissions inventories (every two years), and a global stocktake to assess collective progress toward meeting the agreement’s long term goals will take place in 2023.

The Paris Agreement is open for signature beginning April 22, 2016. Each country must express its consent to be bound through the applicable formal approval process to then be a party to the agreement. The agreement then becomes enforceable when at least 55 countries accounting for at least 55% of global emissions approve it.

A significant difference between COP 21 and prior meetings was the active involvement of non-state participants. During a side summit, the Mayor of Paris and the former Mayor of New York, Michael Bloomberg, announced the collective commitments of more than 350 cities will deliver over half of the world’s potential urban emissions reductions by 2020. A portal established by host country France currently has more than 11,000 commitments registered – including more than 2,250 cities and more than 2,000 companies, including many railway, airline and transport companies. The commitments can be reviewed at climateaction.unfccc.int.

The United Nations General Assembly, in its 2030 Agenda for Transforming the World adopted 17 Sustainable Development Goals (September 2015), noting that the United Nations Framework Convention on Climate Change is the primary international, intergovernmental forum for negotiating the global response to climate change. Goal #13 is to “take urgent action to combat climate change and its impacts.” (For context, note that Goal #1 is to “end poverty in all its forms everywhere.”)

The United States committed to reducing its greenhouse gases by 26-28% below 2005 levels by 2025 and to double grant-based public financing for climate adaptation efforts by 2020 (as of 2014 the U.S. invested more than $400 million per year). As the transportation sector accounts for approximately 27 percent of U.S. emissions, it is likely fuel economy standards for automobiles will be tightened, and potentially also for motorcycles.
U.S. GREENHOUSE GAS EMISSIONS REGULATIONS

No federal legislation limiting greenhouse gas emissions in the motorcycle industry 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. The U.S. EPA has taken direct action to regulate GHG emissions, specifically issuing rules to require permitting of GHG emissions and to restrict GHG emission from new light-duty vehicles and new power plants (motorcycles are not included within these rules).

**U.S. EPA Reporting Rules**

In October 2009, the U.S. EPA issued a reporting rule requiring certain sources begin tracking emissions for six GHG pollutants, including carbon dioxide (CO$_2$), methane (CH$_4$), and nitrous oxide (N$_2$O), beginning Jan. 1, 2011. Currently, no Harley-Davidson facilities meet the requirements for reporting. Similarly no state regulations apply to Harley-Davidson facilities currently. Engine emissions reporting was required for CO$_2$ beginning with model year 2011, with CH$_4$ added for model year 2012 and N$_2$O for model year 2013. This reporting is folded into the existing engine emissions certification process under the Clean Air Act.

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

The U.S. EPA and the National Highway Traffic Safety Administration issued a light-duty vehicle rule (the Tailpipe Rule) that, while not applicable to motorcycles, was the first federal rulemaking regulating GHG emissions. In October 2012 the second phase of the Tailpipe Rule was issued with 2025 targets for light duty vehicles of 150g/km CO$_2$ and 50mpg. The model underlying this rulemaking is not readily applicable to motorcycles; however, U.S. EPA data indicate that the contribution of motorcycles to CO$_2$ from all mobile sources is on the order of 0.1%.

INTERNATIONAL DEVELOPMENTS

Harley-Davidson motorcycles are sold worldwide and international regulations impact our business. The European Union and some Asia/Pacific and Latin American countries have promulgated and are in the process of implementing CO$_2$ efficiency and fuel consumption labeling regulations. Also, CO$_2$ outputs for motor vehicles in grams per kilometer (g/km) are linked to taxation and registration requirements in Spain.

In 2012, the European Parliament and the Council of the European Union reached an agreement on the approval of regulations establishing GHG labeling (CO$_2$ emissions and fuel consumption) and more stringent emissions targets for motorcycles. Under these regulations, certain emissions limits will become applicable in 2016 for new type approvals and 2017 for all vehicles, and other limitations will become applicable by 2020 for all new type approvals and 2021 for all vehicles. Several other markets, including China, India, and other Asian and Latin American markets, are now actively considering following or adapting to the direction established by the EU.

Taiwan remains unique and updated its fuel economy regulations for motorcycles for 2015-2017. India has initiated preliminary discussions on fuel economy.
COMMERCIAL RISKS AND CHALLENGES

Because the implementation of a specific CO$_2$ 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$_2$ and other emissions. This may require motorcycle manufacturers to develop and adapt the types of advanced technologies employed in the products, requiring new and innovative motorcycle designs.

Concerns over climate change are expected to ultimately lead to further regulation of lower tailpipe emission limits for motorcycles. In addition, energy security and availability and its related costs affect all aspects of Harley-Davidson’s manufacturing operations, including our supply chain. This may have an adverse effect on the cost to manufacture motorcycles. We have several facilities with rich histories (some more than 50 years old) in Wisconsin and 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 risk 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.