



Greenhouse gas  
emissions regulations:  
the automakers disclose to investors  
February 2016

A joint report by ShareAction and InfluenceMap



# Greenhouse gas emissions regulations:

## The automotive makers disclose to investors

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## Summary

*In the wake of the VW scandal – which saw huge losses to shareholder value – a group of investors with over £625bn in assets under management [queried the largest automotive manufacturers](#)<sup>1</sup> on issues related to climate risk to their businesses, in particular, critical greenhouse gas emissions standards evolving in the US and the EU. This initiative was coordinated by UK non-profits ShareAction and InfluenceMap. This report reviews the responses received from the companies, outlining where further information could be requested, and offers recommendations for how investors could incorporate this issue into a broader strategy for managing climate risk.*

- In the four months since writing to the CEOs of the automakers on behalf of investors, and interspersed with reminders, Nissan/Renault, PSA Peugeot Citroen and Ford offered no response whatsoever. This inability to communicate on crucial, risk-relevant information is highly concerning. VW provided no reference to its recent emissions testing scandal in its response.
- Corporate lobbying and the relationship between companies and regulators forms part of a larger picture of a firm's approach to climate risk management. Public policy intervention can be a good indicator of the overall health of a company's governance of climate risk as it signals where the companies' perceived interests lie. For instance, an automaker committed to the low carbon transition and seeking to invest heavily in zero-carbon technology is unlikely to be advocating for looser emission rules.
- Daimler offered a one-line assurance on the issue of whether the company may be engaged in emissions testing irregularities: "there is no reason to be concerned". This is despite the fact that Daimler ranked 13<sup>th</sup> out of 15 for EU CO2 fleet emissions in 2014 and has, along with other European importers of high performance vehicles, routinely paid fines to the US government in lieu of compliance with CAFE standards.<sup>2</sup>
- Given the [personal views of the head of the California Air Resources Bureau](#)'s that the State should aim 100% electric vehicles sales by 2030, investors may be interested in how certain automakers without well-defined zero or low emission vehicle programmes would transition to a majority ZEV (zero emission vehicle) fleet in the 2030-2035 time frame. This question could apply to Daimler, Honda, Ford and FCA as makers without clear ZEV strategies at present.

<sup>1</sup> [Reuters, October 2015](#)

<sup>2</sup> [National Transportation Safety Board](#), data from 2014





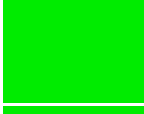






California's actions are significant due to the state's vehicle market size and its historic role as bell-weather for future US and global regulations on zero and low emission vehicles. Similarly, investors should be interested in how all participants in the US market will comply [with the overall fleet target](#) of 54 mpg for the model year 2025.

- Fiat-Chrysler Automobiles (FCA) offered perhaps the most balanced and informative response to investors, expressing details of its views on the future development of regulations in the EU and the US. However, its response on US CAFE regulations appears to be misaligned with [recent statements by the FCA CEO](#) on how tough future US standards will be to achieve.
- BMW offered views on its ability to reach future CO2 and efficiency targets, noting that this was dependent on its ability to market electric vehicles in both markets. Investors may consider a more detailed engagement with BMW regarding its targets for electric vehicle proliferation (which are important for the US zero emission vehicle (ZEV) rules) and its detailed strategy for compliance with US CAFE efficiency standards and EU CO2 standards.
- General Motors (GM) states its plans to reduce fleet GHG emissions rest on decreasing vehicle weight and engine performance, and provided its views on the development of standards in the EU and the US. GM was the only respondent to specifically answer the question of resource allocations to trade associations (for the purposes of lobbying) although details of any financial allocations were not provided.
- Many of the respondents, when answering the question about policy engagement in the EU on climate issues, simply stated their registration with the [EU Transparency Register](#) on EU-focused lobbying in lieu of providing details to the specific questions. However, the EU Transparency Register does not ask for nor require details about companies' engagement with or support for specific policies. The information contained in its responses is therefore not specific enough to gauge the nature of a company's engagement with climate policy.
- The role of the [European Automobile Manufacturer's Association](#) (ACEA) in the effort by automakers in Europe to control GHG emissions regulations is key, and its position is [largely obstructive](#). Indeed, ACEA's activities are likely to be a target of the European Parliament's [enquiries](#)<sup>3</sup> into the evolution and enforcement of NOx and other automotive emissions regulations in the EU. The respondents in our survey (despite all being board members) provided few if any details of ACEA's activities and positions on GHG emissions standards.

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<sup>3</sup> [Reuters, December 16th 2015](#)

## The responses compared

Company	Response Level	Comments on Response to the 2015 <a href="#">ShareAction-InfluenceMap Investor Survey</a> <sup>4</sup>
<a href="#">Honda Motor</a>		Honda provides an informative response that will be a good basis for further discussions by investors.
<a href="#">Fiat Chrysler Automobiles</a>		FCA provides an informative response that will be a good basis for further discussions by investors.
<a href="#">General Motors</a>		GM provides an informative response that will be a good basis for further discussions by investors.
<a href="#">BMW Group</a>		BMW provides an informative response that will be a good basis for further discussions by investors.
<a href="#">Toyota Motor</a>		Toyota provides an informative response that will be a good basis for further discussions by investors.
<a href="#">Volkswagen</a>		VW provides an informative response that will be a good basis for further discussions by investors. It offers no information on its recent scandal.
<a href="#">Daimler</a>		Daimler provides few details and investors should not accept the one line assurance that "there is no reason to be concerned" without elaboration.
<a href="#">Nissan</a> <sup>5</sup>		No response as of end January 2015
<a href="#">Renault</a>		No response as of end January 2015
<a href="#">PSA Peugeot Citroen</a>		No response as of end January 2015
<a href="#">Ford Motor</a>		No response as of end January 2015

 **No response**
 **Brief response**
 **Full response**

<sup>4</sup> A questionnaire on corporate engagement with GHG emissions policy, initiated by ShareAction and InfluenceMap on behalf of 19 investors in October 2015

<sup>5</sup> A single letter was sent to Carlos Ghosn, CEO of both Renault and Nissan and President of ACEA in Oct 2015. The letter was of a different format to the letters to the other automotive companies (see below Detailed Responses)

## Emission regulations: financial risks to investors

Here we outline the key risks to investors in original equipment manufacturers (OEM) automotive companies relating to climate regulations (primarily the greenhouse gas emissions regulations outlined in the Appendix). Indicators of risks are not always apparent from a company's voluntary disclosures, especially for issues such as fraud and obstructive lobbying, where firms are unlikely to disclose the full nature of their activities. A study of corporate culture and behavior towards regulations from a range of data sources is therefore necessary to derive these indicators. The InfluenceMap system is able to do this and has specifically focused on corporate behavior towards climate policy and regulations. The ranking of the automotive companies is [here](#), and an InfluenceMap November 2015 analysis report is [here](#).

### Financial risk of criminal penalties

At the start of 2016, it was revealed that the US Justice Department had ceased negotiations with Volkswagen over the emissions testing fraud and is seeking huge damages of up to \$48 billion, [according to Reuters](#)<sup>6</sup>, with the [Financial Times reporting](#)<sup>7</sup> that the New York Attorney General Eric Schneiderman regards the German automaker as uncooperative and "in denial" with regards to the investigations. While the large US penalty is not yet related to greenhouse gas (GHG) emissions standards fraud there have been [press reports](#)<sup>8</sup> that the company's behavior on emissions standards did indeed extend to EU CO2 testing. Reports of the spread of [emissions testing investigations](#)<sup>9</sup> to Renault on January 14 2016 wiped 20% from its market value in minutes, a stark indicator of how seriously investors view the emissions compliance issue. So far the highest penalty imposed anywhere for GHG-related emissions fraud has been on Hyundai for overstating US CAFE fuel economy claims over several years with the Wall Street Journal reporting the cost to the company at close to \$700 million in 2014.<sup>10</sup>

### Financial risk of non-compliance penalties

Non-compliance penalties are distinct from the much more serious penalties associated with criminal fraud noted above and are often paid routinely by companies in lieu of meeting standards when it comes to environmental compliance (where this option is available, as it is with the US CAFE and EU CO2 standards). Fines paid by the automakers for non-compliance with US Federal regulations have

<sup>6</sup> [Reuters News, January 6th 2016](#)

<sup>7</sup> [Financial Times, January 8th 2016](#)

<sup>8</sup> [Reuters, December 9th 2015](#)

<sup>9</sup> [Bloomberg News, January 14th 2016](#)

<sup>10</sup> [Wall Street Journal, November 2014](#)

been relatively minor (e.g. [less than \\$100 million for the entire industry](#) <sup>11</sup> between 2010-2012). However, in the wake of the Volkswagen scandal political pressure is emerging, particularly in Europe, for a tougher stance on non-compliance. The European Parliament, for example, [is holding enquiries](#) <sup>12</sup> into the evolution and enforcement of emissions regulations in the EU. Investors should look closely at whether the past practice of paying fines in lieu of meeting standards will work in the future.

It is noted that automotive tailpipe GHG emissions account for roughly 12% of the global total and tailpipe emissions regulations are among the most important legislative streams policy makers have in reaching the COP 21 Paris-agreed limit of 1.5C warming. It is likely regulatory pressure will only tighten going forwards and meeting these standards are among the key technical challenges facing the industry.

### Reputational harm

Shareholder suits against Volkswagen and falling vehicle sales in the wake of the scandal indicate reputational damage among investors and consumers alike, with [reports of multi billion dollar suits](#) and up to [15% sales declines in the buoyant US market](#). <sup>13</sup> Forewarnings and signals regarding the threat of potential reputational damage are hard to come by. Clearly corporations will not reveal such brand-harming activities in advance, and traditional environmental indicators do not appear to have picked up this risk in the case of Volkswagen. For example, prior to revelations of the device scandal in September 2015, Volkswagen was identified as an automotive industry group leader in the Dow Jones Sustainability Index, a [position quickly suspended following the scandal](#). <sup>14</sup> It is more likely that a thorough assessment of corporate culture and governance approach towards compliance with emissions standards may offer clues.

### Systemic climate risk issues

Climate change poses a systemic and portfolio-wide risk to investors, who consequently have a clear interest in the creation of a stable policy landscape to help limit global temperature rises and aid the transition towards a low carbon economy. Investors should seek to ensure that investee companies are aligning their public policy interventions with this ambition. In the case of the automotive sector, this specifically means GHG emissions standards. Following the Volkswagen scandal, the IIGCC [wrote to EU policy makers](#) asking for robust GHG emissions testing and standards. Clearly investors with these interests would be highly concerned at automotive OEMs engaging in lobbying against such progress.

<sup>11</sup> [US National Highway and Traffic Safety Administration, 2014](#)

<sup>12</sup> [Reuters, December 16th 2015](#)

<sup>13</sup> [Wall Street Journal, December 11 2015](#)

<sup>14</sup> [Dow Jones S&P Indices, October 2015 Press Release](#)

## Next steps for investors on climate-auto risk

The recent deluge of scandals and investigations surrounding the world's largest automobile companies indicates a need for greater investor scrutiny over the sector. Proactive and forceful stewardship is a mutually beneficial relationship for shareholders to have with investee companies, particularly in cases where a sector is facing issues of strategic significance or risk. Indeed, the automotive sector will face challenges in ensuring strategic resilience as the economy transitions for a low-carbon future. The market-based and regulatory changes necessary for limiting global temperature rises to the international target of *'well below' 2°C, with an ambition for 1.5*<sup>15</sup> pose incisive questions to the current business models of many of the world's largest automakers.

Corporate lobbying and the relationship between companies and regulators forms part of a larger picture of a firm's approach to climate risk management. One reason why public policy intervention can be a good indicator of the overall health of a company's governance of climate risk is that this signals where the companies' perceived interests lie. For instance, an automaker committed to the low carbon transition and seeking to invest heavily in zero-carbon technology is unlikely to be advocating for looser emission rules. It therefore seems that addressing a company's relationship with regulators should form part of a broader stewardship approach towards climate risk, which considers how the company is transitioning its business model for resilience in a carbon-restrained economy.

An example of a thorough disclosure template for companies to report to investors on their position on and engagement with climate legislation is available on InfluenceMap's [investor section](#). Other areas investors could explore with the auto-sector:

1. **Management of total lifecycle of emissions (including scope two and three):** Is the company benchmarking high-carbon value chains, and what strategies and timelines are being implemented for reducing total lifecycle emissions?
2. **Asset portfolio resistance under the 1.5 – 2°C scenario:** How does the company's portfolio of assets perform under scenarios consistent with limiting temperature rises to 1.5 – 2°C?
3. **R&D investment strategies:** How is the company aligning capital expenditure and R&D with the 1.5 – 2°C target?
4. **Strategic KPIs and executive incentives:** How is the company structuring executive incentives in line with the low-carbon transition?

<sup>15</sup> UNFCCC (2015), Adoption of the Paris Agreement (COP 21). [Available online](#)

## Recommendations

- Engagement with individual companies on these issues through meetings, earning calls and AGM questions. Investors can amplify their influence through collaborative engagement initiatives coordinated by organisations including the UN PRI, IIGCC and ShareAction.
- In the case that the companies show an inadequate will to move on these issues, shareholders could consider filing shareholder resolutions.

## Detailed responses from the automakers

### The questions we asked

The ShareAction-InfluenceMap initiative, representing 19 investors with £625 bn in assets under management, wrote to 11 leading automotive OEMs to ask questions related to greenhouse gas (GHG) emissions regulations. We focused specifically on regulations in US and EU markets where the risks discussed above may be the highest and financial losses potentially significant. The following questions were sent to the CEOs of BMW, Daimler, FCA, General Motors, Toyota, Honda, Renault-Nissan, PSA, Ford and Volkswagen (see Note on Renault-Nissan below). The questions were tailored for individual companies, but all essentially asked for the information noted below with exceptions in the footnotes.

<b>(1) On EU CO2 emissions standards</b>	What is your position on the upcoming EU CO2 emissions standards (which propose by 2025 to lower fleet emissions below the 95 gm/km level currently required for 2020)? We would like to know your current estimates for fleet emissions for 2020 and 2025.
<b>(2) On US CAFE and greenhouse gas emissions standards<sup>16</sup></b>	What is your position on the next round of US CAFE standards for the years 2022 to 2025, currently under consideration by US EPA and the NHTSA? Please provide us with your best estimates of how your fleet will perform in 2017, 2021 and 2025 under these standards.
<b>(3) On influencing over the automotive emissions regulations noted in (1) and (2).</b>	Could you please clarify the nature and extent of your involvement in the regulatory processes referred to in (1) and (2)? Please specify what contact your staff or retained consultants have had with European Commission and US EPA/NTSB staff in respect of the standard setting process.
<b>(4) On the use of trade associations for such influencing activity</b>	What has been your involvement in the key trade associations of which you are members, (e.g. the ACEA, the VDA and the US based Alliance of Automotive Manufacturers)? What resources (in terms of financial support and seconded staff/consultants) has been provided by you to these associations in the last three years? What proportion of this is being dedicated to the issue of greenhouse gas emissions regulations?
<b>(5) On ACEA, the European</b>	We understand from the European Commission - Directorate General for Climate Action's office that ACEA's comments <sup>18</sup> were not publicly disclosed

<sup>16</sup> Questions on the US standards are not relevant to PSA or Renault as they are not present in the market.

## automotive trade association<sup>17</sup>

(unlike numerous other comments from most industry representatives). We would like to clarify ACEA's policy on disclosure of its comments on EC consultations in general and would request that this and all other submissions be made public to further our understanding of these critical processes. As a Board member, please clarify ACEA's position on the 2025 EU CO2 emissions standards.

**Note on letter to Renault-Nissan:** A single letter was sent to Carlos Ghosn, CEO of both Renault and Nissan and current President of ACEA. The letter was of a different format to the letters to the other automotive companies, the logic being that investors wanted his views, is his current role in ACEA on the sectors engagement with policy in Europe, as well as information on the two companies he heads. The following phrasing was used, for which no response or acknowledgement was received. *"we attach...[ ].. letters sent to the CEOs of BMW, Daimler, Volkswagen, General Motors, Ford, Honda, and Toyota. We would welcome any comments you have with regards to Nissan and Renault in respect to the contents, and also in relation to ACEA where we are concerned with transparency issues".*

## Why the focus on ACEA?

In the questions to the OEM makers there is a particular emphasis on ACEA. InfluenceMap's analysis of publicly available data indicates that the group uses its position within the EU decision making process, and its ability to deploy mechanical expertise, to inform the technical details of emissions regulations and compliance, along with the pace of its implementation. ACEA is both an outspoken critic of progressive climate regulations, for example, not supporting "greenhouse gas emission and renewable energy targets"<sup>20</sup> and secretive about certain communications with the EC, for example, ACEA did not make public its comments during a key EU climate consultation process in July 2015.<sup>21</sup> InfluenceMap has obtained (under the EC's information request process) these comments and analysed them here. The lack of transparency around ACEA's activity makes it hard for investors to assess whether the trade body is acting in the best long-term interests of investee companies. This is particularly true in their interactions with the European Commission through non-disclosed consultations and technical committees. As ACEA is conducting a significant amount of the European automotive industry's engagement on GHG emissions policy on behalf of its members (all of whom have board seats on ACEA and fund its activities), investors should query the automakers on their funding and relationships with the activities of ACEA. The organization itself is a nonprofit and has no obligation to engage with investors directly.

<sup>18</sup> Submitted to the EC's 26 March 2015 to 18 June 2015 consultation process for the [EU ETS Effort Sharing decision](#).

<sup>17</sup> [Honda is not an ACEA member](#)



## Volkswagen's Response

Submitted by the Group Head of Investor Relations  
(VW's comments translated from German to English)

### (1) EU CO2 Emissions Standards

"Volkswagen was and is the only European automobile manufacturer who committed themselves to the 95 gram fleet target early on. The CO2 emissions of the new European vehicle fleet (EU 28) of the Volkswagen Group actually amounted to 126 g/km in 2014. Since 2010 there has been a 12.5% saving of CO2 emissions. The average CO2 emissions of the Volkswagen Group vehicle fleet in 2015 have not yet been established. But one thing remains clear: the EU fleet targets were certainly achieved; no penalties were incurred in the EU. We will do everything to noticeably reduce our emissions levels further. Thus Volkswagen will advance the electrification of vehicles in the coming years much more than originally intended. We are firmly determined to fulfil the legal limits for 2020/21. However it is still too early to be able to estimate what fleet average Volkswagen can achieve in the year 2025. The market acceleration of E-mobility and with it the development of CO2 emissions depends on factors that an automobile manufacturer alone cannot influence."

**Our Comment:** *Given the NOx emissions irregularities, investors should clearly not take VW's assurances of its compliance plans at face value without significantly more details. It should be noted that VW is the market leader in the EU with sales of over 3 million passenger vehicles per year (compared with less than half a million per year in the US market). As compliance fines are computed per vehicle sold this could be significant should any EU irregularities be discovered. VW also chose not to disclose its opposition to more ambitious EU vehicle emissions standards following 2021.<sup>19</sup>*

### (2) US CAFE efficiency and GHG-related standards

"Volkswagen is firmly determined to fulfil all legal requirements in the USA. However it is still too early to be able to estimate what fleet average Volkswagen can achieve in the years 2017, 2021 and 2025. The market acceleration of E-mobility and with it the development of CO2 emissions depends on factors that an automobile manufacturer alone cannot influence. With our experience from the California Fuel Cell Partnership and the introduction of the modular

<sup>19</sup> [Automotive News Europe, October 1 2014](#)

electrification kit, we have set the basis for achieving targets for strict future fleet limits worldwide. We will also continue to raise the potential for optimization of combustion engines.”

**Our Comment:** *While the issues with the US regulators were focused on NOx, it is likely that VW's relationship with the key Federal and California level regulators has been severely damaged and all of the company's emissions testing data will be scrutinised more closely than other automotive makers. US EPA data does suggest that VW comfortably meets its current CAFE requirements, especially for domestically produced vehicles.*

### (3) Volkswagen's Engagement with the Regulatory Process

“The Volkswagen Group has 118 production sites and almost 600,000 employees worldwide. A business with such a big responsibility for training, employment and regional development, prosperity and quality of life has to take fundamental interest in that political decisions are made in an appropriate and balanced way. Policy-makers rely on the expertise of societal and commercial actors, and on the knowledge and experience acquired through practice. We at Volkswagen provide policy-makers with open and comprehensive information, and reliable and competent advice. We stand for an approach to lobbying that will convince through the best/better arguments and faces up to public criticism. For this reason, Volkswagen has renewed and updated its global lobbying guidelines in April 2015; you can find [the document here](#). Our representation in Brussels additionally discloses its structure, means and aims in the EU Transparency Register.

**Our Comment:** *Despite its updated April 2015 guidelines, it is likely that globally, VW's emissions regulatory lobbying will come under media, campaign group and investor scrutiny. A prime example of this is the apparent use of German political connections at the very highest level, several years ago to attempt to sway US regulators in its favor.<sup>20</sup>*

### (4) Volkswagen's Allocation of Resources to Trade Associations

“The network of external relations and sustainability actors includes numerous memberships, delegations and engagements in industry and manufacturer associations, sustainability initiatives and other organizations, which operate on a national, European and international level. These include memberships of ACEA, VDA and AAMA. Our representation in Brussels discloses the structure, means and aims of its organisation in the EU Transparency Register. The cost for the most important memberships at EU level (ACEA, Business Europe, CSR Europe, CEPS, ERTRAC) amounts to 625,959 Euros in the year 2014 in total.”

<sup>20</sup> [Wall Street Journal, November 2015](#)

**Our Comment:** The EU Transparency Register does not ask for nor require details about companies' engagement with or support for specific policies. The information contained in its responses is not specific enough to gauge the nature of a company's engagement with climate policy.

#### (5) Disclosure on ACEA

"We are just one of 15 member companies of ACEA. The contents of the paper touch on the operations of the association. Therefore we would like to ask you to request the documents from ACEA."

**Our Comment:** Volkswagen has a prominent role in ACEA and its decision making process. For example, there is clear evidence of the close relationship between ACEA and Volkswagen - a document that advocated for a less imposing testing regime sent to the Commission was labeled 'ACEA Comments,' but sent from a corporate Volkswagen email address.



### BMW's Response

Submitted by the Corporate Investor Relations department

#### (1) EU CO2 Emissions Standards

"The CO2 targets in the EU are based on the average weight of the OEMs fleet. As BMW is located in the premium segment, the average BMW weight is higher than the average weight of the EU fleet - which means also the BMW target is higher than the average. We already fulfilled our 2015 obligation, therefore we are on track. We expect to fulfill the 2020 target as well, paying penalties is no strategic option for the BMW Group. A certain share of electrified vehicle is needed to reach the 2020+ targets. As you can see, we are offering xEVs in all segments (BMW i3 and i8; PHEV versions of 3series, 7series, X5 and 2series ActiveTourer, more to come). As the offer side alone is not sufficient, we rely on political support for e-mobility in all EU member states to develop the market for e-mobility. This is even more important for all coming targets below 95g. These are more or less dependent on the market share of electric vehicles, as the optimization of the conventional drivetrain is reaching its physical limits."

**Our Comment:** Investors may consider a more detailed engagement with BMW on its targets for electric vehicle proliferation and position on the emissions from its fuel power fleet should these targets not be realized. [An independent analysis in 2014](#) ranked BMW 14th out of 15 for EU CO2 fleet emissions<sup>21</sup> - at 134 gm/km. We can anticipate additional difficulties for high emitting manufacturers like BMW and Daimler having to comply with more stringent emissions testing regimes, in particular the World Light Vehicle Test Procedure (WLTP). The EU is pushing for the WLTP to replace the discredited and widely criticised New European Driving Cycle (NEDC) by 2017. BMW, along with other manufacturers, has pushed for its introduction to be delayed<sup>22</sup>, almost certainly because they are aware, as wider evidence suggests<sup>23</sup>, that their real world emissions greatly exceed that recorded in laboratory conditions, creating a significant and potentially immediate regulatory risk.

## (2) US CAFE efficiency and GHG-related standards

“The same basic consideration as for the EU could be made for the US as well: The BMW Group gets a OEM specific target based on our fleet composition and the footprint of our vehicles. We are on track reaching our targets. But future targets after 2020 are depending mainly on the market share of electrified vehicles, like in the EU. Therefore it’s decisive, that the government supports the market development further on. In this sense we talk with the regulators in the US in Washington and California.”

**Our Comment:** As with the EU standards, BMW’s strategy for meeting CAFE and ZEV standards appears hinges on its electric vehicles. BMW and Daimler have each paid CAFE penalties more than 20 times in the last two decades rather than meet standards, indicating their costs of compliance may be higher than other makers. Relating to regulatory engagement in both the EU and US, investors should query how BMW’s [track record of opposing progressive climate motivated](#)<sup>24</sup> regulations tallies with its stated enthusiasm for a robust electric vehicle program. Many automakers (including BMW in this response) are now stating that compliance with CAFE will require electric vehicles. We believe that is incorrect with respect to the 2025 CAFE standard, which is complementary but distinct from California’s ZEV requirement. (See a relevant [recent blog posting](#) from David Cooke, Union of Concerned Scientists).

## (3) BMW’s Engagement with the Regulatory Process

“We are in a regular exchange of views on the CO2 and emissions regulations, like all

<sup>21</sup> [Transport and Environment - How Clean are Europe's Cars, 2015](#)

<sup>22</sup> [Financial Times, April 21 2014](#)

<sup>23</sup> [Transport and Environment – Mind the Gap, September 2015](#)

<sup>24</sup> [BMW InfluenceMap profile, 2016](#)

affected stakeholders. We meet with different levels of the EU Commission, EPA and CARB to discuss the market development, technology developments at BMW and important associated topics like E-mobility. This is part of the stakeholder consultation process on both sides of the Atlantic. We answer all questions of the agencies and give our judgment of the situation (e.g. actual market developments in the US caused by the low fuel prices).”

**Our Comment:** *In line with our comment above, investors could request more details from BMW on its position and level of support for ambitious ZEV (zero emission vehicle) regulations in the US and CAFE/GHG emission standards in the US and EU to support its electric vehicle fleet.*

#### (4) BMW's Allocation of Resources to Trade Associations

“We have representative offices in the US, Berlin and Brussels which are involved in the work of the respective associations. As a member of these associations, we take part in the working groups and committees. Depending on the overall situation and the topics that are relevant, the allocated resources vary. Our Brussels office is registered in the transparency register.”

**Our Comment:** *In light of [extensive reports](#)<sup>25</sup> of BMW's influence over the EU CO2 emissions regulatory process and in the wake of emissions testing fraud in the industry, investors need more details on BMW's resource allocations and roles in the regulatory process. BMW has not disclosed, as requested, how much money is being used to fund trade associations or the company resources committed to them, for example, through secondment of staff.*

#### (5) Disclosure on ACEA

“The ACEA position as shared with the Commission is publicly available; as ACEA is registered in the transparency register, all meetings of ACEA with members of the European Commission are known and are being disclosed by each Commissioner upon request.”

**Our Comment:** *ACEA's recent comments on the 2015 EU ETS consultation were not made public at ACEA's request. There is a lack of transparency within the technical committees through which ACEA exercises its influence, making it hard for investors to assess whether the trade body is acting in the best long-term interests of investee companies.*

<sup>25</sup> [InfluenceMap BMW Profile, 2016](#)

# DAIMLER

## Daimler's Response

Submitted by the Director of Automotive Regulatory Strategy

### General Comments

"Daimler for sure, has and is keeping in contact to politicians, ministries, EU Commission and NGOs in a reasonable manner, always in line with the relevant national and EU laws. We see this as opportunities to share opinions and expertise, necessary for a fruitful political dialogue. Any contacts we had in such respect you can find on the relevant lobbying registers. With regard to CO2 reduction, Daimler is strongly continuing with further efficiency improvement for both, conventional and alternative powertrains. With regard to any future rulemaking, Daimler will follow the positions of its Associations (ACEA, VDA) when reasonable. Towards the investors you are acting for, we can assure that there is no reason to be concerned about corporate lobbying performed by us around legislation."

**Our Comments:** Daimler provides few details, and investors might find it hard to accept the one-line assurance that "there is no reason to be concerned", without far greater detail. In 2011, VW, along with Daimler, stood out as strongly opposing the US EPA's plans to double CAFE efficiency standards by 2025.<sup>26</sup> Daimler has a history of paying fines rather than complying with CAFE standards. BMW and Daimler have each paid CAFE penalties more than 20 times in the last two decades. An independent analysis in 2014 ranked Daimler 13<sup>th</sup> out of 15 for EU CO2 fleet emissions<sup>27</sup> - at 132 gm/km. Daimler's assertion that there is no reason to be concerned about corporate lobbying does not align with evidence gathered on the company by InfluenceMap. They score last in the list of 10 major OEM automakers on level of support for climate regulations. Its fleet efficiency in the crucial light truck segment is the lowest in the industry according to US CAFE data, and it does not comply with its CAFE target. As with BMW, Daimler could face significant regulatory risk from the EU with the introduction of the WLTP (real world testing). Investors could also ask Daimler, given the personal views of the head of the California Air Resources Bureau's that the State should aim 100% electric vehicles sales by 2030, how they would transition to a majority ZEV fleet in the 2030-2035 time frame.

<sup>26</sup> [Hydridcars.com](http://Hydridcars.com), August 28 2012

<sup>27</sup> [Transport and Environment - How Clean are Europe's Cars, 2015](#)



## FCA's Response

Submitted by (not specified)

### General Comments

"FCA is committed to reducing the CO2 emissions of all its products and processes including design, production, distribution, use and end-of-life."

### (1) EU CO2 Emissions Standards

"In the EU, the average CO2 emissions of the Group's Mass-Market Brand cars amounted to 120.9 g/km in 2014 (European Commission official data) in line with its objective. This represents a 20% decrease compared to 2006 and a 25% reduction compared to 2000. With regard to post-2020 EU objectives, the debate is ongoing and a proposal has not yet been set forth by the EU Commission. Furthermore, the testing procedure for cars – which includes the measurement of CO2 emissions – is also going to be changed from the current NEDC testing procedure to the WLTP (Worldwide harmonized Light vehicles Test Procedure), which will better reflect real driving conditions. Any new post-2020 CO2 emissions targets should be based on the fully implemented WLTP testing procedure. A new CO2 post-2020 target based on WLTP would be appropriate starting from 2030. Furthermore, the 2020 EU targets are amongst the most ambitious in the world, and the European automobile industry is already overachieving foreseen EU climate package objectives. By 2030, the whole car fleet will emit around one third less CO2 compared to 2005. This will be the result of fulfilling existing CO2 regulations in combination with the current 'substitution effect' (old cars being replaced by new ones). This means that by using the fleet renewal effect alone, the sector will overachieve the EU climate target by a 30% reduction foreseen for non-ETS sectors. There is no silver bullet – need a comprehensive approach based on the full spectrum of solutions. This means not just focusing on continued emissions reduction of new vehicles, but also factoring in the elements that influence overall emissions from vehicles in use. These factors include the carbon content of fuels, driver behavior, infrastructure and the potential of intelligent transport systems (ITS)."

**Our Comments:** *An independent analysis in 2014 ranked FCA 5th out of 15 for EU CO2 fleet emissions<sup>28</sup> - at 121 gm/km and the company appears to have one of the cleanest fleets in the EU, due to the low average weight of its vehicles. Details of FCA's electric and zero emission vehicle strategy might be welcomed by investors, although we are pleased to see FCA has offered a considered response here.*

<sup>28</sup> [Transport and Environment - How Clean are Europe's Cars, 2015](#)

## (2) US CAFE efficiency and GHG-related standards

“In the US, in addition to CO2 emissions, vehicle efficiency is measured by fuel economy expressed in miles per gallon. Actual fleet performance depends on many factors, including the vehicles and technologies FCA offers, as well as the mix of vehicles consumers choose to buy. FCA’s light duty truck fuel economy improved 6% from 2013 to 2014, increasing from 24.5 mpg to 26 mpg. Trucks, including SUVs, pickup trucks and minivans, accounted for approximately three quarters of FCA sales in the US, so this improvement represented a positive contribution to the efficiency of the Group’s fleet. With reference to the EU 2020 and US 2025 objectives, the CO2 emissions trend is subject to model renewal cycles. FCA’s 2014-2018 Business Plan includes a number of actions to help meet CO2 emissions and fuel economy targets, including advanced technologies. In Europe the group has set a target of reducing CO2 emissions of its Mass-Market Brand cars by 40% by 2020 compared to 2006. In the US, FCA is committed to improving fuel economy by at least 5% to 15% on new FCA US vehicles compared with the vehicle replaced and to actively pursue actions in support of the US EPA/ NHTSA industry goal by 2025.”

**Our Comments:** At 31.1 mpg, Chrysler’s US fleet of passenger cars is the *least efficient in the industry* and less than its 2014 CAFE target of 32.9 mpg. The Chrysler part of FCA has a radically different (and higher) fleet emission profile than the Fiat part. Reference should be made to 2015 *comments by the FCA CEO* on how the industry may not be able to meet future ambitious US CAFE standards, which appears to contradict the essence of the answer above.<sup>29</sup> There *are also reports* that FCA appears to be stockpiling GHG credits that could be used to avoid real-world compliance with US regulations.

## (3) FCA's Engagement with the Regulatory Process

“In Europe, the Group belongs to trade associations such as the European Automobile Manufacturers’ Association (ACEA) for passenger cars and commercial vehicles. Moreover, with respect to the natural gas vehicle (NGV) sector, FCA is also a member of NGV Italy and NGVA Europe.”

**Our Comments:** *FCA score last* in our survey of leading automaker’s engagement with progressive climate policy. CEO, Sergio Marchionne, is reported to have *opposed elements of the Corporate Average Fuel Economy (CAFE) standards* in 2015, as well as *not supporting GHG emission targets more generally*.

## (4) FCA's Allocation of Resources to Trade Associations

<sup>29</sup> Detroit Free Press, January 2015

[ no response ]

**Our Comment:** In light of [reports](#)<sup>30</sup> of FCA's influence over the EU CO2 emissions regulatory process and in the wake of emissions testing fraud in the industry it is likely investors need far more details on FCA's resource allocations and roles in the regulatory process.

#### (5) Disclosure on ACEA

“Through the ACEA, FCA has contributed to the definition and directives on CO2 emissions, technical car standards and international transport and trade policies, in an effort to ensure that regulations are balanced and sustainable for automakers and EU member states. ACEA's activity is carried out through various Working Groups (WG) dedicated to specific issues. FCA actively participates in these to define the different European car industry's positions on specific issues. A comprehensive position paper is currently being prepared by the ACEA to be made public in the coming months.”

**Our Comments:** These represent the most detailed of any automaker in our survey on the role of ACEA and its future plans.

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<sup>30</sup> [Reuters](#), October 2014



## General Motors' Response

Submitted by the Government Relations and Public Policy department

### (1) EU CO2 Emissions Standards

“GM works closely with regulators. There is currently no proposal for CO2 standards for passenger cars beyond 2020/2021. The European Commission is unlikely to make a proposal before the end of 2016 at the earliest. GM has a plan in place to meet the regulatory requirements for 2020/2021. GM’s plan is built upon further efforts to improve engine and transmission performance, engine downsizing, light-weighting of vehicles (as recently demonstrated by the new Opel Astra) and contribution from electrification. Market uncertainties, the potential of technology developments and the impact of the future regulatory environments (standards, taxation etc.) all play a role in the development of future regulations. We look forward to continuing dialogue with the regulating agencies.”

**Our Comments:** *An independent analysis in 2014 ranked GM 12th out of 15 for EU CO2 fleet emissions<sup>31</sup> - at 131 gm/km. Investors should query GM's detailed plans should the EU decide on a far more ambitious target for CO2 emissions and low emission vehicle regulations. In particular, GM's strategy and ambition for electric vehicles should be clarified.*

### (2) US CAFE efficiency and GHG-related standards

“GM has a plan in place to meet the requirements for both CAFÉ and GHG regulations through 2021. Our plan is on efforts that include light-weighting, aero drag improvements, downsized turbo engines, electrification and nine- and ten- speed and CVT transmissions just to name a few. GM’s plan is capable and flexible to enable rapid adjustment for evolving markets and regulatory conditions. The US CAFÉ and GHG requirements post-2021 are to be reviewed by the agencies during the Midterm review. According to FR Vol. 77 No 199 page 62633, “the agencies will conduct a comprehensive mid-term evaluation and agency decision-making process for the MY’s 2022-2025 standards, as described in the proposal. As stated in the proposal, both NHTSA and EPA will develop and compile up-to-date information for the mid-term evaluation, through a collaborative robust and transparent process including public notice and comment. GM has and will continue to participate with NHTSA and EPA in that collaborative process.”

**Our Comments:** *As with the EU, in its response above GM's plans do not appear to focus on*

<sup>31</sup> [Transport and Environment - How Clean are Europe's Cars, 2015](#)

ZEV (zero emission vehicles). However, GM has the top-selling PHEV (plug-in hybrid electric vehicle) in the US market over the last 5 years and is bringing the first affordable long-range BEV (battery electric vehicle) to the US later this year. Investors should ask for details of this scale up in the event of more stringent ZEV regulations. Although it complies with US CAFE regulations, its fleet efficiency in the crucial light truck segment is third from last in the industry (ahead of only Ford and Daimler).

### (3) General Motors' Engagement with the Regulatory Process

GM is registered on the Join Transparency Register of the European Commission and European Parliament under identification number 6781451805-03 through its main European affiliate the Opel Group. General Motors' involvement in the regulatory processes set up by the European Institutions (public consultations, stakeholder's consultation and formal work groups) either directly or indirectly via trade associations like ACEA and VDA. Consultants are not used. As part of the comprehensive mid-term evaluation process referenced in the answer to Q2, General Motors staff have met with NHTSA, EPA and CARB to share relevant data and information to assist the agencies in their thorough review. The last GM meeting occurred on September 11, 2015. Consultants are not used.

**Our Comments:** *This response provides more details on this topic than most companies are willing to disclose and provide a good basis for interested investors to talk with the company.*

### (4) General Motors' Allocation of Resources to Trade Associations

"General Motors is a member of ACEA, VDA and the Automobile Alliance. We utilize these membership in a non-competitive environment to have a united voice for the auto industry. These organizations allow for GM to participate in numerous working groups covering very diverse issues of interest to the automotive industry, including proposed emission and fuel economy standards. Allocation of resources to these work groups is ongoing. GM pays annual membership dues but has not provided staff nor consultants to these associations."

### (5) Disclosure on ACEA

"GM does not speak for ACEA, which is a trade organization consisting of several automotive OEMs".

**Our Comments:** *A major GM subsidiary holds one of only several board level positions on ACEA and therefore cannot really distance itself from the organization's activities.*



**TOYOTA**

## Toyota's Response

Submitted by Global Treasury and Investor Relations, Toyota Motor Europe

### General Comments

Since its foundation in 1937, Toyota has been committed to contributing to society through car manufacturing, while leading innovation through technology and creativity.

Addressing key global environmental issues such as climate change, water shortages, resource depletion and degradation of biodiversity is an integral part of this commitment, and Toyota supports the development of sustainable society by reducing a negative environmental impact from its vehicles and manufacturing operations. Toyota aims to achieve long-term sustainable growth driven by always better cars which meet and exceed varied expectations of customers worldwide, also in terms of environmental performance. With regard to CO<sub>2</sub> emissions, Toyota is the world's first and largest manufacturer to mass-produce hybrid vehicles. Since the 1997 launch of the first generation Prius, Toyota's hybrid technology has advanced over three generations to dramatically improve fuel efficiency and lower CO<sub>2</sub> emissions and resulted in cumulative sales of more than 8 million hybrid vehicles globally. Global annual sales of hybrid cars reached 1.2 million units in 2015. As of March 2015, Toyota's hybrid vehicles have saved approximately 54 million tons of CO<sub>2</sub> emissions, compared to its gasoline-powered vehicles of similar sizes and driving performances.

For your information, the recently launched 4th generation Prius achieves fuel efficiency of 40.8km/l and CO<sub>2</sub> emission of just 57g/km (JC08 mode). With hybrid as a core technology, Toyota also addresses reduction of CO<sub>2</sub> emissions through improvement of fuel efficiency of internal combustion engines - both gasoline and diesel - and development of plug-in hybrids, electric vehicles and fuel-cell vehicles. We indeed believe that such a portfolio of lower CO<sub>2</sub> powertrains are our advantage, at the same time as they are necessary for us in order to meet each regional market's CO<sub>2</sub> requirement timely and flexibly. The MIRAI, Toyota's first commercialized FCV, an ultimate eco-car with zero emissions, has been launched in Japan, Europe and the United States since December 2014. In response to customers' positive reactions and gradual development of hydrogen infrastructure, Toyota aspires to increase the global production of FCVs to c2000 units in 2016, c3000 units in 2017 and c30,000 around 2020. Toyota's long-term aspiration to reduce negative environmental impact to zero and beyond is summarized in "Toyota Environmental Challenge 2050" which was published in

October 2015. By setting up six specific challenges towards 2050, Toyota aims to move towards a net positive environmental impact rather than just reducing the negative factors to zero. This is linked with 5-year global and regional action plans to ensure implementation of concrete activities to meet these challenges. For further information, [please refer to our website](#).

### (1) EU CO2 Emissions Standards

As published, Toyota's average CO2 emissions for 2014 was 102.49g/km (based on 80% of the fleet) and 112.82g/km (based on 100% of the fleet), substantially lower than its target set by the EU at 127.32 g/km. At Toyota, we are fully aware of the EU's 95g/km CO2 emissions target for 2020/21, and continue to strive for meeting this challenging target by utilizing and strengthening our portfolio of lower CO2 powertrains as discussed earlier. For your information, hybrid mix in Toyota's European sales has steadily increased to reach 24% in 2015. We are unable to disclose our internal estimates of our fleet emissions in the EU in the future. However, please note that under Toyota Environmental Challenge 2050, Toyota globally aims to reduce its new vehicles' CO2 emissions by more than 22% by 2020 and by 90% by 2050 compared to the 2010 level.

**Our Comments:** *Toyota is a global market leader in fleet emissions and compliance with standards in the EU is not likely to be an issue.*

### (2) US CAFE efficiency and GHG-related standards

Toyota has been closely monitoring the development of discussions over CAFE/GHG standards for model years 2022 and beyond. As the process is on-going we would like to refrain from commenting further. As is the case with the EU, we are unable to disclose our internal estimates of our fleet emissions. The nature of our approach is the same as in the EU and globally, as explained above.

**Our Comments:** *Toyota is a global market leader in fleet emissions and compliance with standards is likely not a material issue. It does, however struggle slightly to meet CAFE standards currently in the US for light trucks, and as with all automakers, investors should be interested in how Toyota will comply with the overall fleet target of 54 mpg for model year 2025.*

### (3) Toyota's Engagement with the Regulatory Process

We engage directly and through industry associations with regulatory authorities for constructive dialogues in order to support the development of effective and fair standards for the industry. Please understand however that we do not disclose the specifics of our contact

and communication other than made publicly available by the authorities. For your information, under transparency registration, the position of ACEA, of which Toyota is a member, with the European Commission is publicly available, and all ACEA meetings with members of the European Commission (from the level of Director General, Cabinet and Commissioner) are being disclosed on the European Commission's website.

**Our Comments:** *These comments do not address concerns that existing disclosure methods for lobbying may not be sufficient for investors, nor issues relating to the withholding of information by ACEA on its positions on certain EU legislation. The company does not have a particularly active climate policy engagement program but it appears to be comparatively supportive of progressive climate motivated standards globally.*

#### (4) Toyota's Allocation of Resources to Trade Associations

Toyota is indeed a member of ACEA in Europe and a member of the Alliance of Automotive Manufacturers in the United States. Related to the former, a member of Toyota's Government Affairs does represent the company at ACEA's CO2 committee, but please note that the committee is led by an ACEA Director, not a company representative.

**Our Comments:** *This response provides more details on this topic than most companies are willing to disclose and provide a good basis for interested investors to talk with the company.*

#### (5) Disclosure on ACEA

"Finally, we understand that ACEA is registered in the transparency register of the European Institutions and its positions as shared with the European Commission are publicly available."

**Our Comments:** *These comments do not address concerns that existing disclosure methods for lobbying may not be sufficient for investors, nor issues relating to the withholding of information by ACEA on its positions on certain EU legislation.*



**HONDA**

## Honda's Response

Submitted by Office of the CEO

### (1) EU CO2 Emissions Standards

"In Honda we link our business strategy to our environmental strategy. This has contributed to establishing a vision towards eventually reducing our environmental footprint to zero. We are conducting activities towards achieving the goal of our corporate emissions by half by 2050, compared to the level in 2000. Specifically, as a key midterm goal, we are working towards reducing CO2 emissions by 30% for all our motorcycles, automobiles and power products manufactured worldwide by 2020, compared to 2000. We have made progress in applying gasoline engine technologies with improved output efficiency for the internal combustion engine, led by downsized turbo engines, diesel combustion technologies and evolutionary models such as small hybrid models. This has resulted in our CO2 emissions, and we have set the roadmap for ensuring compliance with the standard of 95g/km in 2020. Moving forward, we will proceed with establishing new technologies, where Honda has an advantage compared to other manufacturers, turning them into commercial products and launching them into European markets."

**Our Comments:** *An independent analysis in 2014 ranked Honda 15th out of 15 for EU CO2 fleet emissions<sup>32</sup> - at 134 gm/km. Moreover, according the same report only three manufacturers (Honda, Hyundai and Suzuki, of which only Hyundai is a top 10 European player) will fail to meet their 2015 CO<sub>2</sub> emissions targets. However in the key US market where Honda sells 1.2 million vehicles per year (vs. 120,000 in the EU) the company is one of the clear leaders in fleet efficiency (along with Nissan and Toyota). Resulting fines in Europe are not likely to be significant due to the small number of vehicles it sells in the EU.*

### (2) US CAFE efficiency and GHG-related standards

"Our basis approach is the same as in Europe. With the regulatory standard of 54.5 miles per gallon as the premise, we will actively incorporate our environmental technologies into new commercial products. Because our estimates for CAFÉ are related to sales strategies, we do not disclose specific figures."

<sup>32</sup> [Transport and Environment - How Clean are Europe's Cars, 2015](#)

**Our Comments:** In the key US market where Honda sells 1.2 million vehicles per year (vs. 120,000 in the EU) the company is one of the clear leaders in fleet efficiency (along with Nissan and Toyota). Details of Honda's electric and zero emission vehicle strategy would be welcomed by investors. While Honda is a leader in gasoline engine fuel economy, but has been reluctant to market and sell ZEVs in the US. Honda currently does not sell a plug-in vehicle in the US market and has only vague plans to sell ZEVs in the US in the future. Investors could ask Honda that given the [personal views of the head of the California Air Resources Bureau's](#) that the State should aim 100% electric vehicles sales by 2030, how they would transition to a majority ZEV fleet in the 2030-2035 time frame.

### (3) Honda's Engagement with the Regulatory Process

"Our stance regarding gas emissions for automobiles placed importance on the following three ways of thinking: (1) Performance-based rather than design-based approach that could favour specific technologies or product designs; (2) Technical feasibility, or what is possible technologically; (3) Economically viable propositions. We believe that applying regulatory standards according to such thinking will ensure healthy competition and the use of more technologies in the market that will prove to be effective. As for the process of working with the regulatory authorities with regard to the establishment of standards for gas emissions and other issues for automobiles, our basic approach is to respond when there is a certain demand or request from the authorities and work in accordance with their flows, mainly concerning the matters for (1), (2) and (3) mentioned above. In Europe, we currently work with the regulatory authorities mainly through the Japan Automobile Manufacturers Association, Inc. (JAMA). As for our communication with the regulatory authorities in the US, it revolves around our activities through a trade association called Global Automakers, of which Honda is a members, and we also deal with the authorities as an individual company when the need arises."

**Our Comments:** Honda appears to have a relatively [supportive stance on progressive climate motivated regulations worldwide](#) and does not appear to be actively involved in joint-industry influencing initiatives, notably in Europe where it remains a non member of ACEA.

### (4) Honda's Allocation of Resources to Trade Associations

[no response]

## Appendix

### Key GHG emissions regulations at a glance

Of critical importance to the automotive manufacturers are climate-related standards evolving in the US (CAFE, Zero Emission Vehicle) and the European Union (CO2 emissions standards).

Comparable standards are in place in Japan, China, India and other major markets. All these standards show a trend towards tightening.

#### US Federal Level

At the Federal level the [US Environmental Protection Agency](#) (EPA) and the [National Highway Traffic and Safety Administration](#) (NHTSA) enacted the [Corporate Average Fuel Economy](#) (CAFE) system in 1975 to impose fleet fuel efficiency standards on passenger cars and light trucks sold in the US. The system was expanded in 2009 to include greenhouse gas (GHG) emissions limits and the system is reviewed every five years. In August 2012, the [EPA & NHTSA issued](#) CAFE and GHG standards to cover model years 2017 to 2025. Of this the standards for 2022-2025 are subject to review process known as the Midterm Evaluation, and will be finalized over the next two years, a process likely to be of great interest to the automotive manufacturers active in the US market, [with the overall fleet target](#) of 54 mpg likely to be contentious. Penalties for failing to meet the standards are imposed, which manufacturers routinely pay as a cost of doing business. BMW and Daimler have each paid CAFE penalties more than [20 times in the last two decades](#). In addition, a major precedent was set when Hyundai settled with the EPA in 2014 for fraud associated with its CAFE submissions for [a reported \\$300 million](#).

#### California and US State Level

California's 1990 [Zero Emission Vehicle \(ZEV\) program](#) requires auto companies to produce a certain percentage of zero emission vehicles for sale in California, which was expanded to partial ZEVs in 2001, spurring sales of hybrid vehicles. The ZEV program has been highly contested by the automotive industry through its life and currently allows automakers like Tesla Motors to sell surplus credits to other makers who do not meet the targets. In April 2015, the [California Air Resources Bureau](#) issued its target of [1.5 million ZEVs on the road by 2025](#), with some concessions to low volume suppliers to allow "transitional" ZEVs. The program has been cited frequently as a key catalyst for ZEV development programs among global automakers. Nine other states have [adopted the ZEV regulation](#) (through section 177 of the Clean Air Act). These states were subject to the ZEV regulation prior to the 2013 announcement of [a multi-state ZEV task force in 2013](#).

### The EU CO<sub>2</sub> Emissions Standards

The [Road Transport](#) part of its Climate Action plan currently requires that the new automobiles registered in the EU do not emit more than an average of 130 gm CO<sub>2</sub>/km by 2015. As with CAFE in the US, the system undergoes revisions every five years. By 2021, phased in from 2020, the fleet average to be achieved by all new automobiles is 95 gm CO<sub>2</sub>/km. There is a system of penalties for non-compliance (which many manufacturers routinely pay) and super credits to incentivize sales of vehicles with emissions less than 50 gm CO<sub>2</sub>/km. The process leading to revision of the standards for implementation following 2025 will get underway in 2016 and is likely to be closely followed by the automotive sector and other interested parties.

### Rest of the World

China is the world's largest passenger vehicle market and [since 2004 has imposed standards](#) on fuel consumption by weight, in a corporate-average fuel consumption (CAFC) system. Japan's passenger vehicle fleet is among the most efficient in the world, mainly due to the low average weight of vehicles. Japanese standards are expressed in liter/km with weight of vehicle accounted for. Most manufacturers have [easily achieved the standards](#) well before the implementation stages due to the car makers and government working together to set standards. Fuel consumption standards are in place in Australia while greenhouse gas emission standards are in place in Canada.



# InfluenceMap

## About InfluenceMap

We are a neutral and independent UK-based non-profit whose remit is to map, analyze and score the extent to which corporations are influencing climate change policy. Our knowledge platform is used by investors, climate engagers and a range of concerned stakeholders globally.

## Contact Information

We are based at 40 Bermondsey Street, London SE1 3UD, UK

Email: [info@influencemap.org](mailto:info@influencemap.org) Web: <http://influencemap.org>