



General Motors Shareholder Resolution: Report on Effect of Weakened Fuel Economy Standards Proposal #6

We are writing to urge you to **VOTE “YES” ON PROPOSAL 6** on the proxy, which asks General Motors (GM) to report on whether our company’s fleet wide greenhouse gas (GHG) emissions through 2025 will increase given the Administration’s proposed weakening of the Corporate Average Fuel Economy (CAFE) standards or whether it plans to retain emissions consistent with, or better than, CAFE standards to ensure its products are sustainable in a rapidly decarbonizing vehicle market.

A vote FOR this proposal is warranted given the Environmental Protection Agency’s (EPA) recent announcement that it will weaken the nation’s fuel economy standards. Shareholders seek clarity on whether, and to what degree, the company will change its product plans and business strategy as a result of this announcement.

Delaying emission reductions into the future will make it more difficult economically and technologically for GM to achieve needed GHG reductions, while also creating reputational risk, endangering the Company’s global competitiveness, and risking market share loss. Given these risks and the Company’s mixed messages on CAFE standards, shareholders seek clarity.

We believe shareholders should vote “YES” the proposal for the following reasons:

- 1) **Immediate GHG Reductions from GM are Critical to Avoiding the Worst Impacts of Climate Change** – Transportation is the fastest growing source of U.S. greenhouse gas emissions. Without near term and significant year-on-year reductions from automotive companies, it will be exceedingly difficult to keep global warming below 2 degrees Celsius. Any delay in implementing greenhouse gas emissions reductions makes limiting warming to below 2 degrees significantly more costly and nearly impossible to achieve.
- 2) **Weakened Fuel Economy Standards Creates Risk for GM** – Weakened national fuel economy standards, which the auto industry has fully supported, will increase regulatory uncertainty and risk, decrease consumer loyalty, and create significant reputational and competitive risk for GM.
- 3) **GM’s Public Statements & Actions Do Not Clarify How the Company Will Respond to Weakened CAFE Standards** – While GM states that it agrees climate change is real and has announced plans for electric vehicle (EV) development, it also supports adjustments to the national CAFE standards. The company must clarify for shareholders how it intends to react to weakened standards, especially in the short term. Such information will help shareholders make informed and efficient decisions including how much GM’s brand reputation will suffer from slowed progress in fuel efficiency and greenhouse gas emission reductions; how vulnerable the company will be to fuel price spikes and legal decisions that uphold current standards; and whether the company will be at a competitive disadvantage with global peers.

1. Immediate GHG Reductions from GM are Critical to Avoiding the Worst Impacts of Climate Change

Climate change is already leading to severe global economic and social impacts and creating growing risk to shareholders and companies. Damage to property and infrastructure, lost productivity, broken supply chains, mass migration, and growing security threats as water and land resources are threatened, are expected to increasingly disrupt and undermine economies for decades to come. To avoid the worst impacts of global warming, developed countries such as the United States must reduce carbon pollution by 70 to 80% (from 1990 levels) by 2050.¹ To facilitate this goal, the United States adopted commitments under the Paris Agreement to achieve reductions in carbon pollution by 26 to 28% from 2005 levels by 2025.²

Action by the auto industry is key to achieving these goals. In the Environmental Protection Agency's (EPA) recent midterm review of national CAFE standards it highlighted the importance of the auto industry taking immediate action:

Because CO₂ in the atmosphere is long lived, it can effectively lock Earth and future generations into a range of impacts, some of which could become very severe. Therefore, emission reduction *choices made today matter in determining impacts experienced not just over the next few decades, but in the coming centuries and millennia.*³ (emphasis added)

A. Transportation is the 2nd Largest U.S. Source of GHG Emissions - Since transportation emissions are the second largest source of greenhouse gas emissions in the nation,⁴ automotive emissions reductions – or the failure to make emissions reductions in automobiles – can have broad and lasting impacts. Transportation accounts for nearly a third of our nation's greenhouse gas emissions;⁵ passenger cars and light duty trucks are by far the largest class of transportation polluters, contributing over 59% of total motor vehicle carbon pollution⁶ and about 17% of U.S. carbon pollution. Vehicle emissions for cars and

¹ Susan Joy Hassol, Presidential Climate Action Project, "Questions and Answers Emissions Reductions Needed to Stabilize the Climate," <https://www.climatecommunication.org/wp-content/uploads/2011/08/presidentialaction.pdf>

² From a climate perspective, achieving these initial goals are important whether or not the U.S. withdraws from the Paris Accord. Many state and local governments, as well as business leaders, have stepped up to help ensure its achievement.

³ EPA, Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation (PD) at 12, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas#proposed=determination>.

<http://ns.umich.edu/new/releases/25157-beyond-epa-s-clean-power-decision-climate-action-window-could-close-as-early-as-2023>.

⁴ Env't Protection Agency, "Sources of Greenhouse Gas Emissions," <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>.

⁵ *Id.*; see also David Greene (Oakridge Nat'l Lab) and Andreas Schafer (Mass. Institute of Tech.), *Reducing Greenhouse Gas Emissions from U.S. Transportation*, Center for Climate and Energy Solutions (C2ES),

<https://www.c2es.org/document/reducing-greenhouse-gas-emissions-from-u-s-transportation/>

⁶ *Id.*

trucks have increased over the past five years,⁷ propelled by population growth, economic growth, urban sprawl, low fuel prices, and growing vehicle miles travelled.⁸

B. Delay by Automakers Will Make Later Reductions More Costly and Technologically Difficult

Because of the magnitude of the automotive industry's contribution to climate change, any slowing in the pace of GHG reductions by automakers raises concern. This is underscored by a 2017 Rhodium Group study finding that even if *current* U.S. GHG reduction standards were preserved, the U.S. would fall considerably short of its reduction commitment under the Paris Accord.⁹ A recent University of Michigan study similarly found that GHG reductions *beyond* those achievable from current national fuel economy standards will be necessary by 2025 to meet global climate goals.¹⁰ (emphasis added).

The Michigan study further found that the window for climate action by automakers could close as early as 2025, after which it may be too late to stave off significant climate impacts such as global climate tipping points. Significantly, abatement costs and technology hurdles for emissions reduction action by automakers are likely to increase sharply with every year of delay beyond 2020.¹¹ As the report describes:

At some point, likely by 2023, you actually can't sell enough fuel-efficient cars fast enough to be able to achieve the 70-percent [IPCC reduction] target The year-on-year emission reduction rate in such dramatic technology turnovers will exceed 5 percent after about 2020, which makes the 70-percent target infeasible for all practical purposes.

[There is] no evidence to justify delaying climate action in the name of reducing technological costs, even under the most optimistic trajectories for improvement in fuels efficiencies, demand, and technology costs in the U.S. auto and electric sectors. In fact, the study found that waiting another four years to initiate measures on track with the 70 percent target would take the total cost for both sectors from about \$38 billion a year to \$65 billion a year. "You could take this same model or a different model and arrive at different cost numbers using your own set of assumptions for "business as usual" or interest rates, for instance," [report co-author] Supekar said. "But the point is, regardless of whether the cost of climate action today is \$38 billion or \$100 billion, this cost will rise sharply in three to four years from now."

2. Weakened Fuel Economy Standards Creates Risk for GM

⁷ Env't Protection Agency, "Sources of Greenhouse Gas Emissions," <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>, p. 2-30.

⁸ Env't Protection Agency, "Sources of Greenhouse Gas Emissions," <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation>, p. 2-30.

⁹ "Taking Stock 2017: Adjusting Expectations for US GHG Emissions", Rhodium Group (2017), <https://rhg.com/research/taking-stock-2017-us-greenhouse-gas-emissions/>

¹⁰ Analysis of Costs and Time Frame for Reducing CO2 Emissions by 70% in the U.S. Auto and Energy Sectors by 2050, <http://ns.umich.edu/new/releases/25157-beyond-epa-s-clean-power-decision-climate-action-window-could-close-as-early-as-2023>

¹¹ "Taking Stock 2017: Adjusting Expectations for US GHG Emissions", Rhodium Group (2017), <https://rhg.com/research/taking-stock-2017-us-greenhouse-gas-emissions/>



In 2012, the U.S. issued national light duty vehicle rules for model years 2017-2025. NHTSA raised corporate average fuel economy requirements and the EPA strengthened GHG emission reduction standards (collectively "CAFE standards"). These strengthened CAFE standards would have put the U.S. "at the forefront worldwide in the manufacture of electric and highly efficient vehicles."¹² EPA's midterm review of CAFE standards, based on 24 peer-reviewed studies and set forth in a 1,200 page analysis, found that the current standards achieve significant GHG reductions, save consumers money, and are achievable at reasonable cost.¹³ The midterm review also found that automakers are developing and deploying fuel efficient technologies at a faster rate than forecast in the 2012 final rule and that *compliance costs are lower* than those projected in the final rule. The International Council on Clean Transportation similarly found that technology costs to comply with the 2025 standards are 30% to 40% lower than the EPA/NHTSA projections and that fuel efficiency gains of 8%-10% greater than those identified in the EPA/NHTSA analysis are available and cost effective by 2025.

Yet, General Motors, Ford, and other automakers have challenged the current CAFE standards,¹⁴ seeking a variety of revisions that would have the effect of slowing GHG reduction requirements. Not surprisingly, the Administration responded favorably, announcing in March an intent to "rollback" the nation's stringent fuel economy standards.¹⁵ The rollbacks could change the composition of the U.S. auto fleet for years, leading to additional greenhouse gas emissions, regulatory uncertainty, consumer complaints, and significant reputational and competitive risk for automakers.

- a. **Legal Risk & Regulatory Uncertainty:** Reliance on weakened standards is a significant gamble for automakers. California and 16 Attorneys General have announced an intent to maintain their own stringent fuel economy requirements and to challenge in court any rollbacks to the agreed upon national CAFE standards.¹⁶ A legal challenge to the rollback of standards will not only be costly, but will likely take years to resolve, creating uncertainty for automakers. In the meantime, automakers may face different standards at the state and federal levels and risk penalties if the standards are eventually upheld.¹⁷ On the political front, adopting changes based on rules that have little support beyond this Administration could be highly detrimental if a new president is elected in 2020 and reinstates current standards.

¹² Katie Ferenbacher, "Inside automakers' Jekyll-and-Hyde approach to emissions rules", <https://www.greenbiz.com/article/inside-automakers-jekyll-and-hyde-approach-emissions-rules>; Auto Alliance Letter seeking withdrawal of approval of fuel economy standards, <https://autoalliance.org/wp-content/uploads/2017/02/Letter-to-EPA-Admin.-Pruitt-Feb.-21-2016-Signed.pdf>

¹³ EPA, Proposed Determination on the Appropriateness of the Model Year 2022-2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation (PD) at 12, <https://www.epa.gov/regulations-emissions-vehicles-and-engines/midterm-evaluation-light-duty-vehicle-greenhouse-gas#proposed=determination>

¹⁴ <https://www.nytimes.com/2017/02/22/business/energy-environment/automakers-pruitt-mileage-rules.html?r=0>

¹⁵ <http://fortune.com/2018/04/02/donald-trump-epa-fuel-regulations-cut/>; recent leaked memos suggest that the administration is considering freezing fuel economy standards at 2020 levels through 2026, stalling increases at 42 mpg rather than achieving 54.5 mpg by 2025. "Draft EPA memo freezes fuel economy standards at 42 mpg through 2026", Green Car Reports, April 2018, https://www.greencarreports.com/news/1116481_draft-epa-memo-freezes-fuel-economy-standards-at-42-mpg-through-2026.

¹⁶ <https://www.detroitnews.com/story/news/environment/2018/05/01/california-car-pollution-rules-lawsuit/34442915/>;

¹⁷ A district court recently rejected the Administration's attempt to postpone increases in penalties for violation of CAFE standards. <https://insideclimatenews.org/news/23042018/vehicle-efficiency-cafe-standards-carbon-emissions-global-warming-car-pollution-auto-industry-penalties>

- b. Reputational Risk:** Auto companies face increasing reputational risk and potential loss of consumer loyalty due to their support of weakened CAFE standards. A recent poll by the American Lung Association found that voters overwhelmingly support EPA's current fuel efficiency standards.¹⁸ Multiple grassroots campaigns have launched to demand that automakers end their advocacy for a rollback of CAFE standards.¹⁹ As an example of this public concern, GM earned a low score among automotive manufacturers (D-) in a recent Influence Map report noting that GM's lobbying practices are at odds with its climate positioning.²⁰ Auto parts suppliers, states, cities, and investors have all expressed opposition to weakening standards.²¹ Further, a firestorm of bad press has recently erupted around the Alliance of Automotive Manufacturer's suggestions, in papers recently filed with NHTSA that the science of climate change is still in question and that tail pipe emissions may not have negative effects on human health.²²
- c. Competitive Risk:** Companies that delay GHG reductions risk losing their future competitiveness to companies that are rapidly forging ahead with fuel economy improvements and alternative vehicle development. Globally, governments are adopting more stringent fuel economy policies and promoting low carbon vehicle technology standards. China will require 40% of cars sold by 2030 to be electric and has stated an intent to ban vehicles with internal combustion engines (ICE). Other countries and cities have announced measures to ban ICE engines. For example, Austria and Germany will ban petrol and diesel ICE vehicles for new sales beginning in 2030 and the U.K. and France by 2040. California recently announced an Executive Order to increase the State's goal of 1.5 million zero emission vehicles (ZEV) on the road by 2025 to 5 million by 2030.²³

Many of GM's competitors have announced plans and targets in line with this decarbonizing transportation market. While GM has announced plans for 20 electric vehicles by 2020, many of its competitors have more extensive plans in place.²⁴ Volkswagen has committed to 80 new electric car models across the VW group by 2025, with 300 EV models to market in 2030.²⁵ Volvo committed that, by 2019, all new models will be electrified, five EVs will launch between 2019 and 2021, and cars powered solely by gasoline or diesel will be phased out by approximately 2024. BMW committed to sell 100,000 electrified vehicles in 2017 and that 20% to 25% of its sales will be plug-in hybrids or EVs by 2025. Honda has adopted a goal to electrify 2/3 of its global vehicle sales by 2030.

¹⁸ <http://www.lung.org/about-us/media/press-releases/new-poll-voters-support-fuel-efficiency.html>

¹⁹ <https://www.sierraclub.org/press-releases/2017/10/go-forward-not-backward-environmental-and-consumer-groups-launch-campaign>

²⁰ <https://influencemap.org/company/General-Motors>

²¹ "Parts Suppliers Call for Cleaner Cars, Splitting with their Main Customers: Auto Suppliers," <https://www.nytimes.com/2018/03/01/climate/auto-parts-emissions-regulations.html>; "Hogan Calls On EPA to Maintain Obama-Era Emissions Targets," <http://www.wbal.com/article/304745/3/hogan-calls-on-epa-to-maintain-obama-era-emissions-targets>; "We invest millions in Ford, GM. Here's why fighting strong fuel standards is 'the wrong move,'" <https://www.cnbc.com/2017/12/14/ford-gm-should-support-strong-fuel-standards-scott-stringer-commentary.html>.

²² New York Times, "Automakers Shift Gears on Climate Change," (March 21, 2018),

<https://mobile.nytimes.com/2018/03/21/climate/climate-change-sylvia-earle.html?referer=>

²³ <http://www.latimes.com/politics/essential/la-pol-ca-essential-politics-updates-gov-brown-california-will-put-5-1516999162-htmlstory.html>

²⁴ See, <https://www.reuters.com/article/us-autoshow-detroit-electric/global-carmakers-to-invest-at-least-90-billion-in-electric-vehicles-idUSKBN1F42NW>

²⁵ <http://europe.autonews.com/article/20180313/ANE/180319910/vw-will-build-evs-in-16-factories-in-zero-emissions-push?ccid=email-autonews-blast>

GM will need to undertake aggressive action to compete successfully. Current U.S. CAFE standards will align with roughly 70% of the global market²⁶ - including China, Japan and Europe - by 2025,²⁷ so that an engine designed for the American market can be sold in China or Japan or Europe with relatively few design differences. Current CAFE standards drive innovation and investment in new technologies, ensuring the global competitiveness of the U.S. industry. They provide an insurance policy in the event of fuel price spikes - helping avoid the loss in market share experienced by GM during the last gas price spike. And there is no doubt that these standards have certainly played a role in GM's current and planned electric vehicle commitments and fuel economy developments across its fleet.

Adoption of weakened federal standards would drive GM and other U.S. automakers in the wrong direction, reducing incentives for innovation and investment in fuel economy and harming other players in the industry that have invested in developing and producing fuel savings technology. With weakened standards, GM may invest even more significantly in larger vehicles and increase focus on issues such as comfort, connectivity, and entertainment for its large vehicle component, at the expense of fuel economy.

Such a changed focus is likely to harm GM in its future global sales. The rest of the world will continue to push forward with auto emission and efficiency regulations, despite what U.S. policy does, creating a competitive advantage for companies focused on fuel efficiency and against those less focused on the issue. As Nissan's CEO Carlos Ghosn stated at this year's Detroit auto show: "Let's not forget this is a global issue and we develop engines for the global market." He added that the "global trend is driving higher fuel efficiency no matter what happens in U.S."²⁸

3. GM's Public Statements & Actions Do Not Clarify How the Company Will Respond to Weakened CAFE Standards

GM's planned response to weakening of fuel economy standards remains unclear to shareholders. Although over 243,000 GM vehicles with electrification features have been sold as of 2016, this is a very small percentage of the company's overall fleet sales. GM has announced a decision to accelerate and expand electrification of its global fleet, but has not specified sales targets, percentages of planned electric drive vehicles, or what percentage of its fleet will have electrification features. GM has developed GHG intensity targets through 2020. Yet, the Company also remains committed to expanding its truck fleet and sport utility vehicles²⁹ which makes it more challenging to meet current fuel economy standards. When paired with the company's support of "adjusting" fuel economy standards, both through its own actions³⁰ and the actions of the Alliance of Automobile Manufacturers, of which GM is the largest member, serious questions exist as to

²⁶ https://www.theicct.org/sites/default/files/info-tools/pvstds/chartlibrary/NEDC_CO2_cars_Sept2015.pdf

²⁷ https://www.huffingtonpost.com/margo-t-oge/mr-pruitt-the-american-au_b_14607464.html

²⁸ <https://www.nbcnews.com/business/autos/feds-may-soon-roll-back-fuel-economy-standards-n730566>

²⁹ <https://www.reuters.com/article/us-gm-electric-insight/gm-races-to-build-a-formula-for-profitable-electric-cars-idUSKBN1EYOGG>

³⁰ "Auto CEOs want Trump to order review of 2025 fuel rules, David Sheperdson (Feb 2017),

<https://www.reuters.com/article/us-usa-vehicles-idUSKBN15R0U9>; GM's CEO recently met with US regulatory chiefs to discuss modernizing current fuel economy standards, <https://www.reuters.com/article/us-autos-emissions-gm/gm-ceo-meets-with-u-s-regulators-on-fuel-efficiency-rules-idUSKCN1GP331>



whether the company will retreat in reducing the rate of its fleetwide GHG emissions. If it does retreat, by how much, especially through 2025, a critical window of opportunity for the industry to meet climate goals.

In light of these actions, shareholders seek clarity on what stance the company will take going forward. Will GM continue with current product plans, make changes on the margins, or sell vehicles in line with relaxed standards? Current CAFE standards achieve nearly 5% per year GHG emission reductions; contemplated revisions to standards could go so far as to freeze 2020 standards in place or dramatically limit annual greenhouse gas reductions to 0.5% per year. While we may not yet know the full extent of weakened standards, it is clear that they will be curtailed or dramatically lowered, impacting the world's climate. If weakened standards, or a decreased rate of greenhouse gas emissions reductions are adopted by GM, the Company's competitiveness, its market share, and its reputation could all be harmed. Shareholders must be given more information to understand how the company is planning to act in the face of these changes.

Response to the 2018 Board of Directors Opposition Statement: While GM acknowledges that climate change is real and states that it will remain committed to reducing emissions in the future, the company's support for policy action that may lead to dramatic backsliding can be considered inconsistent with this position. Shareholders seek to understand how GM's low-carbon strategies are congruent with its plans to increase production of trucks and SUVs, vehicles known for being less fuel efficient than passenger cars. Shareholders also seek to understand what level of commitment to reducing emissions GM will retain, will its commitment generally be in line with current CAFE standards or will it drop down to levels allowed by potentially dramatically weakened standards, or something in between? The oft-used phrase, "the devil is in the details" is applicable here.

4. Conclusion

Future growth markets in vehicles will primarily be outside the U.S., including in Asian markets such as China and India. Whether GM is positioned to compete successfully in these markets in light of the planned weakening of U.S. fuel economy standards is in question. Whether it becomes vulnerable to successful legal challenges to rollbacks, whether it spends millions to fight states that seek to keep emissions reductions in place, and whether it tarnishes its reputation -- all remain in question. Shareowners seek clear information from the company as to what path it will take if federal CAFE standards are weakened.

Please contact Danielle Fugere (510) 735-8141 (dfugere@asyousow.org) for additional information.

This document is not a solicitation of authority to vote your proxy. Please DO NOT send us your proxy card; As You Sow is not able to vote your proxies, nor does this communication contemplate such an event.

The Proponents urge shareholders to vote for Item #6 following the instruction provided on management's proxy mailing.