COMMENTS OF MECA CLEAN MOBILITY
ON PROPOSED MEXICO LIGHT-DUTY VEHICLE GREENHOUSE GAS STANDARDS
FOR VEHICLES UP TO 3857 kg (NOM-163-SEMARNAT-SCFI-2023)

August 7, 2023

MECA Clean Mobility (MECA) is pleased to provide comments on the Mexican Government's proposed rulemaking to establish light-duty vehicle greenhouse gas emission standards and corporate average fuel economy standards. MECA commends the Mexican Government for committing to align its light-duty vehicle carbon dioxide and fuel economy standards with the U.S. Environmental Protection Agency's (EPA) 2017-2025 standards. MECA submitted comments on SEMARNAT's proposal on November 27, 2018 where we provided recommendations to improve the rule so that it achieved the intended air quality goals. However, after reviewing the latest proposal, we continue to have significant concerns with several aspects being proposed. We believe an important opportunity exists to significantly improve fuel economy for passenger cars, light-duty vehicle trucks, and medium-duty passenger vehicles through technology neutral standards, and thereby reduce dependence on foreign oil.

MECA is a non-profit association of the world's leading manufacturers of emission control, combustion efficiency and fuel saving technology for mobile sources. MECA members supply the full complement of electrified and electric vehicle technologies from micro-hybrid start/stop and mild hybrid 48-volt systems, full hybrid and plug-in hybrid architectures to all electric battery and fuel cell components. Our members have nearly 50 years of experience and a proven track record in developing and manufacturing clean mobility solutions for a wide variety of on-road and off-road vehicles and equipment, including extensive experience in developing criteria pollutant and GHG reducing emission controls for gasoline and diesel light-duty vehicles in all world markets. Our industry has played an important role in the emissions success story associated with light-duty vehicles in North America and has continually supported efforts to develop innovative, technology-forcing, emissions programs to mitigate air quality problems, create jobs and reduce fuel consumption from vehicles.

Automotive Supplier Industry

Companies that design and manufacture emission control and efficiency technology products to meet greenhouse gas standards employ nearly 300,000 people at over 1200 facilities across North America (see https://www.bluegreenalliance.org/wp-content/uploads/2017/05/Supplying-Ingenuity-vFINAL-low-res.pdf), including thousands of jobs in Mexico. The clean mobility industry exists largely because of national regulations that have required pollution reductions from vehicles and fuels to achieve health-based air quality standards to achieve countries' public health and environmental goals. Our industry has responded to national goals to increase energy independence by reducing fuel consumption. In fact, a recent survey of MECA members concluded that the vast majority of our members made investments in response to the U.S. EPA's 2012 rulemaking to set GHG and CAFE standards for 2017-2025. In addition, over half of MECA member companies have experienced job growth in response to those standards. In fact, automotive suppliers have seen an overall 23 percent increase in employment since 2012, which can partly be attributed to advanced technology development spurred by the

2012 U.S. rulemaking and Mexico's 2013 NOM-163 regulation. Finally, each year the emission control industry has invested billions of dollars to develop the technologies needed to meet future emission and fuel economy standards. These investments would not be made if not for technology forcing, performance-based regulations being set by governments around the world. Unfortunately, Mexico has failed to keep up with the rest of the world in continuing to tighten CO_2 standards on light-duty vehicles. In fact, the latest proposal has weakened the reduction goals from the 2018 proposal by 52% from 18.5 $MtCO_2e$ to 8.9 $MtCO_2e$. Furthermore, the addition of the advanced technology credits (TAE) to the 2023 proposal results in an effective 62% loss in efficacy in the current proposal versus the 2018 proposal. This type of regulatory backsliding has resulted in stranded investments by clean mobility suppliers that have continued to innovate new technologies already being applied in other global markets.

Definitions of Hybrids and Plug-in Hybrids

Mexico's proposal includes only a general definition of a hybrid vehicle or distinction between different types of hybridization. Because of the diversity of powertrains with different levels of electrification, MECA believes that it is critical to define the types of hybridization and assign credits based on the fuel saving benefit they offer. For vehicles, these include micro, mild or full hybrid. By defining these, Mexico could prevent confusion amongst the regulated parties as well as consumers and provide for different incentives that could be scaled appropriately with the benefits of the technologies. Without clearer definitions of hybrid vehicles, setting a single credit value for all types of hybrids will likely incentivize the implementation of the cheapest and least effective technology. For example, OEMs may favor micro-hybrid start-stop systems over full hybrid designs because the technologies are given the same credits despite providing different fuel saving benefits. The proposed credit scheme could result in penetration of relatively few advanced technology vehicles into the Mexican vehicle market and deliver minimal benefits in fuel savings, undermining the goals of the NOM-163 program.

Similarly, the definition of plug-in hybrid (PHEV) and E-REV need further clarification by specifying a minimum all electric range (AER) in order to receive credits. The electric range should be set to be representative of current technologies available on the market and the minimum should be raised in the future to drive better technologies into the market. For example, model year 2015-2020 PHEVs ranged from 11 to 22 miles on electricity, whereas 2023 models of these same vehicles are now delivering 38 to 42 miles AER. Without such definition of AER, vehicle manufacturers will produce the lowest possible range with the smallest possible batteries and receive the same number of credits. This would significantly undervalue the reduction potential of the regulation.

Incentives and Credits

MECA has supported the early introductory use of incentives to promote innovative technologies that can be disadvantaged by lack of customer exposure and experience. However, in order for a technology to be a sustainable and durable solution, it must demonstrate the ability to compete on the same basis with other technologies to allow consumers the choice that meets their needs while meeting performance-based standards. U.S. EPA recognized this in its 2011 rule by phasing out credits for MY2022-2025 PHEVs, BEVs and FCEVs. Similarly, the European

Commission has phased down the magnitude of multipliers in their 2015 standards from 3.5 to 1.5 over three years and in the 2020 standards from 2 to 1.3 by 2022. Super credits have been virtually eliminated in the latest European proposal for model years 2025-2030 with multipliers of only 1.2 to 1.1. These powertrain technologies have been around for decades and have matured to the point where almost every manufacturer is offering several electrified models for a total of over 80 models equipped with these technologies, allowing consumers to make informed choices with respect to advanced powertrain vehicles.

The penetration of electric vehicles has grown in many global regions as the price decreases. In 2023, the U.S. EV penetration in the first half of the year was 7.2%. In Europe, the value is expected to exceed 25%, with similar new EV penetration rates in China. Some electric vehicles are produced in Mexico for export and new manufacturing plant openings have been announced this year. This adoption rate clearly demonstrates that electric and electrified vehicles are no longer innovative technologies but rather mass-market products that do not warrant receiving super credit multipliers in Mexico. Mexico's generous TAE credits in the proposal are many times higher than any other region in the world and is certainly not warranted in 2024 and beyond.

An example of how credit multipliers can distort the market for electric vehicles is highlighted in a report published by the International Council on Clean Transportation (ICCT) (https://www.theicct.org/sites/default/files/publications/Integrating-EVs-US-EU_ICCT_Working-Paper_22062017_vF.pdf). The report points out that credit multipliers are actually a disbenefit to long term vehicle policy and tend to erode the environmental benefits from the standards. This is due to manufacturers only producing enough EVs to meet their requirements and multipliers result in fewer EVs being sold. California realized that they were projected to only reach 8% EV penetration in 2025 due to credit multipliers, and in the second version of their Advanced Clean Cars they eliminated multipliers completely beyond 2026. In their report ICCT cautions that long term reliance on credit multipliers for ZEV technology may result in the unintended consequence of increasing real world emissions from the remaining non-ZEV portion of the fleet that is allowed to emit at higher levels. Another study by researchers from Carnegie Mellon University (DOI: 10.1016/j.tra.2019.04.003) concluded that a dual policy of credit multipliers combined with mandating vehicle sales actually results in an increase in GHG emissions because the high credit generation by EVs allows manufacturers to emit more from conventional vehicles, resulting in higher overall emissions. Similarly for Mexico, ICCT's analysis has concluded that unproductive credits will reduce fuel savings by up to 75%. This is partly due to a 15-30% reduction in fuel savings through the proposed EV and hybrid vehicle credits. Mexico's proposal provides for EV and hybrid vehicle credits that are ten times higher than similar regulations around the world, which means that OEMs could spend minimal effort in deploying fuel saving technologies and earn large credit balances, as they will only produce the minimum number of electric vehicles to meet the requirement and no more. For reference, the latest U.S. EPA light-duty multipollutant proposal for 2027-2032 has also eliminated credit multipliers for electric vehicles (https://www.regulations.gov/document/EPA-HQ-OAR-2022-0829-0451/).

Another recent ICCT report (https://www.theicct.org/sites/default/files/publications/ZEV_Regulation_Briefing_20181017.pdf) notes that the phase-out of multipliers in Europe and the United States shows the increased understanding that artificial incentives serve as temporary, early-market sparks for these larger markets but can lead to substantial trade-off in fuel consumption and CO_2 benefits if not done

correctly. Given the number of electric vehicle model offerings and declining costs of these vehicles, large credits to OEMs are not needed to incentivize production, and an over incentivized credit scheme will instead result in erosion of the benefits anticipated by the standards. MECA recommends that credit multipliers be eliminated from the current proposal to be consistent with similar regulatory practices used in other regions. MECA encourages Mexico to review the EU and U.S. EPA proposals for light-duty vehicle GHG and fuel economy standards, which incentivize OEMs to produce electric and hybrid vehicles through relief in the CO_2 certification standard instead of credit multipliers. European OEMs achieving a share of zero- and low-emission vehicles, which is higher than the proposed benchmark level of 35% in 2025 and 50% in 2030, will be rewarded in the form of a less stringent CO_2 target (https://ec.europa.eu/clima/policies/transport/vehicles/proposal_es). These types of market-based incentives encourage greater sales of electric and electrified vehicles and lead to the most effective economic and environmental outcomes.

MECA represents both on-cycle and off-cycle technology suppliers, and therefore we are committed to credit policies that ensure measurable and verifiable CO_2 emission reductions in the real-world. Mexico's proposed off-cycle and air conditioning credits need to be reconfigured to better represent the benefits of these technologies. The proposal sets these credits at a single value that is independent of technology and demonstrated benefit. This one-size-fits-all approach does not incentivize the best technologies to be developed and brought to market because an OEM is rewarded with the same credit for a technology that provides only a minor benefit, especially if a technology that provides a larger benefit costs more. MECA recommends that Mexico revise its proposal to include credit menus, like those in the U.S. light-duty GHG regulation, for specific approved technologies that award off-cycle and air conditioning credits based on real-world benefit of each pre-approved technology.

Another policy example where certification flexibilities have been used to incentivize early market introduction of advanced technologies is the Eco-innovation program that is part of the European Commission's light-duty GHG standards provides a pathway for both technology suppliers and vehicle manufacturers to demonstrate and apply for off-cycle technologies (https://circabc.europa.eu/sd/a/bbf05038-a907-4298-83ee-3d6cce3b4231/Technical%20Guidelines%20October%202015.pdf). A program that assigns credit values based on real world demonstration of technology effectiveness is the best way to ensure that the most cost-effective technologies are deployed and deliver the fuel saving reductions expected under the program.

Compliance

Mexico's proposal does not determine compliance with these standards until after 2025. The proposal averages all years together, which does not incentivize early compliance. Furthermore, as has been found in other fuel economy and GHG regulations, gathering data early in the regulatory implementation period is very beneficial to regulatory agencies, OEMs, suppliers, and consumers. Compliance data from the initial years of implementation of a regulation can provide key insights on technology penetration, durability, cost effectiveness and consumer acceptance. Furthermore, requiring compliance on an annual basis provides a regulator with information on how regulated parties plan to comply with the regulation, including how much of a burden a regulation has on a regulated party.

In some cases, regulated parties have chosen to pay fines rather than comply with a regulation's requirements. This was the case for California's heavy-duty on-board diagnostic regulation, which the state recently revised to fix this issue. If a policy allows paying fines in lieu of meeting pollutant standards for compliance, it likely will not achieve the air quality and/or fuel saving goals of a regulation. The fine should be in addition to repair or compensation for the damage caused to the environment.

In conclusion, MECA commends Mexico for taking important steps to continue to reduce greenhouse gas emissions and improve fuel economy from passenger cars and light trucks. We have provided suggestions that we believe will make the final proposal much stronger by resulting in greater benefits to Mexico's energy security as well as better incentives for the automotive industry to invest in Mexico and grow jobs in the auto sector. MECA members are prepared to do our part and deliver cost-effective advanced emission control and efficiency technologies to the light-duty sector to assist in achieving lower fuel consumption while also meeting future reductions in criteria pollutants.

CONTACT:
Rasto Brezny
Executive Director
MECA Clean Mobility
2101 Wilson Boulevard
Suite 530
Arlington, VA 22201
U.S.A.
Tel.: (202) 296-4797 x106
E-mail: rbrezny@meca.org