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Chair Randolph and Members of the Board
California Air Resources Board
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Ford Motor Company appreciates the opportunity to comment on the Advanced Clean Cars II (ACC II) Rule. This rulemaking addresses policy issues of great significance to California, and to our Nation.

At Ford, we consider pollution and climate change a human rights issue, and a strategic priority. As part of our aspiration to become the world's most trusted company, Ford has strengthened its support for commitments to limit global temperature increases consistent with the Paris Agreement, and our Executive Chairman Bill Ford and our CEO and President Jim Farley both applauded President Biden's announcement to re-enter that agreement.

We believe that Henry Ford's original vision of providing affordable transportation for everyone remains relevant today, and we support a Just Transition to EVs, increasing clean mobility options for underserved and overburdened communities which are often disproportionately impacted by air pollution and climate change. We will advocate for justice, and we will also partner and collaborate with cities, communities, and customers to incorporate equitable mobility into our products and services.

Ford recently supported President Biden's 2030 Nationally Determined Contribution (NDC) of 50-52% greenhouse gas (GHG) emission reductions below 2005 by 2030 for the U.S. This goal is consistent with our commitment to be carbon neutral no later than 2050, and to utilize science-based interim targets that we will achieve by 2035 as we progress towards that goal. We will continue to rely on partnerships with our dealers, union partners, and government agencies to meet these objectives. We firmly believe this course of action will benefit the global community, our customers, and our business.

Ford Motor Company is rapidly transforming, investing more than \$50 billion by 2026 to put new electrified vehicle models on the road globally. We've restructured our business into distinct automotive units to accelerate our product transformations, with Ford Model e 100% focused on electrifying our most popular, iconic vehicles. Our recently announced BlueOval City Mega Campus and BlueOvalSK battery park will create 11,000 US jobs and power the future of our EVs.

At Ford, we are proud of our history of partnership and leadership with California. In 2019, in cooperation with the California Air Resources Board, we committed ourselves to the California Framework Agreement, a 50-state GHG solution with stringency far beyond the Trump Administration's preferred SAFE Vehicles Rule. In 2021, Ford submitted comments to EPA's Reconsideration of the Withdrawal of a Waiver for California's Light-duty Vehicle ZEV and GHG (SAFE I) supporting the restoration of California's authority, and we have subsequently led our industry in support of California's Waiver authority in court challenges.

We will now provide our specific comments on several elements of the ACC II rule.

Equity

We are committed to having an open and on-going dialog with the equity community and advocates to ensure that we are engaging in meaningful partnerships on the ground, where it matters most. In July, Ford published the *Transportation Equity*¹ report in response to a request from the US Department of Transportation. That report articulates the data that is needed, the methods and tools that we will use to measure and underscores our public commitment to "building an equitable future".

We believe that "access to mobility is a fundamental necessity and human right for all people – regardless of age, ability, race, gender or economic status. Building on Henry Ford's original vision of providing affordable transportation for everyone, today we continue to aspire to make people's lives better by improving mobility and accessibility for all in an equitable way by partnering and working closely with cities and government agencies; incorporating equitable mobility in our own products and services; and most importantly being an advocate."

Unfortunately, since our transportation systems were established over 100 years ago, they have historically impacted minorities, and lower income neighborhoods and persists as an existing barrier. We acknowledge and recognize these inequities, and we want to be a part of the solution through partnering with communities, municipalities, and academic institutions to improve people's quality of life. We believe we can continue to move the needle in two ways.

- First, with our own products and services, we can work closely with cities and their residents to design, develop and deploy more equitable mobility systems through our Ford autonomous vehicle and mobility businesses including Ford's City: One program and Safety Insights platform.
- Second, we can use our expertise in mobility to advocate for better metrics and accountability amongst public, non-profit, and private organizations.²

While we do not have specifics yet to share at it relates to this regulation, we are working hard internally to develop programs that actual have real world impact on the ground in communities that are negatively impacted by dirty air. Ford won't stop until all people have the freedom to move to make their lives better and build a better world. That's how we've earned your trust for years and will continue this commitment in the future.

¹ Comment from Ford Autonomous Vehicles LLC <https://www.regulations.gov/comment/DOT-OST-2021-0056-0263>

² Bell, Donna (Director AV & Mobility Strategy, Ford Motor Company). <https://medium.com/cityoftomorrow/helping-to-build-a-better-world-together-for-equitable-mobility-for-all-19098d6221b5>

Advanced Clean Cars II Criteria Emissions Rule

- The LEV IV light-duty vehicle FTP fleet average approach, with an appropriately stringent floor and ZEV phase-out, is the right way ensure low emissions while allowing unhindered EV acceleration. Removing the ZEVs from the FTP fleet average provides greater certainty in the compliance planning process by removing volatile ZEV volumes from the calculation. Finally, we appreciate that CARB has added new emission bins for additional compliance flexibility.
- Although we support removing the ZEVs from the criteria emission fleet average calculations, this approach may not be appropriate for other regulations, such as GHG and fuel economy.
- We support the lower medium-duty vehicle FTP fleet average standards, and we thank CARB for adding new emission bins for compliance flexibility. The lower standards will require steady criteria emission performance improvements between 2026 and 2029 MY, but we believe that these standards will be achievable through calibration and aftertreatment design changes.
- We support the three-year phase-in period of the new light-duty vehicle cold-start test procedures (i.e., FTP Quick Drive-Away, FTP Partial Soak, PHEV High-Power Cold-Start). All products will likely need to be re-engineered over the coming year in order to comply with these new requirements, but we believe that the new requirements are achievable. We agree with CARB's decision to set the FTP Quick Drive-Away duration at 8 seconds (6 seconds in Neutral and 2 seconds in Gear). The 8-second initial drive-away represents the 25th percentile drive-away time from on-road customers. Choosing an initial drive-away period shorter than 8 seconds may have covered a larger percentage of on-road activity, however that shorter idle period would likely increase test-to-test emissions variation and may have resulted in a test procedure that would be difficult for testing personnel to execute.
- We support the proposed phase-in period of the FTP PM1 requirements. The phase-in period is unchanged from the LEV III regulation. The adoption of the FTP PM1 standard provides a 67% reduction in the PM standard versus the existing PM3 standard. Repeatedly achieving PM1 emission levels presents significant challenges for our testing facilities. As the emissions standards decrease, noise from PM filter handling, static electricity on the PM filters, and sampling system contamination may cause test-to-test PM variation to represent a large fraction of the PM standard. Great care will need to be taken within our test facilities when performing PM1 certification tests, in order to minimize the influence of these noise factors on the results.
- We support the Medium-Duty Vehicle Moving-Average Window (MAW) in-use testing requirements applying only to vehicles with a Gross Combined Weight Rating (GCWR) \geq 14,000 lbs. The in-use emissions for vehicles < 14,000 lbs GCWR are properly characterized from in-use FTP and US06/LA92 testing on the chassis dynamometer. We thank CARB for accepting our recommendation to start the MAW in-use testing in 2027 MY instead of the initially proposed 2026 MY. Starting in 2027 MY will allow lessons learned from 2024-2026 MY heavy-duty engine MAW in-use testing to be applied to Medium-Duty vehicles. Finally, we request that CARB work with manufacturers to perform a technical review in 2030 CY of the MAW in-use testing requirement for diesel vehicles and consider whether technical amendments are needed at that time.

- As a certification testing flexibility for determining Medium-Duty Vehicle CO₂ FCLs (Family Certification Limits) used for performing Moving Average Window bin determinations and emission calculations, we recommend that CARB allow US06/LA92-based FCLs; in addition to chassis dynamometer FTP- and engine dynamometer FTP-based values. This flexibility will allow manufacturers to certify to a chassis dynamometer-based CO₂ FCL that is comparable to the result expected on an engine dynamometer FTP. Without this added flexibility, manufacturers will likely need to perform an engine dynamometer FTP test with a Medium-Duty Vehicle engine. It will be a complex and time-consuming process to adapt a Medium-Duty Vehicle engine to run on an engine-dynamometer.
- We agree with CARB's decision to require Standalone SFTP certification for all test groups; however, we are concerned that CARB has chosen to require that 100% of test groups comply with the Standalone SFTP requirements in 2026 MY. This requirement has the potential to reduce emissions from high-speed/high-load driving. This requirement will result in significantly increased levels of investment in internal combustion engines over the next four years and presents substantial workload challenges. Instead of requiring 100% phase-in of standalone SFTP requirements in 2026 MY, we recommend that CARB phase-in the standalone SFTP requirements over a three-year period (2026-2028 MY); as was done for the new cold-start test procedures. This approach would spread internal combustion engine investment out over a longer time period, allow greater levels of short-term investment in ZEV technologies, and achieve CARB's goal of 100% Standalone SFTP certification by 2028 MY.

Advanced Clean Cars II Zero Emissions Vehicle Rule

- The ACC II ZEV sales curve is aggressive, and cooperative partnerships between vehicle manufactures and Government will be required to achieve success. Ford is committed to providing exciting, capable EV products that meet the challenge, and we applaud California's leadership in adopting required supportive policies such as purchase incentives (including the benchmark CVRP and CFR programs, along with numerous local/municipal programs), ambitious charging infrastructure installation activity, and non-monetary incentives such as HOV lane privileges. We maintain that other US States adopting California ZEV rules can also expect ZEV sales success, but only if they institute similar supportive policies.
- Ford's transition to EV has already begun, we're leading the Electrification Revolution with our iconic nameplates like the F-150 Lightning, the Mustang Mach-E, and the fully electric e-Transit van. We've increased our production volumes significantly, delivering more EVs to customers than our initial plan. To continue momentum in the acceleration of EVs, Ford urges ARB to allow usage of converted vehicle values in the calculation of ZEV Requirement Performance. Ford recognizes the concern of carrying large credit banks into the new program, and we are aligned with the 15% cap on converted value usage, and 5-year lifetime/expiration. However, manufacturers' ability to use the converted credits in 2026-2030MYs will ensure continued delivery of EVs to California for the remainder of the ACC-I program (2023-2025MY). Manufacturers have earned these credits in good-faith, and their usage in ZEV performance is needed to support the significant increases in EV deployment to meet the 100% objective in 2035MY.

- We cannot support the EV Battery Durability provision in its current form. We are aligned on the need to ensure that EVs remain capable and reliable as they age, but regulatory requirements must be compatible with available technology. As currently written, the durability requirement will force manufacturers to add 'reserve' battery capacity, unavailable to the new-vehicle customer. This will result in an increase in cost and weight for the new vehicle customer with no vehicle range benefit. It will result in fewer EVs produced and made available to prospective vehicle buyers, as battery raw materials and the battery supply chain cell production remain constrained. It will also drive vehicle complexity, with EVs for sale in California having less range (at same cost and weight) as identical EVs for sale in other US States. It will limit our ability to fully unlock features that provide Grid resiliency in California and force manufacturers to limit activities such as fast charging and V2X. The overall result of this Battery Durability requirement will be a negative impact to new EV sales, and further limit affordable vehicles to equity communities.

We look forward to finalization of this rule. If you have any questions about the substantive comments, please contact Steve Henderson (shenders@ford.com) or Evan Belser (ebelser1@ford.com). Thank you for your attention to these comments.

Sincerely,

A handwritten signature in blue ink that reads "Cynthia Williams". The signature is written in a cursive, flowing style.