

Settlement Agreement

1. The California Air Resources Board ("CARB"), and BMW NA, hereinafter collectively referred to as the "Parties" or singularly as "Party," voluntarily enter into this Settlement Agreement (or "Agreement") based on the Parties' mutual interest in mitigating their respective risks and resolving potential legal disputes concerning the authority of CARB and those states that have adopted California's vehicle standards ("Section 177 States") to adopt and enforce greenhouse gas ("GHG") emissions standards applicable to new light-duty motor vehicles manufactured or distributed by BMW NA for Model Years 2021-2026 in light of the SAFE Rule Part One and Part Two, as discussed and defined below.
2. The Parties enter into this Agreement in light of ongoing and potential lengthy litigation involving the Federal Government, CARB and the Section 177 States regarding the SAFE Rule Part One and Part Two (collectively the "Litigation"). As elaborated below, BMW NA seeks, among other things, flexibility and certainty that will enable it to avoid compliance risks associated with California light duty vehicle GHG standards in California and the Section 177 States while maintaining or enhancing its current motor vehicle planning, production, sales, distribution, and related efforts regardless of the outcome of the current and pending litigation. CARB seeks, among other things, greater certainty regarding continuing automotive GHG emission reductions and vehicle electrification during the Model Years ("MYs") subject to this Agreement.

The Parties

3. The California Air Resources Board: CARB is the state air regulator for California (Cal. Health and Safety Code § 39600 *et seq.*), and sets vehicle emissions standards pursuant to state law (*see, e.g.*, 42 U.S.C. § 7543, Cal. Health & Safety Code §§ 43013, 43018.5). CARB has promulgated GHG emission standards for the light-duty vehicle fleet. (*See* 13 CCR §§ 1961.3 *et seq.*).

4. BMW NA: BMW of North America, LLC ("BMW") and Rolls-Royce Motor Cars NA, LLC ("Rolls-Royce") are affiliated, related, wholly-owned subsidiaries of BMW (US) Holding Corp. Solely for the purposes of the Settlement Agreement, including the Electrification Commitments referenced in Paragraph 37(A) and the Enforcement Discretion Letters, BMW and Rolls-Royce shall be referred to collectively as "BMW NA." Consistent with the current practice of jointly reporting to EPA and to CARB BMW NA fleet-wide GHG emissions values, reflecting combined BMW and Rolls-Royce GHG emissions, the Settlement Agreement, including the Electrification Commitments referenced in Paragraph 37(A), shall apply to only to BMW NA. BMW NA is a manufacturer or distributor of light-duty motor vehicles for sale throughout the United States that are or may be subject to regulation by the United States Environmental Protection Agency ("EPA"), the National Highway Traffic Safety Administration ("NHTSA"), CARB and the Section 177 States.

Definitions

5. "Agreement Balance" means the amount of GHG credits available or deficits that apply to BMW NA at any given time for purposes of compliance with the Agreement, as calculated and tracked in accordance with Paragraph 34(A).
6. "CA Standards" are the standards applicable to light duty vehicle GHG emissions set out at 13 Cal. Code of Regulations § 1961.3(a)-(g) and encompass all related aspects of California regulations and test procedures relevant to the implementation of those standards.
7. "Days" means calendar days, unless otherwise specified.
8. "Emissions Benefit Balance" is an accounting designed to ensure the integrity of the emission benefits of this Agreement. The Emissions Benefit Balance will be calculated and tracked in accordance with Paragraph 34(B).

9. "Enforcement Discretion Letters" refers to letters or directives that each Section 177 State issues to document its exercise of enforcement discretion, assurance of support, or other use of authority allowing BMW NA to comply with this Agreement to achieve the objectives of the CA Standards through Model Year 2026, which each state has adopted pursuant to Section 177 of the Clean Air Act.
10. "Executive Officer" shall mean the person appointed by CARB pursuant to California Health & Safety Code § 39515.
11. "Federal Government" shall mean the National Highway Traffic Safety Administration ("NHTSA") and the United States Environmental Protection Agency ("EPA"), collectively.
12. "2018 Federal Program" encompasses the EPA light-duty vehicle GHG standards and test procedures specified in Title 40 CFR Part 86 Subpart S, Section 86.1818-12 and Part 600 in place on July 1, 2018.
13. "Federal Program" refers to all applicable light-duty vehicle GHG standards and test procedures, such as those specified in Title 40 CFR Parts 86 Subpart S, 1066 and 600, as may be amended from time to time, and as interpreted and implemented by EPA.
14. "SAFE Rule Part One" encompasses the final actions promulgated by EPA and NHTSA and published at 84 Fed. Reg. 51,310 (Sept. 27, 2019).
15. "SAFE Rule Part Two" encompasses the final rules promulgated by EPA and NHTSA and published at 85 Fed. Reg. 24,174 (April 30, 2020).
16. "Section 177 States" means, as of the time the Parties entered into this Agreement, the States of Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington. These states, through their legislatures and duly

authorized state regulatory agencies, have adopted GHG standards applicable to the light-duty vehicle fleet identical to CA standards pursuant to Section 177 of the Clean Air Act. Any additional state (or district or territory of the United States) that adopts such GHG standards after the Effective Date of this Agreement, as defined in Paragraph 46, will be considered a Section 177 State for purposes of this Agreement at such time as that body is authorized to enforce those standards in accordance with Section 177 of the Clean Air Act.

17. "Trust Account" means an account established by CARB, with any appropriate input from the Section 177 States, in which funds may be deposited to address a GHG Credit Shortfall Breach, as described in Paragraph 39 of this Agreement, and which funds are for use to promote vehicle electrification or otherwise to reduce vehicle GHG emissions.
18. "Zero Emission Technology" vehicle means a battery electric vehicle ("BEV"), a fuel cell electric vehicle ("FCEV"), or a plug-in hybrid electric vehicle ("PHEV") as that term is defined in the 2018 Federal Program.
19. "Zero Emission Vehicle" ("ZEV") means a vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.
20. For clarity and to provide certainty, unless otherwise defined herein, any terms not specifically defined in this Settlement Agreement are as defined in the Federal Program, and shall be interpreted to have the commonly-understood meanings of such terminology in the context of light duty vehicle GHG regulatory programs.

Mutual Understandings

21. CARB and Federal GHG Standards. In 2013, EPA issued CARB a waiver of federal preemption for its CA Standards pursuant to Section 209 of the CAA. 78 Fed. Reg. 2,112 (Jan. 9, 2013). EPA promulgated the 2018 Federal Program regulations in 2012, establishing federal GHG standards for Model Years 2022-2025; at the same time, NHTSA undertook an augural rulemaking to promulgate fuel economy standards consistent with the statutory limitations regarding NHTSA's ability to adopt fuel economy standards no more than four years prior to the applicable Model Year. 77 Fed. Reg. 62,624 (Oct. 15, 2012). The CA Standards include a "deemed to comply" provision such that compliance with the 2018 Federal Program is deemed as compliance with the CA Standards. 13 C.C.R. § 1961.3(c). Likewise, compliance with the 2018 Federal Program qualifies as compliance in Section 177 States.
22. SAFE Rule Part One. The SAFE Rule Part One is a final agency action in which 1) EPA published a revocation of the CAA waiver of federal preemption previously granted to CARB for the CA Standards, at least as to certain Model Years, and 2) NHTSA adopted a rule declaring that state law regulations pertaining to motor vehicle emissions of carbon dioxide are preempted by the federal Energy Policy and Conservation Act ("EPCA"). CARB and the Section 177 States dispute the validity of these actions and the authority of EPA and NHTSA to take these actions. California has filed a lawsuit, together with the Section 177 States and other plaintiffs, challenging the NHTSA action in the United States District Court for the District of Columbia. *State of California v. Chao*, Case No. 1:19-cv-02826 (D.D.C. filed Sept. 20, 2019). California (including CARB), the Section 177 States, and others have also petitioned for review of the EPA and NHTSA actions in the SAFE Rule Part One in the United States Court of Appeals for the District of Columbia Circuit. *State of California v. Wheeler*, Case No. 19-1239 (D.C. Cir. filed Nov. 15, 2019).

23. SAFE Rule Part Two. The SAFE Rule Part Two is a final rule that reduces the stringency of the 2018 Federal Program and modifies alternative compliance measures. CARB has initiated litigation challenging the SAFE Rule Part Two. BMW NA has moved to intervene in the litigation for the limited purpose of addressing the remedy if the court grants a petition for review of the SAFE Rule Part Two. Under CARB regulations, with the promulgation of SAFE Rule Part Two, compliance with the Federal Program is no longer deemed compliance with the CA Standards, and instead manufacturers are required to comply with the CA Standards without regard to the Federal Program beginning with the 2021 Model Year. 13 C.C.R. § 1961.3(c).

24. Authority of Agencies to Enter into this Settlement Agreement and Otherwise Exercise Enforcement Discretion. CARB takes the position that its authority pursuant to Health & Safety Code § 43213 among other authorities to enforce the CA Standards was illegally restricted by SAFE Rule Part One, although CARB has stated that it will not take enforcement actions as to model years covered by EPA's waiver revocation in the SAFE Rule Part One unless and until the revoked portions of the waiver are reinstated. CARB and the Section 177 States take the position that they may enforce their regulations if the revoked portions of the waiver are reinstated or if the EPA and NHTSA actions in the SAFE Rule Part One are vacated. CARB and the Section 177 States may exercise enforcement discretion with respect to such authority, including entering into settlement agreements and issuing Enforcement Discretion letters or other enforcement discretion directives. Moreover, CARB has authority to contract with regulated entities or to take other actions necessary to further its statutory purposes as needed to meet climate and public health targets. *See generally* Cal. Health & Safety Code § 39600 *et seq.*

25. Risks and Benefits. This paragraph describes the Parties' understandings of important risks and benefits relevant to this Agreement; it is not intended as a

comprehensive statement of all such risks and benefits. As set forth in Paragraph 2 above, litigation over the SAFE Rule Part One and the SAFE Rule Part Two, as well as potential further federal regulatory actions, create uncertainty for BMW NA regarding the GHG standards that will apply throughout the United States for Model Year 2021 through Model Year 2026 and subsequent. The outcome of this litigation or additional federal regulatory actions may result in two GHG compliance standards in the United States for the covered Model Years: requirements to comply with more stringent CA Standards in California and the Section 177 States; and less stringent SAFE Rule Part Two standards throughout the rest of the United States. This regulatory uncertainty also subjects BMW NA to considerable enforcement risk. Therefore, BMW NA enters into this agreement to ensure, among other reasons, that it has the ability to (i) make long-term product planning decisions and investments with confidence; (ii) satisfy market demand and production realities; and (iii) comply with regulatory requirements during this time. This Settlement Agreement offers BMW NA compliance flexibility and greater certainty to plan for its nationwide fleet. The SAFE Rule Part One and SAFE Rule Part Two, and the related litigation, also entail risks that California and the Section 177 States may not achieve the pollutant reduction goals they expected to result from the CA Standards. Entry into this Settlement Agreement is consistent with those goals, including goals set out in the AB 32 Scoping Plan, and will deliver environmental benefits commensurate with those goals that may not be realized in the absence of an agreement. Each Section 177 State has made consistent judgments, reflected in the Enforcement Discretion Letters.

26. Commitments. In light of the risks set forth above, BMW NA commits to comply with this Settlement Agreement. Subject to the conditions and terms specified in this Settlement Agreement, CARB commits to exercise its enforcement discretion to accept BMW NA's compliance with the terms of this Settlement Agreement as

an agreed upon compliance plan to achieve the objectives of the CA Standards for Model Year 2021 through Model Year 2026. CARB further accepts this Agreement as a contractual commitment. During the term of this Settlement Agreement, CARB will not enforce the CA Standards with regard to BMW NA using available enforcement mechanisms, and CARB instead shall enforce the terms of this Settlement Agreement solely in accordance with the enforcement provisions and remedies herein. The Parties recognize that each Section 177 State is issuing an Enforcement Discretion Letter that allows BMW NA to comply with this Agreement to achieve the objectives of the CA Standards in each Section 177 State through Model Year 2026. Through their respective Enforcement Discretion Letters, each Section 177 State committed to exercise enforcement discretion in lieu of enforcing the CA Standards, as adopted, based on BMW NA's entry into this Agreement. As a basis for entering into this Agreement, BMW NA has relied on each Section 177 State's representation that it will exercise its enforcement discretion, as described in their respective Enforcement Discretion Letters.

27. No Effect on Federal Law or Law of Other States. The Parties to this Agreement do not intend to, and this Agreement does not, alter either Party's obligations under federal law, or impose on BMW NA compliance obligations with respect to sales or related activities in any individual state.

Agreed Substantive Terms

28. Litigation Commitments. BMW NA, on behalf of itself, its parent companies, subsidiaries and affiliates, will not challenge or seek to undermine this Agreement or CA Standards for the current Model Year through Model Year 2026, or the corresponding standards in Section 177 States. BMW NA will, to the extent possible under applicable trade association bylaws, oppose participation in any such challenges by any trade associations to which it belongs and avoid

providing resources for any such challenges. BMW NA will not intervene on the side of the United States, or file an amicus brief on the side of the United States, to defend SAFE Rule Parts One or Two. This Agreement does not limit BMW NA's rights as intervenor in the SAFE Rule Part Two litigation to address the remedy in the event that a court grants a petition for review. Each Party agrees to support the validity of this Agreement in the event of third-party challenges.

29. Greenhouse Gas Fleet Commitments: BMW NA agrees to maintain an average yearly reduction in GHG emissions from its fleet sold nationwide (light-duty passenger cars, light-duty trucks, and medium-duty passenger vehicles) for model years 2021 through 2026, in accordance with the following:

(A) The target Carbon-Related Exhaust Emission (CREE) value for BMW NA's fleet shall be calculated separately for passenger cars and trucks utilizing the footprint curves defined below.

(B) Coefficients defining the footprint curves are identified in the tables below.

(i) For vehicles with a footprint equal to or smaller than the footprint identified in the Minimum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Minimum Footprint column.

(ii) For vehicles with a footprint greater than the Minimum Footprint and less than the Maximum Footprint, the target CREE value in units of grams per mile for each vehicle for the corresponding model year shall be calculated by multiplying the footprint of the vehicle by the value in column (a) and adding the value in column (b) and rounding the result to the nearest tenth of a gram per mile.

(iii) For vehicles with a footprint equal to or greater than the footprint identified in the Maximum Footprint column, the target CREE value in units

of grams per mile for the corresponding model year is the value listed in the Maximum Footprint column.

Passenger Car Curve Coefficients				
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	<i>Maximum Footprint $\geq 56.0 \text{ ft}^2$</i>
2021	157.0	3.84	-0.4	215.0
2022	151.0	3.70	-0.4	207.0
2023	146.0	3.56	-0.4	199.0
2024	140.0	3.43	-0.4	192.0
2025	135.0	3.30	-0.3	185.0
2026	130.0	3.18	-0.3	178.0

Light Truck Curve Coefficients					
Model year	Minimum Footprint ≤ 41.0 ft ²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	188.0	4.12	19.1	74.0	324.0
2023	181.0	3.97	18.4	74.0	312.0
2024	174.0	3.82	17.7	74.0	300.0
2025	168.0	3.68	17.0	74.0	289.0
2026	162.0	3.54	16.4	74.0	278.0

30. Flexibilities to Promote Zero Emission Technology

(A) To recognize the value of increased introduction of zero emission technologies towards CA's and the Section 177 States' long-term needs for electrification of the fleet, BMW NA's Zero Emission Technology vehicles shall utilize a production multiplier for purposes of compliance calculations as follows:

- (i) For BEVs and FCEVs, a vehicle production multiplier of 2.0 shall be used for MY2020 through MY2024, a multiplier of 1.75 shall apply for MY2025, and a multiplier of 1.5 shall apply only for MY2026.

- (ii) For PHEVs, a vehicle production multiplier of 1.6 shall be used for MY2020 through MY2024, a multiplier of 1.45 shall apply for MY2025, and a multiplier of 1.3 shall apply only for MY2026.
- (iii) BMW NA shall clearly identify in its end of model year reporting for each model year to CARB, which Zero Emission Technology vehicles BMW NA has designated to use the production multiplier(s) for compliance calculations.
- (iv) The use of these production multipliers shall be limited by a "1 percent cap".
 - (1) The cap shall be calculated as a cumulative cap representing the total available credits that can be cumulatively earned from the production multipliers for MY2020 through MY2026 vehicles.
 - (2) Calculation of the cap
 - (a) For MY2020 and for MY2021, the contribution to the cumulative cap shall be calculated as 2.0 grams per mile for each model year and converted to grams by multiplying by BMW NA's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.
 - (b) For each model year from MY2022 through MY2026, the contribution to the cumulative cap shall be calculated as the difference between the model-year specific calculated fleet average target value applicable to BMW NA per this Agreement and a calculated fleet average for a target value using the curve coefficients defined in Appendix A: Curve Coefficients that represents 1 percent less in annual reductions than the target value per this Agreement (*e.g.*, a target value reflecting 2.7 percent year

over year reductions from MY2021 if the target value in this Agreement reflected a 3.7 percent year over year reduction from MY2021). The difference shall be converted from grams per mile to grams by multiplying by BMW NA's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.

- (c) BMW NA's cumulative cap, in grams, shall be the sum of the above calculations for each individual model year from MY2020 through MY2026.
- (d) The required calculation format (assuming for purposes of this example that the Agreement requires a 3.7 percent year over year reduction) is as follows. All values expressed in megagrams shall be rounded to the nearest whole number.

$$CAP_{MY2020 \text{ thru } MY2021} = \sum_{MY2020}^{MY2021} (2.0 \text{ [g/mi]} \times \text{Volume} \times \text{Vehicle Lifetime Miles})$$

$$CAP_{MY2022 \text{ thru } MY2026} = \sum_{MY2022}^{MY2026} ((\text{Fleet Target Value [g/mi]} @ 2.7\% - \text{Fleet Target Value [g/mi]} @ 3.7\%) \times \text{Volume} \times \text{Vehicle Lifetime Miles})$$

Where:

$CAP_{MY2020 \text{ thru } MY2021}$ = Portion of the cumulative 1 percent cap from MY2020 and MY2021 vehicles in grams.

$CAP_{MY2022 \text{ thru } MY2026}$ = Portion of the cumulative 1 percent cap from MY2022 through MY2026 vehicles in grams.

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year over year stringency, without the production

multiplier applied to Zero Emission Technology vehicles, in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without production multipliers applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 miles for passenger cars and 225,865 miles for light trucks.

(3) Tracking of credits used toward the cap

- (a) For each model year from MY2020 through MY2026, BMW NA shall calculate the amount of credits earned from production multipliers as specified below and apply those towards the cumulative 1 percent cap as defined in Paragraph 30(A)(iv)(2), above. Zero Emission Technology vehicles for which BMW NA elected not to use the production multipliers shall be included in this calculation in the same manner as other vehicles that do not utilize production multipliers.
- (b) Calculation of credits. For each model year from MY2020 through MY2026, Zero Emission Technology vehicle credits shall be calculated separately for passenger automobiles and light trucks, using the following equations to effectively subtract the credits calculated for the base fleet from the credits calculated for the fleet with multipliers applied. No credits are earned if the result is a negative value. All values expressed in megagrams shall be rounded to the nearest whole number.

$$\text{Zero Emission Technology Vehicle Credits[Mg]} = \text{Credits}_{adj} - \text{Credits}_{base}$$

- (i) When calculating the Credits_{adj} for Zero Emission Technology vehicles from production multipliers for MY2020 through MY2026, BMW NA may elect to calculate the credits based on either the Method 1 or Method 2 formula below.

1. Method 1 formula:

$$Credits_{adj}[Mg] = \left(\frac{(Fleet Target Value_{adj} - Performance_{adj}) \times Volume_{adj} \times Vehicle Lifetime Miles}{1,000,000} \right)$$

Where:

Fleet Target Value_{adj} = Production weighted fleet average standard from the footprint target calculation for the specified year, with the production multiplier applied to designated Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume_{adj} = Total production of passenger cars or light trucks with the production multiplier applied to designated Zero Emission Technology vehicles, with no rounding applied to the result.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

2. Method 2 formula:

$$Credits_{adj}[Mg] = \left(\frac{(Fleet Target Value - Performance_{adj}) \times Volume \times Vehicle Lifetime Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

(ii) Except as noted below for MY2020 and MY2021, for both Method 1 and Method 2, base fleet credits shall be calculated in megagrams using the following equation and rounding the result to the nearest whole number.

$$Credits_{base}[Mg] = \left(\frac{(Fleet\ Target\ Value - Performance) \times Volume \times Vehicle\ Lifetime\ Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance = Production weighted fleet average CREE, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

1. To determine the amount of credits to be added to BMW NA's starting Agreement Balance and to be applied towards the cumulative 1 percent cap for MY2020, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for *Credits_{base}*. BMW shall utilize the same method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2020 with the production multipliers from this Agreement.
2. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the

Agreement Balance for MY2021, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.

3. To determine the amount of credits to be applied towards the cumulative 1 percent cap for MY2021, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for *Credits_{base}*. BMW NA shall utilize the same method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2021 with the production multipliers from this Agreement.
4. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2022 through MY2026 and to be applied towards the cumulative 1 percent cap for MY2022 through MY2026, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.

(v) For Zero Emission Technology vehicles produced by BMW NA in excess of the cumulative 1 percent cap:

- (1) For MY2020 BEVs and FCEVs, a production multiplier of 1.75 and for MY2021 BEVs and FCEVs, a production multiplier of 1.5 shall be used for compliance calculations.
- (2) For MY2020 PHEVs, a production multiplier of 1.45 and for MY2021 PHEVs, a production multiplier of 1.3 shall be used for compliance calculations.

(3) For MY2022 through MY2026 BEVs, FCEVs, and PHEVs, no production multiplier (i.e., a value of 1.0) shall be used.

(vi) For compliance calculations, the applicable Zero Emission Technology production multipliers are only used in the calculation of credits from Zero Emission Technology vehicles and may not be used in the calculation of BMW NA's fleet target value or BMW NA's fleet performance carbon-related exhaust emissions (CREE) value.

(B) Zero Emission Technology vehicles for MY2020 through MY2026 shall utilize a value of 0 grams per mile to represent the emissions of FCEVs and BEVs and the proportion of electric operation of PHEVs that is derived from electricity that is generated from sources that are not onboard the vehicle.

(i) For BEVs and FCEVs, 0 grams per mile shall be used as the CREE value for the vehicle's performance in compliance calculations.

(ii) For PHEVs, 0 grams per mile shall be used as the CREE value to represent the proportion of electric operation of a vehicle that is derived from electricity that is generated from sources that are not onboard the vehicle. For ease of understanding, such proportion of operation shall be calculated in accordance with the 2018 Federal Program.

31. Air Conditioning (A/C) Related Credits and Off-Cycle Credits

(A) Except as noted in Paragraph 31(A)(vi) below, for all requested A/C and off-cycle credits:

(i) BMW NA should notify CARB of its intent to use such credits in its pre-model year report submitted no later than December 31 of the calendar year two years before the model year;

- (ii) BMW NA may submit such requests and supporting data and documentation prior to or during the applicable model year to facilitate earlier review and approval by CARB; and
- (iii) BMW NA shall submit such requests and supporting data and documentation for review and approval by CARB no later than the submittal of the end of model year report by May 15 following the model year. Submitted data shall include identification and sales volumes of the vehicle model(s) and configurations that have specific technologies applied and the credits claimed for each technology along with documentation supporting the claimed credit value for each technology.
- (iv) In general, approved credits are valid through the MY2026. BMW NA will be required to newly apply for and CARB will determine an appropriate value for credits on MY2027 and later vehicles. Where specifically noted, credits may be approved on a more limited basis and/or conditioned on BMW NA collecting and submitting additional data from actual vehicle operation and/or testing to support the approved credits.
- (v) Except as specifically noted in this Agreement, the provisions of the 2018 Federal Program apply for determining credits for A/C leakage and efficiency improvements, off-cycle technologies, and full-size pickup hybrid technology as well as exhaust emission performance CO₂ equivalent credits or debits from N₂O and/or CH₄ emissions.
- (vi) For A/C and off-cycle technologies previously granted credits to BMW NA by EPA before January 1, 2020 through explicit approval or by EPA for MY2020 or earlier via acceptance of BMW NA's end of model year report, and where EPA continues to grant the identical credit values to BMW NA, CARB shall grant BMW NA the same credit values subject to the same, if any, limitations by EPA (*e.g.*, the inclusion or exclusion of a specific credit towards a maximum cap for that technology).

(vii) All MY2021 and later model year credits are subject to CARB acceptance in accordance with this Agreement and the established approval criteria and practice in the Federal Program. In its review of credits for approval, the Parties intend that CARB will remain aligned with EPA to the extent possible in accordance with good engineering judgment and technical rationale. However, where appropriate to promote faster adoption of new technologies, CARB may independently approve credits prior to acceptance by EPA.

(B) For MY2020 through MY2026 off-cycle credits that BMW NA selects from predefined values assigned in the 2018 Federal Program:

- (i) The maximum allowable decrease in BMW NA's fleet emissions from the use of such credits may not exceed 15.0 grams per mile.
- (ii) For thermal control technologies, the existing caps of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).

(iii) The predefined values available for use by BMW NA will also include:

- (1) A credit value of 1.1 grams per mile is available for passenger cars and light trucks that utilize an advanced A/C compressor with an improved efficiency relative to fixed-displacement compressors derived from improved internal valve systems that optimize the internal refrigerant flow across the range of compressor operator conditions through the addition of a variable crankcase suction valve. Except as noted in Paragraph 31(E)(ii) below, these credits shall be counted towards the A/C efficiency per vehicle caps of 5.0 and 7.2 grams per mile for passenger cars and light trucks, respectively.

(2) A credit value is available for passenger cars and light trucks that utilize a high efficiency alternator. The credit value shall be 0.16 grams per mile for each one percent of improvement in Verband der Automobilindustrie (VDA) efficiency above a baseline of 67 percent efficiency (*e.g.*, if a high efficiency alternator achieves 69 percent VDA efficiency, the credit value would be 0.32 grams per mile calculated as $(69 - 67) * 0.16 = 0.32$). VDA efficiency is the ratio of the alternator output power to the power supplied to the alternator, as measured using the VDA efficiency measurement methodology and expressed as a whole number percent from 68 to 100. The Parties agree that further detail regarding these calculations is provided at EPA-HQ-OAR-2018-0283-0706 "Potential Off-cycle Menu Credit Levels for High Efficiency Alternators and Advanced Air Conditioning Compressors", memo from EPA (Aug. 1, 2018).

(C) For MY2021 through MY2026 off-cycle credits that BMW NA utilizes the 5-cycle test method to determine the amount of the credit:

- (i) BMW NA shall provide test data showing the 5-cycle and 2-cycle combined city/highway test results for with and without the off-cycle credit technology active.
- (ii) The amount of off-cycle credit shall be the difference of the 5-cycle testing with and without the technology active less the difference of the 2-cycle testing with and without the technology active to ensure the credit reflects an incremental amount above and beyond what is already accounted for in the 2-cycle testing.

(D) For MY2021 through MY2026 off-cycle credits that BMW NA requests CARB approval of through a special test procedure to quantify the credit:

- (i) Upon receipt of a completed application with all confidential business information redacted, CARB may provide public notice to interested parties of receipt of such an application and make it available for review and comment. CARB may provide at least 30 days of public review and identify a method for parties to submit their comments. After the comment period, the applicant and/or CARB may make modifications as needed to address relevant issues before issuing a final approval. A version of the final approval, with any confidential business information redacted, may also be made publicly available by CARB for reference.
 - (ii) For identical technologies previously approved by CARB during the term of this Agreement or approved by EPA prior to January 1, 2020, BMW NA may utilize the identical special test procedure/methodology as was previously used to determine the appropriate credit value for its specific vehicle(s). If BMW NA elects this option, CARB may omit the notice and comment procedure of Paragraph 31(D)(i) above.
 - (iii) For thermal control technologies, any credit determined under the special test procedures shall be applied towards, and may not exceed, a maximum value for the sum of all applied thermal control technologies of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks.
- (E) For MY2021 through MY2026 credits related to air conditioning system efficiency improvements:
- (i) If BMW NA uses predefined values or 5-cycle testing to demonstrate the credit value of the applicable technology, the maximum credits available are 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck and shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).
 - (ii) In general, the maximum credit limits of 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck also apply to and

include technologies where BMW NA uses special testing approved by CARB to demonstrate the credit value of the applicable technology. However, if BMW NA performs such special testing on a vehicle or system that has already met the credit limit by utilization of other technologies and demonstrates that the added technology still provides additional measurable GHG reductions, credits beyond the limit commensurate with the benefits will be granted by CARB.

(F) Additional provisions for MY2021 through MY2026 vehicles:

- (i) To support the development of streamlined application processes for MY2027 and later vehicles:
 - (1) Applications to determine the preliminary credit value for eligible off-cycle technologies on MY2021 through MY2026 vehicles may be submitted by automotive suppliers. However, only applications accompanied by a letter of endorsement from BMW NA or another manufacturer subject to a similar agreement will be considered for approval by CARB.
 - (2) Applications by suppliers may be based on the 5-cycle testing method or the special testing method to determine the appropriate credit value. Depending on the technology, the preliminary credit value may be an absolute value or a scaled value based on a parameter determined to be correlated to its benefit.
 - (3) For technologies assigned a preliminary credit value from an approved supplier application, BMW NA shall request CARB approval of the use of the technology. CARB shall approve the use of the credit value upon BMW NA providing sufficient information to confirm the implementation of the technology is consistent with the supplier's application.

- (4) CARB may approve such applications on a limited basis by model year and vehicle application and/or require testing or other data collection from the supplier or BMW NA to verify the appropriateness of the credit value.
- (ii) To support the development of appropriate credit values and testing methodologies for future model year vehicles:
- (1) In order for MY2022 through MY2026 BEVs and/or FCEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), BMW NA shall submit a plan for CARB review and approval on how it will gather activity data and/or test data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of data specific to the technology and its relative benefits on a Zero Emission Technology vehicle across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, by demonstrating the improvement in vehicle efficiency (Watt-hour per mile) and using a value for electricity generation in grams CO₂ per Watt-hour to calculate an appropriate gram per mile value, by collecting representative data on in-use vehicles to refine future assumptions related to usage of the technology, etc.).
- (2) In order for MY2022 through MY2026 PHEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), BMW NA shall be required to submit a plan for CARB review and approval on how it will submit PHEV activity data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. Such data shall be limited to data

that BMW NA will be collecting for other purposes and/or otherwise have available for PHEVs for which BMW NA is requesting the credit and need only include the data most relevant to informing the usage or operation of the applicable off-cycle technology in PHEVs across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, data on the fraction of vehicle miles traveled using electric propulsion versus gasoline powered propulsion, data on the fraction of trips that have an engine start, etc.). CARB may not require BMW NA to conduct special testing or implement additional parameters or data collection methods, however, BMW NA may voluntarily propose to use test data or a combination of test data and activity data as part of its plan to satisfy this requirement. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of the available data (and/or test data as described above) specific to the applicable PHEV(s).

- (3) Off-cycle credits may be approved on a limited model year basis for technologies where the GHG benefits depend on the behavior of the driver (*e.g.*, driver coaching, haptic pedals) only when:
 - (a) It is possible, on the basis of reasonable evidence, to make assumptions about average driver behavior to calculate the likely impact and associated credit value; and
 - (b) BMW NA agrees to perform additional data collection and testing to allow for verification of the behavior on actual vehicles utilizing the technology and to be used in establishment of more appropriate credit values and testing methodologies for subsequent model year vehicles.

(iii) Ineligible technologies

- (1) Off-cycle credits may not be approved for technologies that are integral or inherent to the basic vehicle design, such as engine, transmission, mass reduction, passive aerodynamic design, and tire technologies. Technologies installed for non-off-cycle emission-related reasons or that otherwise would have been installed for purposes of reducing emissions (directly or indirectly) over the test cycles for compliance with the GHG standards are also not eligible as they would be considered part of the baseline vehicle design. Off-cycle credits may not be approved for crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies designed for the purpose of reducing the frequency of vehicle crashes. Off-cycle credits may not be earned for technologies installed on a motor vehicle to attain compliance with any vehicle safety standard.
- (2) Waste heat, as used for active warm-up off-cycle credits, refers to heat that cannot be recovered by any other component or system on the vehicle and does not include systems that preferentially or necessarily first use heat to warm the engine oil or interior cabin before utilization to warm up the engine or transmission.
- (3) With the exception of A/C-related technologies for cooling the cabin or occupants, technologies that have predefined credit values, and technologies for Zero Emission Technology vehicles, off-cycle credits may not be granted for non-powertrain or non-propulsion technologies including technologies inherent to the design of occupant comfort and entertainment features such as passenger or cabin heating, interior displays or components, infotainment components, etc. For purposes of this paragraph, technologies that are designed to recapture energy created by the powertrain that otherwise would be lost (*e.g.*, through heat or mechanical friction during deceleration or braking events) will be considered powertrain technologies.

(4) For Zero Emission Technology vehicles, ineligible technologies will include displays, infotainment systems, and other items not directly related to propulsion or battery conditioning.

32. Certification. Prior to certification, BMW NA agrees to provide CARB with all emission data necessary to calculate CREE levels for each emission data vehicle representing a test group submitted to CARB for certification to CARB's criteria pollutant emission standards (title 13, CCR § 1961.2).

33. Compliance.

(A) Unless it is otherwise specified in this Agreement that provisions of the 2018 Federal Program apply, EPA changes during the term of this Agreement in the Federal Program regulations, including but not limited to test procedures and calculation methodologies, will automatically apply for purposes of this Agreement unless either Party notifies the other Party of its belief that such changes will have a material impact on the stringency of the GHG commitments. Following such notification, BMW NA and CARB shall in good faith confer in accordance with Paragraph 35 to reach a mutually acceptable resolution. The Party seeking a departure from changes to the Federal Program shall 1) explain the basis for its position that the changes made by EPA will have a material impact on the stringency of the GHG commitments, and 2) propose a technical modification in accordance with Paragraph 35. It is the intent of the Parties that any resolution to address a material impact on stringency due to changes EPA makes in the Federal Program regulations will minimize disruption or burdens on BMW NA's implementation of testing and related administrative requirements. Except where the 2018 Federal Program is specified in this Agreement and for changes to the Federal Program for which a Party provides notification under this paragraph, the Parties intend that BMW NA will be able to utilize the same test procedures and calculation

methodologies to generate the required data for compliance with this Agreement and the Federal Program, including but not limited to any revisions related to the phase-in of the use of E10 test fuel resulting from EPA's Vehicle Test Procedures Adjustments for Tier 3 Certification Test Fuel rulemaking, proposed at 85 Fed. Reg. 28,564 (May 13, 2020).

- (B) Compliance under this Agreement is determined by first calculating compliance based on CREE performance relative to the standard without the use of any Zero Emission Technology multipliers. Air conditioning-related, off-cycle, full-size pickup, and Zero Emission Technology vehicle credits as well as applicable debits for N₂O and/or CH₄ emissions are then separately calculated and added to the calculated CREE performance credits or debits. Zero Emission Technology vehicle credits shall be calculated for each model year as specified in Paragraph 30(A)(iv)(3)(b) of this Agreement.
- (C) No later than May 15 following the model year, BMW NA shall provide CARB with all data and technical documentation to support a calculation of compliance for the applicable model year including:
 - (i) Sales and footprint data to calculate BMW NA's target CREE fleet value.
 - (ii) Sales, vehicle performance data, and supporting information for all credits requested for the model year to calculate BMW NA's achieved fleet CREE performance.
 - (iii) Sales data and fleet footprint and performance data to calculate BMW NA's Zero Emission Technology 1 percent cumulative cap and the number of credits earned towards the cap for the current and previous model years. If the cumulative credits claimed as earned by BMW NA exceed the 1 percent cap as calculated solely for the current and previous model years, the submitted data must also include an estimate of the cumulative portion of the cap projected to be earned in future model years by BMW NA.

- (iv) The "Agreement ABT Calculator" that was developed jointly by the Parties, as may be updated from time to time upon written agreement of the Parties, populated with data for the applicable model year to support BMW NA's calculation of compliance and tracking of credits and deficits.

34. Banking of Credits and Deficits.

(A) Agreement Balance.

- (i) Starting Balance: BMW NA will enter the Agreement with a value of credits (or deficits) in megagrams of CO₂ for its Agreement credit balance equal to its 2018 Federal Program credit balance as calculated at the conclusion of MY2020 (for MY2011 through MY2020) with the following adjustments:
 - (1) Subject to the limits of the "1 percent cap" per Paragraph 30(A)(iv), the advanced technology vehicle multiplier for MY2020 BEVs and FCEVs will be 2.0 and 1.6 for MY2020 PHEVs in lieu of 1.75 and 1.45, respectively; and
 - (2) The cap for off-cycle credits based on predefined (menu) values will be 15 g/mi for MY2020 such that if BMW NA had exceeded the 10 g/mi cap in MY2020 and not been awarded full benefit of the applied technologies, an adjustment would be made to its credit balance to reflect the higher cap.
- (ii) Calculation of Agreement Balance. For MY2021 through MY2026, BMW NA's Agreement credit balance shall be calculated per the requirements of this Agreement.
 - (1) As specified in Paragraph 33(A) above, compliance is calculated first based on actual performance and then all earned credits (*e.g.*, A/C, off-cycle) per this Agreement for the specific model year for which BMW NA is subject to GHG fleet commitments under this Agreement.

- (2) If BMW NA has a surplus (credits earned beyond its obligation) after the model year compliance calculation, those credits shall be added to the Agreement Balance in accordance with the averaging, banking, and trading ("ABT") provisions of the 2018 Federal Program.
- (3) If BMW NA has a deficit after the model year compliance calculation, then those deficits shall be added to the Agreement Balance in accordance with the ABT provisions of the 2018 Federal Program.
- (4) If BMW NA participated in any Agreement credit transactions (*e.g.*, sale, purchase) or used Agreement credits to satisfy Agreement Balance deficits, then those transactions and usage shall be recorded in the Agreement Balance in accordance with ABT rules. Except as specified in Paragraph 34(D)(iv)(3) for Federal Program credits acquired from ZEV-only manufacturers, Federal Program credit transactions for model years subject to standards specified in this Agreement may not be recorded in the Agreement Balance. Regarding Federal Program credits earned from model years after the expiration or early termination of this Agreement and used to resolve BMW NA's Agreement Balance deficits carried forward into model years after the expiration or early termination of this Agreement in accordance with Paragraph 34(C)(iv), such Federal Program credits shall be recorded in the Agreement Balance.

(B) Emissions Benefit Balance.

- (i) Purpose: To ensure the integrity of the emission benefits of this Agreement, BMW NA shall be required to achieve a net zero or positive credit balance and resolve any incurred deficits through MY2031 (based on the resolution of BMW NA's obligations in accordance with Paragraph 34(B)(vi)), and possibly through as late as MY2034 (based on BMW NA's carry-forward of deficits in accordance with Paragraphs 34(C)(iii), and

- 34(C)(iv)), in a separate Emissions Benefit Balance that BMW NA tracks and reports to CARB.
- (ii) Starting Balance: The starting balance for the Emissions Benefit Balance shall be equal to BMW NA's starting Agreement Balance.
 - (iii) Calculation of Emissions Benefit Balance through MY2026. For MY2021 through MY2026, BMW NA's Emissions Benefit Balance will be calculated as follows:
 - (1) Add in, per ABT rules, credits (or deficits) determined from the Agreement model year compliance calculation for MY2021.
 - (2) Add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2021.
 - (3) Add in, per ABT rules except as noted below in Paragraph 34(B)(iii)(4), applicable Federal Program credit transactions that occurred between end of the previous model year and end of MY2021. For this requirement, applicable transactions only include purchase and sale transactions of Federal Program credits. Federal Program credits for model years subject to standards specified in this Agreement earned by BMW NA or used by BMW NA to resolve Federal Program deficits have no impact on the Emissions Benefit Balance.
 - (4) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by BMW NA and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2024, MY2025, and/or MY2026 Emissions Benefit Balance deficits carried forward in accordance with Paragraph 34(C)(iii).

(5) Repeat "Calculation of Emissions Benefit Balance through MY2026" above at the end of each successive model year for MY2022 through MY2026, substituting the applicable model year for MY2021.

(iv) Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination. Subject to the resolution of BMW NA's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi), for MY2027 and subsequent model years (or substituting earlier model years in this paragraph as appropriate in the case of early termination of this Agreement pursuant to Paragraph 35), BMW NA's Emissions Benefit Balance will be calculated as follows:

- (1) At the end of MY2027, add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2027 only for transactions involving MY2022 through (including) MY2026 vintage Agreement credits.
- (2) At the end of MY2027, add in, per ABT rules, Federal Program credit transactions and Federal Program credits that were used by BMW NA to satisfy any Federal Program deficits that occurred between end of the previous model year and end of MY2027 only for transactions or usage involving MY2022 through (including) MY2026 vintage Federal Program credits.
- (3) At the end of MY2027, if any MY2027 Federal Program credits were used by BMW NA to resolve BMW NA's Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv), add in, per ABT rules, credits (or deficits) determined from the Federal Program compliance for MY2027.
- (4) At the end of MY2027, add in, per ABT rules except as noted in Paragraph 34(B)(iv)(5), Federal Program credit transactions and Federal Program credits that were used by BMW NA to satisfy any Federal

Program deficits of BMW NA that occurred between end of the previous model year and end of MY2027 only for transactions involving the same model year vintage credits as those used to resolve an Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv) (*e.g.*, include MY2027 and MY2028 vintage credit transactions and usage if both MY2027 and MY2028 Federal Program credits were used to resolve BMW NA's Agreement Balance deficits).

- (5) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by BMW NA and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2027 or subsequent Emissions Benefit Balance deficits incurred due to Federal Program compliance, credit transactions, or usage recorded in accordance with Paragraphs 34(B)(iv)(3) and 34(B)(iv)(4).
 - (6) Repeat "Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination" at the end of each successive model year for latest applicable year (possibly as late as MY2034), substituting the applicable model year for MY2027.
- (v) Federal Program credits that BMW NA may permanently retire or otherwise remove without being used from its Federal Program credit balance may be used towards satisfying BMW NA's Emissions Benefit Balance obligations in lieu of tracking such credits in the Emissions Benefit Balance through to their expiration. BMW NA and CARB may agree that Emissions Benefit Balance obligations satisfied in this manner will terminate BMW NA's corresponding Emissions Benefit Balance reporting requirements.

(vi) Recognizing the uncertainty of regulatory requirements applicable following the model years covered in the Agreement, BMW NA and CARB desire to maintain the integrity of the environmental benefits of this Agreement while not disadvantaging BMW NA with regard to future regulatory compliance obligations. Therefore, prior to the expiration or upon early termination of this Agreement, BMW NA and CARB shall in good faith confer to reach mutually acceptable agreement with respect to BMW NA's Emissions Benefit Balance obligations. In seeking to reach such an agreement, BMW NA and CARB shall consider all relevant and equitable circumstances, including but not limited to the following:

- (1) the important environmental benefits of this Agreement, as described in Paragraph 25 above, which the Parties agree were a primary basis for CARB's decision to enter into the Agreement;
- (2) the regulatory requirements known or likely to apply to BMW NA in the model years following the model years covered by this Agreement; and
- (3) the extent to which BMW NA would be harmed, relative to other manufacturers who chose not to enter into a similar agreement, if BMW NA is restricted, in whole or in part, by its Emissions Benefit Balance obligations.

BMW NA and CARB shall seek to reach an agreement that reflects an appropriate balancing of the relevant and equitable considerations. If BMW NA and CARB are unable to reach a mutually acceptable understanding regarding BMW NA's Emissions Benefit Balance obligations, the issue shall be the subject of Dispute Resolution under this Agreement. Both BMW NA and CARB agree that the factors set forth in this subparagraph shall be the basis upon which Dispute Resolution shall be conducted.

(C) Tracking of Credits within Credit Balances.

- (i) Within the Agreement Balance and the Emissions Benefit Balance, credits (and debits) shall be tracked based on the model year in which they were earned, per ABT rules.
- (ii) Credits shall be subject to a five-year carry forward and three-year carry back provision. Credits may be used by BMW NA to satisfy deficits incurred in the prior three model years or used or traded by BMW NA for use in the subsequent five model years. Credits not used within five model years shall expire.
- (iii) If BMW NA has a deficit after the model year compliance calculation, then unexpired credits earned in prior model years or acquired through trade may be utilized to satisfy its obligation. Except as noted below, if BMW NA still has a deficit after utilizing all prior model year credits and acquired credits, then it may carry forward the credit deficit up to and including the third model year after the model year in which the deficit was incurred. To facilitate alignment between the Agreement Balance and the Emissions Benefit Balance, if BMW NA has an Agreement Balance deficit being carried forward from MY2024, MY2025, and/or MY2026, BMW NA shall also carry forward an equivalent MY2024, MY2025, and/or MY2026 deficit in the Emissions Benefit Balance (or likewise, as appropriate, for earlier model years in the case of early termination of this Agreement), in lieu of utilizing all prior model year credits and acquired credits in the Emissions Benefit Balance to resolve some or all of the deficits before carrying forward the remaining deficits.
- (iv) Agreement Balance and/or Emissions Benefit Balance deficits carried into model years after expiration or early termination of this Agreement may be resolved by applying Federal Program credits generated in accordance with the ABT provisions of the 2018 Federal Program for those model

- years after expiration or early termination of this Agreement. Such Federal Program credits shall be recorded as a credit transaction (credits acquired) in BMW NA's Agreement Balance and Emissions Benefit Balance per ABT rules and tracked accordingly.
- (v) Deficits not satisfied within the three model year carry forward period shall constitute noncompliance with this Agreement.

(D) Credit Trading.

- (i) Credits in BMW NA's Agreement Balance may be traded (or deficits resolved) in accordance with the trading provisions of the 2018 Federal Program and the additional credit trading restrictions described in this Agreement.
- (ii) Credits in the Emissions Benefit Balance may not be directly traded by BMW NA and credits may only be added or removed in accordance with Paragraph 34(B) above.
- (iii) Trading within Agreement. Except as noted in Paragraph 34(D)(iv)(3) below for Federal Program credits acquired from ZEV-only manufacturers, BMW NA may only trade credits earned under this Agreement for its Agreement Balance from/to other manufacturers who have executed an agreement similar to this Agreement. CARB's Executive Officer will determine if any such agreements exist and provide in writing a determination to all parties to any such agreements as to which manufacturers may trade credits under this Agreement or similar agreements.
- (iv) Transferring Credits into Agreement.

- (1) Earned or purchased MY2020 or earlier Federal Program credits may be used to meet BMW NA's commitments in this Agreement.

- (2) Except as noted below for ZEV-only manufacturers and as specified in Paragraph 34(C)(iv) for Federal Program credits used to resolve any outstanding deficits after the expiration or early termination of this Agreement, MY2021 and subsequent credits earned under the Federal Program by BMW NA or any other manufacturer may not be used to meet BMW NA's commitments in this Agreement for its Agreement Balance.
- (3) MY2021 through MY2026 Federal Program credits earned by a ZEV-only manufacturer and acquired by BMW NA through a Federal Program credit transaction may be used to meet BMW NA's commitments in this Agreement subject to the following:
- (a) Only Federal Program credits directly earned by the ZEV-only manufacturer are eligible. For purposes of this requirement, ZEV-only manufacturer means a vehicle manufacturer that exclusively offers BEVs and/or FCEVs for sale in the United States.
 - (b) Adjustment of Federal Program Credits transferred into program.
 - (i) MY2020 and earlier credits earned by a ZEV-only manufacturer and acquired by BMW NA shall be recorded as a credit transaction (credits acquired) in BMW NA's Agreement Balance and Emissions Benefit Balance per ABT rules without adjustment.
 - (ii) For model years subject to standards specified in this Agreement, credits earned under the SAFE Rule Part Two by a ZEV-only manufacturer and acquired by BMW NA shall be adjusted before being recorded as a credit transaction (credits acquired) in BMW NA's Agreement Balance and Emissions Benefit Balance per ABT rules. To adjust credits acquired, the credits shall be reduced by the following formula before being added to BMW NA's Agreement Balance and Emissions Benefit Balance:

$$Credits_{adj}[Mg] = Credits_{acq}[Mg] \times Adjust_Factor_{MY}$$

Where:

$Credits_{adj}$ = Credit amount, in megagrams, after adjustment.

$Credits_{acq}$ = Acquired credit amount, in megagrams, before adjustment.

$Adjust_Factor_{MY}$ = Adjustment factor specific to the model year of the acquired credits from the following table:

	MY2021	MY2022	MY2023	MY2024	MY2025	MY2026
Adjustment Factor	0.96	0.95	0.94	0.93	0.92	0.91

(iii) If the Federal Program is further amended after the SAFE Rule Part Two, Federal Program credits earned by a ZEV-only manufacturer for model years subject to standards specified in this Agreement and acquired by BMW NA shall be adjusted to reflect the relative difference in effective stringency between the Agreement and the Federal Program before being recorded as a credit transaction (credits acquired) in BMW NA's Agreement Balance and Emissions Benefit Balance per ABT rules. BMW NA and CARB, in accordance with Paragraph 35, shall in good faith confer to determine the appropriate adjustment. In determining such an adjustment, the Parties acknowledge that the adjustment factor specified in this Agreement was derived from the difference in credits earned by a ZEV under the Agreement (in g/mi) versus credits earned under the Federal Program. Assumptions include a fleet with an equal share of passenger cars and light trucks, and industry sales-weighted average passenger car and light truck footprints of 46.2 and 53.8 square feet, respectively.

(4) Credits earned under a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s) may not be used to meet BMW NA's commitments in this Agreement for its Agreement Balance.

(v) Transferring Credits out of Agreement. Credits earned by BMW NA per this Agreement for its Agreement Balance may not be used by or traded by BMW NA to meet its or any other vehicle manufacturer's obligation under the Federal Program, or a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s).

35. Modification and Termination. The Parties acknowledge that modifications to or termination of this Agreement may be necessary or appropriate in response to various events or circumstances.

(A) If BMW NA or CARB, with any input from the Section 177 States, believes that modifications to or termination of the Agreement may be warranted, it will provide written notice to the other Party identifying the events or circumstances at issue and explaining why modification to or termination of the Agreement may be necessary or appropriate. BMW NA and CARB, with input from the Section 177 States, shall engage in good faith discussions to determine whether modification or termination of this Agreement is necessary or appropriate.

(B) Nothing in this paragraph obligates BMW NA or CARB, with any input from the Section 177 States, to accept a proposed modification or termination, except as follows:

(i) If CARB, with any input from the Section 177 States, enters into an agreement with another light-duty automobile manufacturer containing GHG obligations materially different from and more favorable to BMW NA or that light-duty automobile manufacturer than this Agreement, BMW NA

- has the option to either (a) comply with this Agreement; (b) comply with the provision(s) of the agreement with the other light-duty automotive manufacturer that is materially different from and more favorable than this Agreement or (c) terminate this Agreement.
- (ii) If any Section 177 State rescinds its Enforcement Discretion Letter affiliated with this Agreement or seeks to enforce the CA Standards against BMW NA, or if any other state becomes a Section 177 State without promptly issuing an Enforcement Discretion Letter, then BMW NA has the option to terminate this Agreement.
 - (iii) If EPA imposes, or an action of a court results in imposition of, national GHG emission standards equal to or more stringent than the commitments specified in this Agreement, BMW NA and CARB agree that this Agreement terminates upon the date the more stringent regulations begin to apply.
- (C) In all instances except those described in Paragraph 35(B) above, any modification to this Agreement is only valid and enforceable if it is in writing and signed by both Parties to this Agreement. If the Parties cannot agree, the Parties' rights and obligations under this Agreement survive.
- (D) If this Agreement terminates in accordance with Paragraph 35, BMW NA shall thereafter:
- (i) be subject to applicable law upon and after termination; and
 - (ii) unless otherwise agreed by CARB in consultation with the Section 177 States, remain subject to remedies applicable under this Agreement for GHG-related breaches occurring prior to termination of this Agreement.

36. Reporting of Agreement Compliance to Section 177 States and Additional Commitments Regarding Section 177 States. CARB may communicate the compliance status of BMW NA with the terms of this Agreement to Section 177

States annually. BMW NA agrees, at CARB's request, to provide to Section 177 States certain submissions under this Agreement containing BMW NA's Confidential Business Information where the recipient Section 177 State(s) has the legal ability to protect such information against release to the public.

37. Advancement of Electrification. The Parties recognize that the practical availability and marketing of electrified vehicles to the public promotes the interests of both California and BMW NA in furthering electrification technology development and deployment, including via public acceptance of such technology, reduced costs, and charging infrastructure expansion. CARB has an interest in making electrified vehicles more available and affordable, reducing climate change impacts experienced by Californians, and supporting the GHG reductions and technology development goals of the CA Standards and CARB's statutory requirements for further GHG reductions for later model years. In light of the above, BMW NA and CARB agree that BMW NA's performance as specified in Paragraphs 37(A) and 37(B) are an important consideration for this Agreement, and are integral to CARB's decision to enter into it:

- (A) BMW NA will undertake electrification commitments described in Appendix B: Electrification Commitments to this Agreement.
- (B) BMW NA shall report annually to CARB on the status of its electrification commitments described in Appendix B: Electrification Commitments. The Parties acknowledge that BMW NA has also made electrification commitments relating to the Section 177 States as described in Appendix B: Electrification Commitments. BMW NA's annual report to CARB under Paragraph 33(C) will include a description of the status of those commitments. At CARB's request, BMW NA agrees to transmit the report to the Section 177 States in accordance with Paragraph 36.

(C) In order to promote the environmental benefits of this Agreement, CARB commits to continue its use of best efforts to complete expeditious review of applications for certification of Zero Emission Technology vehicles.

38. Enforcement in General. If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination that BMW NA has failed to comply with any term of this Settlement Agreement, the Executive Officer will notify BMW NA, in writing, of the reasons supporting the determination and provide BMW NA with information upon which the determination was based. Except as provided below with regard to a GHG Credit Shortfall Breach, breaches of this Settlement Agreement shall be enforced in accordance with applicable contract law, including the availability of injunctive relief.

39. Enforcement of Breach of GHG Fleet Commitments; Mitigation Plans. A breach of GHG fleet commitments in Paragraphs 29-34 of this Settlement Agreement resulting in a GHG credit shortfall required for a particular compliance period, after accounting for the GHG credit averaging, trading and banking provisions of this Agreement (a "GHG Credit Shortfall Breach"), is subject to enforcement by CARB exclusively in accordance with the terms of this paragraph.

(A) If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination and notifies BMW NA under this Agreement that BMW NA has committed a GHG Credit Shortfall Breach, BMW NA may, within 60 Days of receipt of the determination by the Executive Officer, propose a mitigation plan for approval by the Executive Officer.

(B) A mitigation plan shall fully mitigate the emissions consequences of the Credit Shortfall Breach. It shall also prescribe BMW NA's compliance for the GHG emissions commitments in the Agreement going forward. If BMW NA's return to compliance is impracticable because there is inadequate time remaining in the Agreement, the mitigation plan shall identify the means by

which BMW NA will fully mitigate the consequences of any anticipated Credit Shortfall Breach.

- (C) To address the emissions consequences of the Credit Shortfall Breach, BMW NA may propose, subject to the approval of the Executive Officer as set out in paragraph F below, a mitigation plan including any combination of commitments to take remedial actions, to implement special projects, or to make payments into the Trust Account to be used to promote electrification and reduce GHG emissions. Payments into the Trust Account corresponding to the amount of the Credit Shortfall Breach as determined under this subparagraph shall be deemed fully to mitigate the emissions consequences of a Credit Shortfall Breach. In determining the amount of tons of GHGs to be addressed in a mitigation plan, BMW NA shall propose and CARB shall confirm and specify the credit shortfall.
- (D) Payment amounts under a mitigation plan shall generally be consistent with prices for GHG credits in California's cap-and-trade program, the Regional Greenhouse Gas Initiative, or other similar GHG market programs, taking into account such other equitable factors as may be appropriate under all of the circumstances, and considering the social cost of carbon, using the Central 3 Percent Average Values as expressed in Appendix A, Table A-1 of the Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government (August 2016).
- (E) Mitigation plans may be enforced in court consistent with the venue provisions of this Agreement.
- (F) The Executive Officer shall review a mitigation plan for consistency with the terms of this Agreement and, on behalf of CARB, with any appropriate input from the Section 177 States, either approve or reject within 30 Days, with an explanation of any objections. This 30-Day period may be extended if BMW

NA agrees to an extension for further evaluation. If the Executive Officer rejects a mitigation plan, in whole or in part, BMW NA will have 30 Days to amend the plan to address any objections by the Executive Officer. If the Executive Officer approves a mitigation plan, BMW NA shall implement the mitigation plan according to its terms.

- (G) If BMW NA fails timely to submit a mitigation plan or an amended plan, or if the Executive Officer rejects an amended plan, the Executive Officer may adopt a mitigation plan for BMW NA. Any mitigation plans that include actions in addition to, or in lieu of, payments into the Trust Account shall be limited to remedial actions or implementation of special projects that BMW NA accepts as reasonable and whose cost does not exceed, for the tons in question, the amount of payments into the Trust Account determined in accordance with Paragraph 39(D) of this Agreement.
- (H) BMW NA shall have 60 Days after receipt of approval or adoption by the Executive Officer to begin to implement a mitigation plan.
- (I) All payments required under a mitigation plan shall be deposited into a Trust Account as directed by CARB. Trust Account funds shall be used to administer the Trust Account. All funds deposited into this Trust Account shall be used to promote vehicle electrification or otherwise to reduce vehicle GHG emissions, in accordance with trust agreements to be developed in accordance with this Agreement as necessary. CARB will notify BMW NA of the activities funded in each Section 177 State by any such payments, including the number of electric vehicle and fuel cell vehicle station installations, if applicable.

40. Dispute Resolution. The Parties agree that the procedures contained in this paragraph are the sole and exclusive procedures for resolving disputes under this Settlement Agreement.

- (A) If BMW NA disagrees with the Executive Officer's determination of breach under this Settlement Agreement, or identifies other grounds for dispute under this Settlement Agreement including but not limited to the Executive Officer's rejection of a mitigation plan or adoption of its own mitigation plan, BMW NA will provide a written Notice of Dispute and Statement of Position to the Executive Officer within 30 Days of the Executive Officer's notification of breach or other action that is the subject of dispute. BMW NA's Notice of Dispute and Statement of Position shall include any factual data, analysis, or opinion supporting BMW NA's position and any supporting documentation relied upon by BMW NA. CARB, with any appropriate input from the Section 177 States, will serve its Statement of Position within 45 Days of receipt of BMW NA's Notice of Dispute and Statement of Position, unless that period is modified by written agreement. CARB's Statement of Position shall include any factual data, analysis, or opinion supporting CARB's position and any supporting documentation relied upon by CARB.
- (B) The period of informal negotiations shall not exceed 60 Days from the date of BMW NA's receipt of CARB's Statement of Position, unless that period is extended by written agreement signed by CARB and BMW NA.
- (C) If CARB, with any input from the Section 177 States, and BMW NA are unable to resolve a dispute before the expiration of the 60-Day period for informal negotiations, either Party may file an action for breach in accordance with the venue provision of this Settlement Agreement, after providing ten Days written notice to the other Party. In any such action, the Parties shall be prohibited from raising issues that were not previously raised during dispute resolution, except for issues which could not practicably be raised previously during the dispute resolution.

(D) The time period for BMW NA to respond to CARB under any provision of this Agreement, including the time periods to submit, amend or implement a mitigation plan, shall not begin to run until the completion of dispute resolution either by agreement between the Parties or by the final resolution of a court proceeding.

41. Force Majeure.

(A) "Force Majeure" means, for purposes of this Agreement, an event arising from causes beyond the control of BMW NA, which delays or prevents the performance of any obligation under this Agreement, despite BMW NA's best efforts to fulfill the obligation, such as war, fires, floods, hurricanes, tornadoes, earthquakes, volcanic eruptions, labor strikes (but not lock-outs), acts of terrorism, pandemics, and other events resulting in unavoidable supply chain disruption. This does not include negligent acts or BMW NA's financial inability to perform unrelated to the event as described in this paragraph.

(B) If any event BMW NA considers to be a force majeure event occurs or has occurred, BMW NA shall provide written notice to CARB within 10 Days of when BMW NA first knew that the event might cause a delay, impossibility or impracticability. Within 14 Days thereafter, BMW NA shall provide in writing to CARB an explanation and description of the reasons for the delay, impossibility, or impracticability; the anticipated duration of any delay; all actions taken or to be taken to prevent or minimize any delay, impossibility, or impracticability; a schedule for implementation of any measures to be taken to prevent or mitigate a delay or the effects of any delay, impossibility, or impracticability; and BMW NA's rationale for attributing such delay, impossibility, or impracticability to a force majeure event if it intends to assert such a claim. BMW NA shall include with any notice all available documentation supporting the claim that the delay, impossibility, or impracticability was attributable to a force majeure event.

- (C) If CARB, with any input from the Section 177 States, agrees that the delay, anticipated delay, impossibility, or impracticability is attributable to a force majeure event, CARB shall modify BMW NA's obligations under this Settlement Agreement as necessary and appropriate to account for the delay, impossibility, or impracticability resulting from the force majeure event. CARB will notify BMW NA in writing of the modifications approved by CARB.
- (D) If CARB, with any input from the Section 177 States, disagrees that a delay, anticipated delay, impossibility, or impracticability has been or will be caused by a force majeure event, CARB will notify BMW NA in writing of the decision.
- (E) BMW NA may elect to invoke dispute resolution in accordance with this Agreement based upon CARB's determinations and decisions pursuant to Paragraphs 41(C) and 41(D) above.

42. Records. BMW NA agrees that CARB, on behalf of itself or the Section 177 State that has issued an Enforcement Discretion Letter, may request, and shall receive, records regarding compliance with this Agreement by filing a request in writing; records will be provided by BMW NA within 21 Days of a request. BMW NA may assert a claim of business confidentiality as appropriate for any such records pursuant to California law and the corresponding law of any Section 177 States that might seek to receive such records. BMW NA will retain all relevant records for the term of this Agreement plus five years.

Additional Provisions

43. Term and Expiration. BMW NA and CARB agree that, unless terminated or extended by modification in accordance with Paragraph 35, the Settlement Agreement covers MY2021 through MY2026. Except as otherwise specified in this paragraph, this Settlement Agreement shall expire and be of no further force and effect following BMW NA's submission of data and technical information supporting its calculation of compliance for MY2026 in accordance with

Paragraph 33(C) which includes, subject to the resolution of BMW NA's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi) and three-year deficit carry-forward in accordance with Paragraph 34(C)(iii), verification of BMW NA's Emissions Benefit Balance to determine whether MY2026 credits and/or deficits were fully resolved to achieve compliance through MY2026. If the Executive Officer has made a determination and notified BMW NA of a GHG Credit Shortfall Breach within 60 Days after BMW NA's submission of data and technical information with respect to Model Year 2026, the enforcement of breach of GHG fleet commitments/mitigation plan requirements and the dispute resolution provisions shall survive for the sole purpose of resolving a determination of a GHG Credit Shortfall Breach, in accordance with Paragraph 39.

44. Entirety. This Agreement constitutes the entire agreement and understanding among the Parties concerning the matter described herein, and supersedes and replaces any and all prior negotiations and agreements of any kind, whether written or oral, among the Parties concerning the matter described herein. This Agreement consists of 48 pages plus signature pages and appendices and 57 numbered paragraphs.
45. Binding Effect. This Agreement binds BMW NA and any principals, officers, receivers, trustees, successors and assignees, subsidiary and parent corporations and upon CARB, and any successor agencies that may have responsibility for and jurisdiction over the subject matter of this Agreement.
46. Effective Date. This Settlement Agreement is binding and effective as of the date that it is fully executed by BMW NA and CARB.
47. Agreement Not Severable. In the event that any provision of this Settlement Agreement is held by a court to be illegal, invalid, or unenforceable in any jurisdiction, the Parties shall enter into good faith negotiation regarding modification in accordance with Paragraph 35 above with the intent to achieve

the objectives and benefits of this Settlement Agreement to the greatest extent possible. Following such negotiations, either BMW NA or CARB, with any appropriate input from the Section 177 States, may provide written notice to the other Party terminating this Settlement Agreement if the Agreement is not capable of modification in the view of either Party.

48. Choice of Law. This Agreement shall be interpreted and enforced in accordance with the laws of the State of California, without regard to California's choice-of-law rules.

49. Rule of Construction. Any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in interpreting this Settlement Agreement, including in any dispute resolution process.

50. Non-Waiver. The failure to enforce any provision of this Agreement shall not be construed as a waiver of any such provision, nor shall it prevent such Party thereafter from enforcing such provision or any other provision of this Agreement. The rights and remedies granted all Parties herein are cumulative and the election of one right or remedy by a Party shall not constitute a waiver of such Party's right to assert all other legal remedies available under this Agreement or otherwise provided by law.

51. Intent to be Bound. The Parties represent that they have participated fully in the review and drafting of this Agreement; understand and accept all terms; that they enter into this Agreement freely and voluntarily; have had an opportunity to consult with legal counsel; that they are fully informed of the terms and effect of this Agreement; that they enter into this Agreement after independent investigation and through no fraud, duress, or undue influence; and that they knowingly and voluntarily intend to be legally bound by this Agreement.

52. Venue. The Superior Court of California, located in the County of Sacramento, shall hear any dispute between the Parties arising from this Agreement.

53. Counterparts. This Agreement may be executed in counterparts. Facsimile or photocopied signatures (including PDF copies), shall be considered as valid signatures as of the date hereof, although the original signature pages shall thereafter be appended to this Agreement.

54. Release and Covenant Not to Sue. In consideration of BMW NA's voluntary commitments in this Agreement, CARB releases BMW NA and its principals, officers, receivers, trustees, successors and assignees, subsidiaries, affiliates and parent corporations from any claims, and covenants not to sue or otherwise pursue such entities or individuals, for violations of the CA Standards for MY2021-MY2026. However, CARB retains authority to enforce this Settlement Agreement on the terms provided herein.

55. Authority. The undersigned represents that he or she has full authority to enter into this Agreement.

56. Assignment. This Settlement Agreement and the rights, duties, and obligations under it may not be assigned or delegated by CARB or BMW NA without the prior written consent of the other Party. Any assignment or delegation made without prior written consent shall be void.

Notices

57. Notices. All notices, demands, requests, consents, approvals, or other communications (collectively "Notices") required or permitted to be given pursuant to this Settlement Agreement shall be in writing and shall be transmitted via United States mail and electronic mail to the Parties set out below. Notice shall be deemed given on the date of receipt.

To CARB:

Executive Officer
California Air Resources Board
1001 I St
Sacramento, CA, 95814
Richard.Corey@arb.ca.gov

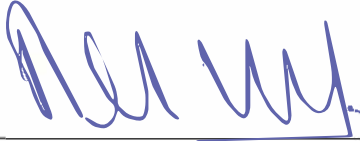
To BMW NA:

BMW Group
Vice President - General Counsel
AJ-NA
300 Chestnut Ridge Road
Woodcliff Lake, NJ 07677-7731
Mark.Redman@bmwna.com

Settlement Agreement Between BMW NA* and California Air Resources Board

The undersigned Party is authorized to enter into this Settlement Agreement:

FOR BMW NA:



Bernhard Kuhnt, President and CEO
BMW of North America, LLC

Dated: August 12, 2020



Adam McNeill, Vice President Engineering
BMW of North America, LLC

Dated: August 12, 2020

FOR CALIFORNIA AIR RESOURCES BOARD:



Richard W. Corey, Executive Officer
California Air Resources Board

Dated: August 17, 2020

*BMW of North America, LLC (“BMW”) and Rolls-Royce Motor Cars NA, LLC (“Rolls-Royce”) are affiliated, related, wholly-owned subsidiaries of BMW (US) Holding Corp. Solely for the purposes of this Settlement Agreement, including Appendix B (Electrification Commitments), and the Enforcement Discretion Letters, BMW and Rolls-Royce shall be referred to collectively as “BMW NA.”

Consistent with the current practice of jointly reporting to EPA and to CARB BMW fleet-wide GHG emissions values reflecting combined BMW and Rolls-Royce GHG emissions, the Settlement Agreement, including Appendix B (Electrification Commitments) shall apply to BMW NA (BMW and Rolls-Royce).

Appendix A: Curve Coefficients

Passenger Car and Light Truck Curve Coefficients representing 1 percent less year over year stringency to be used in calculation of 1 percent cap for Zero Emission Technology vehicles multiplier.

Passenger Car Curve Coefficients (1 Percent Less)				
Model year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint ≥ 56.0 ft²
2021	157.0	3.84	-0.4	215.0
2022	153.0	3.74	-0.4	209.0
2023	149.0	3.64	-0.4	203.0
2024	145.0	3.54	-0.4	198.0
2025	141.0	3.44	-0.4	192.0
2026	137.0	3.35	-0.3	187.0

Light Truck Curve Coefficients (1 Percent Less)					
Model year	Minimum Footprint ≤ 41.0 ft ²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	190.0	4.16	19.3	74.0	327.0
2023	185.0	4.05	18.7	74.0	318.0
2024	180.0	3.94	18.2	74.0	310.0
2025	175.0	3.84	17.7	74.0	302.0
2026	170.0	3.73	17.3	74.0	293.0

Appendix B: Electrification Commitments

-- CONTAINS CONFIDENTIAL BUSINESS INFORMATION

Settlement Agreement

1. The California Air Resources Board (“CARB”), and Ford Motor Company (“Ford”), hereinafter collectively referred to as the “Parties” or singularly as “Party,” voluntarily enter into this Settlement Agreement (or “Agreement”) based on the Parties’ mutual interest in mitigating their respective risks and resolving potential legal disputes concerning the authority of CARB and those states that have adopted California’s vehicle standards (“Section 177 States”) to adopt and enforce greenhouse gas (“GHG”) emissions standards applicable to new light-duty motor vehicles manufactured or distributed by Ford for Model Years 2021-2026 in light of the SAFE Rule Part One and Part Two, as discussed and defined below.
2. The Parties enter into this Agreement in light of ongoing and potential lengthy litigation involving the Federal Government, CARB and the Section 177 States regarding the SAFE Rule Part One and Part Two (collectively the “Litigation”). As elaborated below, Ford seeks, among other things, flexibility and certainty that will enable it to avoid compliance risks associated with California light duty vehicle GHG standards in California and the Section 177 States while maintaining or enhancing its current motor vehicle planning, production, sales, distribution, and related efforts regardless of the outcome of the current and pending litigation. CARB seeks, among other things, greater certainty regarding continuing automotive GHG emission reductions and vehicle electrification during the Model Years (“MYs”) subject to this Agreement.

The Parties

3. The California Air Resources Board: CARB is the state air regulator for California (Cal. Health and Safety Code § 39600 *et seq.*), and sets vehicle emissions standards pursuant to state law (*see, e.g.*, 42 U.S.C. § 7543, Cal. Health & Safety Code §§ 43013, 43018.5). CARB has promulgated GHG emission standards for the light-duty vehicle fleet. (*See* 13 CCR §§ 1961.3 *et seq.*).
4. Ford: Ford is a manufacturer or distributor of light-duty motor vehicles for sale throughout the United States that are or may be subject to regulation by the United States

Environmental Protection Agency (“EPA”), the National Highway Traffic Safety Administration (“NHTSA”), CARB, and the Section 177 States.

Definitions

5. “Agreement Balance” means the amount of GHG credits available or deficits that apply to Ford at any given time for purposes of compliance with the Agreement, as calculated and tracked in accordance with Paragraph 34(A).
6. “CA Standards” are the standards applicable to light duty vehicle GHG emissions set out at 13 Cal. Code of Regulations § 1961.3(a)-(g) and encompass all related aspects of California regulations and test procedures relevant to the implementation of those standards.
7. “Days” means calendar days, unless otherwise specified.
8. “Emissions Benefit Balance” is an accounting designed to ensure the integrity of the emission benefits of this Agreement. The Emissions Benefit Balance will be calculated and tracked in accordance with Paragraph 34(B).
9. “Enforcement Discretion Letters” refers to letters or directives that each Section 177 State issues to document its exercise of enforcement discretion, assurance of support, or other use of authority allowing Ford to comply with this Agreement to achieve the objectives of the CA Standards through Model Year 2026, which each state has adopted pursuant to Section 177 of the Clean Air Act.
10. “Executive Officer” shall mean the person appointed by CARB pursuant to California Health & Safety Code § 39515.
11. “Federal Government” shall mean NHTSA and EPA, collectively.
12. “2018 Federal Program” encompasses the EPA light-duty vehicle GHG standards and test procedures specified in Title 40 CFR Part 86 Subpart S, Section 86.1818-12 and Part 600 in place on July 1, 2018.
13. “Federal Program” refers to all applicable light-duty vehicle GHG standards and test procedures, such as those specified in Title 40 CFR Parts 86 Subpart S, 1066 and 600, as may be amended from time to time, and as interpreted and implemented by EPA.

14. “SAFE Rule Part One” encompasses the final actions promulgated by EPA and NHTSA and published at 84 Fed. Reg. 51,310 (Sept. 27, 2019).
15. “SAFE Rule Part Two” encompasses the final rules promulgated by EPA and NHTSA and published at 85 Fed. Reg. 24,174 (April 30, 2020).
16. “Section 177 States” means, as of the time the Parties entered into this Agreement, the States of Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington. These states, through their legislatures and duly authorized state regulatory agencies, have adopted GHG standards applicable to the light-duty vehicle fleet identical to CA standards pursuant to Section 177 of the Clean Air Act. Any additional state (or district or territory of the United States) that adopts such GHG standards after the Effective Date of this Agreement, as defined in Paragraph 46, will be considered a Section 177 State for purposes of this Agreement at such time as that body is authorized to enforce those standards in accordance with Section 177 of the Clean Air Act.
17. “Trust Account” means an account established by CARB, with any appropriate input from the Section 177 States, in which funds may be deposited to address a GHG Credit Shortfall Breach, as described in Paragraph 39 of this Agreement, and which funds are for use to promote vehicle electrification or otherwise to reduce vehicle GHG emissions.
18. “Zero Emission Technology” vehicle means a battery electric vehicle (“BEV”), a fuel cell electric vehicle (“FCEV”), or a plug-in hybrid electric vehicle (“PHEV”) as that term is defined in the 2018 Federal Program.
19. “Zero Emission Vehicle” (“ZEV”) means a vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.
20. For clarity and to provide certainty, unless otherwise defined herein, any terms not specifically defined in this Settlement Agreement are as defined in the Federal Program, and shall be interpreted to have the commonly-understood meanings of such terminology in the context of light duty vehicle GHG regulatory programs.

Mutual Understandings

21. CARB and Federal GHG Standards. In 2013, EPA issued CARB a waiver of federal preemption for its CA Standards pursuant to Section 209 of the CAA. 78 Fed. Reg. 2,112 (Jan. 9, 2013). EPA promulgated the 2018 Federal Program regulations in 2012, establishing federal GHG standards for Model Years 2022-2025; at the same time, NHTSA undertook an augural rulemaking to promulgate fuel economy standards consistent with the statutory limitations regarding NHTSA’s ability to adopt fuel economy standards no more than four years prior to the applicable Model Year. 77 Fed. Reg. 62,624 (Oct. 15, 2012). The CA Standards include a “deemed to comply” provision such that compliance with the 2018 Federal Program is deemed as compliance with the CA Standards. 13 C.C.R. § 1961.3(c). Likewise, compliance with the 2018 Federal Program qualifies as compliance in Section 177 States.
22. SAFE Rule Part One. The SAFE Rule Part One is a final agency action in which 1) EPA published a revocation of the CAA waiver of federal preemption previously granted to CARB for the CA Standards, at least as to certain Model Years, and 2) NHTSA adopted a rule declaring that state law regulations pertaining to motor vehicle emissions of carbon dioxide are preempted by the federal Energy Policy and Conservation Act (“EPCA”). CARB and the Section 177 States dispute the validity of these actions and the authority of EPA and NHTSA to take these actions. California has filed a lawsuit, together with the Section 177 States and other plaintiffs, challenging the NHTSA action in the United States District Court for the District of Columbia. *State of California v. Chao*, Case No. 1:19-cv-02826 (D.D.C. filed Sept. 20, 2019). California (including CARB), the Section 177 States, and others have also petitioned for review of the EPA and NHTSA actions in the SAFE Rule Part One in the United States Court of Appeals for the District of Columbia Circuit. *State of California v. Wheeler*, Case No. 19-1239 (D.C. Cir. filed Nov. 15, 2019).
23. SAFE Rule Part Two. The SAFE Rule Part Two is a final rule that reduces the stringency of the 2018 Federal Program and modifies alternative compliance measures. CARB has initiated litigation challenging the SAFE Rule Part Two. Ford has moved to intervene in the litigation for the limited purpose of addressing the remedy if the court

grants a petition for review of the SAFE Rule Part Two. Under CARB regulations, with the promulgation of SAFE Rule Part Two, compliance with the Federal Program is no longer deemed compliance with the CA Standards, and instead manufacturers are required to comply with the CA Standards without regard to the Federal Program beginning with the 2021 Model Year. 13 C.C.R. § 1961.3(c).

24. Authority of Agencies to Enter into this Settlement Agreement and Otherwise Exercise Enforcement Discretion. CARB takes the position that its authority pursuant to Health & Safety Code § 43213 among other authorities to enforce the CA Standards was illegally restricted by SAFE Rule Part One, although CARB has stated that it will not take enforcement actions as to model years covered by EPA's waiver revocation in the SAFE Rule Part One unless and until the revoked portions of the waiver are reinstated. CARB and the Section 177 States take the position that they may enforce their regulations if the revoked portions of the waiver are reinstated or if the EPA and NHTSA actions in the SAFE Rule Part One are vacated. CARB and the Section 177 States may exercise enforcement discretion with respect to such authority, including entering into settlement agreements and issuing Enforcement Discretion letters or other enforcement discretion directives. Moreover, CARB has authority to contract with regulated entities or to take other actions necessary to further its statutory purposes as needed to meet climate and public health targets. *See generally* Cal. Health & Safety Code § 39600 *et seq.*
25. Risks and Benefits. This paragraph describes the Parties' understandings of important risks and benefits relevant to this Agreement; it is not intended as a comprehensive statement of all such risks and benefits. As set forth in Paragraph 2 above, litigation over the SAFE Rule Part One and the SAFE Rule Part Two, as well as potential further federal regulatory actions, create uncertainty for Ford regarding the GHG standards that will apply throughout the United States for Model Year 2021 through Model Year 2026 and subsequent. The outcome of this litigation or additional federal regulatory actions may result in two GHG compliance standards in the United States for the covered Model Years: requirements to comply with more stringent CA Standards in California and the Section 177 States; and less stringent SAFE Rule Part Two standards throughout the rest of the United States. This regulatory uncertainty also subjects Ford to considerable

enforcement risk. Therefore, Ford enters into this agreement to ensure, among other reasons, that it has the ability to (i) make long-term product planning decisions and investments with confidence; (ii) satisfy market demand and production realities; and (iii) comply with regulatory requirements during this time. This Settlement Agreement offers Ford compliance flexibility and greater certainty to plan for its nationwide fleet. The SAFE Rule Part One and SAFE Rule Part Two, and the related litigation, also entail risks that California and the Section 177 States may not achieve the pollutant reduction goals they expected to result from the CA Standards. Entry into this Settlement Agreement is consistent with those goals, including goals set out in the AB 32 Scoping Plan, and will deliver environmental benefits commensurate with those goals that may not be realized in the absence of an agreement. Each Section 177 State has made consistent judgments, reflected in the Enforcement Discretion Letters.

26. Commitments. In light of the risks set forth above, Ford commits to comply with this Settlement Agreement. Subject to the conditions and terms specified in this Settlement Agreement, CARB commits to exercise its enforcement discretion to accept Ford's compliance with the terms of this Settlement Agreement as an agreed upon compliance plan to achieve the objectives of the CA Standards for Model Year 2021 through Model Year 2026. CARB further accepts this Agreement as a contractual commitment. During the term of this Settlement Agreement, CARB will not enforce the CA Standards with regard to Ford using available enforcement mechanisms, and CARB instead shall enforce the terms of this Settlement Agreement solely in accordance with the enforcement provisions and remedies herein. The Parties recognize that each Section 177 State is issuing an Enforcement Discretion Letter that allows Ford to comply with this Agreement to achieve the objectives of the CA Standards in each Section 177 State through Model Year 2026. Through their respective Enforcement Discretion Letters, each Section 177 State committed to exercise enforcement discretion in lieu of enforcing the CA Standards, as adopted, based on Ford's entry into this Agreement. As a basis for entering into this Agreement, Ford has relied on each Section 177 State's representation that it will exercise its enforcement discretion, as described in their respective Enforcement Discretion Letters.

27. No Effect on Federal Law or Law of Other States. The Parties to this Agreement do not intend to, and this Agreement does not, alter either Party's obligations under federal law, or impose on Ford compliance obligations with respect to sales or related activities in any individual state.

Agreed Substantive Terms

28. Litigation Commitments. Ford, on behalf of itself, its parent companies, subsidiaries and affiliates, will not challenge or seek to undermine this Agreement or CA Standards for the current Model Year through Model Year 2026, or the corresponding standards in Section 177 States. Ford will, to the extent possible under applicable trade association bylaws, oppose participation in any such challenges by any trade associations to which it belongs and avoid providing resources for any such challenges. Ford will not intervene on the side of the United States, or file an amicus brief on the side of the United States, to defend SAFE Rule Parts One or Two. This Agreement does not limit Ford's rights as intervenor in the SAFE Rule Part Two litigation to address the remedy in the event that a court grants a petition for review. Each Party agrees to support the validity of this Agreement in the event of third-party challenges.
29. Greenhouse Gas Fleet Commitments: Ford agrees to maintain an average yearly reduction in GHG emissions from its fleet sold nationwide (light-duty passenger cars, light-duty trucks, and medium-duty passenger vehicles) for model years 2021 through 2026, in accordance with the following:
- (A) The target Carbon-Related Exhaust Emission ("CREE") value for Ford's fleet shall be calculated separately for passenger cars and trucks utilizing the footprint curves defined below.
 - (B) Coefficients defining the footprint curves are identified in the tables below.
 - (i) For vehicles with a footprint equal to or smaller than the footprint identified in the Minimum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Minimum Footprint column.

- (ii) For vehicles with a footprint greater than the Minimum Footprint and less than the Maximum Footprint, the target CREE value in units of grams per mile for each vehicle for the corresponding model year shall be calculated by multiplying the footprint of the vehicle by the value in column (a) and adding the value in column (b) and rounding the result to the nearest tenth of a gram per mile.
- (iii) For vehicles with a footprint equal to or greater than the footprint identified in the Maximum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Maximum Footprint column.

Passenger Car Curve Coefficients				
Model year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint ≥ 56.0 ft²
2021	157.0	3.84	-0.4	215.0
2022	151.0	3.70	-0.4	207.0
2023	146.0	3.56	-0.4	199.0
2024	140.0	3.43	-0.4	192.0
2025	135.0	3.30	-0.3	185.0
2026	130.0	3.18	-0.3	178.0

Light Truck Curve Coefficients					
Model year	Minimum Footprint ≤ 41.0 ft ²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	188.0	4.12	19.1	74.0	324.0
2023	181.0	3.97	18.4	74.0	312.0
2024	174.0	3.82	17.7	74.0	300.0
2025	168.0	3.68	17.0	74.0	289.0
2026	162.0	3.54	16.4	74.0	278.0

30. Flexibilities to Promote Zero Emission Technology

- (A) To recognize the value of increased introduction of zero emission technologies towards California’s and the Section 177 States’ long-term needs for electrification of the fleet, Ford’s Zero Emission Technology vehicles shall utilize a production multiplier for purposes of compliance calculations as follows:
- (i) For BEVs and FCEVs, a vehicle production multiplier of 2.0 shall be used for MY2020 through MY2024, a multiplier of 1.75 shall apply for MY2025, and a multiplier of 1.5 shall apply only for MY2026.
 - (ii) For PHEVs, a vehicle production multiplier of 1.6 shall be used for MY2020 through MY2024, a multiplier of 1.45 shall apply for MY2025, and a multiplier of 1.3 shall apply only for MY2026.

- (iii) Ford shall clearly identify in its end of model year reporting for each model year to CARB, which Zero Emission Technology vehicles Ford has designated to use the production multiplier(s) for compliance calculations.
- (iv) The use of these production multipliers shall be limited by a “1 percent cap.”
 - (1) The cap shall be calculated as a cumulative cap representing the total available credits that can be cumulatively earned from the production multipliers for MY2020 through MY2026 vehicles.
 - (2) Calculation of the cap
 - (a) For MY2020 and for MY2021, the contribution to the cumulative cap shall be calculated as 2.0 grams per mile for each model year and converted to grams by multiplying by Ford’s specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.
 - (b) For each model year from MY2022 through MY2026, the contribution to the cumulative cap shall be calculated as the difference between the model-year specific calculated fleet average target value applicable to Ford per this Agreement and a calculated fleet average for a target value using the curve coefficients defined in Appendix A : Curve Coefficients that represents 1 percent less in annual reductions than the target value per this Agreement (*e.g.*, a target value reflecting 2.7 percent year over year reductions from MY2021 if the target value in this Agreement reflected a 3.7 percent year over year reduction from MY2021). The difference shall be converted from grams per mile to grams by multiplying by Ford’s

specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.

- (c) Ford’s cumulative cap, in grams, shall be the sum of the above calculations for each individual model year from MY2020 through MY2026.
- (d) The required calculation format (assuming for purposes of this example that the Agreement requires a 3.7 percent year over year reduction) is as follows. All values expressed in megagrams shall be rounded to the nearest whole number.

$$CAP_{MY2020 \text{ thru } MY2021} = \sum_{MY2020}^{MY2021} (2.0 [g/mi] \times Volume \times Vehicle \text{ Lifetime Miles})$$

$$CAP_{MY2022 \text{ thru } MY2026} =$$

$$\sum_{MY2022}^{MY2026} ((Fleet \text{ Target Value } [g/mi]@2.7\% - Fleet \text{ Target Value } [g/mi]@ 3.7\%) \times Volume \times Vehicle \text{ Lifetime Miles})$$

Where:

CAP_{MY2020 thru MY2021} = Portion of the cumulative 1 percent cap from MY2020 and MY2021 vehicles in grams.

CAP_{MY2022 thru MY2026} = Portion of the cumulative 1 percent cap from MY2022 through MY2026 vehicles in grams.

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year over year stringency, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without production multipliers applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 miles for passenger cars and 225,865 miles for light trucks.

- (3) Tracking of credits used toward the cap
- (a) For each model year from MY2020 through MY2026, Ford shall calculate the amount of credits earned from production multipliers as specified below and apply those towards the cumulative 1 percent cap as defined in Paragraph 30(A)(iv)(2), above. Zero Emission Technology vehicles for which Ford elected not to use the production multipliers shall be included in this calculation in the same manner as other vehicles that do not utilize production multipliers.
- (b) Calculation of credits. For each model year from MY2020 through MY2026, Zero Emission Technology vehicle credits shall be calculated separately for passenger automobiles and light trucks, using the following equations to effectively subtract the credits calculated for the base fleet from the credits calculated for the fleet with multipliers applied. No credits are earned if the result is a negative value. All values expressed in megagrams shall be rounded to the nearest whole number.

$$\text{Zero Emission Technology Vehicle Credits}[Mg] = \text{Credits}_{adj} - \text{Credits}_{base}$$

- (i) When calculating the Credits_{adj} for Zero Emission Technology vehicles from production multipliers for MY2020 through MY2026, Ford may elect to calculate the credits based on either the Method 1 or Method 2 formula below.

1. Method 1 formula:

$$\text{Credits}_{adj}[Mg] = \left(\frac{(\text{Fleet Target Value}_{adj} - \text{Performance}_{adj}) \times \text{Volume}_{adj} \times \text{Vehicle Lifetime Miles}}{1,000,000} \right)$$

Where:

Fleet Target Value_{adj} = Production weighted fleet average standard from the footprint target calculation for the specified year, with the production multiplier applied to designated Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume_{adj} = Total production of passenger cars or light trucks with the production multiplier applied to designated Zero Emission Technology vehicles, with no rounding applied to the result.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

2. Method 2 formula:

$$Credits_{adj}[Mg] = \left(\frac{(Fleet\ Target\ Value - Performance_{adj}) \times Volume \times Vehicle\ Lifetime\ Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

- (ii) Except as noted below for MY2020 and MY2021, for both Method 1 and Method 2, base fleet credits shall be calculated in megagrams using the following equation and rounding the result to the nearest whole number.

$$Credits_{base}[Mg] = \left(\frac{(Fleet\ Target\ Value - Performance) \times Volume \times Vehicle\ Lifetime\ Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance = Production weighted fleet average CREE, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

1. To determine the amount of credits to be added to Ford's starting Agreement Balance and to be applied towards the cumulative 1 percent cap for MY2020, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for *Credits_{base}*. Ford shall utilize the same method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2020 with the production multipliers from this Agreement.
2. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2021, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.
3. To determine the amount of credits to be applied towards the cumulative 1 percent cap for MY2021, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for *Credits_{base}*. Ford shall utilize the same method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2021 with the production multipliers from this Agreement.

4. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2022 through MY2026 and to be applied towards the cumulative 1 percent cap for MY2022 through MY2026, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.
- (v) For Zero Emission Technology vehicles produced by Ford in excess of the cumulative 1 percent cap:
 - (1) For MY2020 BEVs and FCEVs, a production multiplier of 1.75 and for MY2021 BEVs and FCEVs, a production multiplier of 1.5 shall be used for compliance calculations.
 - (2) For MY2020 PHEVs, a production multiplier of 1.45 and for MY2021 PHEVs, a production multiplier of 1.3 shall be used for compliance calculations.
 - (3) For MY2022 through MY2026 BEVs, FCEVs, and PHEVs, no production multiplier (i.e., a value of 1.0) shall be used.
 - (vi) For compliance calculations, the applicable Zero Emission Technology production multipliers are only used in the calculation of credits from Zero Emission Technology vehicles and may not be used in the calculation of Ford's fleet target value or Ford's fleet performance CREE value.
- (B) Zero Emission Technology vehicles for MY2020 through MY2026 shall utilize a value of 0 grams per mile to represent the emissions of FCEVs and BEVs and the proportion of electric operation of PHEVs that is derived from electricity that is generated from sources that are not onboard the vehicle.
- (i) For BEVs and FCEVs, 0 grams per mile shall be used as the CREE value for the vehicle's performance in compliance calculations.
 - (ii) For PHEVs, 0 grams per mile shall be used as the CREE value to represent the proportion of electric operation of a vehicle that is derived from electricity that is generated from sources that are not onboard the

vehicle. For ease of understanding, such proportion of operation shall be calculated in accordance with the 2018 Federal Program.

31. Air Conditioning (A/C) Related Credits and Off-Cycle Credits

- (A) Except as noted in Paragraph 31(A)(vi) below, for all requested A/C and off-cycle credits:
- (i) Ford should notify CARB of its intent to use such credits in its pre-model year report submitted no later than December 31 of the calendar year two years before the model year;
 - (ii) Ford may submit such requests and supporting data and documentation prior to or during the applicable model year to facilitate earlier review and approval by CARB; and
 - (iii) Ford shall submit such requests and supporting data and documentation for review and approval by CARB no later than the submittal of the end of model year report by May 15 following the model year. Submitted data shall include identification and sales volumes of the vehicle model(s) and configurations that have specific technologies applied and the credits claimed for each technology along with documentation supporting the claimed credit value for each technology.
 - (iv) In general, approved credits are valid through the MY2026. Ford will be required to newly apply for and CARB will determine an appropriate value for credits on MY2027 and later vehicles. Where specifically noted, credits may be approved on a more limited basis and/or conditioned on Ford collecting and submitting additional data from actual vehicle operation and/or testing to support the approved credits.
 - (v) Except as specifically noted in this Agreement, the provisions of the 2018 Federal Program apply for determining credits for A/C leakage and efficiency improvements, off-cycle technologies, and full-size pickup hybrid technology as well as exhaust emission performance CO₂ equivalent credits or debits from N₂O and/or CH₄ emissions.

- (vi) For A/C and off-cycle technologies previously granted credits to Ford by EPA before January 1, 2020 through explicit approval or by EPA for MY2020 or earlier via acceptance of Ford's end of model year report, and where EPA continues to grant the identical credit values to Ford, CARB shall grant Ford the same credit values subject to the same, if any, limitations by EPA (*e.g.*, the inclusion or exclusion of a specific credit towards a maximum cap for that technology).
 - (vii) All MY2021 and later model year credits are subject to CARB acceptance in accordance with this Agreement and the established approval criteria and practice in the Federal Program. In its review of credits for approval, the Parties intend that CARB will remain aligned with EPA to the extent possible in accordance with good engineering judgment and technical rationale. However, where appropriate to promote faster adoption of new technologies, CARB may independently approve credits prior to acceptance by EPA.
- (B) For MY2020 through MY2026 off-cycle credits that Ford selects from predefined values assigned in the 2018 Federal Program:
- (i) The maximum allowable decrease in Ford's fleet emissions from the use of such credits may not exceed 15.0 grams per mile.
 - (ii) For thermal control technologies, the existing caps of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).
 - (iii) The predefined values available for use by Ford will also include:
 - (1) A credit value of 1.1 grams per mile is available for passenger cars and light trucks that utilize an advanced A/C compressor with an improved efficiency relative to fixed-displacement compressors derived from improved internal valve systems that optimize the internal refrigerant flow across the range of compressor operator

conditions through the addition of a variable crankcase suction valve. Except as noted in Paragraph 31(E)(ii) below, these credits shall be counted towards the A/C efficiency per vehicle caps of 5.0 and 7.2 grams per mile for passenger cars and light trucks, respectively.

- (2) A credit value is available for passenger cars and light trucks that utilize a high efficiency alternator. The credit value shall be 0.16 grams per mile for each one percent of improvement in Verband der Automobilindustrie (“VDA”) efficiency above a baseline of 67 percent efficiency (*e.g.*, if a high efficiency alternator achieves 69 percent VDA efficiency, the credit value would be 0.32 grams per mile calculated as $(69 - 67) * 0.16 = 0.32$). VDA efficiency is the ratio of the alternator output power to the power supplied to the alternator, as measured using the VDA efficiency measurement methodology and expressed as a whole number percent from 68 to 100. The Parties agree that further detail regarding these calculations is provided at EPA-HQ-OAR-2018-0283-0706 “Potential Off-cycle Menu Credit Levels for High Efficiency Alternators and Advanced Air Conditioning Compressors,” memo from EPA (Aug. 1, 2018).
- (C) For MY2021 through MY2026 off-cycle credits that Ford utilizes the 5-cycle test method to determine the amount of the credit:
- (i) Ford shall provide test data showing the 5-cycle and 2-cycle combined city/highway test results for with and without the off-cycle credit technology active.
 - (ii) The amount of off-cycle credit shall be the difference of the 5-cycle testing with and without the technology active less the difference of the 2-cycle testing with and without the technology active to ensure the credit reflects an incremental amount above and beyond what is already accounted for in the 2-cycle testing.

- (D) For MY2021 through MY2026 off-cycle credits that Ford requests CARB approval of through a special test procedure to quantify the credit:
- (i) Upon receipt of a completed application with all confidential business information redacted, CARB may provide public notice to interested parties of receipt of such an application and make it available for review and comment. CARB may provide at least 30 days of public review and identify a method for parties to submit their comments. After the comment period, the applicant and/or CARB may make modifications as needed to address relevant issues before issuing a final approval. A version of the final approval, with any confidential business information redacted, may also be made publicly available by CARB for reference.
 - (ii) For identical technologies previously approved by CARB during the term of this Agreement or approved by EPA prior to January 1, 2020, Ford may utilize the identical special test procedure/methodology as was previously used to determine the appropriate credit value for its specific vehicle(s). If Ford elects this option, CARB may omit the notice and comment procedure of Paragraph 31(D)(i) above.
 - (iii) For thermal control technologies, any credit determined under the special test procedures shall be applied towards, and may not exceed, a maximum value for the sum of all applied thermal control technologies of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks.
- (E) For MY2021 through MY2026 credits related to air conditioning system efficiency improvements:
- (i) If Ford uses predefined values or 5-cycle testing to demonstrate the credit value of the applicable technology, the maximum credits available are 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck and shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).

- (ii) In general, the maximum credit limits of 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck also apply to and include technologies where Ford uses special testing approved by CARB to demonstrate the credit value of the applicable technology. However, if Ford performs such special testing on a vehicle or system that has already met the credit limit by utilization of other technologies and demonstrates that the added technology still provides additional measurable GHG reductions, credits beyond the limit commensurate with the benefits will be granted by CARB.
- (F) Additional provisions for MY2021 through MY2026 vehicles:
- (i) To support the development of streamlined application processes for MY2027 and later vehicles:
 - (1) Applications to determine the preliminary credit value for eligible off-cycle technologies on MY2021 through MY2026 vehicles may be submitted by automotive suppliers. However, only applications accompanied by a letter of endorsement from Ford or another manufacturer subject to a similar agreement will be considered for approval by CARB.
 - (2) Applications by suppliers may be based on the 5-cycle testing method or the special testing method to determine the appropriate credit value. Depending on the technology, the preliminary credit value may be an absolute value or a scaled value based on a parameter determined to be correlated to its benefit.
 - (3) For technologies assigned a preliminary credit value from an approved supplier application, Ford shall request CARB approval of the use of the technology. CARB shall approve the use of the credit value upon Ford providing sufficient information to confirm the implementation of the technology is consistent with the supplier's application.

- (4) CARB may approve such applications on a limited basis by model year and vehicle application and/or require testing or other data collection from the supplier or Ford to verify the appropriateness of the credit value.
- (ii) To support the development of appropriate credit values and testing methodologies for future model year vehicles:
 - (1) In order for MY2022 through MY2026 BEVs and/or FCEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), Ford shall submit a plan for CARB review and approval on how it will gather activity data and/or test data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of data specific to the technology and its relative benefits on a Zero Emission Technology vehicle across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, by demonstrating the improvement in vehicle efficiency (Watt-hour per mile) and using a value for electricity generation in grams CO₂ per Watt-hour to calculate an appropriate gram per mile value, by collecting representative data on in-use vehicles to refine future assumptions related to usage of the technology, etc.).
 - (2) In order for MY2022 through MY2026 PHEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), Ford shall be required to submit a plan for CARB review and approval on how it will submit PHEV activity data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. Such data shall be limited to data that Ford will be collecting for other purposes and/or otherwise have available for PHEVs for which

Ford is requesting the credit and need only include the data most relevant to informing the usage or operation of the applicable off-cycle technology in PHEVs across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, data on the fraction of vehicle miles traveled using electric propulsion versus gasoline powered propulsion, data on the fraction of trips that have an engine start, etc.). CARB may not require Ford to conduct special testing or implement additional parameters or data collection methods, however, Ford may voluntarily propose to use test data or a combination of test data and activity data as part of its plan to satisfy this requirement. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of the available data (and/or test data as described above) specific to the applicable PHEV(s).

- (3) Off-cycle credits may be approved on a limited model year basis for technologies where the GHG benefits depend on the behavior of the driver (*e.g.*, driver coaching, haptic pedals) only when:
 - (a) It is possible, on the basis of reasonable evidence, to make assumptions about average driver behavior to calculate the likely impact and associated credit value; and
 - (b) Ford agrees to perform additional data collection and testing to allow for verification of the behavior on actual vehicles utilizing the technology and to be used in establishment of more appropriate credit values and testing methodologies for subsequent model year vehicles.

(iii) Ineligible technologies

- (1) Off-cycle credits may not be approved for technologies that are integral or inherent to the basic vehicle design, such as engine, transmission, mass reduction, passive aerodynamic design, and tire

technologies. Technologies installed for non-off-cycle emission-related reasons or that otherwise would have been installed for purposes of reducing emissions (directly or indirectly) over the test cycles for compliance with the GHG standards are also not eligible as they would be considered part of the baseline vehicle design. Off-cycle credits may not be approved for crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies designed for the purpose of reducing the frequency of vehicle crashes. Off-cycle credits may not be earned for technologies installed on a motor vehicle to attain compliance with any vehicle safety standard.

- (2) Waste heat, as used for active warm-up off-cycle credits, refers to heat that cannot be recovered by any other component or system on the vehicle and does not include systems that preferentially or necessarily first use heat to warm the engine oil or interior cabin before utilization to warm up the engine or transmission.
- (3) With the exception of A/C-related technologies for cooling the cabin or occupants, technologies that have predefined credit values, and technologies for Zero Emission Technology vehicles, off-cycle credits may not be granted for non-powertrain or non-propulsion technologies including technologies inherent to the design of occupant comfort and entertainment features such as passenger or cabin heating, interior displays or components, infotainment components, etc. For purposes of this paragraph, technologies that are designed to recapture energy created by the powertrain that otherwise would be lost (*e.g.*, through heat or mechanical friction during deceleration or braking events) will be considered powertrain technologies.

- (4) For Zero Emission Technology vehicles, ineligible technologies will include displays, infotainment systems, and other items not directly related to propulsion or battery conditioning.

32. Certification. Prior to certification, Ford agrees to provide CARB with all emission data necessary to calculate CREE levels for each emission data vehicle representing a test group submitted to CARB for certification to CARB's criteria pollutant emission standards (title 13, CCR § 1961.2).

33. Compliance.

- (A) Unless it is otherwise specified in this Agreement that provisions of the 2018 Federal Program apply, EPA changes during the term of this Agreement in the Federal Program regulations, including but not limited to test procedures and calculation methodologies, will automatically apply for purposes of this Agreement unless either Party notifies the other Party of its belief that such changes will have a material impact on the stringency of the GHG commitments. Following such notification, Ford and CARB shall in good faith confer in accordance with Paragraph 35 to reach a mutually acceptable resolution. The Party seeking a departure from changes to the Federal Program shall 1) explain the basis for its position that the changes made by EPA will have a material impact on the stringency of the GHG commitments, and 2) propose a technical modification in accordance with Paragraph 35. It is the intent of the Parties that any resolution to address a material impact on stringency due to changes EPA makes in the Federal Program regulations will minimize disruption or burdens on Ford's implementation of testing and related administrative requirements. Except where the 2018 Federal Program is specified in this Agreement and for changes to the Federal Program for which a Party provides notification under this paragraph, the Parties intend that Ford will be able to utilize the same test procedures and calculation methodologies to generate the required data for compliance with this Agreement and the Federal Program, including but not limited to any revisions related to the phase-in of the use of E10 test fuel resulting from EPA's Vehicle

Test Procedures Adjustments for Tier 3 Certification Test Fuel rulemaking, proposed at 85 Fed. Reg. 28,564 (May 13, 2020).

- (B) Compliance under this Agreement is determined by first calculating compliance based on CREE performance relative to the standard without the use of any Zero Emission Technology multipliers. Air conditioning-related, off-cycle, full-size pickup, and Zero Emission Technology vehicle credits as well as applicable debits for N₂O and/or CH₄ emissions are then separately calculated and added to the calculated CREE performance credits or debits. Zero Emission Technology vehicle credits shall be calculated for each model year as specified in Paragraph 30(A)(iv)(3)(b) of this Agreement.
- (C) No later than May 15 following the model year, Ford shall provide CARB with all data and technical documentation to support a calculation of compliance for the applicable model year including:
 - (i) Sales and footprint data to calculate Ford's target CREE fleet value.
 - (ii) Sales, vehicle performance data, and supporting information for all credits requested for the model year to calculate Ford's achieved fleet CREE performance.
 - (iii) Sales data and fleet footprint and performance data to calculate Ford's Zero Emission Technology 1 percent cumulative cap and the number of credits earned towards the cap for the current and previous model years. If the cumulative credits claimed as earned by Ford exceed the 1 percent cap as calculated solely for the current and previous model years, the submitted data must also include an estimate of the cumulative portion of the cap projected to be earned in future model years by Ford.
 - (iv) The "Agreement ABT Calculator" that was developed jointly by the Parties, as may be updated from time to time upon written agreement of the Parties, populated with data for the applicable model year to support Ford's calculation of compliance and tracking of credits and deficits.

34. Banking of Credits and Deficits.

(A) Agreement Balance.

- (i) Starting Balance: Ford will enter the Agreement with a value of credits (or deficits) in megagrams of CO₂ for its Agreement credit balance equal to its 2018 Federal Program credit balance as calculated at the conclusion of MY2020 (for MY2011 through MY2020) with the following adjustments:
 - (1) Subject to the limits of the “1 percent cap” per Paragraph 30(A)(iv), the advanced technology vehicle multiplier for MY2020 BEVs and FCEVs will be 2.0 and 1.6 for MY2020 PHEVs in lieu of 1.75 and 1.45, respectively; and
 - (2) The cap for off-cycle credits based on predefined (menu) values will be 15 g/mi for MY2020 such that if Ford had exceeded the 10 g/mi cap in MY2020 and not been awarded full benefit of the applied technologies, an adjustment would be made to its credit balance to reflect the higher cap.
- (ii) Calculation of Agreement Balance. For MY2021 through MY2026, Ford’s Agreement credit balance shall be calculated per the requirements of this Agreement.
 - (1) As specified in Paragraph 33(B) above, compliance is calculated first based on actual performance and then all earned credits (*e.g.*, A/C, off-cycle) per this Agreement for the specific model year for which Ford is subject to GHG fleet commitments under this Agreement.
 - (2) If Ford has a surplus (credits earned beyond its obligation) after the model year compliance calculation, those credits shall be added to the Agreement Balance in accordance with the averaging, banking, and trading (“ABT”) provisions of the 2018 Federal Program.

- (3) If Ford has a deficit after the model year compliance calculation, then those deficits shall be added to the Agreement Balance in accordance with the ABT provisions of the 2018 Federal Program.
- (4) If Ford participated in any Agreement credit transactions (*e.g.*, sale, purchase) or used Agreement credits to satisfy Agreement Balance deficits, then those transactions and usage shall be recorded in the Agreement Balance in accordance with ABT rules. Except as specified in Paragraph 34(D)(iv)(3) for Federal Program credits acquired from ZEV-only manufacturers, Federal Program credit transactions for model years subject to standards specified in this Agreement may not be recorded in the Agreement Balance. Regarding Federal Program credits earned from model years after the expiration or early termination of this Agreement and used to resolve Ford's Agreement Balance deficits carried forward into model years after the expiration or early termination of this Agreement in accordance with Paragraph 34(C)(iv), such Federal Program credits shall be recorded in the Agreement Balance.

(B) Emissions Benefit Balance.

- (i) Purpose: To ensure the integrity of the emission benefits of this Agreement, Ford shall be required to achieve a net zero or positive credit balance and resolve any incurred deficits through MY2031 (based on the resolution of Ford's obligations in accordance with Paragraph 34(B)(vi)), and possibly through as late as MY2034 (based on Ford's carry-forward of deficits in accordance with Paragraphs 34(C)(iii), and 34(C)(iv)), in a separate Emissions Benefit Balance that Ford tracks and reports to CARB.
- (ii) Starting Balance: The starting balance for the Emissions Benefit Balance shall be equal to Ford's starting Agreement Balance.
- (iii) Calculation of Emissions Benefit Balance through MY2026. For MY2021 through MY2026, Ford's Emissions Benefit Balance will be calculated as follows:

- (1) Add in, per ABT rules, credits (or deficits) determined from the Agreement model year compliance calculation for MY2021.
 - (2) Add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2021.
 - (3) Add in, per ABT rules except as noted below in Paragraph 34(B)(iii)(4), applicable Federal Program credit transactions that occurred between end of the previous model year and end of MY2021. For this requirement, applicable transactions only include purchase and sale transactions of Federal Program credits. Federal Program credits for model years subject to standards specified in this Agreement earned by Ford or used by Ford to resolve Federal Program deficits have no impact on the Emissions Benefit Balance.
 - (4) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by Ford and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2024, MY2025, and/or MY2026 Emissions Benefit Balance deficits carried forward in accordance with Paragraph 34(C)(iii).
 - (5) Repeat “Calculation of Emissions Benefit Balance through MY2026” above at the end of each successive model year for MY2022 through MY2026, substituting the applicable model year for MY2021.
- (iv) Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination. Subject to the resolution of Ford’s Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi), for MY2027 and subsequent model years (or substituting earlier model years in this paragraph as appropriate in the case of early termination of this

Agreement pursuant to Paragraph 35), Ford's Emissions Benefit Balance will be calculated as follows:

- (1) At the end of MY2027, add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2027 only for transactions involving MY2022 through (including) MY2026 vintage Agreement credits.
- (2) At the end of MY2027, add in, per ABT rules, Federal Program credit transactions and Federal Program credits that were used by Ford to satisfy any Federal Program deficits that occurred between end of the previous model year and end of MY2027 only for transactions or usage involving MY2022 through (including) MY2026 vintage Federal Program credits.
- (3) At the end of MY2027, if any MY2027 Federal Program credits were used by Ford to resolve Ford's Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv), add in, per ABT rules, credits (or deficits) determined from the Federal Program compliance for MY2027.
- (4) At the end of MY2027, add in, per ABT rules except as noted in Paragraph 34(B)(iv)(5), Federal Program credit transactions and Federal Program credits that were used by Ford to satisfy any Federal Program deficits of Ford that occurred between end of the previous model year and end of MY2027 only for transactions involving the same model year vintage credits as those used to resolve an Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv) (e.g., include MY2027 and MY2028 vintage credit transactions and usage if both MY2027 and MY2028 Federal Program credits were used to resolve Ford's Agreement Balance deficits).

- (5) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by Ford and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2027 or subsequent Emissions Benefit Balance deficits incurred due to Federal Program compliance, credit transactions, or usage recorded in accordance with Paragraphs 34(B)(iv)(3) and 34(B)(iv)(4).
- (6) Repeat “Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination” at the end of each successive model year for latest applicable year (possibly as late as MY2034), substituting the applicable model year for MY2027.
- (v) Federal Program credits that Ford may permanently retire or otherwise remove without being used from its Federal Program credit balance may be used towards satisfying Ford’s Emissions Benefit Balance obligations in lieu of tracking such credits in the Emissions Benefit Balance through to their expiration. Ford and CARB may agree that Emissions Benefit Balance obligations satisfied in this manner will terminate Ford’s corresponding Emissions Benefit Balance reporting requirements.
- (vi) Recognizing the uncertainty of regulatory requirements applicable following the model years covered in the Agreement, Ford and CARB desire to maintain the integrity of the environmental benefits of this Agreement while not disadvantaging Ford with regard to future regulatory compliance obligations. Therefore, prior to the expiration or upon early termination of this Agreement, Ford and CARB shall in good faith confer to reach mutually acceptable agreement with respect to Ford’s Emissions Benefit Balance obligations. In seeking to reach such an agreement, Ford and CARB shall consider all relevant and equitable circumstances, including but not limited to the following:

- (1) the important environmental benefits of this Agreement, as described in Paragraph 25 above, which the Parties agree were a primary basis for CARB's decision to enter into the Agreement;
- (2) the regulatory requirements known or likely to apply to Ford in the model years following the model years covered by this Agreement; and
- (3) the extent to which Ford would be harmed, relative to other manufacturers who chose not to enter into a similar agreement, if Ford is restricted, in whole or in part, by its Emissions Benefit Balance obligations.

Ford and CARB shall seek to reach an agreement that reflects an appropriate balancing of the relevant and equitable considerations. If Ford and CARB are unable to reach a mutually acceptable understanding regarding Ford's Emissions Benefit Balance obligations, the issue shall be the subject of Dispute Resolution under this Agreement. Both Ford and CARB agree that the factors set forth in this subparagraph shall be the basis upon which Dispute Resolution shall be conducted.

(C) Tracking of Credits within Credit Balances.

- (i) Within the Agreement Balance and the Emissions Benefit Balance, credits (and debits) shall be tracked based on the model year in which they were earned, per ABT rules.
- (ii) Credits shall be subject to a five-year carry forward and three-year carry back provision. Credits may be used by Ford to satisfy deficits incurred in the prior three model years or used or traded by Ford for use in the subsequent five model years. Credits not used within five model years shall expire.
- (iii) If Ford has a deficit after the model year compliance calculation, then unexpired credits earned in prior model years or acquired through trade may be utilized to satisfy its obligation. Except as noted below, if Ford still has a deficit after utilizing all prior model year credits and acquired

credits, then it may carry forward the credit deficit up to and including the third model year after the model year in which the deficit was incurred.

To facilitate alignment between the Agreement Balance and the Emissions Benefit Balance, if Ford has an Agreement Balance deficit being carried forward from MY2024, MY2025, and/or MY2026, Ford shall also carry forward an equivalent MY2024, MY2025, and/or MY2026 deficit in the Emissions Benefit Balance (or likewise, as appropriate, for earlier model years in the case of early termination of this Agreement), in lieu of utilizing all prior model year credits and acquired credits in the Emissions Benefit Balance to resolve some or all of the deficits before carrying forward the remaining deficits.

- (iv) Agreement Balance and/or Emissions Benefit Balance deficits carried into model years after expiration or early termination of this Agreement may be resolved by applying Federal Program credits generated in accordance with the ABT provisions of the 2018 Federal Program for those model years after expiration or early termination of this Agreement. Such Federal Program credits shall be recorded as a credit transaction (credits acquired) in Ford's Agreement Balance and Emissions Benefit Balance per ABT rules and tracked accordingly.
- (v) Deficits not satisfied within the three model year carry forward period shall constitute noncompliance with this Agreement.

(D) Credit Trading.

- (i) Credits in Ford's Agreement Balance may be traded (or deficits resolved) in accordance with the trading provisions of the 2018 Federal Program and the additional credit trading restrictions described in this Agreement.
- (ii) Credits in the Emissions Benefit Balance may not be directly traded by Ford and credits may only be added or removed in accordance with Paragraph 34(B) above.

- (iii) Trading within Agreement. Except as noted in Paragraph 34(D)(iv)(3) below for Federal Program credits acquired from ZEV-only manufacturers, Ford may only trade credits earned under this Agreement for its Agreement Balance from/to other manufacturers who have executed an agreement similar to this Agreement. CARB's Executive Officer will determine if any such agreements exist and provide in writing a determination to all parties to any such agreements as to which manufacturers may trade credits under this Agreement or similar agreements.
- (iv) Transferring Credits into Agreement.
 - (1) Earned or purchased MY2020 or earlier Federal Program credits may be used to meet Ford's commitments in this Agreement.
 - (2) Except as noted below for ZEV-only manufacturers and as specified in Paragraph 34(C)(iv) for Federal Program credits used to resolve any outstanding deficits after the expiration or early termination of this Agreement, MY2021 and subsequent credits earned under the Federal Program by Ford or any other manufacturer may not be used to meet Ford's commitments in this Agreement for its Agreement Balance.
 - (3) MY2021 through MY2026 Federal Program credits earned by a ZEV-only manufacturer and acquired by Ford through a Federal Program credit transaction may be used to meet Ford's commitments in this Agreement subject to the following:
 - (a) Only Federal Program credits directly earned by the ZEV-only manufacturer are eligible. For purposes of this requirement, ZEV-only manufacturer means a vehicle manufacturer that exclusively offers BEVs and/or FCEVs for sale in the United States.
 - (b) Adjustment of Federal Program Credits transferred into program.

- (i) MY2020 and earlier credits earned by a ZEV-only manufacturer and acquired by Ford shall be recorded as a credit transaction (credits acquired) in Ford’s Agreement Balance and Emissions Benefit Balance per ABT rules without adjustment.
- (ii) For model years subject to standards specified in this Agreement, credits earned under the SAFE Rule Part Two by a ZEV-only manufacturer and acquired by Ford shall be adjusted before being recorded as a credit transaction (credits acquired) in Ford’s Agreement Balance and Emissions Benefit Balance per ABT rules. To adjust credits acquired, the credits shall be reduced by the following formula before being added to Ford’s Agreement Balance and Emissions Benefit Balance:

$$Credits_{adj}[Mg] = Credits_{acq}[Mg] \times Adjust_Factor_{MY}$$

Where:

Credits_{adj} = Credit amount, in megagrams, after adjustment.

Credits_{acq} = Acquired credit amount, in megagrams, before adjustment.

Adjust_Factor_{MY} = Adjustment factor specific to the model year of the acquired credits from the following table:

	MY2021	MY2022	MY2023	MY2024	MY2025	MY2026
<i>Adjustment Factor</i>	0.96	0.95	0.94	0.93	0.92	0.91

- (iii) If the Federal Program is further amended after the SAFE Rule Part Two, Federal Program credits earned by a ZEV-only manufacturer for model years subject to standards specified in this Agreement and acquired by Ford shall be adjusted to reflect the relative difference in effective stringency between the Agreement and the Federal

Program before being recorded as a credit transaction (credits acquired) in Ford's Agreement Balance and Emissions Benefit Balance per ABT rules. Ford and CARB, in accordance with Paragraph 35, shall in good faith confer to determine the appropriate adjustment. In determining such an adjustment, the Parties acknowledge that the adjustment factor specified in this Agreement was derived from the difference in credits earned by a ZEV under the Agreement (in g/mi) versus credits earned under the Federal Program. Assumptions include a fleet with an equal share of passenger cars and light trucks, and industry sales-weighted average passenger car and light truck footprints of 46.2 and 53.8 square feet, respectively.

(4) Credits earned under a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s) may not be used to meet Ford's commitments in this Agreement for its Agreement Balance.

(v) Transferring Credits out of Agreement. Credits earned by Ford per this Agreement for its Agreement Balance may not be used by or traded by Ford to meet its or any other vehicle manufacturer's obligation under the Federal Program, or a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s).

35. Modification and Termination. The Parties acknowledge that modifications to or termination of this Agreement may be necessary or appropriate in response to various events or circumstances.

(A) If Ford or CARB, with any input from the Section 177 States, believes that modifications to or termination of the Agreement may be warranted, it will provide written notice to the other Party identifying the events or circumstances at issue and explaining why modification to or termination of the Agreement may be necessary or appropriate. Ford and CARB, with input from the Section 177

States, shall engage in good faith discussions to determine whether modification or termination of this Agreement is necessary or appropriate.

- (B) Nothing in this paragraph obligates Ford or CARB, with any input from the Section 177 States, to accept a proposed modification or termination, except as follows:
 - (i) If CARB, with any input from the Section 177 States, enters into an agreement with another light-duty automobile manufacturer containing GHG obligations materially different from and more favorable to Ford or that light-duty automobile manufacturer than this Agreement, Ford has the option to either (a) comply with this Agreement; (b) comply with the provision(s) of the agreement with the other light-duty automotive manufacturer that is materially different from and more favorable than this Agreement or (c) terminate this Agreement.
 - (ii) If any Section 177 State rescinds its Enforcement Discretion Letter affiliated with this Agreement or seeks to enforce the CA Standards against Ford, or if any other state becomes a Section 177 State without promptly issuing an Enforcement Discretion Letter, then Ford has the option to terminate this Agreement.
 - (iii) If EPA imposes, or an action of a court results in imposition of, national GHG emission standards equal to or more stringent than the commitments specified in this Agreement, Ford and CARB agree that this Agreement terminates upon the date the more stringent regulations begin to apply.
- (C) In all instances except those described in Paragraph 35(B) above, any modification to this Agreement is only valid and enforceable if it is in writing and signed by both Parties to this Agreement. If the Parties cannot agree, the Parties' rights and obligations under this Agreement survive.
- (D) If this Agreement terminates in accordance with Paragraph 35, Ford shall thereafter:
 - (i) be subject to applicable law upon and after termination; and

- (ii) unless otherwise agreed by CARB in consultation with the Section 177 States, remain subject to remedies applicable under this Agreement for GHG-related breaches occurring prior to termination of this Agreement.

36. Reporting of Agreement Compliance to Section 177 States and Additional Commitments Regarding Section 177 States. CARB may communicate the compliance status of Ford with the terms of this Agreement to Section 177 States annually. Ford agrees, at CARB's request, to provide to Section 177 States certain submissions under this Agreement containing Ford's Confidential Business Information where the recipient Section 177 State(s) has the legal ability to protect such information against release to the public.
37. Advancement of Electrification. The Parties recognize that the practical availability and marketing of electrified vehicles to the public promotes the interests of both California and Ford in furthering electrification technology development and deployment, including via public acceptance of such technology, reduced costs, and charging infrastructure expansion. CARB has an interest in making electrified vehicles more available and affordable, reducing climate change impacts experienced by Californians, and supporting the GHG reductions and technology development goals of the CA Standards and CARB's statutory requirements for further GHG reductions for later model years. In light of the above, Ford and CARB agree that Ford's performance as specified in Paragraphs 37(A) and 37(B) are an important consideration for this Agreement, and are integral to CARB's decision to enter into it:
- (A) Ford will undertake electrification commitments described in Appendix B: Electrification Commitments to this Agreement.
 - (B) Ford shall report annually to CARB on the status of its electrification commitments described in Appendix B: Electrification Commitments. The Parties acknowledge that Ford has also made electrification commitments relating to the Section 177 States as described in Appendix B: Electrification Commitments. Ford's annual report to CARB under Paragraph 33(C) will include a description of the status of those commitments. At CARB's request, Ford agrees to transmit the report to the Section 177 States in accordance with Paragraph 36.

- (C) In order to promote the environmental benefits of this Agreement, CARB commits to continue its use of best efforts to complete expeditious review of applications for certification of Zero Emission Technology vehicles.
38. Enforcement in General. If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination that Ford has failed to comply with any term of this Settlement Agreement, the Executive Officer will notify Ford, in writing, of the reasons supporting the determination and provide Ford with information upon which the determination was based. Except as provided below with regard to a GHG Credit Shortfall Breach, breaches of this Settlement Agreement shall be enforced in accordance with applicable contract law, including the availability of injunctive relief.
39. Enforcement of Breach of GHG Fleet Commitments; Mitigation Plans. A breach of GHG fleet commitments in Paragraphs 29-34 of this Settlement Agreement resulting in a GHG credit shortfall required for a particular compliance period, after accounting for the GHG credit averaging, trading and banking provisions of this Agreement (a “GHG Credit Shortfall Breach”), is subject to enforcement by CARB exclusively in accordance with the terms of this paragraph.
- (A) If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination and notifies Ford under this Agreement that Ford has committed a GHG Credit Shortfall Breach, Ford may, within 60 Days of receipt of the determination by the Executive Officer, propose a mitigation plan for approval by the Executive Officer.
- (B) A mitigation plan shall fully mitigate the emissions consequences of the Credit Shortfall Breach. It shall also prescribe Ford’s compliance for the GHG emissions commitments in the Agreement going forward. If Ford’s return to compliance is impracticable because there is inadequate time remaining in the Agreement, the mitigation plan shall identify the means by which Ford will fully mitigate the consequences of any anticipated Credit Shortfall Breach.
- (C) To address the emissions consequences of the Credit Shortfall Breach, Ford may propose, subject to the approval of the Executive Officer in accordance with Paragraph 39(F), a mitigation plan including any combination of commitments to

take remedial actions, to implement special projects, or to make payments into the Trust Account to be used to promote electrification and reduce GHG emissions. Payments into the Trust Account corresponding to the amount of the Credit Shortfall Breach as determined under this subparagraph shall be deemed fully to mitigate the emissions consequences of a Credit Shortfall Breach. In determining the amount of tons of GHGs to be addressed in a mitigation plan, Ford shall propose and CARB shall confirm and specify the credit shortfall.

- (D) Payment amounts under a mitigation plan shall generally be consistent with prices for GHG credits in California's cap-and-trade program, the Regional Greenhouse Gas Initiative, or other similar GHG market programs, taking into account such other equitable factors as may be appropriate under all of the circumstances, and considering the social cost of carbon, using the Central 3 Percent Average Values as expressed in Appendix A, Table A-1 of the Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government (August 2016).
- (E) Mitigation plans may be enforced in court consistent with the venue provisions of this Agreement.
- (F) The Executive Officer shall review a mitigation plan for consistency with the terms of this Agreement and, on behalf of CARB, with any appropriate input from the Section 177 States, either approve or reject within 30 Days, with an explanation of any objections. This 30-Day period may be extended if Ford agrees to an extension for further evaluation. If the Executive Officer rejects a mitigation plan, in whole or in part, Ford will have 30 Days to amend the plan to address any objections by the Executive Officer. If the Executive Officer approves a mitigation plan, Ford shall implement the mitigation plan according to its terms.
- (G) If Ford fails timely to submit a mitigation plan or an amended plan, or if the Executive Officer rejects an amended plan, the Executive Officer may adopt a mitigation plan for Ford. Any mitigation plans that include actions in addition to,

or in lieu of, payments into the Trust Account shall be limited to remedial actions or implementation of special projects that Ford accepts as reasonable and whose cost does not exceed, for the tons in question, the amount of payments into the Trust Account determined in accordance with Paragraph 39(D) of this Agreement.

(H) Ford shall have 60 Days after receipt of approval or adoption by the Executive Officer to begin to implement a mitigation plan.

(I) All payments required under a mitigation plan shall be deposited into a Trust Account as directed by CARB. Trust Account funds shall be used to administer the Trust Account. All funds deposited into this Trust Account shall be used to promote vehicle electrification or otherwise to reduce vehicle GHG emissions, in accordance with trust agreements to be developed in accordance with this Agreement as necessary. CARB will notify Ford of the activities funded in each Section 177 State by any such payments, including the number of electric vehicle and fuel cell vehicle station installations, if applicable.

40. Dispute Resolution. The Parties agree that the procedures contained in this paragraph are the sole and exclusive procedures for resolving disputes under this Settlement Agreement.

(A) If Ford disagrees with the Executive Officer's determination of breach under this Settlement Agreement, or identifies other grounds for dispute under this Settlement Agreement including but not limited to the Executive Officer's rejection of a mitigation plan or adoption of its own mitigation plan, Ford will provide a written Notice of Dispute and Statement of Position to the Executive Officer within 30 Days of the Executive Officer's notification of breach or other action that is the subject of dispute. Ford's Notice of Dispute and Statement of Position shall include any factual data, analysis, or opinion supporting Ford's position and any supporting documentation relied upon by Ford. CARB, with any appropriate input from the Section 177 States, will serve its Statement of Position within 45 Days of receipt of Ford's Notice of Dispute and Statement of Position, unless that period is modified by written agreement. CARB's Statement of

Position shall include any factual data, analysis, or opinion supporting CARB's position and any supporting documentation relied upon by CARB.

- (B) The period of informal negotiations shall not exceed 60 Days from the date of Ford's receipt of CARB's Statement of Position, unless that period is extended by written agreement signed by CARB and Ford.
- (C) If CARB, with any input from the Section 177 States, and Ford are unable to resolve a dispute before the expiration of the 60-Day period for informal negotiations, either Party may file an action for breach in accordance with the venue provision of this Settlement Agreement, after providing ten Days written notice to the other Party. In any such action, the Parties shall be prohibited from raising issues that were not previously raised during dispute resolution, except for issues which could not practicably be raised previously during the dispute resolution.
- (D) The time period for Ford to respond to CARB under any provision of this Agreement, including the time periods to submit, amend or implement a mitigation plan, shall not begin to run until the completion of dispute resolution either by agreement between the Parties or by the final resolution of a court proceeding.

41. Force Majeure.

- (A) "Force Majeure" means, for purposes of this Agreement, an event arising from causes beyond the control of Ford, which delays or prevents the performance of any obligation under this Agreement, despite Ford's best efforts to fulfill the obligation, such as war, fires, floods, hurricanes, tornadoes, earthquakes, volcanic eruptions, labor strikes (but not lock-outs), acts of terrorism, pandemics, and other events resulting in unavoidable supply chain disruption. This does not include negligent acts or Ford's financial inability to perform unrelated to the event as described in this paragraph.
- (B) If any event Ford considers to be a force majeure event occurs or has occurred, Ford shall provide written notice to CARB within 10 Days of when Ford first

knew that the event might cause a delay, impossibility or impracticability. Within 14 Days thereafter, Ford shall provide in writing to CARB an explanation and description of the reasons for the delay, impossibility, or impracticability; the anticipated duration of any delay; all actions taken or to be taken to prevent or minimize any delay, impossibility, or impracticability; a schedule for implementation of any measures to be taken to prevent or mitigate a delay or the effects of any delay, impossibility, or impracticability; and Ford's rationale for attributing such delay, impossibility, or impracticability to a force majeure event if it intends to assert such a claim. Ford shall include with any notice all available documentation supporting the claim that the delay, impossibility, or impracticability was attributable to a force majeure event.

- (C) If CARB, with any input from the Section 177 States, agrees that the delay, anticipated delay, impossibility, or impracticability is attributable to a force majeure event, CARB shall modify Ford's obligations under this Settlement Agreement as necessary and appropriate to account for the delay, impossibility, or impracticability resulting from the force majeure event. CARB will notify Ford in writing of the modifications approved by CARB.
- (D) If CARB, with any input from the Section 177 States, disagrees that a delay, anticipated delay, impossibility, or impracticability has been or will be caused by a force majeure event, CARB will notify Ford in writing of the decision.
- (E) Ford may elect to invoke dispute resolution in accordance with this Agreement based upon CARB's determinations and decisions pursuant to Paragraphs 41(C) and 41(D) above.

42. Records. Ford agrees that CARB, on behalf of itself or Section 177 States that have issued Enforcement Discretion Letters, may request, and shall receive, records regarding compliance with this Agreement by filing a request in writing; records will be provided by Ford within 21 Days of a request. Ford may assert a claim of business confidentiality as appropriate for any such records pursuant to California law and the corresponding law

of any Section 177 States that might seek to receive such records. Ford will retain all relevant records for the term of this Agreement plus five years.

Additional Provisions

43. Term and Expiration. Ford and CARB agree that, unless terminated or extended by modification in accordance with Paragraph 35, the Settlement Agreement covers MY2021 through MY2026. Except as otherwise specified in this paragraph, this Settlement Agreement shall expire and be of no further force and effect following Ford's submission of data and technical information supporting its calculation of compliance for MY2026 in accordance with Paragraph 33(C) which includes, subject to the resolution of Ford's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi) and three-year deficit carry-forward in accordance with Paragraph 34(C)(iii), verification of Ford's Emissions Benefit Balance to determine whether MY2026 credits and/or deficits were fully resolved to achieve compliance through MY2026. If the Executive Officer has made a determination and notified Ford of a GHG Credit Shortfall Breach within 60 Days after Ford's submission of data and technical information with respect to Model Year 2026, the enforcement of breach of GHG fleet commitments/mitigation plan requirements and the dispute resolution provisions shall survive for the sole purpose of resolving a determination of a GHG Credit Shortfall Breach, in accordance with Paragraph 39.
44. Entirety. This Agreement constitutes the entire agreement and understanding among the Parties concerning the matter described herein, and supersedes and replaces any and all prior negotiations and agreements of any kind, whether written or oral, among the Parties concerning the matter described herein. This Agreement consists of 46 pages plus signature pages and appendices and 57 numbered paragraphs.
45. Binding Effect. This Agreement binds Ford and any principals, officers, receivers, trustees, successors and assignees, subsidiary and parent corporations and upon CARB, and any successor agencies that may have responsibility for and jurisdiction over the subject matter of this Agreement.
46. Effective Date. This Settlement Agreement is binding and effective as of the date that it is fully executed by Ford and CARB.

47. Agreement Not Severable. In the event that any provision of this Settlement Agreement is held by a court to be illegal, invalid, or unenforceable in any jurisdiction, the Parties shall enter into good faith negotiation regarding modification in accordance with Paragraph 35 above with the intent to achieve the objectives and benefits of this Settlement Agreement to the greatest extent possible. Following such negotiations, either Ford or CARB, with any appropriate input from the Section 177 States, may provide written notice to the other Party terminating this Settlement Agreement if the Agreement is not capable of modification in the view of either Party.
48. Choice of Law. This Agreement shall be interpreted and enforced in accordance with the laws of the State of California, without regard to California's choice-of-law rules.
49. Rule of Construction. Any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in interpreting this Settlement Agreement, including in any dispute resolution process.
50. Non-Waiver. The failure to enforce any provision of this Agreement shall not be construed as a waiver of any such provision, nor shall it prevent such Party thereafter from enforcing such provision or any other provision of this Agreement. The rights and remedies granted all Parties herein are cumulative and the election of one right or remedy by a Party shall not constitute a waiver of such Party's right to assert all other legal remedies available under this Agreement or otherwise provided by law.
51. Intent to be Bound. The Parties represent that they have participated fully in the review and drafting of this Agreement; understand and accept all terms; that they enter into this Agreement freely and voluntarily; have had an opportunity to consult with legal counsel; that they are fully informed of the terms and effect of this Agreement; that they enter into this Agreement after independent investigation and through no fraud, duress, or undue influence; and that they knowingly and voluntarily intend to be legally bound by this Agreement.
52. Venue. The Superior Court of California, located in the County of Sacramento, shall hear any dispute between the Parties arising from this Agreement.

53. Counterparts. This Agreement may be executed in counterparts. Facsimile or photocopied signatures (including PDF copies) shall be considered as valid signatures as of the date hereof, although the original signature pages shall thereafter be appended to this Agreement.
54. Release and Covenant Not to Sue. In consideration of Ford's voluntary commitments in this Agreement, CARB releases Ford and its principals, officers, receivers, trustees, successors and assignees, subsidiaries, affiliates and parent corporations from any claims, and covenant not to sue or otherwise pursue such entities or individuals, for violations of the CA Standards for MY2021-MY2026. However, CARB retains authority to enforce this Settlement Agreement on the terms provided herein.
55. Authority. The undersigned represents that he or she has full authority to enter into this Agreement.
56. Assignment. This Settlement Agreement and the rights, duties, and obligations under it may not be assigned or delegated by CARB or Ford without the prior written consent of the other Party. Any assignment or delegation made without prior written consent shall be void.

Notices

57. Notices. All notices, demands, requests, consents, approvals, or other communications (collectively "Notices") required or permitted to be given pursuant to this Settlement Agreement shall be in writing and shall be transmitted via United States mail and electronic mail to the Parties set out below. Notice shall be deemed given on the date of receipt.

To CARB:

Executive Officer
California Air Resources Board
1001 I St
Sacramento, CA, 95814
Richard.Corey@arb.ca.gov

To Ford:

Robert T. Holycross
Vice President, SE&SE
Ford Motor Company WHQ
One American Road
Dearborn, MI 48126
rholycro@ford.com

Cynthia Williams
Global Director, SH&C
Ford Motor Company WHQ
One American Road
Dearborn, MI 48126
cwilli96@ford.com



Date: 8/17/2020

Richard W. Corey, Executive Officer, CARB



Date: 8/4/2020

For Ford Motor Company
Robert T. Holycross, Vice President,
Sustainability, Environment and Safety Engineering

APPENDIX A: CURVE COEFFICIENTS

Appendix A : Curve Coefficients

Passenger Car and Light Truck Curve Coefficients representing 1 percent less year over year stringency to be used in calculation of 1 percent cap for Zero Emission Technology vehicles multiplier.

Passenger Car Curve Coefficients (1 Percent Less)				
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	Maximum Footprint $\geq 56.0 \text{ ft}^2$
2021	157.0	3.84	-0.4	215.0
2022	153.0	3.74	-0.4	209.0
2023	149.0	3.64	-0.4	203.0
2024	145.0	3.54	-0.4	198.0
2025	141.0	3.44	-0.4	192.0
2026	137.0	3.35	-0.3	187.0

Light Truck Curve Coefficients (1 Percent Less)					
Model Year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	190.0	4.16	19.3	74.0	327.0
2023	185.0	4.05	18.7	74.0	318.0
2024	180.0	3.94	18.2	74.0	310.0
2025	175.0	3.84	17.7	74.0	302.0
2026	170.0	3.73	17.3	74.0	293.0

Appendix B: Electrification Commitments

-- CONTAINS CONFIDENTIAL BUSINESS INFORMATION

Settlement Agreement

1. The California Air Resources Board ("CARB"), and American Honda Motor Co., Inc. ("AHM"), hereinafter collectively referred to as the "Parties" or singularly as "Party," voluntarily enter into this Settlement Agreement (or "Agreement") based on the Parties' mutual interest in mitigating their respective risks and resolving potential legal disputes concerning the authority of CARB and those states that have adopted California's vehicle standards ("Section 177 States") to adopt and enforce greenhouse gas ("GHG") emissions standards applicable to new light-duty motor vehicles manufactured or distributed by AHM for Model Years 2021-2026 in light of the SAFE Rule Part One and Part Two, as discussed and defined below.

2. The Parties enter into this Agreement in light of ongoing and potential lengthy litigation involving the Federal Government, CARB and the Section 177 States regarding the SAFE Rule Part One and Part Two (collectively the "Litigation"). As elaborated below, AHM seeks, among other things, flexibility and certainty that will enable it to avoid compliance risks associated with California light duty vehicle GHG standards in California and the Section 177 States while maintaining or enhancing its current motor vehicle planning, production, sales, distribution, and related efforts regardless of the outcome of the current and pending litigation. CARB seeks, among other things, greater certainty regarding continuing automotive GHG emission reductions and vehicle electrification during the Model Years ("MYs") subject to this Agreement.

The Parties

3. The California Air Resources Board: CARB is the state air regulator for California (Cal. Health and Safety Code § 39600 *et seq.*), and sets vehicle emissions standards pursuant to state law (*see, e.g.*, 42 U.S.C. § 7543, Cal. Health & Safety

Code §§ 43013, 43018.5). CARB has promulgated GHG emission standards for the light-duty vehicle fleet. (*See* 13 CCR §§ 1961.3 *et seq.*).

4. AHM: AHM is a manufacturer or distributor of light-duty motor vehicles for sale throughout the United States that are or may be subject to regulation by the United States Environmental Protection Agency (“EPA”), the National Highway Traffic Safety Administration (“NHTSA”), CARB, and the Section 177 States.

Definitions

5. “Agreement Balance” means the amount of GHG credits available or deficits that apply to AHM at any given time for purposes of compliance with the Agreement, as calculated and tracked in accordance with Paragraph 34(A).
6. “CA Standards” are the standards applicable to light duty vehicle GHG emissions set out at 13 Cal. Code of Regulations § 1961.3(a)-(g) and encompass all related aspects of California regulations and test procedures relevant to the implementation of those standards.
7. “Days” means calendar days, unless otherwise specified.
8. “Emissions Benefit Balance” is an accounting designed to ensure the integrity of the emission benefits of this Agreement. The Emissions Benefit Balance will be calculated and tracked in accordance with Paragraph 34(B).
9. “Enforcement Discretion Letters” refers to letters or directives that each Section 177 State issues to document its exercise of enforcement discretion, assurance of support, or other use of authority allowing AHM to comply with this Agreement to achieve the objectives of the CA Standards through Model Year 2026, which each state has adopted pursuant to Section 177 of the Clean Air Act.
10. “Executive Officer” shall mean the person appointed by CARB pursuant to California Health & Safety Code § 39515.

11. "Federal Government" shall mean the National Highway Traffic Safety Administration ("NHTSA") and the United States Environmental Protection Agency ("EPA"), collectively.
12. "2018 Federal Program" encompasses the EPA light-duty vehicle GHG standards and test procedures specified in Title 40 CFR Part 86 Subpart S, Section 86.1818-12 and Part 600 in place on July 1, 2018.
13. "Federal Program" refers to all applicable light-duty vehicle GHG standards and test procedures, such as those specified in Title 40 CFR Parts 86 Subpart S, 1066 and 600, as may be amended from time to time, and as interpreted and implemented by EPA.
14. "SAFE Rule Part One" encompasses the final actions promulgated by EPA and NHTSA and published at 84 Fed. Reg. 51,310 (Sept. 27, 2019).
15. "SAFE Rule Part Two" encompasses the final rules promulgated by EPA and NHTSA and published at 85 Fed. Reg. 24,174 (April 30, 2020).
16. "Section 177 States" means, as of the time the Parties entered into this Agreement, the States of Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington. These states, through their legislatures and duly authorized state regulatory agencies, have adopted GHG standards applicable to the light-duty vehicle fleet identical to CA standards pursuant to Section 177 of the Clean Air Act. Any additional state (or district or territory of the United States) that adopts such GHG standards after the Effective Date of this Agreement, as defined in Paragraph 46, will be considered a Section 177 State for purposes of this Agreement at such time as that body is authorized to enforce those standards in accordance with Section 177 of the Clean Air Act.

17. "Trust Account" means an account established by CARB, with any appropriate input from the Section 177 States, in which funds may be deposited to address a GHG Credit Shortfall Breach, as described in Paragraph 39 of this Agreement, and which funds are for use to promote vehicle electrification or otherwise to reduce vehicle GHG emissions.
18. "Zero Emission Technology" vehicle means a battery electric vehicle ("BEV"), a fuel cell electric vehicle ("FCEV"), or a plug-in hybrid electric vehicle ("PHEV") as that term is defined in the 2018 Federal Program.
19. "Zero Emission Vehicle" ("ZEV") means a vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.
20. For clarity and to provide certainty, unless otherwise defined herein, any terms not specifically defined in this Settlement Agreement are as defined in the Federal Program, and shall be interpreted to have the commonly-understood meanings of such terminology in the context of light duty vehicle GHG regulatory programs.

Mutual Understandings

21. CARB and Federal GHG Standards. In 2013, EPA issued CARB a waiver of federal preemption for its CA Standards pursuant to Section 209 of the CAA. 78 Fed. Reg. 2,112 (Jan. 9, 2013). EPA promulgated the 2018 Federal Program regulations in 2012, establishing federal GHG standards for Model Years 2022-2025; at the same time, NHTSA undertook an augural rulemaking to promulgate fuel economy standards consistent with the statutory limitations regarding NHTSA's ability to adopt fuel economy standards no more than four years prior to the applicable Model Year. 77 Fed. Reg. 62,624 (Oct. 15, 2012). The CA Standards include a "deemed to comply" provision such that compliance with the

2018 Federal Program is deemed as compliance with the CA Standards. 13 C.C.R. § 1961.3(c). Likewise, compliance with the 2018 Federal Program qualifies as compliance in Section 177 States.

22. SAFE Rule Part One. The SAFE Rule Part One is a final agency action in which 1) EPA published a revocation of the CAA waiver of federal preemption previously granted to CARB for the CA Standards, at least as to certain Model Years, and 2) NHTSA adopted a rule declaring that state law regulations pertaining to motor vehicle emissions of carbon dioxide are preempted by the federal Energy Policy and Conservation Act ("EPCA"). CARB and the Section 177 States dispute the validity of these actions and the authority of EPA and NHTSA to take these actions. California has filed a lawsuit, together with the Section 177 States and other plaintiffs, challenging the NHTSA action in the United States District Court for the District of Columbia. *State of California v. Chao*, Case No. 1:19-cv-02826 (D.D.C. filed Sept. 20, 2019). California (including CARB), the Section 177 States, and others have also petitioned for review of the EPA and NHTSA actions in the SAFE Rule Part One in the United States Court of Appeals for the District of Columbia Circuit. *State of California v. Wheeler*, Case No. 19-1239 (D.C. Cir. filed Nov. 15, 2019).
23. SAFE Rule Part Two. The SAFE Rule Part Two is a final rule that reduces the stringency of the 2018 Federal Program and modifies alternative compliance measures. CARB has initiated litigation challenging the SAFE Rule Part Two. AHM has moved to intervene in the litigation for the limited purpose of addressing the remedy if the court grants a petition for review of the SAFE Rule Part Two. Under CARB regulations, with the promulgation of SAFE Rule Part Two, compliance with the Federal Program is no longer deemed compliance with the CA Standards, and instead manufacturers are required to comply with the CA Standards without regard to the Federal Program beginning with the 2021 Model Year. 13 C.C.R. § 1961.3(c).

24. Authority of Agencies to Enter into this Settlement Agreement and Otherwise Exercise Enforcement Discretion. CARB takes the position that its authority pursuant to Health & Safety Code § 43213 among other authorities to enforce the CA Standards was illegally restricted by SAFE Rule Part One, although CARB has stated that it will not take enforcement actions as to model years covered by EPA's waiver revocation in the SAFE Rule Part One unless and until the revoked portions of the waiver are reinstated. CARB and the Section 177 States take the position that they may enforce their regulations if the revoked portions of the waiver are reinstated or if the EPA and NHTSA actions in the SAFE Rule Part One are vacated. CARB and the Section 177 States may exercise enforcement discretion with respect to such authority, including entering into settlement agreements and issuing Enforcement Discretion letters or other enforcement discretion directives. Moreover, CARB has authority to contract with regulated entities or to take other actions necessary to further its statutory purposes as needed to meet climate and public health targets. *See generally* Cal. Health & Safety Code § 39600 *et seq.*

25. Risks and Benefits. This paragraph describes the Parties' understandings of important risks and benefits relevant to this Agreement; it is not intended as a comprehensive statement of all such risks and benefits. As set forth in Paragraph 2 above, litigation over the SAFE Rule Part One and the SAFE Rule Part Two, as well as potential further federal regulatory actions, create uncertainty for AHM regarding the GHG standards that will apply throughout the United States for Model Year 2021 through Model Year 2026 and subsequent. The outcome of this litigation or additional federal regulatory actions may result in two GHG compliance standards in the United States for the covered Model Years: requirements to comply with more stringent CA Standards in California and the Section 177 States; and less stringent SAFE Rule Part Two standards throughout the rest of the United States. This regulatory uncertainty also subjects AHM to considerable enforcement risk. Therefore, AHM enters into this agreement to

ensure, among other reasons, that it has the ability to (i) make long-term product planning decisions and investments with confidence; (ii) satisfy market demand and production realities; and (iii) comply with regulatory requirements during this time. This Settlement Agreement offers AHM compliance flexibility and greater certainty to plan for its nationwide fleet. The SAFE Rule Part One and SAFE Rule Part Two, and the related litigation, also entail risks that California and the Section 177 States may not achieve the pollutant reduction goals they expected to result from the CA Standards. Entry into this Settlement Agreement is consistent with those goals, including goals set out in the AB 32 Scoping Plan, and will deliver environmental benefits commensurate with those goals that may not be realized in the absence of an agreement. Each Section 177 State has made consistent judgments, reflected in the Enforcement Discretion Letters.

26. Commitments. In light of the risks set forth above, AHM commits to comply with this Settlement Agreement. Subject to the conditions and terms specified in this Settlement Agreement, CARB commits to exercise its enforcement discretion to accept AHM's compliance with the terms of this Settlement Agreement as an agreed upon compliance plan to achieve the objectives of the CA Standards for Model Year 2021 through Model Year 2026. CARB further accepts this Agreement as a contractual commitment. During the term of this Settlement Agreement, CARB will not enforce the CA Standards with regard to AHM using available enforcement mechanisms, and CARB instead shall enforce the terms of this Settlement Agreement solely in accordance with the enforcement provisions and remedies herein. The Parties recognize that each Section 177 State is issuing an Enforcement Discretion Letter that allows AHM to comply with this Agreement to achieve the objectives of the CA Standards in each Section 177 State through Model Year 2026. Through their respective Enforcement Discretion Letters, each Section 177 State committed to exercise enforcement discretion in lieu of enforcing the CA Standards, as adopted, based on AHM's entry into this Agreement. As a basis for entering into this Agreement, AHM has relied on each

Section 177 State's representation that it will exercise its enforcement discretion, as described in their respective Enforcement Discretion Letters.

27. No Effect on Federal Law or Law of Other States. The Parties to this Agreement do not intend to, and this Agreement does not, alter either Party's obligations under federal law, or impose on AHM compliance obligations with respect to sales or related activities in any individual state.

Agreed Substantive Terms

28. Litigation Commitments. AHM, on behalf of itself, its parent companies, subsidiaries and affiliates, will not challenge or seek to undermine this Agreement or CA Standards for the current Model Year through Model Year 2026, or the corresponding standards in Section 177 States. AHM will, to the extent possible under applicable trade association bylaws, oppose participation in any such challenges by any trade associations to which it belongs and avoid providing resources for any such challenges. AHM will not intervene on the side of the United States, or file an amicus brief on the side of the United States, to defend SAFE Rule Parts One or Two. This Agreement does not limit AHM's rights as intervenor in the SAFE Rule Part Two litigation to address the remedy in the event that a court grants a petition for review. Each Party agrees to support the validity of this Agreement in the event of third-party challenges.

29. Greenhouse Gas Fleet Commitments: AHM agrees to maintain an average yearly reduction in GHG emissions from its fleet sold nationwide (light-duty passenger cars, light-duty trucks, and medium-duty passenger vehicles) for model years 2021 through 2026, in accordance with the following:

(A) The target Carbon-Related Exhaust Emission (CREE) value for AHM's fleet shall be calculated separately for passenger cars and trucks utilizing the footprint curves defined below.

(B) Coefficients defining the footprint curves are identified in the tables below.

- (i) For vehicles with a footprint equal to or smaller than the footprint identified in the Minimum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Minimum Footprint column.
- (ii) For vehicles with a footprint greater than the Minimum Footprint and less than the Maximum Footprint, the target CREE value in units of grams per mile for each vehicle for the corresponding model year shall be calculated by multiplying the footprint of the vehicle by the value in column (a) and adding the value in column (b) and rounding the result to the nearest tenth of a gram per mile.
- (iii) For vehicles with a footprint equal to or greater than the footprint identified in the Maximum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Maximum Footprint column.

Passenger Car Curve Coefficients				
Model year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint ≥ 56.0 ft²
2021	157.0	3.84	-0.4	215.0
2022	151.0	3.70	-0.4	207.0
2023	146.0	3.56	-0.4	199.0
2024	140.0	3.43	-0.4	192.0
2025	135.0	3.30	-0.3	185.0
2026	130.0	3.18	-0.3	178.0

Light Truck Curve Coefficients					
Model year	Minimum Footprint ≤ 41.0 ft ²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	188.0	4.12	19.1	74.0	324.0
2023	181.0	3.97	18.4	74.0	312.0
2024	174.0	3.82	17.7	74.0	300.0
2025	168.0	3.68	17.0	74.0	289.0
2026	162.0	3.54	16.4	74.0	278.0

30. Flexibilities to Promote Zero Emission Technology

(A) To recognize the value of increased introduction of zero emission technologies towards CA's and the Section 177 States' long-term needs for electrification of the fleet, AHM's Zero Emission Technology vehicles shall utilize a production multiplier for purposes of compliance calculations as follows:

- (i) For BEVs and FCEVs, a vehicle production multiplier of 2.0 shall be used for MY2020 through MY2024, a multiplier of 1.75 shall apply for MY2025, and a multiplier of 1.5 shall apply only for MY2026.

- (ii) For PHEVs, a vehicle production multiplier of 1.6 shall be used for MY2020 through MY2024, a multiplier of 1.45 shall apply for MY2025, and a multiplier of 1.3 shall apply only for MY2026.
- (iii) AHM shall clearly identify in its end of model year reporting for each model year to CARB, which Zero Emission Technology vehicles AHM has designated to use the production multiplier(s) for compliance calculations.
- (iv) The use of these production multipliers shall be limited by a "1 percent cap".
 - (1) The cap shall be calculated as a cumulative cap representing the total available credits that can be cumulatively earned from the production multipliers for MY2020 through MY2026 vehicles.
 - (2) Calculation of the cap
 - (a) For MY2020 and for MY2021, the contribution to the cumulative cap shall be calculated as 2.0 grams per mile for each model year and converted to grams by multiplying by AHM's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.
 - (b) For each model year from MY2022 through MY2026, the contribution to the cumulative cap shall be calculated as the difference between the model-year specific calculated fleet average target value applicable to AHM per this Agreement and a calculated fleet average for a target value using the curve coefficients defined in Appendix A: Curve Coefficients that represents 1 percent less in annual reductions than the target value per this Agreement (*e.g.*, a target value reflecting 2.7 percent year over year reductions from MY2021 if the target value in this Agreement reflected a 3.7 percent year over year reduction from MY2021). The difference shall be

converted from grams per mile to grams by multiplying by AHM's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.

- (c) AHM's cumulative cap, in grams, shall be the sum of the above calculations for each individual model year from MY2020 through MY2026.
- (d) The required calculation format (assuming for purposes of this example that the Agreement requires a 3.7 percent year over year reduction) is as follows. All values expressed in megagrams shall be rounded to the nearest whole number.

$$CAP_{MY2020 \text{ thru } MY2021} = \sum_{MY2020}^{MY2021} (2.0 [g/mi] \times Volume \times Vehicle Lifetime Miles)$$

$$CAP_{MY2022 \text{ thru } MY2026} = \sum_{MY2022}^{MY2026} ((Fleet Target Value [g/mi]@2.7\% - Fleet Target Value [g/mi]@ 3.7\%) \times Volume \times Vehicle Lifetime Miles)$$

Where:

CAP_{MY2020 thru MY2021} = Portion of the cumulative 1 percent cap from MY2020 and MY2021 vehicles in grams.

CAP_{MY2022 thru MY2026} = Portion of the cumulative 1 percent cap from MY2022 through MY2026 vehicles in grams.

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year over year stringency, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without production multipliers applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 miles for passenger cars and 225,865 miles for light trucks.

(3) Tracking of credits used toward the cap

- (a) For each model year from MY2020 through MY2026, AHM shall calculate the amount of credits earned from production multipliers as specified below and apply those towards the cumulative 1 percent cap as defined in Paragraph 30(A)(iv)(2), above. Zero Emission Technology vehicles for which AHM elected not to use the production multipliers shall be included in this calculation in the same manner as other vehicles that do not utilize production multipliers.
- (b) Calculation of credits. For each model year from MY2020 through MY2026, Zero Emission Technology vehicle credits shall be calculated separately for passenger automobiles and light trucks, using the following equations to effectively subtract the credits calculated for the base fleet from the credits calculated for the fleet with multipliers applied. No credits are earned if the result is a negative value. All values expressed in megagrams shall be rounded to the nearest whole number.

$$\text{Zero Emission Technology Vehicle Credits[Mg]} = \text{Credits}_{adj} - \text{Credits}_{base}$$

- (i) When calculating the Credits_{adj} for Zero Emission Technology vehicles from production multipliers for MY2020 through MY2026, AHM may elect to calculate the credits based on either the Method 1 or Method 2 formula below.

1. Method 1 formula:

$$\text{Credits}_{adj}[\text{Mg}] = \left(\frac{(\text{Fleet Target Value}_{adj} - \text{Performance}_{adj}) \times \text{Volume}_{adj} \times \text{Vehicle Lifetime Miles}}{1,000,000} \right)$$

Where:

Fleet Target Value_{adj} = Production weighted fleet average standard from the footprint target calculation for the specified year, with the production multiplier applied to designated Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume_{adj} = Total production of passenger cars or light trucks with the production multiplier applied to designated Zero Emission Technology vehicles, with no rounding applied to the result.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

2. Method 2 formula:

$$Credits_{adj}[Mg] = \left(\frac{(Fleet Target Value - Performance_{adj}) \times Volume \times Vehicle Lifetime Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

- (ii) Except as noted below for MY2020 and MY2021, for both Method 1 and Method 2, base fleet credits shall be calculated in megagrams using the following equation and rounding the result to the nearest whole number.

$$Credits_{base}[Mg] = \left(\frac{(Fleet\ Target\ Value - Performance) \times Volume \times Vehicle\ Lifetime\ Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance = Production weighted fleet average CREE, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

1. To determine the amount of credits to be added to AHM's starting Agreement Balance and to be applied towards the cumulative 1 percent cap for MY2020, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for *Credits_{base}*. AHM shall utilize the same method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2020 with the production multipliers from this Agreement.
2. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2021, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.
3. To determine the amount of credits to be applied towards the cumulative 1 percent cap for MY2021, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for

Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for $Credits_{base}$. AHM shall utilize the same method (i.e., Method 1 or 2) that was used to calculate $Credits_{adj}$ for MY2021 with the production multipliers from this Agreement.

4. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2022 through MY2026 and to be applied towards the cumulative 1 percent cap for MY2022 through MY2026, base fleet credits shall be calculated using the equation specified above for $Credits_{base}$ with no production multipliers applied.

(v) For Zero Emission Technology vehicles produced by AHM in excess of the cumulative 1 percent cap:

(1) For MY2020 BEVs and FCEVs, a production multiplier of 1.75 and for MY2021 BEVs and FCEVs, a production multiplier of 1.5 shall be used for compliance calculations.

(2) For MY2020 PHEVs, a production multiplier of 1.45 and for MY2021 PHEVs, a production multiplier of 1.3 shall be used for compliance calculations.

(3) For MY2022 through MY2026 BEVs, FCEVs, and PHEVs, no production multiplier (i.e., a value of 1.0) shall be used.

(vi) For compliance calculations, the applicable Zero Emission Technology production multipliers are only used in the calculation of credits from Zero Emission Technology vehicles and may not be used in the calculation of AHM's fleet target value or AHM's fleet performance carbon-related exhaust emissions (CREE) value.

(B) Zero Emission Technology vehicles for MY2020 through MY2026 shall utilize a value of 0 grams per mile to represent the emissions of FCEVs and BEVs and the proportion of electric operation of PHEVs that is derived from electricity that is generated from sources that are not onboard the vehicle.

- (i) For BEVs and FCEVs, 0 grams per mile shall be used as the CREE value for the vehicle's performance in compliance calculations.
- (ii) For PHEVs, 0 grams per mile shall be used as the CREE value to represent the proportion of electric operation of a vehicle that is derived from electricity that is generated from sources that are not onboard the vehicle. For ease of understanding, such proportion of operation shall be calculated in accordance with the 2018 Federal Program.

31. Air Conditioning (A/C) Related Credits and Off-Cycle Credits

(A) Except as noted in Paragraph 31(A)(vi) below, for all requested A/C and off-cycle credits:

- (i) AHM should notify CARB of its intent to use such credits in its pre-model year report submitted no later than December 31 of the calendar year two years before the model year;
- (ii) AHM may submit such requests and supporting data and documentation prior to or during the applicable model year to facilitate earlier review and approval by CARB; and
- (iii) AHM shall submit such requests and supporting data and documentation for review and approval by CARB no later than the submittal of the end of model year report by May 15 following the model year. Submitted data shall include identification and sales volumes of the vehicle model(s) and configurations that have specific technologies applied and the credits claimed for each technology along with documentation supporting the claimed credit value for each technology.

- (iv) In general, approved credits are valid through the MY2026. AHM will be required to newly apply for and CARB will determine an appropriate value for credits on MY2027 and later vehicles. Where specifically noted, credits may be approved on a more limited basis and/or conditioned on AHM collecting and submitting additional data from actual vehicle operation and/or testing to support the approved credits.
 - (v) Except as specifically noted in this Agreement, the provisions of the 2018 Federal Program apply for determining credits for A/C leakage and efficiency improvements, off-cycle technologies, and full-size pickup hybrid technology as well as exhaust emission performance CO₂ equivalent credits or debits from N₂O and/or CH₄ emissions.
 - (vi) For A/C and off-cycle technologies previously granted credits to AHM by EPA before January 1, 2020 through explicit approval or by EPA for MY2020 or earlier via acceptance of AHM's end of model year report, and where EPA continues to grant the identical credit values to AHM, CARB shall grant AHM the same credit values subject to the same, if any, limitations by EPA (*e.g.*, the inclusion or exclusion of a specific credit towards a maximum cap for that technology).
 - (vii) All MY2021 and later model year credits are subject to CARB acceptance in accordance with this Agreement and the established approval criteria and practice in the Federal Program. In its review of credits for approval, the Parties intend that CARB will remain aligned with EPA to the extent possible in accordance with good engineering judgment and technical rationale. However, where appropriate to promote faster adoption of new technologies, CARB may independently approve credits prior to acceptance by EPA.
- (B) For MY2020 through MY2026 off-cycle credits that AHM selects from predefined values assigned in the 2018 Federal Program:

- (i) The maximum allowable decrease in AHM's fleet emissions from the use of such credits may not exceed 15.0 grams per mile.
- (ii) For thermal control technologies, the existing caps of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).
- (iii) The predefined values available for use by AHM will also include:
 - (1) A credit value of 1.1 grams per mile is available for passenger cars and light trucks that utilize an advanced A/C compressor with an improved efficiency relative to fixed-displacement compressors derived from improved internal valve systems that optimize the internal refrigerant flow across the range of compressor operator conditions through the addition of a variable crankcase suction valve. Except as noted in Paragraph 31(E)(ii) below, these credits shall be counted towards the A/C efficiency per vehicle caps of 5.0 and 7.2 grams per mile for passenger cars and light trucks, respectively.
 - (2) A credit value is available for passenger cars and light trucks that utilize a high efficiency alternator. The credit value shall be 0.16 grams per mile for each one percent of improvement in Verband der Automobilindustrie (VDA) efficiency above a baseline of 67 percent efficiency (*e.g.*, if a high efficiency alternator achieves 69 percent VDA efficiency, the credit value would be 0.32 grams per mile calculated as $(69 - 67) * 0.16 = 0.32$). VDA efficiency is the ratio of the alternator output power to the power supplied to the alternator, as measured using the VDA efficiency measurement methodology and expressed as a whole number percent from 68 to 100. The Parties agree that further detail regarding these calculations is provided at EPA-HQ-OAR-2018-0283-0706 "Potential Off-cycle Menu Credit Levels for High Efficiency

Alternators and Advanced Air Conditioning Compressors”, memo from EPA (Aug. 1, 2018).

(C) For MY2021 through MY2026 off-cycle credits that AHM utilizes the 5-cycle test method to determine the amount of the credit:

- (i) AHM shall provide test data showing the 5-cycle and 2-cycle combined city/highway test results for with and without the off-cycle credit technology active.
- (ii) The amount of off-cycle credit shall be the difference of the 5-cycle testing with and without the technology active less the difference of the 2-cycle testing with and without the technology active to ensure the credit reflects an incremental amount above and beyond what is already accounted for in the 2-cycle testing.

(D) For MY2021 through MY2026 off-cycle credits that AHM requests CARB approval of through a special test procedure to quantify the credit:

- (i) Upon receipt of a completed application with all confidential business information redacted, CARB may provide public notice to interested parties of receipt of such an application and make it available for review and comment. CARB may provide at least 30 days of public review and identify a method for parties to submit their comments. After the comment period, the applicant and/or CARB may make modifications as needed to address relevant issues before issuing a final approval. A version of the final approval, with any confidential business information redacted, may also be made publicly available by CARB for reference.
- (ii) For identical technologies previously approved by CARB during the term of this Agreement or approved by EPA prior to January 1, 2020, AHM may utilize the identical special test procedure/methodology as was previously used to determine the appropriate credit value for its specific vehicle(s). If

AHM elects this option, CARB may omit the notice and comment procedure of Paragraph 31(D)(i) above.

(iii) For thermal control technologies, any credit determined under the special test procedures shall be applied towards, and may not exceed, a maximum value for the sum of all applied thermal control technologies of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks.

(E) For MY2021 through MY2026 credits related to air conditioning system efficiency improvements:

(i) If AHM uses predefined values or 5-cycle testing to demonstrate the credit value of the applicable technology, the maximum credits available are 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck and shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).

(ii) In general, the maximum credit limits of 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck also apply to and include technologies where AHM uses special testing approved by CARB to demonstrate the credit value of the applicable technology. However, if AHM performs such special testing on a vehicle or system that has already met the credit limit by utilization of other technologies and demonstrates that the added technology still provides additional measurable GHG reductions, credits beyond the limit commensurate with the benefits will be granted by CARB.

(F) Additional provisions for MY2021 through MY2026 vehicles:

(i) To support the development of streamlined application processes for MY2027 and later vehicles:

(1) Applications to determine the preliminary credit value for eligible off-cycle technologies on MY2021 through MY2026 vehicles may be

submitted by automotive suppliers. However, only applications accompanied by a letter of endorsement from AHM or another manufacturer subject to a similar agreement will be considered for approval by CARB.

- (2) Applications by suppliers may be based on the 5-cycle testing method or the special testing method to determine the appropriate credit value. Depending on the technology, the preliminary credit value may be an absolute value or a scaled value based on a parameter determined to be correlated to its benefit.
 - (3) For technologies assigned a preliminary credit value from an approved supplier application, AHM shall request CARB approval of the use of the technology. CARB shall approve the use of the credit value upon AHM providing sufficient information to confirm the implementation of the technology is consistent with the supplier's application.
 - (4) CARB may approve such applications on a limited basis by model year and vehicle application and/or require testing or other data collection from the supplier or AHM to verify the appropriateness of the credit value.
- (ii) To support the development of appropriate credit values and testing methodologies for future model year vehicles:
- (1) In order for MY2022 through MY2026 BEVs and/or FCEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), AHM shall submit a plan for CARB review and approval on how it will gather activity data and/or test data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of data specific to the technology and its relative benefits on a Zero Emission Technology

vehicle across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, by demonstrating the improvement in vehicle efficiency (Watt-hour per mile) and using a value for electricity generation in grams CO₂ per Watt-hour to calculate an appropriate gram per mile value, by collecting representative data on in-use vehicles to refine future assumptions related to usage of the technology, etc.).

- (2) In order for MY2022 through MY2026 PHEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), AHM shall be required to submit a plan for CARB review and approval on how it will submit PHEV activity data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. Such data shall be limited to data that AHM will be collecting for other purposes and/or otherwise have available for PHEVs for which AHM is requesting the credit and need only include the data most relevant to informing the usage or operation of the applicable off-cycle technology in PHEVs across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, data on the fraction of vehicle miles traveled using electric propulsion versus gasoline powered propulsion, data on the fraction of trips that have an engine start, etc.). CARB may not require AHM to conduct special testing or implement additional parameters or data collection methods, however, AHM may voluntarily propose to use test data or a combination of test data and activity data as part of its plan to satisfy this requirement. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of the available data (and/or test data as described above) specific to the applicable PHEV(s).

- (3) Off-cycle credits may be approved on a limited model year basis for technologies where the GHG benefits depend on the behavior of the driver (*e.g.*, driver coaching, haptic pedals) only when:
- (a) It is possible, on the basis of reasonable evidence, to make assumptions about average driver behavior to calculate the likely impact and associated credit value; and
 - (b) AHM agrees to perform additional data collection and testing to allow for verification of the behavior on actual vehicles utilizing the technology and to be used in establishment of more appropriate credit values and testing methodologies for subsequent model year vehicles.

(iii) Ineligible technologies

- (1) Off-cycle credits may not be approved for technologies that are integral or inherent to the basic vehicle design, such as engine, transmission, mass reduction, passive aerodynamic design, and tire technologies. Technologies installed for non-off-cycle emission-related reasons or that otherwise would have been installed for purposes of reducing emissions (directly or indirectly) over the test cycles for compliance with the GHG standards are also not eligible as they would be considered part of the baseline vehicle design. Off-cycle credits may not be approved for crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies designed for the purpose of reducing the frequency of vehicle crashes. Off-cycle credits may not be earned for technologies installed on a motor vehicle to attain compliance with any vehicle safety standard.
- (2) Waste heat, as used for active warm-up off-cycle credits, refers to heat that cannot be recovered by any other component or system on the vehicle. Off-cycle credits may not be earned for systems that

preferentially or necessarily first use heat to warm the engine oil or interior cabin before utilization to warm up the engine or transmission.

(3) With the exception of A/C-related technologies for cooling the cabin or occupants, technologies that have predefined credit values, and technologies for Zero Emission Technology vehicles, off-cycle credits may not be granted for non-powertrain or non-propulsion technologies including technologies inherent to the design of occupant comfort and entertainment features such as passenger or cabin heating, interior displays or components, infotainment components, etc. For purposes of this paragraph, technologies that are designed to recapture energy created by the powertrain that otherwise would be lost (*e.g.*, through heat or mechanical friction during deceleration or braking events) will be considered powertrain technologies.

(4) For Zero Emission Technology vehicles, ineligible technologies will include displays, infotainment systems, and other items not directly related to propulsion or battery conditioning.

32. Certification. Prior to certification, AHM agrees to provide CARB with all emission data necessary to calculate CREE levels for each emission data vehicle representing a test group submitted to CARB for certification to CARB's criteria pollutant emission standards (title 13, CCR § 1961.2).

33. Compliance.

(A) Unless it is otherwise specified in this Agreement that provisions of the 2018 Federal Program apply, EPA changes during the term of this Agreement in the Federal Program regulations, including but not limited to test procedures and calculation methodologies, will automatically apply for purposes of this Agreement unless either Party notifies the other Party of its belief that such changes will have a material impact on the stringency of the GHG commitments. Following such notification, AHM and CARB shall in good faith

confer in accordance with Paragraph 35 to reach a mutually acceptable resolution. The Party seeking a departure from changes to the Federal Program shall 1) explain the basis for its position that the changes made by EPA will have a material impact on the stringency of the GHG commitments, and 2) propose a technical modification in accordance with Paragraph 35. It is the intent of the Parties that any resolution to address a material impact on stringency due to changes EPA makes in the Federal Program regulations will minimize disruption or burdens on AHM's implementation of testing and related administrative requirements. Except where the 2018 Federal Program is specified in this Agreement and for changes to the Federal Program for which a Party provides notification under this paragraph, the Parties intend that AHM will be able to utilize the same test procedures and calculation methodologies to generate the required data for compliance with this Agreement and the Federal Program, including but not limited to any revisions related to the phase-in of the use of E10 test fuel resulting from EPA's Vehicle Test Procedures Adjustments for Tier 3 Certification Test Fuel rulemaking, proposed at 85 Fed. Reg. 28,564 (May 13, 2020).

- (B) Compliance under this Agreement is determined by first calculating compliance based on CREE performance relative to the standard without the use of any Zero Emission Technology multipliers. Air conditioning-related, off-cycle, full-size pickup, and Zero Emission Technology vehicle credits as well as applicable debits for N₂O and/or CH₄ emissions are then separately calculated and added to the calculated CREE performance credits or debits. Zero Emission Technology vehicle credits shall be calculated for each model year as specified in Paragraph 30(A)(iv)(3)(b) of this Agreement.
- (C) No later than May 15 following the model year, AHM shall provide CARB with all data and technical documentation to support a calculation of compliance for the applicable model year including:
 - (i) Sales and footprint data to calculate AHM's target CREE fleet value.

- (ii) Sales, vehicle performance data, and supporting information for all credits requested for the model year to calculate AHM's achieved fleet CREE performance.
- (iii) Sales data and fleet footprint and performance data to calculate AHM's Zero Emission Technology 1 percent cumulative cap and the number of credits earned towards the cap for the current and previous model years. If the cumulative credits claimed as earned by AHM exceed the 1 percent cap as calculated solely for the current and previous model years, the submitted data must also include an estimate of the cumulative portion of the cap projected to be earned in future model years by AHM.
- (iv) The "Agreement ABT Calculator" that was developed jointly by the Parties, as may be updated from time to time upon written agreement of the Parties, populated with data for the applicable model year to support AHM's calculation of compliance and tracking of credits and deficits.

34. Banking of Credits and Deficits.

(A) Agreement Balance.

- (i) Starting Balance: AHM will enter the Agreement with a value of credits (or deficits) in megagrams of CO₂ for its Agreement credit balance equal to its 2018 Federal Program credit balance as calculated at the conclusion of MY2020 (for MY2011 through MY2020) with the following adjustments:
 - (1) Subject to the limits of the "1 percent cap" per Paragraph 30(A)(iv), the advanced technology vehicle multiplier for MY2020 BEVs and FCEVs will be 2.0 and 1.6 for MY2020 PHEVs in lieu of 1.75 and 1.45, respectively; and
 - (2) The cap for off-cycle credits based on predefined (menu) values will be 15 g/mi for MY2020 such that if AHM had exceeded the 10 g/mi cap in MY2020 and not been awarded full benefit of the applied technologies,

an adjustment would be made to its credit balance to reflect the higher cap.

- (ii) Calculation of Agreement Balance. For MY2021 through MY2026, AHM's Agreement credit balance shall be calculated per the requirements of this Agreement.
- (1) As specified in Paragraph 33(B) above, compliance is calculated first based on actual performance and then all earned credits (*e.g.*, A/C, off-cycle) per this Agreement for the specific model year for which AHM is subject to GHG fleet commitments under this Agreement.
 - (2) If AHM has a surplus (credits earned beyond its obligation) after the model year compliance calculation, those credits shall be added to the Agreement Balance in accordance with the averaging, banking, and trading ("ABT") provisions of the 2018 Federal Program.
 - (3) If AHM has a deficit after the model year compliance calculation, then those deficits shall be added to the Agreement Balance in accordance with the ABT provisions of the 2018 Federal Program.
 - (4) If AHM participated in any Agreement credit transactions (*e.g.*, sale, purchase) or used Agreement credits to satisfy Agreement Balance deficits, then those transactions and usage shall be recorded in the Agreement Balance in accordance with ABT rules. Except as specified in Paragraph 34(D)(iv)(3) for Federal Program credits acquired from ZEV-only manufacturers, Federal Program credit transactions for model years subject to standards specified in this Agreement may not be recorded in the Agreement Balance. Regarding Federal Program credits earned from model years after the expiration or early termination of this Agreement and used to resolve AHM's Agreement Balance deficits carried forward into model years after the expiration or early termination of this Agreement in accordance with Paragraph

34(C)(iv), such Federal Program credits shall be recorded in the Agreement Balance.

(B) Emissions Benefit Balance.

- (i) Purpose: To ensure the integrity of the emission benefits of this Agreement, AHM shall be required to achieve a net zero or positive credit balance and resolve any incurred deficits through MY2031 (based on the resolution of AHM's obligations in accordance with Paragraph 34(B)(vi)), and possibly through as late as MY2034 (based on AHM's carry-forward of deficits in accordance with Paragraphs 34(C)(iii), and 34(C)(iv)), in a separate Emissions Benefit Balance that AHM tracks and reports to CARB.
- (ii) Starting Balance: The starting balance for the Emissions Benefit Balance shall be equal to AHM's starting Agreement Balance.
- (iii) Calculation of Emissions Benefit Balance through MY2026. For MY2021 through MY2026, AHM's Emissions Benefit Balance will be calculated as follows:
 - (1) Add in, per ABT rules, credits (or deficits) determined from the Agreement model year compliance calculation for MY2021.
 - (2) Add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2021.
 - (3) Add in, per ABT rules except as noted below in Paragraph 34(B)(iii)(4), applicable Federal Program credit transactions that occurred between end of the previous model year and end of MY2021. For this requirement, applicable transactions only include purchase and sale transactions of Federal Program credits. Federal Program credits for model years subject to standards specified in this Agreement earned by AHM or used by AHM to resolve Federal Program deficits have no impact on the Emissions Benefit Balance.

- (4) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by AHM and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2024, MY2025, and/or MY2026 Emissions Benefit Balance deficits carried forward in accordance with Paragraph 34(C)(iii).
 - (5) Repeat "Calculation of Emissions Benefit Balance through MY2026" above at the end of each successive model year for MY2022 through MY2026, substituting the applicable model year for MY2021.
- (iv) Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination. Subject to the resolution of AHM's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi), for MY2027 and subsequent model years (or substituting earlier model years in this paragraph as appropriate in the case of early termination of this Agreement pursuant to Paragraph 35), AHM's Emissions Benefit Balance will be calculated as follows:
- (1) At the end of MY2027, add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2027 only for transactions involving MY2022 through (including) MY2026 vintage Agreement credits.
 - (2) At the end of MY2027, add in, per ABT rules, Federal Program credit transactions and Federal Program credits that were used by AHM to satisfy any Federal Program deficits that occurred between end of the previous model year and end of MY2027 only for transactions or usage involving MY2022 through (including) MY2026 vintage Federal Program credits.
 - (3) At the end of MY2027, if any MY2027 Federal Program credits were used by AHM to resolve AHM's Agreement Balance deficit carried

forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv), add in, per ABT rules, credits (or deficits) determined from the Federal Program compliance for MY2027.

- (4) At the end of MY2027, add in, per ABT rules except as noted in Paragraph 34(B)(iv)(5), Federal Program credit transactions and Federal Program credits that were used by AHM to satisfy any Federal Program deficits of AHM that occurred between end of the previous model year and end of MY2027 only for transactions involving the same model year vintage credits as those used to resolve an Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv) (*e.g.*, include MY2027 and MY2028 vintage credit transactions and usage if both MY2027 and MY2028 Federal Program credits were used to resolve AHM's Agreement Balance deficits).
 - (5) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by AHM and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2027 or subsequent Emissions Benefit Balance deficits incurred due to Federal Program compliance, credit transactions, or usage recorded in accordance with Paragraphs 34(B)(iv)(3) and 34(B)(iv)(4).
 - (6) Repeat "Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination" at the end of each successive model year for latest applicable year (possibly as late as MY2034), substituting the applicable model year for MY2027.
- (v) Federal Program credits that AHM may permanently retire or otherwise remove without being used from its Federal Program credit balance may be used towards satisfying AHM's Emissions Benefit Balance obligations in

lieu of tracking such credits in the Emissions Benefit Balance through to their expiration. AHM and CARB may agree that Emissions Benefit Balance obligations satisfied in this manner will terminate AHM's corresponding Emissions Benefit Balance reporting requirements.

(vi) Recognizing the uncertainty of regulatory requirements applicable following the model years covered in the Agreement, AHM and CARB desire to maintain the integrity of the environmental benefits of this Agreement while not disadvantaging AHM with regard to future regulatory compliance obligations. Therefore, prior to the expiration or upon early termination of this Agreement, AHM and CARB shall in good faith confer to reach mutually acceptable agreement with respect to AHM's Emissions Benefit Balance obligations. In seeking to reach such an agreement, AHM and CARB shall consider all relevant and equitable circumstances, including but not limited to the following:

- (1) the important environmental benefits of this Agreement, as described in Paragraph 25 above, which the Parties agree were a primary basis for CARB's decision to enter into the Agreement;
- (2) the regulatory requirements known or likely to apply to AHM in the model years following the model years covered by this Agreement; and
- (3) the extent to which AHM would be harmed, relative to other manufacturers who chose not to enter into a similar agreement, if AHM is restricted, in whole or in part, by its Emissions Benefit Balance obligations.

AHM and CARB shall seek to reach an agreement that reflects an appropriate balancing of the relevant and equitable considerations. If AHM and CARB are unable to reach a mutually acceptable understanding regarding AHM's Emissions Benefit Balance obligations, the issue shall be the subject of Dispute Resolution under this Agreement. Both AHM and

CARB agree that the factors set forth in this subparagraph shall be the basis upon which Dispute Resolution shall be conducted.

(C) Tracking of Credits within Credit Balances.

- (i) Within the Agreement Balance and the Emissions Benefit Balance, credits (and debits) shall be tracked based on the model year in which they were earned, per ABT rules.
- (ii) Credits shall be subject to a five-year carry forward and three-year carry back provision. Credits may be used by AHM to satisfy deficits incurred in the prior three model years or used or traded by AHM for use in the subsequent five model years. Credits not used within five model years shall expire.
- (iii) If AHM has a deficit after the model year compliance calculation, then unexpired credits earned in prior model years or acquired through trade may be utilized to satisfy its obligation. Except as noted below, if AHM still has a deficit after utilizing all prior model year credits and acquired credits, then it may carry forward the credit deficit up to and including the third model year after the model year in which the deficit was incurred. To facilitate alignment between the Agreement Balance and the Emissions Benefit Balance, if AHM has an Agreement Balance deficit being carried forward from MY2024, MY2025, and/or MY2026, AHM shall also carry forward an equivalent MY2024, MY2025, and/or MY2026 deficit in the Emissions Benefit Balance (or likewise, as appropriate, for earlier model years in the case of early termination of this Agreement), in lieu of utilizing all prior model year credits and acquired credits in the Emissions Benefit Balance to resolve some or all of the deficits before carrying forward the remaining deficits.
- (iv) Agreement Balance and/or Emissions Benefit Balance deficits carried into model years after expiration or early termination of this Agreement may be resolved by applying Federal Program credits generated in accordance

- with the ABT provisions of the 2018 Federal Program for those model years after expiration or early termination of this Agreement. Such Federal Program credits shall be recorded as a credit transaction (credits acquired) in AHM's Agreement Balance and Emissions Benefit Balance per ABT rules and tracked accordingly.
- (v) Deficits not satisfied within the three model year carry forward period shall constitute noncompliance with this Agreement.

(D) Credit Trading.

- (i) Credits in AHM's Agreement Balance may be traded (or deficits resolved) in accordance with the trading provisions of the 2018 Federal Program and the additional credit trading restrictions described in this Agreement.
- (ii) Credits in the Emissions Benefit Balance may not be directly traded by AHM and credits may only be added or removed in accordance with Paragraph 34(B) above.
- (iii) Trading within Agreement. Except as noted in Paragraph 34(D)(iv)(3) below for Federal Program credits acquired from ZEV-only manufacturers, AHM may only trade credits earned under this Agreement for its Agreement Balance from/to other manufacturers who have executed an agreement similar to this Agreement. CARB's Executive Officer will determine if any such agreements exist and provide in writing a determination to all parties to any such agreements as to which manufacturers may trade credits under this Agreement or similar agreements.
- (iv) Transferring Credits into Agreement.
- (1) Earned or purchased MY2020 or earlier Federal Program credits may be used to meet AHM's commitments in this Agreement.
- (2) Except as noted below for ZEV-only manufacturers and as specified in Paragraph 34(C)(iv) for Federal Program credits used to resolve any

outstanding deficits after the expiration or early termination of this Agreement, MY2021 and subsequent credits earned under the Federal Program by AHM or any other manufacturer may not be used to meet AHM's commitments in this Agreement for its Agreement Balance.

(3) MY2021 through MY2026 Federal Program credits earned by a ZEV-only manufacturer and acquired by AHM through a Federal Program credit transaction may be used to meet AHM's commitments in this Agreement subject to the following:

(a) Only Federal Program credits directly earned by the ZEV-only manufacturer are eligible. For purposes of this requirement, ZEV-only manufacturer means a vehicle manufacturer that exclusively offers BEVs and/or FCEVs for sale in the United States.

(b) Adjustment of Federal Program Credits transferred into program.

(i) MY2020 and earlier credits earned by a ZEV-only manufacturer and acquired by AHM shall be recorded as a credit transaction (credits acquired) in AHM's Agreement Balance and Emissions Benefit Balance per ABT rules without adjustment.

(ii) For model years subject to standards specified in this Agreement, credits earned under the SAFE Rule Part Two by a ZEV-only manufacturer and acquired by AHM shall be adjusted before being recorded as a credit transaction (credits acquired) in AHM's Agreement Balance and Emissions Benefit Balance per ABT rules. To adjust credits acquired, the credits shall be reduced by the following formula before being added to AHM's Agreement Balance and Emissions Benefit Balance:

$$Credits_{adj}[Mg] = Credits_{acc}[Mg] \times Adjust_Factor_{MY}$$

Where:

Credits_{adj} = Credit amount, in megagrams, after adjustment.

$Credits_{acq}$ = Acquired credit amount, in megagrams, before adjustment.

$Adjust_Factor_{MY}$ = Adjustment factor specific to the model year of the acquired credits from the following table:

	MY2021	MY2022	MY2023	MY2024	MY2025	MY2026
Adjustment Factor	0.96	0.95	0.94	0.93	0.92	0.91

(iii) If the Federal Program is further amended after the SAFE Rule Part Two, Federal Program credits earned by a ZEV-only manufacturer for model years subject to standards specified in this Agreement and acquired by AHM shall be adjusted to reflect the relative difference in effective stringency between the Agreement and the Federal Program before being recorded as a credit transaction (credits acquired) in AHM's Agreement Balance and Emissions Benefit Balance per ABT rules. AHM and CARB, in accordance with Paragraph 35, shall in good faith confer to determine the appropriate adjustment. In determining such an adjustment, the Parties acknowledge that the adjustment factor specified in this Agreement was derived from the difference in credits earned by a ZEV under the Agreement (in g/mi) versus credits earned under the Federal Program. Assumptions include a fleet with an equal share of passenger cars and light trucks, and industry sales-weighted average passenger car and light truck footprints of 46.2 and 53.8 square feet, respectively.

- (4) Credits earned under a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s) may not be used to meet AHM's commitments in this Agreement for its Agreement Balance.
- (v) Transferring Credits out of Agreement. Credits earned by AHM per this Agreement for its Agreement Balance may not be used by or traded by

AHM to meet its or any other vehicle manufacturer's obligation under the Federal Program, or a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s).

35. Modification and Termination. The Parties acknowledge that modifications to or termination of this Agreement may be necessary or appropriate in response to various events or circumstances.

(A) If AHM or CARB, with any input from the Section 177 States, believes that modifications to or termination of the Agreement may be warranted, it will provide written notice to the other Party identifying the events or circumstances at issue and explaining why modification to or termination of the Agreement may be necessary or appropriate. AHM and CARB, with input from the Section 177 States, shall engage in good faith discussions to determine whether modification or termination of this Agreement is necessary or appropriate.

(B) Nothing in this paragraph obligates AHM or CARB, with any input from the Section 177 States, to accept a proposed modification or termination, except as follows:

(i) If CARB, with any input from the Section 177 States, enters into an agreement with another light-duty automobile manufacturer containing GHG obligations materially different from and more favorable to AHM or that light-duty automobile manufacturer than this Agreement, AHM has the option to either (a) comply with this Agreement; (b) comply with the provision(s) of the agreement with the other light-duty automotive manufacturer that is materially different from and more favorable than this Agreement or (c) terminate this Agreement.

(ii) If any Section 177 State rescinds its Enforcement Discretion Letter affiliated with this Agreement or seeks to enforce the CA Standards against AHM, or if any other state becomes a Section 177 State without promptly issuing

an Enforcement Discretion Letter, then AHM has the option to terminate this Agreement.

- (iii) If EPA imposes, or an action of a court results in imposition of, national GHG emission standards equal to or more stringent than the commitments specified in this Agreement, AHM and CARB agree that this Agreement terminates upon the date the more stringent regulations begin to apply.

(C) In all instances except those described in Paragraph 35(B) above, any modification to this Agreement is only valid and enforceable if it is in writing and signed by both Parties to this Agreement. If the Parties cannot agree, the Parties' rights and obligations under this Agreement survive.

(D) If this Agreement terminates in accordance with Paragraph 35, AHM shall thereafter:

- (i) be subject to applicable law upon and after termination; and
- (ii) unless otherwise agreed by CARB in consultation with the Section 177 States, remain subject to remedies applicable under this Agreement for GHG-related breaches occurring prior to termination of this Agreement.

36. Reporting of Agreement Compliance to Section 177 States and Additional Commitments Regarding Section 177 States. CARB may communicate the compliance status of AHM with the terms of this Agreement to Section 177 States annually. AHM agrees, at CARB's request, to provide to Section 177 States certain submissions under this Agreement containing AHM's Confidential Business Information where the recipient Section 177 State(s) has the legal ability to protect such information against release to the public.

37. Advancement of Electrification. The Parties recognize that the practical availability and marketing of electrified vehicles to the public promotes the interests of both California and AHM in furthering electrification technology development and deployment, including via public acceptance of such

technology, reduced costs, and charging infrastructure expansion. CARB has an interest in making electrified vehicles more available and affordable, reducing climate change impacts experienced by Californians, and supporting the GHG reductions and technology development goals of the CA Standards and CARB's statutory requirements for further GHG reductions for later model years. In light of the above, AHM and CARB agree that AHM's performance as specified in Paragraphs 37(A) and 37(B) are an important consideration for this Agreement, and are integral to CARB's decision to enter into it:

(A) AHM will undertake electrification commitments described in Appendix B: Electrification Commitments to this Agreement.

(B) AHM shall report annually to CARB on the status of its electrification commitments described in Appendix B: Electrification Commitments. The Parties acknowledge that AHM has also made electrification commitments relating to the Section 177 States as described in Appendix B: Electrification Commitments. AHM's annual report to CARB under Paragraph 33(C) will include a description of the status of those commitments. At CARB's request, AHM agrees to transmit the report to the Section 177 States in accordance with Paragraph 36.

(C) In order to promote the environmental benefits of this Agreement, CARB commits to continue its use of best efforts to complete expeditious review of applications for certification of Zero Emission Technology vehicles.

38. Enforcement in General. If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination that AHM has failed to comply with any term of this Settlement Agreement, the Executive Officer will notify AHM, in writing, of the reasons supporting the determination and provide AHM with information upon which the determination was based. Except as provided below with regard to a GHG Credit Shortfall Breach, breaches of this Settlement Agreement shall be enforced in accordance with applicable contract law, including the availability of injunctive relief.

39. Enforcement of Breach of GHG Fleet Commitments; Mitigation Plans. A breach of GHG fleet commitments in Paragraphs 29-34 of this Settlement Agreement resulting in a GHG credit shortfall required for a particular compliance period, after accounting for the GHG credit averaging, trading and banking provisions of this Agreement (a "GHG Credit Shortfall Breach"), is subject to enforcement by CARB exclusively in accordance with the terms of this paragraph.

- (A) If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination and notifies AHM under this Agreement that AHM has committed a GHG Credit Shortfall Breach, AHM may, within 60 Days of receipt of the determination by the Executive Officer, propose a mitigation plan for approval by the Executive Officer.
- (B) A mitigation plan shall fully mitigate the emissions consequences of the Credit Shortfall Breach. It shall also prescribe AHM's compliance for the GHG emissions commitments in the Agreement going forward. If AHM's return to compliance is impracticable because there is inadequate time remaining in the Agreement, the mitigation plan shall identify the means by which AHM will fully mitigate the consequences of any anticipated Credit Shortfall Breach.
- (C) To address the emissions consequences of the Credit Shortfall Breach, AHM may propose, subject to the approval of the Executive Officer as set out below, a mitigation plan including any combination of commitments to take remedial actions, to implement special projects, or to make payments into the Trust Account to be used to promote electrification and reduce GHG emissions. Payments into the Trust Account corresponding to the amount of the Credit Shortfall Breach as determined under this subparagraph shall be deemed fully to mitigate the emissions consequences of a Credit Shortfall Breach. In determining the amount of tons of GHGs to be addressed in a mitigation plan, AHM shall propose and CARB shall confirm and specify the credit shortfall.

- (D) Payment amounts under a mitigation plan shall generally be consistent with prices for GHG credits in California's cap-and-trade program, the Regional Greenhouse Gas Initiative, or other similar GHG market programs, taking into account such other equitable factors as may be appropriate under all of the circumstances, and considering the social cost of carbon, using the Central 3 Percent Average Values as expressed in Appendix A, Table A-1 of the Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government (August 2016).
- (E) Mitigation plans may be enforced in court consistent with the venue provisions of this Agreement.
- (F) The Executive Officer shall review a mitigation plan for consistency with the terms of this Agreement and, on behalf of CARB, with any appropriate input from the Section 177 States, either approve or reject within 30 Days, with an explanation of any objections. This 30-Day period may be extended if AHM agrees to an extension for further evaluation. If the Executive Officer rejects a mitigation plan, in whole or in part, AHM will have 30 Days to amend the plan to address any objections by the Executive Officer. If the Executive Officer approves a mitigation plan, AHM shall implement the mitigation plan according to its terms.
- (G) If AHM fails timely to submit a mitigation plan or an amended plan, or if the Executive Officer rejects an amended plan, the Executive Officer may adopt a mitigation plan for AHM. Any mitigation plans that include actions in addition to, or in lieu of, payments into the Trust Account shall be limited to remedial actions or implementation of special projects that AHM accepts as reasonable and whose cost does not exceed, for the tons in question, the amount of payments into the Trust Account determined in accordance with Paragraph 39(D) of this Agreement.

- (H) AHM shall have 60 Days after receipt of approval or adoption by the Executive Officer to begin to implement a mitigation plan.
- (I) All payments required under a mitigation plan shall be deposited into a Trust Account as directed by CARB. Trust Account funds shall be used to administer the Trust Account. All funds deposited into this Trust Account shall be used to promote vehicle electrification or otherwise to reduce vehicle GHG emissions, in accordance with trust agreements to be developed in accordance with this Agreement as necessary. CARB will notify AHM of the activities funded in each Section 177 State by any such payments, including the number of electric vehicle and fuel cell vehicle station installations, if applicable.

40. Dispute Resolution. The Parties agree that the procedures contained in this paragraph are the sole and exclusive procedures for resolving disputes under this Settlement Agreement.

- (A) If AHM disagrees with the Executive Officer's determination of breach under this Settlement Agreement, or identifies other grounds for dispute under this Settlement Agreement including but not limited to the Executive Officer's rejection of a mitigation plan or adoption of its own mitigation plan, AHM will provide a written Notice of Dispute and Statement of Position to the Executive Officer within 30 Days of the Executive Officer's notification of breach or other action that is the subject of dispute. AHM's Notice of Dispute and Statement of Position shall include any factual data, analysis, or opinion supporting AHM's position and any supporting documentation relied upon by AHM. CARB, with any appropriate input from the Section 177 States, will serve its Statement of Position within 45 Days of receipt of AHM's Notice of Dispute and Statement of Position, unless that period is modified by written agreement. CARB's Statement of Position shall include any factual

data, analysis, or opinion supporting CARB's position and any supporting documentation relied upon by CARB.

- (B) The period of informal negotiations shall not exceed 60 Days from the date of AHM's receipt of CARB's Statement of Position, unless that period is extended by written agreement signed by CARB and AHM.
- (C) If CARB, with any input from the Section 177 States, and AHM are unable to resolve a dispute before the expiration of the 60-Day period for informal negotiations, either Party may file an action for breach in accordance with the venue provision of this Settlement Agreement, after providing ten Days written notice to the other Party. In any such action, the Parties shall be prohibited from raising issues that were not previously raised during dispute resolution, except for issues which could not practicably be raised previously during the dispute resolution.
- (D) The time period for AHM to respond to CARB under any provision of this Agreement, including the time periods to submit, amend or implement a mitigation plan, shall not begin to run until the completion of dispute resolution either by agreement between the Parties or by the final resolution of a court proceeding.

41. Force Majeure.

- (A) "Force Majeure" means, for purposes of this Agreement, an event arising from causes beyond the control of AHM, which delays or prevents the performance of any obligation under this Agreement, despite AHM's best efforts to fulfill the obligation, such as war, fires, floods, hurricanes, tornadoes, earthquakes, volcanic eruptions, labor strikes (but not lock-outs), acts of terrorism, pandemics, and other events resulting in unavoidable supply chain disruption. This does not include negligent acts or AHM's financial inability to perform unrelated to the event as described in this paragraph.

- (B) If any event AHM considers to be a force majeure event occurs or has occurred, AHM shall provide written notice to CARB within 10 Days of when AHM first knew that the event might cause a delay, impossibility or impracticability. Within 14 Days thereafter, AHM shall provide in writing to CARB an explanation and description of the reasons for the delay, impossibility, or impracticability; the anticipated duration of any delay; all actions taken or to be taken to prevent or minimize any delay, impossibility, or impracticability; a schedule for implementation of any measures to be taken to prevent or mitigate a delay or the effects of any delay, impossibility, or impracticability; and AHM's rationale for attributing such delay, impossibility, or impracticability to a force majeure event if it intends to assert such a claim. AHM shall include with any notice all available documentation supporting the claim that the delay, impossibility, or impracticability was attributable to a force majeure event.
- (C) If CARB, with any input from the Section 177 States, agrees that the delay, anticipated delay, impossibility, or impracticability is attributable to a force majeure event, CARB shall modify AHM's obligations under this Settlement Agreement as necessary and appropriate to account for the delay, impossibility, or impracticability resulting from the force majeure event. CARB will notify AHM in writing of the modifications approved by CARB.
- (D) If CARB, with any input from the Section 177 States, disagrees that a delay, anticipated delay, impossibility, or impracticability has been or will be caused by a force majeure event, CARB will notify AHM in writing of the decision.
- (E) AHM may elect to invoke dispute resolution in accordance with this Agreement based upon CARB's determinations and decisions pursuant to Paragraphs 41(C) and 41(D) above.

42. Records. AHM agrees that CARB, on behalf of itself or the Section 177 State that has issued an Enforcement Discretion Letter, may request, and shall receive, records regarding compliance with this Agreement by filing a request in writing;

records will be provided by AHM within 21 Days of a request. AHM may assert a claim of business confidentiality as appropriate for any such records pursuant to California law and the corresponding law of any Section 177 States that might seek to receive such records. AHM will retain all relevant records for the term of this Agreement plus five years.

Additional Provisions

43. Term and Expiration. AHM and CARB agree that, unless terminated or extended by modification in accordance with Paragraph 35, the Settlement Agreement covers MY2021 through MY2026. Except as otherwise specified in this paragraph, this Settlement Agreement shall expire and be of no further force and effect following AHM's submission of data and technical information supporting its calculation of compliance for MY2026 in accordance with Paragraph 33(C) which includes, subject to the resolution of AHM's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi) and three-year deficit carry-forward in accordance with Paragraph 34(C)(iii), verification of AHM's Emissions Benefit Balance to determine whether MY2026 credits and/or deficits were fully resolved to achieve compliance through MY2026. If the Executive Officer has made a determination and notified AHM of a GHG Credit Shortfall Breach within 60 Days after AHM's submission of data and technical information with respect to Model Year 2026, the enforcement of breach of GHG fleet commitments/mitigation plan requirements and the dispute resolution provisions shall survive for the sole purpose of resolving a determination of a GHG Credit Shortfall Breach, in accordance with Paragraph 39.
44. Entirety. This Agreement constitutes the entire agreement and understanding among the Parties concerning the matter described herein, and supersedes and replaces any and all prior negotiations and agreements of any kind, whether written or oral, among the Parties concerning the matter described herein. This

Agreement consists of 48 pages plus signature pages and appendices and 57 numbered paragraphs.

45. Binding Effect. This Agreement binds AHM and any principals, officers, receivers, trustees, successors and assignees, subsidiary and parent corporations and upon CARB, and any successor agencies that may have responsibility for and jurisdiction over the subject matter of this Agreement.
46. Effective Date. This Settlement Agreement is binding and effective as of the date that it is fully executed by AHM and CARB.
47. Agreement Not Severable. In the event that any provision of this Settlement Agreement is held by a court to be illegal, invalid, or unenforceable in any jurisdiction, the Parties shall enter into good faith negotiation regarding modification in accordance with Paragraph 35 above with the intent to achieve the objectives and benefits of this Settlement Agreement to the greatest extent possible. Following such negotiations, either AHM or CARB, with any appropriate input from the Section 177 States, may provide written notice to the other Party terminating this Settlement Agreement if the Agreement is not capable of modification in the view of either Party.
48. Choice of Law. This Agreement shall be interpreted and enforced in accordance with the laws of the State of California, without regard to California's choice-of-law rules.
49. Rule of Construction. Any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in interpreting this Settlement Agreement, including in any dispute resolution process.
50. Non-Waiver. The failure to enforce any provision of this Agreement shall not be construed as a waiver of any such provision, nor shall it prevent such Party thereafter from enforcing such provision or any other provision of this

Agreement. The rights and remedies granted all Parties herein are cumulative and the election of one right or remedy by a Party shall not constitute a waiver of such Party's right to assert all other legal remedies available under this Agreement or otherwise provided by law.

51. Intent to be Bound. The Parties represent that they have participated fully in the review and drafting of this Agreement; understand and accept all terms; that they enter into this Agreement freely and voluntarily; have had an opportunity to consult with legal counsel; that they are fully informed of the terms and effect of this Agreement; that they enter into this Agreement after independent investigation and through no fraud, duress, or undue influence; and that they knowingly and voluntarily intend to be legally bound by this Agreement.
52. Venue. The Superior Court of California, located in the County of Sacramento, shall hear any dispute between the Parties arising from this Agreement.
53. Counterparts. This Agreement may be executed in counterparts. Facsimile or photocopied signatures (including PDF copies), shall be considered as valid signatures as of the date hereof, although the original signature pages shall thereafter be appended to this Agreement.
54. Release and Covenant Not to Sue. In consideration of AHM's voluntary commitments in this Agreement, CARB releases AHM and its principals, officers, receivers, trustees, successors and assignees, subsidiaries, affiliates and parent corporations from any claims, and covenant not to sue or otherwise pursue such entities or individuals, for violations of the CA Standards for MY2021-MY2026. However, CARB retains authority to enforce this Settlement Agreement on the terms provided herein.
55. Authority. The undersigned represents that he or she has full authority to enter into this Agreement.

56. Assignment. This Settlement Agreement and the rights, duties, and obligations under it may not be assigned or delegated by CARB or AHM without the prior written consent of the other Party. Any assignment or delegation made without prior written consent shall be void.

Notices

57. Notices. All notices, demands, requests, consents, approvals, or other communications (collectively "Notices") required or permitted to be given pursuant to this Settlement Agreement shall be in writing and shall be transmitted via United States mail and electronic mail to the Parties set out below. Notice shall be deemed given on the date of receipt.

To CARB:

Executive Officer
California Air Resources Board
1001 I St
Sacramento, CA, 95814
Richard.Corey@arb.ca.gov

To AHM:

American Honda Motor Co., Inc.
Product Regulatory Office
Attn.: Vice President
1919 Torrance Blvd., Mail Stop 500-2-10A
Torrance, California 90501-1490
Jenny_Gilger@ahm.honda.com

American Honda Motor Co., Inc.
Law Division
Attn: General Counsel
1919 Torrance Blvd., Mail Stop 300-2-1D
Torrance, California 90501-1490
Cathy_McEvelly@ahm.honda.com

Dated: August 17, 2020



Richard W. Corey, Executive Officer, CARB

Dated: August 7, 2020



Rick Schostek, Executive Vice President
American Honda Motor, Co., Inc.

Appendix A: Curve Coefficients

Passenger Car and Light Truck Curve Coefficients representing 1 percent less year over year stringency to be used in calculation of 1 percent cap for Zero Emission Technology vehicles multiplier.

Passenger Car Curve Coefficients (1 Percent Less)				
Model year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint ≥ 56.0 ft²
2021	157.0	3.84	-0.4	215.0
2022	153.0	3.74	-0.4	209.0
2023	149.0	3.64	-0.4	203.0
2024	145.0	3.54	-0.4	198.0
2025	141.0	3.44	-0.4	192.0
2026	137.0	3.35	-0.3	187.0

Light Truck Curve Coefficients (1 Percent Less)					
Model year	Minimum Footprint ≤ 41.0 ft ²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	190.0	4.16	19.3	74.0	327.0
2023	185.0	4.05	18.7	74.0	318.0
2024	180.0	3.94	18.2	74.0	310.0
2025	175.0	3.84	17.7	74.0	302.0
2026	170.0	3.73	17.3	74.0	293.0

Appendix B: Electrification Commitments

-- CONTAINS CONFIDENTIAL BUSINESS INFORMATION

Settlement Agreement

1. The California Air Resources Board ("CARB"), and Volvo Car USA, LLC ("Volvo Car USA"), hereinafter collectively referred to as the "Parties" or singularly as "Party," voluntarily enter into this Settlement Agreement (or "Agreement") based on the Parties' mutual interest in mitigating their respective risks and resolving potential legal disputes concerning the authority of CARB and those states that have adopted California's vehicle standards ("Section 177 States") to adopt and enforce greenhouse gas ("GHG") emissions standards applicable to new light-duty motor vehicles manufactured or distributed by Volvo Car USA for Model Years 2021-2026 in light of the SAFE Rule Part One and Part Two, as discussed and defined below.
2. The Parties enter into this Agreement in light of ongoing and potential lengthy litigation involving the Federal Government, CARB and the Section 177 States regarding the SAFE Rule Part One and Part Two (collectively the "Litigation"). As elaborated below, Volvo Car USA seeks, among other things, flexibility and certainty that will enable it to avoid compliance risks associated with California light duty vehicle GHG standards in California and the Section 177 States while maintaining or enhancing its current motor vehicle planning, production, sales, distribution, and related efforts regardless of the outcome of the current and pending litigation. CARB seeks, among other things, greater certainty regarding continuing automotive GHG emission reductions and vehicle electrification during the Model Years ("MYs") subject to this Agreement.

The Parties

3. The California Air Resources Board: CARB is the state air regulator for California (Cal. Health and Safety Code § 39600 *et seq.*), and sets vehicle emissions standards pursuant to state law (*see, e.g.*, 42 U.S.C. § 7543, Cal. Health & Safety Code §§ 43013, 43018.5). CARB has promulgated GHG emission standards for the light-duty vehicle fleet. (*See* 13 CCR §§ 1961.3 *et seq.*).

4. Volvo Car USA: Volvo Car USA is a manufacturer or distributor of light-duty motor vehicles for sale throughout the United States that are or may be subject to regulation by the United States Environmental Protection Agency ("EPA"), the National Highway Traffic Safety Administration ("NHTSA"), CARB, and the Section 177 States.

Definitions

5. "Agreement Balance" means the amount of GHG credits available or deficits that apply to Volvo Car USA at any given time for purposes of compliance with the Agreement, as calculated and tracked in accordance with Paragraph 34(A).
6. "CA Standards" are the standards applicable to light duty vehicle GHG emissions set out at 13 Cal. Code of Regulations § 1961.3(a)-(g) and encompass all related aspects of California regulations and test procedures relevant to the implementation of those standards.
7. "Days" means calendar days, unless otherwise specified.
8. "Emissions Benefit Balance" is an accounting designed to ensure the integrity of the emission benefits of this Agreement. The Emissions Benefit Balance will be calculated and tracked in accordance with Paragraph 34(B).
9. "Enforcement Discretion Letters" refers to letters or directives that each Section 177 State issues to document its exercise of enforcement discretion, assurance of support, or other use of authority allowing Volvo Car USA to comply with this Agreement to achieve the objectives of the CA Standards through Model Year 2026, which each state has adopted pursuant to Section 177 of the Clean Air Act.
10. "Executive Officer" shall mean the person appointed by CARB pursuant to California Health & Safety Code § 39515.

11. "Federal Government" shall mean the National Highway Traffic Safety Administration ("NHTSA") and the United States Environmental Protection Agency ("EPA"), collectively.
12. "2018 Federal Program" encompasses the EPA light-duty vehicle GHG standards and test procedures specified in Title 40 CFR Part 86 Subpart S, Section 86.1818-12 and Part 600 in place on July 1, 2018.
13. "Federal Program" refers to all applicable light-duty vehicle GHG standards and test procedures, such as those specified in Title 40 CFR Parts 86 Subpart S, 1066 and 600, as may be amended from time to time, and as interpreted and implemented by EPA.
14. "SAFE Rule Part One" encompasses the final actions promulgated by EPA and NHTSA and published at 84 Fed. Reg. 51,310 (Sept. 27, 2019).
15. "SAFE Rule Part Two" encompasses the final rules promulgated by EPA and NHTSA and published at 85 Fed. Reg. 24,174 (April 30, 2020).
16. "Section 177 States" means, as of the time the Parties entered into this Agreement, the States of Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington. These states, through their legislatures and duly authorized state regulatory agencies, have adopted GHG standards applicable to the light-duty vehicle fleet identical to CA standards pursuant to Section 177 of the Clean Air Act. Any additional state (or district or territory of the United States) that adopts such GHG standards after the Effective Date of this Agreement, as defined in Paragraph 46, will be considered a Section 177 State for purposes of this Agreement at such time as that body is authorized to enforce those standards in accordance with Section 177 of the Clean Air Act.
17. "Trust Account" means an account established by CARB, with any appropriate input from the Section 177 States, in which funds may be deposited to address a

GHG Credit Shortfall Breach, as described in Paragraph 39 of this Agreement, and which funds are for use to promote vehicle electrification or otherwise to reduce vehicle GHG emissions.

18. "Zero Emission Technology" vehicle means a battery electric vehicle ("BEV"), a fuel cell electric vehicle ("FCEV"), or a plug-in hybrid electric vehicle ("PHEV") as that term is defined in the 2018 Federal Program.
19. "Zero Emission Vehicle" ("ZEV") means a vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.
20. For clarity and to provide certainty, unless otherwise defined herein, any terms not specifically defined in this Settlement Agreement are as defined in the Federal Program, and shall be interpreted to have the commonly-understood meanings of such terminology in the context of light duty vehicle GHG regulatory programs.

Mutual Understandings

21. CARB and Federal GHG Standards. In 2013, EPA issued CARB a waiver of federal preemption for its CA Standards pursuant to Section 209 of the CAA. 78 Fed. Reg. 2,112 (Jan. 9, 2013). EPA promulgated the 2018 Federal Program regulations in 2012, establishing federal GHG standards for Model Years 2022-2025; at the same time, NHTSA undertook an augural rulemaking to promulgate fuel economy standards consistent with the statutory limitations regarding NHTSA's ability to adopt fuel economy standards no more than four years prior to the applicable Model Year. 77 Fed. Reg. 62,624 (Oct. 15, 2012). The CA Standards include a "deemed to comply" provision such that compliance with the 2018 Federal Program is deemed as compliance with the CA Standards. 13 C.C.R.

§ 1961.3(c). Likewise, compliance with the 2018 Federal Program qualifies as compliance in Section 177 States.

22. SAFE Rule Part One. The SAFE Rule Part One is a final agency action in which 1) EPA published a revocation of the CAA waiver of federal preemption previously granted to CARB for the CA Standards, at least as to certain Model Years, and 2) NHTSA adopted a rule declaring that state law regulations pertaining to motor vehicle emissions of carbon dioxide are preempted by the federal Energy Policy and Conservation Act ("EPCA"). CARB and the Section 177 States dispute the validity of these actions and the authority of EPA and NHTSA to take these actions. California has filed a lawsuit, together with the Section 177 States and other plaintiffs, challenging the NHTSA action in the United States District Court for the District of Columbia. *State of California v. Chao*, Case No. 1:19-cv-02826 (D.D.C. filed Sept. 20, 2019). California (including CARB), the Section 177 States, and others have also petitioned for review of the EPA and NHTSA actions in the SAFE Rule Part One in the United States Court of Appeals for the District of Columbia Circuit. *State of California v. Wheeler*, Case No. 19-1239 (D.C. Cir. filed Nov. 15, 2019).

23. SAFE Rule Part Two. The SAFE Rule Part Two is a final rule that reduces the stringency of the 2018 Federal Program and modifies alternative compliance measures. CARB has initiated litigation challenging the SAFE Rule Part Two. Under CARB regulations, with the promulgation of SAFE Rule Part Two, compliance with the Federal Program is no longer deemed compliance with the CA Standards, and instead manufacturers are required to comply with the CA Standards without regard to the Federal Program beginning with the 2021 Model Year. 13 C.C.R. § 1961.3(c).

24. Authority of Agencies to Enter into this Settlement Agreement and Otherwise Exercise Enforcement Discretion. CARB takes the position that its authority pursuant to Health & Safety Code § 43213 among other authorities to enforce the CA Standards was illegally restricted by SAFE Rule Part One, although CARB

has stated that it will not take enforcement actions as to model years covered by EPA's waiver revocation in the SAFE Rule Part One unless and until the revoked portions of the waiver are reinstated. CARB and the Section 177 States take the position that they may enforce their regulations if the revoked portions of the waiver are reinstated or if the EPA and NHTSA actions in the SAFE Rule Part One are vacated. CARB and the Section 177 States may exercise enforcement discretion with respect to such authority, including entering into settlement agreements and issuing Enforcement Discretion letters or other enforcement discretion directives. Moreover, CARB has authority to contract with regulated entities or to take other actions necessary to further its statutory purposes as needed to meet climate and public health targets. *See generally* Cal. Health & Safety Code § 39600 *et seq.*

25. Risks and Benefits. This paragraph describes the Parties' understandings of important risks and benefits relevant to this Agreement; it is not intended as a comprehensive statement of all such risks and benefits. As set forth in Paragraph 2 above, litigation over the SAFE Rule Part One and the SAFE Rule Part Two, as well as potential further federal regulatory actions, create uncertainty for Volvo Car USA regarding the GHG standards that will apply throughout the United States for Model Year 2021 through Model Year 2026 and subsequent. The outcome of this litigation or additional federal regulatory actions may result in two GHG compliance standards in the United States for the covered Model Years: requirements to comply with more stringent CA Standards in California and the Section 177 States; and less stringent SAFE Rule Part Two standards throughout the rest of the United States. This regulatory uncertainty also subjects Volvo Car USA to considerable enforcement risk. Therefore, Volvo Car USA enters into this agreement to ensure, among other reasons, that it has the ability to (i) make long-term product planning decisions and investments with confidence; (ii) satisfy market demand and production realities; and (iii) comply with regulatory requirements during this time. This Settlement Agreement offers Volvo Car USA compliance flexibility and greater certainty to plan for its nationwide fleet. The

SAFE Rule Part One and SAFE Rule Part Two, and the related litigation, also entail risks that California and the Section 177 States may not achieve the pollutant reduction goals they expected to result from the CA Standards. Entry into this Settlement Agreement is consistent with those goals, including goals set out in the AB 32 Scoping Plan, and will deliver environmental benefits commensurate with those goals that may not be realized in the absence of an agreement. Each Section 177 State has made consistent judgments, reflected in the Enforcement Discretion Letters.

26. Commitments. In light of the risks set forth above, Volvo Car USA commits to comply with this Settlement Agreement. Subject to the conditions and terms specified in this Settlement Agreement, CARB commits to exercise its enforcement discretion to accept Volvo Car USA's compliance with the terms of this Settlement Agreement as an agreed upon compliance plan to achieve the objectives of the CA Standards for Model Year 2021 through Model Year 2026. CARB further accepts this Agreement as a contractual commitment. During the term of this Settlement Agreement, CARB will not enforce the CA Standards with regard to Volvo Car USA using available enforcement mechanisms, and CARB instead shall enforce the terms of this Settlement Agreement solely in accordance with the enforcement provisions and remedies herein. The Parties recognize that each Section 177 State is issuing an Enforcement Discretion Letter that allows Volvo Car USA to comply with this Agreement to achieve the objectives of the CA Standards in each Section 177 State through Model Year 2026. Through their respective Enforcement Discretion Letters, each Section 177 State committed to exercise enforcement discretion in lieu of enforcing the CA Standards, as adopted, based on Volvo Car USA's entry into this Agreement. As a basis for entering into this Agreement, Volvo Car USA has relied on each Section 177 State's representation that it will exercise its enforcement discretion, as described in their respective Enforcement Discretion Letters.

27. No Effect on Federal Law or Law of Other States. The Parties to this Agreement do not intend to, and this Agreement does not, alter either Party's obligations under federal law, or impose on Volvo Car USA compliance obligations with respect to sales or related activities in any individual state.

Agreed Substantive Terms

28. Litigation Commitments. Volvo Car USA, on behalf of itself, its parent companies, subsidiaries and affiliates, will not challenge or seek to undermine this Agreement or CA Standards for the current Model Year through Model Year 2026, or the corresponding standards in Section 177 States. Volvo Car USA will, to the extent possible under applicable trade association bylaws, oppose participation in any such challenges by any trade associations to which it belongs and avoid providing resources for any such challenges. Volvo Car USA will not intervene on the side of the United States, or file an amicus brief on the side of the United States, to defend SAFE Rule Parts One or Two. This Agreement does not limit Volvo Car USA's rights as intervenor in the SAFE Rule Part Two litigation to address the remedy in the event that a court grants a petition for review. Each Party agrees to support the validity of this Agreement in the event of third-party challenges.

29. Greenhouse Gas Fleet Commitments: Volvo Car USA agrees to maintain an average yearly reduction in GHG emissions from its fleet sold nationwide (light-duty passenger cars, light-duty trucks, and medium-duty passenger vehicles) for model years 2021 through 2026, in accordance with the following:

(A) The target Carbon-Related Exhaust Emission (CREE) value for Volvo Car USA's fleet shall be calculated separately for passenger cars and trucks utilizing the footprint curves defined below.

(B) Coefficients defining the footprint curves are identified in the tables below.

- (i) For vehicles with a footprint equal to or smaller than the footprint identified in the Minimum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Minimum Footprint column.
- (ii) For vehicles with a footprint greater than the Minimum Footprint and less than the Maximum Footprint, the target CREE value in units of grams per mile for each vehicle for the corresponding model year shall be calculated by multiplying the footprint of the vehicle by the value in column (a) and adding the value in column (b) and rounding the result to the nearest tenth of a gram per mile.
- (iii) For vehicles with a footprint equal to or greater than the footprint identified in the Maximum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Maximum Footprint column.

Passenger Car Curve Coefficients				
Model year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint ≥ 56.0 ft²
2021	157.0	3.84	-0.4	215.0
2022	151.0	3.70	-0.4	207.0
2023	146.0	3.56	-0.4	199.0
2024	140.0	3.43	-0.4	192.0
2025	135.0	3.30	-0.3	185.0
2026	130.0	3.18	-0.3	178.0

Light Truck Curve Coefficients					
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	188.0	4.12	19.1	74.0	324.0
2023	181.0	3.97	18.4	74.0	312.0
2024	174.0	3.82	17.7	74.0	300.0
2025	168.0	3.68	17.0	74.0	289.0
2026	162.0	3.54	16.4	74.0	278.0

30. Flexibilities to Promote Zero Emission Technology

(A) To recognize the value of increased introduction of zero emission technologies towards CA's and the Section 177 States' long-term needs for electrification of the fleet, Volvo Car USA's Zero Emission Technology vehicles shall utilize a production multiplier for purposes of compliance calculations as follows:

- (i) For BEVs and FCEVs, a vehicle production multiplier of 2.0 shall be used for MY2020 through MY2024, a multiplier of 1.75 shall apply for MY2025, and a multiplier of 1.5 shall apply only for MY2026.

- (ii) For PHEVs, a vehicle production multiplier of 1.6 shall be used for MY2020 through MY2024, a multiplier of 1.45 shall apply for MY2025, and a multiplier of 1.3 shall apply only for MY2026.
- (iii) Volvo Car USA shall clearly identify in its end of model year reporting for each model year to CARB, which Zero Emission Technology vehicles Volvo Car USA has designated to use the production multiplier(s) for compliance calculations.
- (iv) The use of these production multipliers shall be limited by a "1 percent cap".
 - (1) The cap shall be calculated as a cumulative cap representing the total available credits that can be cumulatively earned from the production multipliers for MY2020 through MY2026 vehicles.
 - (2) Calculation of the cap
 - (a) For MY2020 and for MY2021, the contribution to the cumulative cap shall be calculated as 2.0 grams per mile for each model year and converted to grams by multiplying by Volvo Car USA's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.
 - (b) For each model year from MY2022 through MY2026, the contribution to the cumulative cap shall be calculated as the difference between the model-year specific calculated fleet average target value applicable to Volvo Car USA per this Agreement and a calculated fleet average for a target value using the curve coefficients defined in Appendix A: Curve Coefficients that represents 1 percent less in annual reductions than the target value per this Agreement (*e.g.*, a target value reflecting 2.7 percent year over year reductions from MY2021 if the target value in this

Agreement reflected a 3.7 percent year over year reduction from MY2021). The difference shall be converted from grams per mile to grams by multiplying by Volvo Car USA's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.

- (c) Volvo Car USA's cumulative cap, in grams, shall be the sum of the above calculations for each individual model year from MY2020 through MY2026.
- (d) The required calculation format (assuming for purposes of this example that the Agreement requires a 3.7 percent year over year reduction) is as follows. All values expressed in megagrams shall be rounded to the nearest whole number.

$$CAP_{MY2020 \text{ thru } MY2021} = \sum_{MY2020}^{MY2021} (2.0 \text{ [g/mi]} \times \text{Volume} \times \text{Vehicle Lifetime Miles})$$

$$CAP_{MY2022 \text{ thru } MY2026} = \sum_{MY2022}^{MY2026} ((\text{Fleet Target Value [g/mi]}@2.7\% - \text{Fleet Target Value [g/mi]}@3.7\%) \times \text{Volume} \times \text{Vehicle Lifetime Miles})$$

Where:

$CAP_{MY2020 \text{ thru } MY2021}$ = Portion of the cumulative 1 percent cap from MY2020 and MY2021 vehicles in grams.

$CAP_{MY2022 \text{ thru } MY2026}$ = Portion of the cumulative 1 percent cap from MY2022 through MY2026 vehicles in grams.

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year over year stringency, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without production multipliers applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 miles for passenger cars and 225,865 miles for light trucks.

(3) Tracking of credits used toward the cap

- (a) For each model year from MY2020 through MY2026, Volvo Car USA shall calculate the amount of credits earned from production multipliers as specified below and apply those towards the cumulative 1 percent cap as defined in Paragraph 30(A)(iv)(2), above. Zero Emission Technology vehicles for which Volvo Car USA elected not to use the production multipliers shall be included in this calculation in the same manner as other vehicles that do not utilize production multipliers.
- (b) Calculation of credits. For each model year from MY2020 through MY2026, Zero Emission Technology vehicle credits shall be calculated separately for passenger automobiles and light trucks, using the following equations to effectively subtract the credits calculated for the base fleet from the credits calculated for the fleet with multipliers applied. No credits are earned if the result is a negative value. All values expressed in megagrams shall be rounded to the nearest whole number.

$$\text{Zero Emission Technology Vehicle Credits}[Mg] = \text{Credits}_{adj} - \text{Credits}_{base}$$

- (i) When calculating the Credits_{adj} for Zero Emission Technology vehicles from production multipliers for MY2020 through MY2026, Volvo Car USA may elect to calculate the credits based on either the Method 1 or Method 2 formula below.

1. Method 1 formula:

$$\text{Credits}_{adj}[Mg] = \left(\frac{(\text{Fleet Target Value}_{adj} - \text{Performance}_{adj}) \times \text{Volume}_{adj} \times \text{Vehicle Lifetime Miles}}{1,000,000} \right)$$

Where:

Fleet Target Value_{adj} = Production weighted fleet average standard from the footprint target calculation for the specified year, with the production multiplier applied to designated Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume_{adj} = Total production of passenger cars or light trucks with the production multiplier applied to designated Zero Emission Technology vehicles, with no rounding applied to the result.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

2. Method 2 formula:

$$\text{Credits}_{adj}[\text{Mg}] = \left(\frac{(\text{Fleet Target Value} - \text{Performance}_{adj}) \times \text{Volume} \times \text{Vehicle Lifetime Miles}}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance_{adj} = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

- (ii) Except as noted below for MY2020 and MY2021, for both Method 1 and Method 2, base fleet credits shall be calculated in megagrams using the following equation and rounding the result to the nearest whole number.

$$Credits_{base}[Mg] = \left(\frac{(Fleet\ Target\ Value - Performance) \times Volume \times Vehicle\ Lifetime\ Miles}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance = Production weighted fleet average CREE, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

1. To determine the amount of credits to be added to Volvo Car USA's starting Agreement Balance and to be applied towards the cumulative 1 percent cap for MY2020, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for *Credits_{base}*. Volvo Car USA shall utilize the same method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2020 with the production multipliers from this Agreement.
2. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2021, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.
3. To determine the amount of credits to be applied towards the cumulative 1 percent cap for MY2021, base fleet credits shall be calculated using the *Credits_{adj}* equation identified for

Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for $Credits_{base}$. Volvo Car USA shall utilize the same method (i.e., Method 1 or 2) that was used to calculate $Credits_{adj}$ for MY2021 with the production multipliers from this Agreement.

4. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2022 through MY2026 and to be applied towards the cumulative 1 percent cap for MY2022 through MY2026, base fleet credits shall be calculated using the equation specified above for $Credits_{base}$ with no production multipliers applied.

- (v) For Zero Emission Technology vehicles produced by Volvo Car USA in excess of the cumulative 1 percent cap:
 - (1) For MY2020 BEVs and FCEVs, a production multiplier of 1.75 and for MY2021 BEVs and FCEVs, a production multiplier of 1.5 shall be used for compliance calculations.
 - (2) For MY2020 PHEVs, a production multiplier of 1.45 and for MY2021 PHEVs, a production multiplier of 1.3 shall be used for compliance calculations.
 - (3) For MY2022 through MY2026 BEVs, FCEVs, and PHEVs, no production multiplier (i.e., a value of 1.0) shall be used.

- (vi) For compliance calculations, the applicable Zero Emission Technology production multipliers are only used in the calculation of credits from Zero Emission Technology vehicles and may not be used in the calculation of Volvo Car USA's fleet target value or Volvo Car USA's fleet performance carbon-related exhaust emissions (CREE) value.

(B) Zero Emission Technology vehicles for MY2020 through MY2026 shall utilize a value of 0 grams per mile to represent the emissions of FCEVs and BEVs and the proportion of electric operation of PHEVs that is derived from electricity that is generated from sources that are not onboard the vehicle.

(i) For BEVs and FCEVs, 0 grams per mile shall be used as the CREE value for the vehicle's performance in compliance calculations.

(ii) For PHEVs, 0 grams per mile shall be used as the CREE value to represent the proportion of electric operation of a vehicle that is derived from electricity that is generated from sources that are not onboard the vehicle. For ease of understanding, such proportion of operation shall be calculated in accordance with the 2018 Federal Program.

31. Air Conditioning (A/C) Related Credits and Off-Cycle Credits

(A) Except as noted in Paragraph 31(A)(vi) below, for all requested A/C and off-cycle credits:

(i) Volvo Car USA should notify CARB of its intent to use such credits in its pre-model year report submitted no later than December 31 of the calendar year two years before the model year;

(ii) Volvo Car USA may submit such requests and supporting data and documentation prior to or during the applicable model year to facilitate earlier review and approval by CARB; and

(iii) Volvo Car USA shall submit such requests and supporting data and documentation for review and approval by CARB no later than the submittal of the end of model year report by May 15 following the model year. Submitted data shall include identification and sales volumes of the vehicle model(s) and configurations that have specific technologies applied and the credits claimed for each technology along with documentation supporting the claimed credit value for each technology.

- (iv) In general, approved credits are valid through the MY2026. Volvo Car USA will be required to newly apply for and CARB will determine an appropriate value for credits on MY2027 and later vehicles. Where specifically noted, credits may be approved on a more limited basis and/or conditioned on Volvo Car USA collecting and submitting additional data from actual vehicle operation and/or testing to support the approved credits.
- (v) Except as specifically noted in this Agreement, the provisions of the 2018 Federal Program apply for determining credits for A/C leakage and efficiency improvements, off-cycle technologies, and full-size pickup hybrid technology as well as exhaust emission performance CO₂ equivalent credits or debits from N₂O and/or CH₄ emissions.
- (vi) For A/C and off-cycle technologies previously granted credits to Volvo Car USA by EPA before January 1, 2020 through explicit approval or by EPA for MY2020 or earlier via acceptance of Volvo Car USA's end of model year report, and where EPA continues to grant the identical credit values to Volvo Car USA, CARB shall grant Volvo Car USA the same credit values subject to the same, if any, limitations by EPA (*e.g.*, the inclusion or exclusion of a specific credit towards a maximum cap for that technology).
- (vii) All MY2021 and later model year credits are subject to CARB acceptance in accordance with this Agreement and the established approval criteria and practice in the Federal Program. In its review of credits for approval, the Parties intend that CARB will remain aligned with EPA to the extent possible in accordance with good engineering judgment and technical rationale. However, where appropriate to promote faster adoption of new technologies, CARB may independently approve credits prior to acceptance by EPA.

(B) For MY2020 through MY2026 off-cycle credits that Volvo Car USA selects from predefined values assigned in the 2018 Federal Program:

- (i) The maximum allowable decrease in Volvo Car USA's fleet emissions from the use of such credits may not exceed 15.0 grams per mile.
- (ii) For thermal control technologies, the existing caps of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).
- (iii) The predefined values available for use by Volvo Car USA will also include:
 - (1) A credit value of 1.1 grams per mile is available for passenger cars and light trucks that utilize an advanced A/C compressor with an improved efficiency relative to fixed-displacement compressors derived from improved internal valve systems that optimize the internal refrigerant flow across the range of compressor operator conditions through the addition of a variable crankcase suction valve. Except as noted in Paragraph 31(E)(ii) below, these credits shall be counted towards the A/C efficiency per vehicle caps of 5.0 and 7.2 grams per mile for passenger cars and light trucks, respectively.
 - (2) A credit value is available for passenger cars and light trucks that utilize a high efficiency alternator. The credit value shall be 0.16 grams per mile for each one percent of improvement in Verband der Automobilindustrie (VDA) efficiency above a baseline of 67 percent efficiency (*e.g.*, if a high efficiency alternator achieves 69 percent VDA efficiency, the credit value would be 0.32 grams per mile calculated as $(69 - 67) * 0.16 = 0.32$). VDA efficiency is the ratio of the alternator output power to the power supplied to the alternator, as measured using the VDA efficiency measurement methodology and expressed as a whole number percent from 68 to 100. The Parties agree that further detail regarding these calculations is provided at EPA-HQ-OAR-2018-0283-0706 "Potential Off-cycle Menu Credit Levels for High Efficiency Alternators and Advanced Air Conditioning Compressors", memo from EPA (Aug. 1, 2018).

(C) For MY2021 through MY2026 off-cycle credits that Volvo Car USA utilizes the 5-cycle test method to determine the amount of the credit:

- (i) Volvo Car USA shall provide test data showing the 5-cycle and 2-cycle combined city/highway test results for with and without the off-cycle credit technology active.
- (ii) The amount of off-cycle credit shall be the difference of the 5-cycle testing with and without the technology active less the difference of the 2-cycle testing with and without the technology active to ensure the credit reflects an incremental amount above and beyond what is already accounted for in the 2-cycle testing.

(D) For MY2021 through MY2026 off-cycle credits that Volvo Car USA requests CARB approval of through a special test procedure to quantify the credit:

- (i) Upon receipt of a completed application with all confidential business information redacted, CARB may provide public notice to interested parties of receipt of such an application and make it available for review and comment. CARB may provide at least 30 days of public review and identify a method for parties to submit their comments. After the comment period, the applicant and/or CARB may make modifications as needed to address relevant issues before issuing a final approval. A version of the final approval, with any confidential business information redacted, may also be made publicly available by CARB for reference.
- (ii) For identical technologies previously approved by CARB during the term of this Agreement or approved by EPA prior to January 1, 2020, Volvo Car USA may utilize the identical special test procedure/methodology as was previously used to determine the appropriate credit value for its specific vehicle(s). If Volvo Car USA elects this option, CARB may waive the notice and comment requirement of Paragraph 31(D)(i) above.
- (iii) For thermal control technologies, any credit determined under the special test procedures shall be applied towards, and may not exceed, a maximum

value for the sum of all applied thermal control technologies of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks.

(E) For MY2021 through MY2026 credits related to air conditioning system efficiency improvements:

- (i) If Volvo Car USA uses predefined values or 5-cycle testing to demonstrate the credit value of the applicable technology, the maximum credits available are 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck and shall apply on a per vehicle basis (*e.g.*, no individual car or truck shall receive credits in excess of the cap).
- (ii) In general, the maximum credit limits of 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck also apply to and include technologies where Volvo Car USA uses special testing approved by CARB to demonstrate the credit value of the applicable technology. However, if Volvo Car USA performs such special testing on a vehicle or system that has already met the credit limit by utilization of other technologies and demonstrates that the added technology still provides additional measurable GHG reductions, credits beyond the limit commensurate with the benefits will be granted by CARB.

(F) Additional provisions for MY2021 through MY2026 vehicles:

- (i) To support the development of streamlined application processes for MY2027 and later vehicles:
 - (1) Applications to determine the preliminary credit value for eligible off-cycle technologies on MY2021 through MY2026 vehicles may be submitted by automotive suppliers. However, only applications accompanied by a letter of endorsement from Volvo Car USA or another manufacturer subject to a similar agreement will be considered for approval by CARB.

- (2) Applications by suppliers may be based on the 5-cycle testing method or the special testing method to determine the appropriate credit value. Depending on the technology, the preliminary credit value may be an absolute value or a scaled value based on a parameter determined to be correlated to its benefit.
 - (3) For technologies assigned a preliminary credit value from an approved supplier application, Volvo Car USA shall request CARB approval of the use of the technology. CARB shall approve the use of the credit value upon Volvo Car USA providing sufficient information to confirm the implementation of the technology is consistent with the supplier's application.
 - (4) CARB may approve such applications on a limited basis by model year and vehicle application and/or require testing or other data collection from the supplier or Volvo Car USA to verify the appropriateness of the credit value.
- (ii) To support the development of appropriate credit values and testing methodologies for future model year vehicles:
- (1) In order for MY2022 through MY2026 BEVs and/or FCEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), Volvo Car USA shall submit a plan for CARB review and approval on how it will gather activity data and/or test data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of data specific to the technology and its relative benefits on a Zero Emission Technology vehicle across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, by demonstrating the improvement in vehicle efficiency (Watt-hour per mile) and using a value for electricity

generation in grams CO₂ per Watt-hour to calculate an appropriate gram per mile value, by collecting representative data on in-use vehicles to refine future assumptions related to usage of the technology, etc.).

- (2) In order for MY2022 through MY2026 PHEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), Volvo Car USA shall be required to submit a plan for CARB review and approval on how it will submit PHEV activity data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. Such data shall be limited to data that Volvo Car USA will be collecting for other purposes and/or otherwise have available for PHEVs for which Volvo Car USA is requesting the credit and need only include the data most relevant to informing the usage or operation of the applicable off-cycle technology in PHEVs across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, data on the fraction of vehicle miles traveled using electric propulsion versus gasoline powered propulsion, data on the fraction of trips that have an engine start, etc.). CARB may not require Volvo Car USA to conduct special testing or implement additional parameters or data collection methods, however, Volvo Car USA may voluntarily propose to use test data or a combination of test data and activity data as part of its plan to satisfy this requirement. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of the available data (and/or test data as described above) specific to the applicable PHEV(s).
- (3) Off-cycle credits may be approved on a limited model year basis for technologies where the GHG benefits depend on the behavior of the driver (*e.g.*, driver coaching, haptic pedals) only when:

- (a) It is possible, on the basis of reasonable evidence, to make assumptions about average driver behavior to calculate the likely impact and associated credit value; and
- (b) Volvo Car USA agrees to perform additional data collection and testing to allow for verification of the behavior on actual vehicles utilizing the technology and to be used in establishment of more appropriate credit values and testing methodologies for subsequent model year vehicles.

(iii) Ineligible technologies

- (1) Off-cycle credits may not be approved for technologies that are integral or inherent to the basic vehicle design, such as engine, transmission, mass reduction, passive aerodynamic design, and tire technologies. Technologies installed for non-off-cycle emission-related reasons or that otherwise would have been installed for purposes of reducing emissions (directly or indirectly) over the test cycles for compliance with the GHG standards are also not eligible as they would be considered part of the baseline vehicle design. Off-cycle credits may not be approved for crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies designed for the purpose of reducing the frequency of vehicle crashes. Off-cycle credits may not be earned for technologies installed on a motor vehicle to attain compliance with any vehicle safety standard.
- (2) Waste heat, as used for active warm-up off-cycle credits, refers to heat that cannot be recovered by any other component or system on the vehicle and does not include systems that preferentially or necessarily first use heat to warm the engine oil or interior cabin before utilization to warm up the engine or transmission.
- (3) With the exception of A/C-related technologies for cooling the cabin or occupants, technologies that have predefined credit values, and

technologies for Zero Emission Technology vehicles, off-cycle credits may not be granted for non-powertrain or non-propulsion technologies including technologies inherent to the design of occupant comfort and entertainment features such as passenger or cabin heating, interior displays or components, infotainment components, etc. For purposes of this paragraph, technologies that are designed to recapture energy created by the powertrain that otherwise would be lost (*e.g.*, through heat or mechanical friction during deceleration or braking events) will be considered powertrain technologies.

- (4) For Zero Emission Technology vehicles, ineligible technologies will include displays, infotainment systems, and other items not directly related to propulsion or battery conditioning.

32. Certification. Prior to certification, Volvo Car USA agrees to provide CARB with all emission data necessary to calculate CREE levels for each emission data vehicle representing a test group submitted to CARB for certification to CARB's criteria pollutant emission standards (title 13, CCR § 1961.2).

33. Compliance.

- (A) Unless it is otherwise specified in this Agreement that provisions of the 2018 Federal Program apply, EPA changes during the term of this Agreement in the Federal Program regulations, including but not limited to test procedures and calculation methodologies, will automatically apply for purposes of this Agreement unless either Party notifies the other Party of its belief that such changes will have a material impact on the stringency of the GHG commitments. Following such notification, Volvo Car USA and CARB shall in good faith confer in accordance with Paragraph 35 to reach a mutually acceptable resolution. The Party seeking a departure from changes to the Federal Program shall 1) explain the basis for its position that the changes made by EPA will have a material impact on the stringency of the GHG commitments, and 2) propose a technical modification in accordance with

Paragraph 35. It is the intent of the Parties that any resolution to address a material impact on stringency due to changes EPA makes in the Federal Program regulations will minimize disruption or burdens on Volvo Car USA's implementation of testing and related administrative requirements. Except where the 2018 Federal Program is specified in this Agreement and for changes to the Federal Program for which a Party provides notification under this paragraph, the Parties intend that Volvo Car USA will be able to utilize the same test procedures and calculation methodologies to generate the required data for compliance with this Agreement and the Federal Program, including but not limited to any revisions related to the phase-in of the use of E10 test fuel resulting from EPA's Vehicle Test Procedures Adjustments for Tier 3 Certification Test Fuel rulemaking, proposed at 85 Fed. Reg. 28,564 (May 13, 2020).

- (B) Compliance under this Agreement is determined by first calculating compliance based on CREE performance relative to the standard without the use of any Zero Emission Technology multipliers. Air conditioning-related, off-cycle, full-size pickup, and Zero Emission Technology vehicle credits as well as applicable debits for N₂O and/or CH₄ emissions are then separately calculated and added to the calculated CREE performance credits or debits. Zero Emission Technology vehicle credits shall be calculated for each model year as specified in Paragraph 30(A)(iv)(3)(b) of this Agreement.
- (C) No later than May 15 following the model year, Volvo Car USA shall provide CARB with all data and technical documentation to support a calculation of compliance for the applicable model year including:
 - (i) Sales and footprint data to calculate Volvo Car USA's target CREE fleet value.
 - (ii) Sales, vehicle performance data, and supporting information for all credits requested for the model year to calculate Volvo Car USA's achieved fleet CREE performance.

- (iii) Sales data and fleet footprint and performance data to calculate Volvo Car USA's Zero Emission Technology 1 percent cumulative cap and the number of credits earned towards the cap for the current and previous model years. If the cumulative credits claimed as earned by Volvo Car USA exceed the 1 percent cap as calculated solely for the current and previous model years, the submitted data must also include an estimate of the cumulative portion of the cap projected to be earned in future model years by Volvo Car USA.
- (iv) The "Agreement ABT Calculator" that was developed jointly by the Parties, as may be updated from time to time upon written agreement of the Parties, populated with data for the applicable model year to support Volvo Car USA's calculation of compliance and tracking of credits and deficits.

34. Banking of Credits and Deficits.

(A) Agreement Balance.

- (i) Starting Balance: Volvo Car USA will enter the Agreement with a value of credits (or deficits) in megagrams of CO₂ for its Agreement credit balance equal to its 2018 Federal Program credit balance as calculated at the conclusion of MY2020 (for MY2011 through MY2020) with the following adjustments:
 - (1) Subject to the limits of the "1 percent cap" per Paragraph 30(A)(iv), the advanced technology vehicle multiplier for MY2020 BEVs and FCEVs will be 2.0 and 1.6 for MY2020 PHEVs in lieu of 1.75 and 1.45, respectively; and
 - (2) The cap for off-cycle credits based on predefined (menu) values will be 15 g/mi for MY2020 such that if Volvo Car USA had exceeded the 10 g/mi cap in MY2020 and not been awarded full benefit of the applied

technologies, an adjustment would be made to its credit balance to reflect the higher cap.

(ii) Calculation of Agreement Balance. For MY2021 through MY2026, Volvo Car USA's Agreement credit balance shall be calculated per the requirements of this Agreement.

- (1) As specified in Paragraph 33(A) above, compliance is calculated first based on actual performance and then all earned credits (*e.g.*, A/C, off-cycle) per this Agreement for the specific model year for which Volvo Car USA is subject to GHG fleet commitments under this Agreement.
- (2) If Volvo Car USA has a surplus (credits earned beyond its obligation) after the model year compliance calculation, those credits shall be added to the Agreement Balance in accordance with the averaging, banking, and trading ("ABT") provisions of the 2018 Federal Program.
- (3) If Volvo Car USA has a deficit after the model year compliance calculation, then those deficits shall be added to the Agreement Balance in accordance with the ABT provisions of the 2018 Federal Program.
- (4) If Volvo Car USA participated in any Agreement credit transactions (*e.g.*, sale, purchase) or used Agreement credits to satisfy Agreement Balance deficits, then those transactions and usage shall be recorded in the Agreement Balance in accordance with ABT rules. Except as specified in Paragraph 34(D)(iv)(3) for Federal Program credits acquired from ZEV-only manufacturers, Federal Program credit transactions for model years subject to standards specified in this Agreement may not be recorded in the Agreement Balance. Regarding Federal Program credits earned from model years after the expiration or early termination of this Agreement and used to resolve Volvo Car USA's Agreement Balance deficits carried forward into model years after the expiration or early termination of this Agreement in accordance with

Paragraph 34(C)(iv), such Federal Program credits shall be recorded in the Agreement Balance.

(B) Emissions Benefit Balance.

- (i) Purpose: To ensure the integrity of the emission benefits of this Agreement, Volvo Car USA shall be required to achieve a net zero or positive credit balance and resolve any incurred deficits through MY2031 (based on the resolution of Volvo Car USA's obligations in accordance with Paragraph 34(B)(vi)), and possibly through as late as MY2034 (based on Volvo Car USA's carry-forward of deficits in accordance with Paragraphs 34(C)(iii), and 34(C)(iv)), in a separate Emissions Benefit Balance that Volvo Car USA tracks and reports to CARB.
- (ii) Starting Balance: The starting balance for the Emissions Benefit Balance shall be equal to Volvo Car USA's starting Agreement Balance.
- (iii) Calculation of Emissions Benefit Balance through MY2026. For MY2021 through MY2026, Volvo Car USA's Emissions Benefit Balance will be calculated as follows:
 - (1) Add in, per ABT rules, credits (or deficits) determined from the Agreement model year compliance for MY2021.
 - (2) Add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2021.
 - (3) Add in, per ABT rules except as noted below in Paragraph 34(B)(iii)(4), applicable Federal Program credit transactions that occurred between end of the previous model year and end of MY2021. For this requirement, applicable transactions only include purchase and sale transactions of Federal Program credits. Federal Program credits for model years subject to standards specified in this Agreement earned by Volvo Car USA or used by Volvo Car USA to resolve Federal Program deficits have no impact on the Emissions Benefit Balance.

- (4) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by Volvo Car USA and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2024, MY2025, and/or MY2026 Emissions Benefit Balance deficits carried forward in accordance with Paragraph 34(C)(iii).
 - (5) Repeat "Calculation of Emissions Benefit Balance through MY2026" above at the end of each successive model year for MY2022 through MY2026, substituting the applicable model year for MY2021.
- (iv) Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination. Subject to the resolution of Volvo Car USA's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi), for MY2027 and subsequent model years (or substituting earlier model years in this paragraph as appropriate in the case of early termination of this Agreement pursuant to Paragraph 35), Volvo Car USA's Emissions Benefit Balance will be calculated as follows:
- (1) At the end of MY2027, add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2027 only for transactions involving MY2022 through (including) MY2026 vintage Agreement credits.
 - (2) At the end of MY2027, add in, per ABT rules, Federal Program credit transactions and Federal Program credits that were used by Volvo Car USA to satisfy any Federal Program deficits that occurred between end of the previous model year and end of MY2027 only for transactions or usage involving MY2022 through (including) MY2026 vintage Federal Program credits.
 - (3) At the end of MY2027, if any MY2027 Federal Program credits were used by Volvo Car USA to resolve Volvo Car USA's Agreement Balance

- deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv), add in, per ABT rules, credits (or deficits) determined from the Federal Program compliance for MY2027.
- (4) At the end of MY2027, add in, per ABT rules except as noted in Paragraph 34(B)(iv)(5), Federal Program credit transactions and Federal Program credits that were used by Volvo Car USA to satisfy any Federal Program deficits of Volvo Car USA that occurred between end of the previous model year and end of MY2027 only for transactions involving the same model year vintage credits as those used to resolve an Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv) (*e.g.*, include MY2027 and MY2028 vintage credit transactions and usage if both MY2027 and MY2028 Federal Program credits were used to resolve Volvo Car USA's Agreement Balance deficits).
- (5) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by Volvo Car USA and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2027 or subsequent Emissions Benefit Balance deficits incurred due to Federal Program compliance, credit transactions, or usage recorded in accordance with Paragraphs 34(B)(iv)(3) and 34(B)(iv)(4).
- (6) Repeat "Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination" at the end of each successive model year for latest applicable year (possibly as late as MY2034), substituting the applicable model year for MY2027.
- (v) Federal Program credits that Volvo Car USA may permanently retire or otherwise remove without being used from its Federal Program credit balance may be used towards satisfying Volvo Car USA's Emissions Benefit Balance obligations in lieu of tracking such credits in the Emissions Benefit

Balance through to their expiration. Volvo Car USA and CARB may agree that Emissions Benefit Balance obligations satisfied in this manner will terminate Volvo Car USA's corresponding Emissions Benefit Balance reporting requirements.

(vi) Recognizing the uncertainty of regulatory requirements applicable following the model years covered in the Agreement, Volvo Car USA and CARB desire to maintain the integrity of the environmental benefits of this Agreement while not disadvantaging Volvo Car USA with regard to future regulatory compliance obligations. Therefore, prior to the expiration or upon early termination of this Agreement, Volvo Car USA and CARB shall in good faith confer to reach mutually acceptable agreement with respect to Volvo Car USA's Emissions Benefit Balance obligations. In seeking to reach such an agreement, Volvo Car USA and CARB shall consider all relevant and equitable circumstances, including but not limited to the following:

- (1) the important environmental benefits of this Agreement, as described in Paragraph 25 above, which the Parties agree were a primary basis for CARB's decision to enter into the Agreement;
- (2) the regulatory requirements known or likely to apply to Volvo Car USA in the model years following the model years covered by this Agreement; and
- (3) the extent to which Volvo Car USA would be harmed, relative to other manufacturers who chose not to enter into a similar agreement, if Volvo Car USA is restricted, in whole or in part, by its Emissions Benefit Balance obligations.

Volvo Car USA and CARB shall seek to reach an agreement that reflects an appropriate balancing of the relevant and equitable considerations. If Volvo Car USA and CARB are unable to reach a mutually acceptable understanding regarding Volvo Car USA's Emissions Benefit Balance

obligations, the issue shall be the subject of Dispute Resolution under this Agreement. Both Volvo Car USA and CARB agree that the factors set forth in this subparagraph shall be the basis upon which Dispute Resolution shall be conducted.

(C) Tracking of Credits within Credit Balances.

- (i) Within the Agreement Balance and the Emissions Benefit Balance, credits (and debits) shall be tracked based on the model year in which they were earned, per ABT rules.
- (ii) Credits shall be subject to a five-year carry forward and three-year carry back provision. Credits may be used by Volvo Car USA to satisfy deficits incurred in the prior three model years or used or traded by Volvo Car USA for use in the subsequent five model years. Credits not used within five model years shall expire.
- (iii) If Volvo Car USA has a deficit after the model year compliance calculation, then unexpired credits earned in prior model years or acquired through trade may be utilized to satisfy its obligation. Except as noted below, if Volvo Car USA still has a deficit after utilizing all prior model year credits and acquired credits, then it may carry forward the credit deficit up to and including the third model year after the model year in which the deficit was incurred. To facilitate alignment between the Agreement Balance and the Emissions Benefit Balance, if Volvo Car USA has an Agreement Balance deficit being carried forward from MY2024, MY2025, and/or MY2026, Volvo Car USA shall also carry forward an equivalent MY2024, MY2025, and/or MY2026 deficit in the Emissions Benefit Balance (or likewise, as appropriate, for earlier model years in the case of early termination of this Agreement), in lieu of utilizing all prior model year credits and acquired credits in the Emissions Benefit Balance to resolve some or all of the deficits before carrying forward the remaining deficits.

- (iv) Agreement Balance and/or Emissions Benefit Balance deficits carried into model years after expiration or early termination of this Agreement may be resolved by applying Federal Program credits generated in accordance with the ABT provisions of the 2018 Federal Program for those model years after expiration or early termination of this Agreement. Such Federal Program credits shall be recorded as a credit transaction (credits acquired) in Volvo Car USA's Agreement Balance and Emissions Benefit Balance per ABT rules and tracked accordingly.
- (v) Deficits not satisfied within the three model year carry forward period shall constitute noncompliance with this Agreement.

(D) Credit Trading.

- (i) Credits in Volvo Car USA's Agreement Balance may be traded (or deficits resolved) in accordance with the trading provisions of the 2018 Federal Program and the additional credit trading restrictions described in this Agreement.
- (ii) Credits in the Emissions Benefit Balance may not be directly traded by Volvo Car USA and credits may only be added or removed in accordance with Paragraph 34(B) above.
- (iii) Trading within Agreement. Except as noted in Paragraph 34(D)(iv)(3) below for Federal Program credits acquired from ZEV-only manufacturers, Volvo Car USA may only trade credits earned under this Agreement for its Agreement Balance from/to other manufacturers who have executed an agreement similar to this Agreement. CARB's Executive Officer will determine if any such agreements exist and provide in writing a determination to all parties to any such agreements as to which manufacturers may trade credits under this Agreement or similar agreements.
- (iv) Transferring Credits into Agreement.

- (1) Earned or purchased MY2020 or earlier Federal Program credits may be used to meet Volvo Car USA's commitments in this Agreement.
- (2) Except as noted below for ZEV-only manufacturers and as specified in Paragraph 34(C)(iv) for Federal Program credits used to resolve any outstanding deficits after the expiration or early termination of this Agreement, MY2021 and subsequent credits earned under the Federal Program by Volvo Car USA or any other manufacturer may not be used to meet Volvo Car USA's commitments in this Agreement for its Agreement Balance.
- (3) MY2021 through MY2026 Federal Program credits earned by a ZEV-only manufacturer and acquired by Volvo Car USA through a Federal Program credit transaction may be used to meet Volvo Car USA's commitments in this Agreement subject to the following:
 - (a) Only Federal Program credits directly earned by the ZEV-only manufacturer are eligible. For purposes of this requirement, ZEV-only manufacturer means a vehicle manufacturer that exclusively offers BEVs and/or FCEVs for sale in the United States.
 - (b) Adjustment of Federal Program Credits transferred into program.
 - (i) MY2020 and earlier credits earned by a ZEV-only manufacturer and acquired by Volvo Car USA shall be recorded as a credit transaction (credits acquired) in Volvo Car USA's Agreement Balance and Emissions Benefit Balance per ABT rules without adjustment.
 - (ii) For model years subject to standards specified in this Agreement, credits earned under the SAFE Rule Part Two by a ZEV-only manufacturer and acquired by Volvo Car USA shall be adjusted before being recorded as a credit transaction (credits acquired) in Volvo Car USA's Agreement Balance and Emissions Benefit Balance per ABT rules. To adjust credits acquired, the credits

shall be reduced by the following formula before being added to Volvo Car USA's Agreement Balance and Emissions Benefit Balance:

$$Credits_{adj}[Mg] = Credits_{acc}[Mg] \times Adjust_Factor_{MY}$$

Where:

Credits_{adj} = Credit amount, in megagrams, after adjustment.

Credits_{acc} = Acquired credit amount, in megagrams, before adjustment.

Adjust_Factor_{MY} = Adjustment factor specific to the model year of the acquired credits from the following table:

	MY2021	MY2022	MY2023	MY2024	MY2025	MY2026
Adjustment Factor	0.96	0.95	0.94	0.93	0.92	0.91

(iii) If the Federal Program is further amended after the SAFE Rule Part Two, Federal Program credits earned by a ZEV-only manufacturer for model years subject to standards specified in this Agreement and acquired by Volvo Car USA shall be adjusted to reflect the relative difference in effective stringency between the Agreement and the Federal Program before being recorded as a credit transaction (credits acquired) in Volvo Car USA's Agreement Balance and Emissions Benefit Balance per ABT rules. Volvo Car USA and CARB, in accordance with Paragraph 35, shall in good faith confer to determine the appropriate adjustment. In determining such an adjustment, the Parties acknowledge that the adjustment factor specified in this Agreement was derived from the difference in credits earned by a ZEV under the Agreement (in g/mi) versus credits earned under the Federal Program. Assumptions include a fleet with an equal share of passenger cars and light trucks, and industry sales-weighted average passenger car and light truck footprints of 46.2 and 53.8 square feet, respectively.

- (4) Credits earned under a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s) may not be used to meet Volvo Car USA's commitments in this Agreement for its Agreement Balance.
- (v) Transferring Credits out of Agreement. Credits earned by Volvo Car USA per this Agreement for its Agreement Balance may not be used by or traded by Volvo Car USA to meet its or any other vehicle manufacturer's obligation under the Federal Program, or a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s).

35. Modification and Termination. The Parties acknowledge that modifications to or termination of this Agreement may be necessary or appropriate in response to various events or circumstances.

- (A) If Volvo Car USA or CARB, with any input from the Section 177 States, believes that modifications to or termination of the Agreement may be warranted, it will provide written notice to the other Party identifying the events or circumstances at issue and explaining why modification to or termination of the Agreement may be necessary or appropriate. Volvo Car USA and CARB, with input from the Section 177 States, shall engage in good faith discussions to determine whether modification or termination of this Agreement is necessary or appropriate.
- (B) Nothing in this paragraph obligates Volvo Car USA or CARB, with any input from the Section 177 States, to accept a proposed modification or termination, except as follows:
 - (i) If CARB, with any input from the Section 177 States, enters into an agreement with another light-duty automobile manufacturer containing GHG obligations materially different from and more favorable to Volvo Car USA or that light-duty automobile manufacturer than this Agreement, Volvo Car USA has the option to either (a) comply with this Agreement; (b)

- comply with the provision(s) of the agreement with the other light-duty automotive manufacturer that is materially different from and more favorable than this Agreement or (c) terminate this Agreement.
- (ii) If any Section 177 State rescinds its Enforcement Discretion Letter affiliated with this Agreement or seeks to enforce the CA Standards against Volvo Car USA, or if any other state becomes a Section 177 State without promptly issuing an Enforcement Discretion Letter, then Volvo Car USA has the option to terminate this Agreement.
 - (iii) If EPA imposes, or an action of a court results in imposition of, national GHG emission standards equal to or more stringent than the commitments specified in this Agreement, Volvo Car USA and CARB agree that this Agreement terminates upon the date the more stringent regulations begin to apply.
- (C) In all instances except those described in Paragraph 35(B) above, any modification to this Agreement is only valid and enforceable if it is in writing and signed by both Parties to this Agreement. If the Parties cannot agree, the Parties' rights and obligations under this Agreement survive.
- (D) If this Agreement terminates in accordance with Paragraph 35, Volvo Car USA shall thereafter:
- (i) be subject to applicable law upon and after termination; and
 - (ii) unless otherwise agreed by CARB in consultation with the Section 177 States, remain subject to remedies applicable under this Agreement for GHG-related breaches occurring prior to termination of this Agreement.

36. Reporting of Agreement Compliance to Section 177 States and Additional Commitments Regarding Section 177 States. CARB may communicate the compliance status of Volvo Car USA with the terms of this Agreement to Section 177 States annually. Volvo Car USA agrees, at CARB's request, to provide to Section 177 States certain submissions under this Agreement containing Volvo Car USA's Confidential Business Information where the recipient Section 177

State(s) has the legal ability to protect such information against release to the public.

37. Advancement of Electrification. The Parties recognize that the practical availability and marketing of electrified vehicles to the public promotes the interests of both California and Volvo Car USA in furthering electrification technology development and deployment, including via public acceptance of such technology, reduced costs, and charging infrastructure expansion. CARB has an interest in making electrified vehicles more available and affordable, reducing climate change impacts experienced by Californians, and supporting the GHG reductions and technology development goals of the CA Standards and CARB's statutory requirements for further GHG reductions for later model years. In light of the above, Volvo Car USA and CARB agree that Volvo Car USA's performance as specified in Paragraphs 37(A) and 37(B) are an important consideration for this Agreement, and are integral to CARB's decision to enter into it:

(A) Volvo Car USA will undertake electrification commitments described in Appendix B: Electrification Commitments to this Agreement.

(B) Volvo Car USA shall report annually to CARB on the status of its electrification commitments described in Appendix B: Electrification Commitments. The Parties acknowledge that Volvo Car USA has also made electrification commitments relating to the Section 177 States as described in Appendix B: Electrification Commitments. Volvo Car USA's annual report to CARB under Paragraph 33(C) will include a description of the status of those commitments. At CARB's request, Volvo Car USA agrees to transmit the report to the Section 177 States in accordance with Paragraph 36.

(C) In order to promote the environmental benefits of this Agreement, CARB commits to continue its use of best efforts to complete expeditious review of applications for certification of Zero Emission Technology vehicles.

38. Enforcement in General. If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination that Volvo Car USA has failed to

comply with any term of this Settlement Agreement, the Executive Officer will notify Volvo Car USA, in writing, of the reasons supporting the determination and provide Volvo Car USA with information upon which the determination was based. Except as provided below with regard to a GHG Credit Shortfall Breach, breaches of this Settlement Agreement shall be enforced in accordance with applicable contract law, including the availability of injunctive relief.

39. Enforcement of Breach of GHG Fleet Commitments; Mitigation Plans. A breach of GHG fleet commitments in Paragraphs 29-34 of this Settlement Agreement resulting in a GHG credit shortfall required for a particular compliance period, after accounting for the GHG credit averaging, trading and banking provisions of this Agreement (a "GHG Credit Shortfall Breach"), is subject to enforcement by CARB exclusively in accordance with the terms of this paragraph.

- (A) If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination and notifies Volvo Car USA under this Agreement that Volvo Car USA has committed a GHG Credit Shortfall Breach, Volvo Car USA may, within 60 Days of receipt of the determination by the Executive Officer, propose a mitigation plan for approval by the Executive Officer.
- (B) A mitigation plan shall fully mitigate the emissions consequences of the Credit Shortfall Breach. It shall also prescribe Volvo Car USA's compliance for the GHG emissions commitments in the Agreement going forward. If Volvo Car USA's return to compliance is impracticable because there is inadequate time remaining in the Agreement, the mitigation plan shall identify the means by which Volvo Car USA will fully mitigate the consequences of any anticipated Credit Shortfall Breach.
- (C) To address the emissions consequences of the Credit Shortfall Breach, Volvo Car USA may propose, subject to the approval of the Executive Officer as set out below, a mitigation plan including any combination of commitments to take remedial actions, to implement special projects, or to make payments

into the Trust Account to be used to promote electrification and reduce GHG emissions. Payments into the Trust Account corresponding to the amount of the Credit Shortfall Breach as determined under this subparagraph shall be deemed fully to mitigate the emissions consequences of a Credit Shortfall Breach. In determining the amount of tons of GHGs to be addressed in a mitigation plan, Volvo Car USA shall propose and CARB shall confirm and specify the credit shortfall.

- (D) Payment amounts under a mitigation plan shall generally be consistent with prices for GHG credits in California's cap-and-trade program, the Regional Greenhouse Gas Initiative, or other similar GHG market programs, taking into account such other equitable factors as may be appropriate under all of the circumstances, and considering the social cost of carbon, using the Central 3 Percent Average Values as expressed in Appendix A, Table A-1 of the Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government (August 2016).
- (E) Mitigation plans may be enforced in court consistent with the venue provisions of this Agreement.
- (F) The Executive Officer shall review a mitigation plan for consistency with the terms of this Agreement and, on behalf of CARB, with any appropriate input from the Section 177 States, either approve or reject within 30 Days, with an explanation of any objections. This 30-Day period may be extended if Volvo Car USA agrees to an extension for further evaluation. If the Executive Officer rejects a mitigation plan, in whole or in part, Volvo Car USA will have 30 Days to amend the plan to address any objections by the Executive Officer. If the Executive Officer approves a mitigation plan, Volvo Car USA shall implement the mitigation plan according to its terms.
- (G) If Volvo Car USA fails timely to submit a mitigation plan or an amended plan, or if the Executive Officer rejects an amended plan, the Executive Officer may

adopt a mitigation plan for Volvo Car USA. Any mitigation plans that include actions in addition to, or in lieu of, payments into the Trust Account shall be limited to remedial actions or implementation of special projects that Volvo Car USA accepts as reasonable and whose cost does not exceed, for the tons in question, the amount of payments into the Trust Account determined in accordance with Paragraph 39(D) of this Agreement.

- (H) Volvo Car USA shall have 60 Days after receipt of approval or adoption by the Executive Officer to begin to implement a mitigation plan.
- (I) All payments required under a mitigation plan shall be deposited into a Trust Account as directed by CARB. Trust Account funds shall be used to administer the Trust Account. All funds deposited into this Trust Account shall be used to promote vehicle electrification or otherwise to reduce vehicle GHG emissions, in accordance with trust agreements to be developed in accordance with this Agreement as necessary. CARB will notify Volvo Car USA of the activities funded in each Section 177 State by any such payments, including the number of electric vehicle and fuel cell vehicle station installations, if applicable.

40. Dispute Resolution. The Parties agree that the procedures contained in this paragraph are the sole and exclusive procedures for resolving disputes under this Settlement Agreement.

- (A) If Volvo Car USA disagrees with the Executive Officer's determination of breach under this Settlement Agreement, or identifies other grounds for dispute under this Settlement Agreement including but not limited to the Executive Officer's rejection of a mitigation plan or adoption of its own mitigation plan, Volvo Car USA will provide a written Notice of Dispute and Statement of Position to the Executive Officer within 30 Days of the Executive Officer's notification of breach or other action that is the subject of dispute. Volvo Car USA's Notice of Dispute and Statement of Position shall include any factual data, analysis, or opinion supporting Volvo Car USA's position and any

supporting documentation relied upon by Volvo Car USA. CARB, with any appropriate input from the Section 177 States, will serve its Statement of Position within 45 Days of receipt of Volvo Car USA's Notice of Dispute and Statement of Position, unless that period is modified by written agreement. CARB's Statement of Position shall include any factual data, analysis, or opinion supporting CARB's position and any supporting documentation relied upon by CARB.

- (B) The period of informal negotiations shall not exceed 60 Days from the date of Volvo Car USA's receipt of CARB's Statement of Position, unless that period is extended by written agreement signed by CARB and Volvo Car USA.
- (C) If CARB, with any input from the Section 177 States, and Volvo Car USA are unable to resolve a dispute before the expiration of the 60-Day period for informal negotiations, either Party may file an action for breach in accordance with the venue provision of this Settlement Agreement, after providing ten Days written notice to the other Party. In any such action, the Parties shall be prohibited from raising issues that were not previously raised during dispute resolution, except for issues which could not practicably be raised previously during the dispute resolution.
- (D) The time period for Volvo Car USA to respond to CARB under any provision of this Agreement, including the time periods to submit, amend or implement a mitigation plan, shall not begin to run until the completion of dispute resolution either by agreement between the Parties or by the final resolution of a court proceeding.

41. Force Majeure.

- (A) "Force Majeure" means, for purposes of this Agreement, an event arising from causes beyond the control of Volvo Car USA, which delays or prevents the performance of any obligation under this Agreement, despite Volvo Car USA's

best efforts to fulfill the obligation, such as war, fires, floods, hurricanes, tornadoes, earthquakes, volcanic eruptions, labor strikes (but not lock-outs), acts of terrorism, pandemics, and other events resulting in unavoidable supply chain disruption. This does not include negligent acts or Volvo Car USA's financial inability to perform unrelated to the event as described in this paragraph.

- (B) If any event Volvo Car USA considers to be a force majeure event occurs or has occurred, Volvo Car USA shall provide written notice to CARB within 10 Days of when Volvo Car USA first knew that the event might cause a delay, impossibility or impracticability. Within 14 Days thereafter, Volvo Car USA shall provide in writing to CARB an explanation and description of the reasons for the delay, impossibility, or impracticability; the anticipated duration of any delay; all actions taken or to be taken to prevent or minimize any delay, impossibility, or impracticability; a schedule for implementation of any measures to be taken to prevent or mitigate a delay or the effects of any delay, impossibility, or impracticability; and Volvo Car USA's rationale for attributing such delay, impossibility, or impracticability to a force majeure event if it intends to assert such a claim. Volvo Car USA shall include with any notice all available documentation supporting the claim that the delay, impossibility, or impracticability was attributable to a force majeure event.
- (C) If CARB, with any input from the Section 177 States, agrees that the delay, anticipated delay, impossibility, or impracticability is attributable to a force majeure event, CARB shall modify Volvo Car USA's obligations under this Settlement Agreement as necessary and appropriate to account for the delay, impossibility, or impracticability resulting from the force majeure event. CARB will notify Volvo Car USA in writing of the modifications approved by CARB.
- (D) If CARB, with any input from the Section 177 States, disagrees that a delay, anticipated delay, impossibility, or impracticability has been or will be caused by a force majeure event, CARB will notify Volvo Car USA in writing of the decision.

(E) Volvo Car USA may elect to invoke dispute resolution in accordance with this Agreement based upon CARB's determinations and decisions pursuant to Paragraphs 41(C) and 41(D) above.

42. Records. Volvo Car USA agrees that CARB, on behalf of itself or the Section 177 State that has issued an Enforcement Discretion Letter, may request, and shall receive, records regarding compliance with this Agreement by filing a request in writing; records will be provided by Volvo Car USA within 21 Days of a request. Volvo Car USA may assert a claim of business confidentiality as appropriate for any such records pursuant to California law and the corresponding law of any Section 177 States that might seek to receive such records. Volvo Car USA will retain all relevant records for the term of this Agreement plus five years.

Additional Provisions

43. Term and Expiration. Volvo Car USA and CARB agree that, unless terminated or extended by modification in accordance with Paragraph 35, the Settlement Agreement covers MY2021 through MY2026. Except as otherwise specified in this paragraph, this Settlement Agreement shall expire and be of no further force and effect following Volvo Car USA's submission of data and technical information supporting its calculation of compliance for MY2026 in accordance with Paragraph 33(C) which includes, subject to the resolution of Volvo Car USA's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi) and three-year deficit carry-forward in accordance with Paragraph 34(C)(iii), verification of Volvo Car USA's Emissions Benefit Balance to determine whether MY2026 credits and/or deficits were fully resolved to achieve compliance through MY2026. If the Executive Officer has made a determination and notified Volvo Car USA of a GHG Credit Shortfall Breach within 60 Days after Volvo Car USA's submission of data and technical information with respect to Model Year 2026, the enforcement of breach of GHG fleet commitments/mitigation plan requirements and the dispute resolution provisions shall survive for the sole

purpose of resolving a determination of a GHG Credit Shortfall Breach, in accordance with Paragraph 39.

44. Entirety. This Agreement constitutes the entire agreement and understanding among the Parties concerning the matter described herein, and supersedes and replaces any and all prior negotiations and agreements of any kind, whether written or oral, among the Parties concerning the matter described herein. This Agreement consists of 49 pages plus signature pages and appendices and 57 numbered paragraphs.
45. Binding Effect. This Agreement binds Volvo Car USA and any principals, officers, receivers, trustees, successors and assignees, subsidiary and parent corporations and upon CARB, and any successor agencies that may have responsibility for and jurisdiction over the subject matter of this Agreement.
46. Effective Date. This Settlement Agreement is binding and effective as of the date that it is fully executed by Volvo Car USA and CARB.
47. Agreement Not Severable. In the event that any provision of this Settlement Agreement is held by a court to be illegal, invalid, or unenforceable in any jurisdiction, the Parties shall enter into good faith negotiation regarding modification in accordance with Paragraph 35 above with the intent to achieve the objectives and benefits of this Settlement Agreement to the greatest extent possible. Following such negotiations, either Volvo Car USA or CARB, with any appropriate input from the Section 177 States, may provide written notice to the other Party terminating this Settlement Agreement if the Agreement is not capable of modification in the view of either Party.
48. Choice of Law. This Agreement shall be interpreted and enforced in accordance with the laws of the State of California, without regard to California's choice-of-law rules.

49. Rule of Construction. Any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in interpreting this Settlement Agreement, including in any dispute resolution process.
50. Non-Waiver. The failure to enforce any provision of this Agreement shall not be construed as a waiver of any such provision, nor shall it prevent such Party thereafter from enforcing such provision or any other provision of this Agreement. The rights and remedies granted all Parties herein are cumulative and the election of one right or remedy by a Party shall not constitute a waiver of such Party's right to assert all other legal remedies available under this Agreement or otherwise provided by law.
51. Intent to be Bound. The Parties represent that they have participated fully in the review and drafting of this Agreement; understand and accept all terms; that they enter into this Agreement freely and voluntarily; have had an opportunity to consult with legal counsel; that they are fully informed of the terms and effect of this Agreement; that they enter into this Agreement after independent investigation and through no fraud, duress, or undue influence; and that they knowingly and voluntarily intend to be legally bound by this Agreement.
52. Venue. The Superior Court of California, located in the County of Sacramento, shall hear any dispute between the Parties arising from this Agreement.
53. Counterparts. This Agreement may be executed in counterparts. Facsimile or photocopied signatures (including PDF copies), shall be considered as valid signatures as of the date hereof, although the original signature pages shall thereafter be appended to this Agreement.
54. Release and Covenant Not to Sue. In consideration of Volvo Car USA's voluntary commitments in this Agreement, CARB releases Volvo Car USA and its principals, officers, receivers, trustees, successors and assignees, subsidiaries, affiliates and parent corporations from any claims, and covenant not to sue or otherwise

pursue such entities or individuals, for violations of the CA Standards for MY2021-MY2026. However, CARB retains authority to enforce this Settlement Agreement on the terms provided herein.

55. Authority. The undersigned represents that he or she has full authority to enter into this Agreement.

56. Assignment. This Settlement Agreement and the rights, duties, and obligations under it may not be assigned or delegated by CARB or Volvo Car USA without the prior written consent of the other Party. Any assignment or delegation made without prior written consent shall be void.

Notices

57. Notices. All notices, demands, requests, consents, approvals, or other communications (collectively "Notices") required or permitted to be given pursuant to this Settlement Agreement shall be in writing and shall be transmitted via United States mail and electronic mail to the Parties set out below. Notice shall be deemed given on the date of receipt.

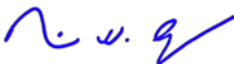
To CARB:

Executive Officer
California Air Resources Board
1001 I St
Sacramento, CA, 95814
Richard.Corey@arb.ca.gov

To Volvo Car USA:

Volvo Car USA, LLC
1 Volvo Drive
Rockleigh, NJ 07647
Attn: Katherine Yehl
katherine.yehl@volvocars.com

Dated: 8/17/2020



Richard W. Corey, Executive Officer, CARB



Anders Gustafsson, President & Chief Executive Officer
Volvo Car USA, LLC



Katherine Yehl, Vice President of Government Affairs, the Americas
Volvo Car USA, LLC

Appendix A: Curve Coefficients

Passenger Car and Light Truck Curve Coefficients representing 1 percent less year over year stringency to be used in calculation of 1 percent cap for Zero Emission Technology vehicles multiplier.

Passenger Car Curve Coefficients (1 Percent Less)				
Model year	Minimum Footprint ≤ 41.0 ft²	(a)	(b)	Maximum Footprint ≥ 56.0 ft²
2021	157.0	3.84	-0.4	215.0
2022	153.0	3.74	-0.4	209.0
2023	149.0	3.64	-0.4	203.0
2024	145.0	3.54	-0.4	198.0
2025	141.0	3.44	-0.4	192.0
2026	137.0	3.35	-0.3	187.0

Light Truck Curve Coefficients (1 Percent Less)					
Model year	Minimum Footprint ≤ 41.0 ft ²	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	190.0	4.16	19.3	74.0	327.0
2023	185.0	4.05	18.7	74.0	318.0
2024	180.0	3.94	18.2	74.0	310.0
2025	175.0	3.84	17.7	74.0	302.0
2026	170.0	3.73	17.3	74.0	293.0

Appendix B: Electrification Commitments

--This Appendix Consists Entirely of Confidential Business Information--

Settlement Agreement
between
California Air Resources Board
and
Volkswagen Group of America, Inc.

1. The California Air Resources Board (“CARB”) and Volkswagen Group of America, Inc. (VWGoA), hereinafter collectively referred to as the “Parties” or singularly as “Party,” voluntarily enter into this Settlement Agreement (or “Agreement”) based on the Parties’ mutual interest in mitigating their respective risks and resolving potential legal disputes concerning the authority of CARB and those states that have adopted California’s vehicle standards (“Section 177 States”) to adopt and enforce greenhouse gas (“GHG”) emissions standards applicable to new light-duty motor vehicles manufactured or distributed by VWGoA for Model Years 2021-2026 in light of the SAFE Rule Part One and Part Two, as discussed and defined below.
2. The Parties enter into this Agreement in light of ongoing and potential lengthy litigation involving the Federal Government, CARB and the Section 177 States regarding the SAFE Rule Part One and Part Two (collectively the “Litigation”). As elaborated below, VWGoA seeks, among other things, flexibility and certainty that will enable it to avoid compliance risks associated with California light duty vehicle GHG standards in California and the Section 177 States while maintaining or enhancing its current motor vehicle planning, production, sales, distribution, and related efforts regardless of the outcome of the current and pending litigation. CARB seeks, among other things, greater certainty regarding continuing automotive GHG emission reductions and vehicle electrification during the Model Years (“MYs”) subject to this Agreement.

The Parties

3. The California Air Resources Board: CARB is the state air regulator for California (Cal. Health and Safety Code § 39600 *et seq.*), and sets vehicle emissions standards pursuant to state law (*see, e.g.*, 42 U.S.C. § 7543, Cal. Health & Safety Code §§ 43013, 43018.5). CARB has promulgated GHG emission standards for the light-duty vehicle fleet. (*See* 13 CCR §§ 1961.3 *et seq.*).
4. VWGoA: VWGoA is a manufacturer or distributor of light-duty motor vehicles for sale throughout the United States that are or may be subject to regulation by the United States Environmental Protection Agency (“EPA”), the National Highway Traffic Safety Administration (“NHTSA”), CARB, and the Section 177 States.

Definitions

5. “Agreement Balance” means the amount of GHG credits available or deficits that apply to VWGoA at any given time for purposes of compliance with the Agreement, as calculated and tracked in accordance with Paragraph 34(A).

6. “CA Standards” are the standards applicable to light duty vehicle GHG emissions set out at 13 Cal. Code of Regulations § 1961.3(a)-(g) and encompass all related aspects of California regulations and test procedures relevant to the implementation of those standards.
7. “Days” means calendar days, unless otherwise specified.
8. “Emissions Benefit Balance” is an accounting designed to ensure the integrity of the emission benefits of this Agreement. The Emissions Benefit Balance will be calculated and tracked in accordance with Paragraph 34(B).
9. “Enforcement Discretion Letters” refers to letters or directives that each Section 177 State issues to document its exercise of enforcement discretion, assurance of support, or other use of authority allowing VWGoA to comply with this Agreement to achieve the objectives of the CA Standards through Model Year 2026, which each state has adopted pursuant to Section 177 of the Clean Air Act.
10. “Executive Officer” shall mean the person appointed by CARB pursuant to California Health & Safety Code § 39515.
11. “Federal Government” shall mean the National Highway Traffic Safety Administration (“NHTSA”) and the United States Environmental Protection Agency (“EPA”), collectively.
12. “2018 Federal Program” encompasses the EPA light-duty vehicle GHG standards and test procedures specified in Title 40 CFR Part 86 Subpart S, Section 86.1818-12 and Part 600 in place on July 1, 2018.
13. “Federal Program” refers to all applicable light-duty vehicle GHG standards and test procedures, such as those specified in Title 40 CFR Parts 86 Subpart S, 1066 and 600, as may be amended from time to time, and as interpreted and implemented by EPA.
14. “SAFE Rule Part One” encompasses the final actions promulgated by EPA and NHTSA and published at 84 Fed. Reg. 51,310 (Sept. 27, 2019).
15. “SAFE Rule Part Two” encompasses the final rules promulgated by EPA and NHTSA and published at 85 Fed. Reg. 24,174 (April 30, 2020).
16. “Section 177 States” means, as of the time the Parties entered into this Agreement, the States of Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont and Washington. These states, through their legislatures and duly authorized state regulatory agencies, have adopted GHG standards applicable to the light-duty vehicle fleet identical to CA standards pursuant to Section 177 of the Clean Air Act. Any additional state (or district or territory of the United States) that adopts such GHG standards after the Effective Date of this Agreement, as defined in Paragraph 46, will be considered a Section 177 State for purposes of this Agreement at such time as that body is authorized to enforce those standards in accordance with Section 177 of the Clean Air Act.
17. “Trust Account” means an account established by CARB, with any appropriate input from the Section 177 States, in which funds may be deposited to address a GHG Credit Shortfall Breach,

as described in Paragraph 39 of this Agreement, and which funds are for use to promote vehicle electrification or otherwise to reduce vehicle GHG emissions.

18. “Zero Emission Technology” vehicle means a battery electric vehicle (“BEV”), a fuel cell electric vehicle (“FCEV”), or a plug-in hybrid electric vehicle (“PHEV”) as that term is defined in the 2018 Federal Program.
19. “Zero Emission Vehicle” (“ZEV”) means a vehicle that produces zero exhaust emissions of any criteria pollutant (or precursor pollutant) or greenhouse gas, excluding emissions from air conditioning systems, under any possible operational modes or conditions.
20. For clarity and to provide certainty, unless otherwise defined herein, any terms not specifically defined in this Settlement Agreement are as defined in the Federal Program, and shall be interpreted to have the commonly-understood meanings of such terminology in the context of light duty vehicle GHG regulatory programs.

Mutual Understandings

21. CARB and Federal GHG Standards. In 2013, EPA issued CARB a waiver of federal preemption for its CA Standards pursuant to Section 209 of the CAA. 78 Fed. Reg. 2,112 (Jan. 9, 2013). EPA promulgated the 2018 Federal Program regulations in 2012, establishing federal GHG standards for Model Years 2022-2025; at the same time, NHTSA undertook an augural rulemaking to promulgate fuel economy standards consistent with the statutory limitations regarding NHTSA’s ability to adopt fuel economy standards no more than four years prior to the applicable Model Year. 77 Fed. Reg. 62,624 (Oct. 15, 2012). The CA Standards include a “deemed to comply” provision such that compliance with the 2018 Federal Program is deemed as compliance with the CA Standards. 13 C.C.R. § 1961.3(c). Likewise, compliance with the 2018 Federal Program qualifies as compliance in Section 177 States.
22. SAFE Rule Part One. The SAFE Rule Part One is a final agency action in which 1) EPA published a revocation of the CAA waiver of federal preemption previously granted to CARB for the CA Standards, at least as to certain Model Years, and 2) NHTSA adopted a rule declaring that state law regulations pertaining to motor vehicle emissions of carbon dioxide are preempted by the federal Energy Policy and Conservation Act (“EPCA”). CARB and the Section 177 States dispute the validity of these actions and the authority of EPA and NHTSA to take these actions. California has filed a lawsuit, together with the Section 177 States and other plaintiffs, challenging the NHTSA action in the United States District Court for the District of Columbia. *State of California v. Chao*, Case No. 1:19-cv-02826 (D.D.C. filed Sept. 20, 2019). California (including CARB), the Section 177 States, and others have also petitioned for review of the EPA and NHTSA actions in the SAFE Rule Part One in the United States Court of Appeals for the District of Columbia Circuit. *State of California v. Wheeler*, Case No. 19-1239 (D.C. Cir. filed Nov. 15, 2019).
23. SAFE Rule Part Two. The SAFE Rule Part Two is a final rule that reduces the stringency of the 2018 Federal Program and modifies alternative compliance measures. CARB has initiated litigation challenging the SAFE Rule Part Two. VWGoA has moved to intervene in the litigation for the limited purpose of addressing the remedy if the court grants a petition for review of the SAFE Rule Part Two. Under CARB regulations, with the promulgation of SAFE

Rule Part Two, compliance with the Federal Program is no longer deemed compliance with the CA Standards, and instead manufacturers are required to comply with the CA Standards without regard to the Federal Program beginning with the 2021 Model Year. 13 C.C.R. § 1961.3(c).

24. Authority of Agencies to Enter into this Settlement Agreement and Otherwise Exercise Enforcement Discretion. CARB takes the position that its authority pursuant to Health & Safety Code § 43213 among other authorities to enforce the CA Standards was illegally restricted by SAFE Rule Part One, although CARB has stated that it will not take enforcement actions as to model years covered by EPA's waiver revocation in the SAFE Rule Part One unless and until the revoked portions of the waiver are reinstated. CARB and the Section 177 States take the position that they may enforce their regulations if the revoked portions of the waiver are reinstated or if the EPA and NHTSA actions in the SAFE Rule Part One are vacated. CARB and the Section 177 States may exercise enforcement discretion with respect to such authority, including entering into settlement agreements and issuing Enforcement Discretion letters or other enforcement discretion directives. Moreover, CARB has authority to contract with regulated entities or to take other actions necessary to further its statutory purposes as needed to meet climate and public health targets. *See generally* Cal. Health & Safety Code § 39600 *et seq.*
25. Risks and Benefits. This paragraph describes the Parties' understandings of important risks and benefits relevant to this Agreement; it is not intended as a comprehensive statement of all such risks and benefits. As set forth in Paragraph 2 above, litigation over the SAFE Rule Part One and the SAFE Rule Part Two, as well as potential further federal regulatory actions, create uncertainty for VWGoA regarding the GHG standards that will apply throughout the United States for Model Year 2021 through Model Year 2026 and subsequent. The outcome of this litigation or additional federal regulatory actions may result in two GHG compliance standards in the United States for the covered Model Years: requirements to comply with more stringent CA Standards in California and the Section 177 States; and less stringent SAFE Rule Part Two standards throughout the rest of the United States. This regulatory uncertainty also subjects VWGoA to considerable enforcement risk. Therefore, VWGoA enters into this agreement to ensure, among other reasons, that it has the ability to (i) make long-term product planning decisions and investments with confidence; (ii) satisfy market demand and production realities; and (iii) comply with regulatory requirements during this time. This Settlement Agreement offers VWGoA compliance flexibility and greater certainty to plan for its nationwide fleet. The SAFE Rule Part One and SAFE Rule Part Two, and the related litigation, also entail risks that California and the Section 177 States may not achieve the pollutant reduction goals they expected to result from the CA Standards. Entry into this Settlement Agreement is consistent with those goals, including goals set out in the AB 32 Scoping Plan, and will deliver environmental benefits commensurate with those goals that may not be realized in the absence of an agreement. Each Section 177 State has made consistent judgments, reflected in the Enforcement Discretion Letters.
26. Commitments. In light of the risks set forth above, VWGoA commits to comply with this Settlement Agreement. Subject to the conditions and terms specified in this Settlement Agreement, CARB commits to exercise its enforcement discretion to accept VWGoA's compliance with the terms of this Settlement Agreement as an agreed upon compliance plan

to achieve the objectives of the CA Standards for Model Year 2021 through Model Year 2026. CARB further accepts this Agreement as a contractual commitment. During the term of this Settlement Agreement, CARB will not enforce the CA Standards with regard to VWGoA using available enforcement mechanisms, and CARB instead shall enforce the terms of this Settlement Agreement solely in accordance with the enforcement provisions and remedies herein. The Parties recognize that each Section 177 State is issuing an Enforcement Discretion Letter that allows VWGoA to comply with this Agreement to achieve the objectives of the CA Standards in each Section 177 State through Model Year 2026. Through their respective Enforcement Discretion Letters, each Section 177 State committed to exercise enforcement discretion in lieu of enforcing the CA Standards, as adopted, based on VWGoA's entry into this Agreement. As a basis for entering into this Agreement, VWGoA has relied on each Section 177 State's representation that it will exercise its enforcement discretion, as described in their respective Enforcement Discretion Letters.

27. No Effect on Federal Law or Law of Other States. The Parties to this Agreement do not intend to, and this Agreement does not, alter either Party's obligations under federal law, or impose on VWGoA compliance obligations with respect to sales or related activities in any individual state.

Agreed Substantive Terms

28. Litigation Commitments. VWGoA, on behalf of itself, its parent companies, subsidiaries and affiliates, will not challenge or seek to undermine this Agreement or CA Standards for the current Model Year through Model Year 2026, or the corresponding standards in Section 177 States. VWGoA will, to the extent possible under applicable trade association bylaws, oppose participation in any such challenges by any trade associations to which it belongs and avoid providing resources for any such challenges. VWGoA will not intervene on the side of the United States, or file an amicus brief on the side of the United States, to defend SAFE Rule Parts One or Two. This Agreement does not limit VWGoA's rights as intervenor in the SAFE Rule Part Two litigation to address the remedy in the event that a court grants a petition for review. Each Party agrees to support the validity of this Agreement in the event of third-party challenges.
29. Greenhouse Gas Fleet Commitments: VWGoA agrees to maintain an average yearly reduction in GHG emissions from its fleet sold nationwide (light-duty passenger cars, light-duty trucks, and medium-duty passenger vehicles) for model years 2021 through 2026, in accordance with the following:
- (A) The target Carbon-Related Exhaust Emission (CREE) value for VWGoA's fleet shall be calculated separately for passenger cars and trucks utilizing the footprint curves defined below.
 - (B) Coefficients defining the footprint curves are identified in the tables below.
 - (i) For vehicles with a footprint equal to or smaller than the footprint identified in the Minimum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Minimum Footprint column.

- (ii) For vehicles with a footprint greater than the Minimum Footprint and less than the Maximum Footprint, the target CREE value in units of grams per mile for each vehicle for the corresponding model year shall be calculated by multiplying the footprint of the vehicle by the value in column (a) and adding the value in column (b) and rounding the result to the nearest tenth of a gram per mile.
- (iii) For vehicles with a footprint equal to or greater than the footprint identified in the Maximum Footprint column, the target CREE value in units of grams per mile for the corresponding model year is the value listed in the Maximum Footprint column.

Passenger Car Curve Coefficients				
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	Maximum Footprint $\geq 56.0 \text{ ft}^2$
2021	157.0	3.84	-0.4	215.0
2022	151.0	3.70	-0.4	207.0
2023	146.0	3.56	-0.4	199.0
2024	140.0	3.43	-0.4	192.0
2025	135.0	3.30	-0.3	185.0
2026	130.0	3.18	-0.3	178.0

Light Truck Curve Coefficients					
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft^2)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	188.0	4.12	19.1	74.0	324.0
2023	181.0	3.97	18.4	74.0	312.0
2024	174.0	3.82	17.7	74.0	300.0
2025	168.0	3.68	17.0	74.0	289.0
2026	162.0	3.54	16.4	74.0	278.0

30. Flexibilities to Promote Zero Emission Technology

(A) To recognize the value of increased introduction of zero emission technologies towards CA's and the Section 177 States' long-term needs for electrification of the fleet, VWGoA's Zero Emission Technology vehicles shall utilize a production multiplier for purposes of compliance calculations as follows:

- (i) For BEVs and FCEVs, a vehicle production multiplier of 2.0 shall be used for MY2020 through MY2024, a multiplier of 1.75 shall apply for MY2025, and a multiplier of 1.5 shall apply only for MY2026.
- (ii) For PHEVs, a vehicle production multiplier of 1.6 shall be used for MY2020 through MY2024, a multiplier of 1.45 shall apply for MY2025, and a multiplier of 1.3 shall apply only for MY2026.
- (iii) VWGoA shall clearly identify in its end of model year reporting for each model year to CARB, which Zero Emission Technology vehicles VWGoA has designated to use the production multiplier(s) for compliance calculations.
- (iv) The use of these production multipliers shall be limited by a "1 percent cap".

(1) The cap shall be calculated as a cumulative cap representing the total available credits that can be cumulatively earned from the production multipliers for MY2020 through MY2026 vehicles.

(2) Calculation of the cap

- (a) For MY2020 and for MY2021, the contribution to the cumulative cap shall be calculated as 2.0 grams per mile for each model year and converted to grams by multiplying by VWGoA's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.
- (b) For each model year from MY2022 through MY2026, the contribution to the cumulative cap shall be calculated as the difference between the model-year specific calculated fleet average target value applicable to VWGoA per this Agreement and a calculated fleet average for a target value using the curve coefficients defined in Appendix A: Curve Coefficients that represents 1 percent less in annual reductions than the target value per this Agreement (e.g., a target value reflecting 2.7 percent year over year reductions from MY2021 if the target value in this Agreement reflected a 3.7 percent year over year reduction from MY2021). The difference shall be converted from grams per mile to grams by multiplying by VWGoA's specific fleet for the number of passenger cars and light trucks and the corresponding value for vehicle lifetime miles of 195,264 and 225,865, respectively. For this calculation, production multipliers for Zero Emission Technology vehicles may not be utilized.
- (c) VWGoA's cumulative cap, in grams, shall be the sum of the above calculations for each individual model year from MY2020 through MY2026.
- (d) The required calculation format (assuming for purposes of this example that the Agreement requires a 3.7 percent year over year reduction) is as follows. All values expressed in megagrams shall be rounded to the nearest whole number.

$$CAP_{MY2020 \text{ thru } MY2021} = \sum_{MY2020}^{MY2021} (2.0 [g/mi] \times Volume \times Vehicle Lifetime Miles)$$

$$CAP_{MY2022 \text{ thru } MY2026} = \sum_{MY2022}^{MY2026} ((Fleet Target Value [g/mi]@2.7\% - Fleet Target Value [g/mi]@3.7\%) \times Volume \times Vehicle Lifetime Miles)$$

Where:

$CAP_{MY2020 \text{ thru } MY2021}$ = Portion of the cumulative 1 percent cap from MY2020 and MY2021 vehicles in grams.

$CAP_{MY2022 \text{ thru } MY2026}$ = Portion of the cumulative 1 percent cap from MY2022 through MY2026 vehicles in grams.

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year over year stringency, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without production multipliers applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 miles for passenger cars and 225,865 miles for light trucks.

(3) Tracking of credits used toward the cap

- (a) For each model year from MY2020 through MY2026, VWGoA shall calculate the amount of credits earned from production multipliers as specified below and apply those towards the cumulative 1 percent cap as defined in Paragraph 30(A)(iv)(2), above. Zero Emission Technology vehicles for which VWGoA elected not to use the production multipliers shall be included in this calculation in the same manner as other vehicles that do not utilize production multipliers.
- (b) Calculation of credits. For each model year from MY2020 through MY2026, Zero Emission Technology vehicle credits shall be calculated separately for passenger automobiles and light trucks, using the following equations to effectively subtract the credits calculated for the base fleet from the credits calculated for the fleet with multipliers applied. No credits are earned if the result is a negative value. All values expressed in megagrams shall be rounded to the nearest whole number.

$$Zero \ Emission \ Technology \ Vehicle \ Credits[Mg] = Credits_{adj} - Credits_{base}$$

- (i) When calculating the $Credits_{adj}$ for Zero Emission Technology vehicles from production multipliers for MY2020 through MY2026, VWGoA may elect to calculate the credits based on either the Method 1 or Method 2 formula below.

1. Method 1 formula:

$$Credits_{adj}[Mg] = \left(\frac{(Fleet Target Value_{adj} - Performance_{adj}) \times Volume_{adj} \times Vehicle Lifetime Miles}{1,000,000} \right)$$

Where:

$Fleet Target Value_{adj}$ = Production weighted fleet average standard from the footprint target calculation for the specified year, with the production multiplier applied to designated Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

$Performance_{adj}$ = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

$Volume_{adj}$ = Total production of passenger cars or light trucks with the production multiplier applied to designated Zero Emission Technology vehicles, with no rounding applied to the result.

$Vehicle Lifetime Miles$ = 195,264 for passenger automobiles and 225,865 for light trucks.

2. Method 2 formula:

$$Credits_{adj}[Mg] = \left(\frac{(Fleet Target Value - Performance_{adj}) \times Volume \times Vehicle Lifetime Miles}{1,000,000} \right)$$

Where:

$Fleet Target Value$ = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

$Performance_{adj}$ = Production weighted fleet average CREE with the production multiplier applied to designated Zero Emission Technology vehicles in the CREE value calculation in gram per mile units with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

- (ii) Except as noted below for MY2020 and MY2021, for both Method 1 and Method 2, base fleet credits shall be calculated in megagrams using the following equation and rounding the result to the nearest whole number.

$$\text{Credits}_{base}[Mg] = \left(\frac{(\text{Fleet Target Value} - \text{Performance}) \times \text{Volume} \times \text{Vehicle Lifetime Miles}}{1,000,000} \right)$$

Where:

Fleet Target Value = Production weighted fleet average standard from the footprint target calculation for the specified year, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Performance = Production weighted fleet average CREE, without the production multiplier applied to Zero Emission Technology vehicles, in gram per mile units, with no rounding applied to the result.

Volume = Total production of passenger cars or light trucks, without the production multiplier applied to Zero Emission Technology vehicles.

Vehicle Lifetime Miles = 195,264 for passenger automobiles and 225,865 for light trucks.

1. To determine the amount of credits to be added to VWGoA's starting Agreement Balance and to be applied towards the cumulative 1 percent cap for MY2020, base fleet credits shall be calculated using the $Credits_{adj}$ equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for $Credits_{base}$. VWGoA shall utilize the same method (i.e., Method 1 or 2) that was used to calculate $Credits_{adj}$ for MY2020 with the production multipliers from this Agreement.
2. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2021, base fleet credits shall be calculated using the equation specified above for $Credits_{base}$ with no production multipliers applied.
3. To determine the amount of credits to be applied towards the cumulative 1 percent cap for MY2021, base fleet credits shall be calculated using the $Credits_{adj}$ equation identified for Method 1 or 2 with the applicable production multipliers from the 2018 Federal Program rather than the equation specified above for $Credits_{base}$. VWGoA shall utilize the same

method (i.e., Method 1 or 2) that was used to calculate *Credits_{adj}* for MY2021 with the production multipliers from this Agreement.

4. To determine the total Zero Emission Technology credits to be used in the calculation of model year compliance and the Agreement Balance for MY2022 through MY2026 and to be applied towards the cumulative 1 percent cap for MY2022 through MY2026, base fleet credits shall be calculated using the equation specified above for *Credits_{base}* with no production multipliers applied.
- (v) For Zero Emission Technology vehicles produced by VWGoA in excess of the cumulative 1 percent cap:
- (1) For MY2020 BEVs and FCEVs, a production multiplier of 1.75 and for MY2021 BEVs and FCEVs, a production multiplier of 1.5 shall be used for compliance calculations.
 - (2) For MY2020 PHEVs, a production multiplier of 1.45 and for MY2021 PHEVs, a production multiplier of 1.3 shall be used for compliance calculations.
 - (3) For MY2022 through MY2026 BEVs, FCEVs, and PHEVs, no production multiplier (i.e., a value of 1.0) shall be used.
- (vi) For compliance calculations, the applicable Zero Emission Technology production multipliers are only used in the calculation of credits from Zero Emission Technology vehicles and may not be used in the calculation of VWGoA's fleet target value or VWGoA's fleet performance carbon-related exhaust emissions (CREE) value.
- (B) Zero Emission Technology vehicles for MY2020 through MY2026 shall utilize a value of 0 grams per mile to represent the emissions of FCEVs and BEVs and the proportion of electric operation of PHEVs that is derived from electricity that is generated from sources that are not onboard the vehicle.
- (i) For BEVs and FCEVs, 0 grams per mile shall be used as the CREE value for the vehicle's performance in compliance calculations.
 - (ii) For PHEVs, 0 grams per mile shall be used as the CREE value to represent the proportion of electric operation of a vehicle that is derived from electricity that is generated from sources that are not onboard the vehicle. For ease of understanding, such proportion of operation shall be calculated in accordance with the 2018 Federal Program.

31. Air Conditioning (A/C) Related Credits and Off-Cycle Credits

- (A) Except as noted in Paragraph 31(A)(vi) below, for all requested A/C and off-cycle credits:
- (i) VWGoA should notify CARB of its intent to use such credits in its pre-model year report submitted no later than December 31 of the calendar year two years before the model year;
 - (ii) VWGoA may submit such requests and supporting data and documentation prior to or during the applicable model year to facilitate earlier review and approval by CARB; and

- (iii) VWGoA shall submit such requests and supporting data and documentation for review and approval by CARB no later than the submittal of the end of model year report by May 15 following the model year. Submitted data shall include identification and sales volumes of the vehicle model(s) and configurations that have specific technologies applied and the credits claimed for each technology along with documentation supporting the claimed credit value for each technology.
 - (iv) In general, approved credits are valid through the MY2026. VWGoA will be required to newly apply for and CARB will determine an appropriate value for credits on MY2027 and later vehicles. Where specifically noted, credits may be approved on a more limited basis and/or conditioned on VWGoA collecting and submitting additional data from actual vehicle operation and/or testing to support the approved credits.
 - (v) Except as specifically noted in this Agreement, the provisions of the 2018 Federal Program apply for determining credits for A/C leakage and efficiency improvements, off-cycle technologies, and full-size pickup hybrid technology as well as exhaust emission performance CO₂ equivalent credits or debits from N₂O and/or CH₄ emissions.
 - (vi) For A/C and off-cycle technologies previously granted credits to VWGoA by EPA before January 1, 2020 through explicit approval or by EPA for MY2020 or earlier via acceptance of VWGoA's end of model year report, and where EPA continues to grant the identical credit values to VWGoA, CARB shall grant VWGoA the same credit values subject to the same, if any, limitations by EPA (e.g., the inclusion or exclusion of a specific credit towards a maximum cap for that technology).
 - (vii) All MY2021 and later model year credits are subject to CARB acceptance in accordance with this Agreement and the established approval criteria and practice in the Federal Program. In its review of credits for approval, the Parties intend that CARB will remain aligned with EPA to the extent possible in accordance with good engineering judgment and technical rationale. However, where appropriate to promote faster adoption of new technologies, CARB may independently approve credits prior to acceptance by EPA.
- (B) For MY2020 through MY2026 off-cycle credits that VWGoA selects from predefined values assigned in the 2018 Federal Program:
- (i) The maximum allowable decrease in VWGoA's fleet emissions from the use of such credits may not exceed 15.0 grams per mile.
 - (ii) For thermal control technologies, the existing caps of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks shall apply on a per vehicle basis (e.g., no individual car or truck shall receive credits in excess of the cap).
 - (iii) The predefined values available for use by VWGoA will also include:
 - (1) A credit value of 1.1 grams per mile is available for passenger cars and light trucks that utilize an advanced A/C compressor with an improved efficiency relative to fixed-displacement compressors derived from improved internal valve systems that optimize the internal refrigerant flow across the range of compressor operator conditions through the addition of a variable crankcase suction valve. Except as noted in Paragraph 31(E)(ii) below, these credits shall be counted towards the A/C

efficiency per vehicle caps of 5.0 and 7.2 grams per mile for passenger cars and light trucks, respectively.

- (2) A credit value is available for passenger cars and light trucks that utilize a high efficiency alternator. The credit value shall be 0.16 grams per mile for each one percent of improvement in Verband der Automobilindustrie (VDA) efficiency above a baseline of 67 percent efficiency (*e.g.*, if a high efficiency alternator achieves 69 percent VDA efficiency, the credit value would be 0.32 grams per mile calculated as $(69 - 67) * 0.16 = 0.32$). VDA efficiency is the ratio of the alternator output power to the power supplied to the alternator, as measured using the VDA efficiency measurement methodology and expressed as a whole number percent from 68 to 100. The Parties agree that further detail regarding these calculations is provided at EPA-HQ-OAR-2018-0283-0706 “Potential Off-cycle Menu Credit Levels for High Efficiency Alternators and Advanced Air Conditioning Compressors”, memo from EPA (Aug. 1, 2018).

(C) For MY2021 through MY2026 off-cycle credits that VWGoA utilizes the 5-cycle test method to determine the amount of the credit:

- (i) VWGoA shall provide test data showing the 5-cycle and 2-cycle combined city/highway test results for with and without the off-cycle credit technology active.
- (ii) The amount of off-cycle credit shall be the difference of the 5-cycle testing with and without the technology active less the difference of the 2-cycle testing with and without the technology active to ensure the credit reflects an incremental amount above and beyond what is already accounted for in the 2-cycle testing.

(D) For MY2021 through MY2026 off-cycle credits that VWGoA requests CARB approval of through a special test procedure to quantify the credit:

- (i) Upon receipt of a completed application with all confidential business information redacted, CARB may provide public notice to interested parties of receipt of such an application and make it available for review and comment. CARB may provide at least 30 days of public review and identify a method for parties to submit their comments. After the comment period, the applicant and/or CARB may make modifications as needed to address relevant issues before issuing a final approval. A version of the final approval, with any confidential business information redacted, may also be made publicly available by CARB for reference.
- (ii) For identical technologies previously approved by CARB during the term of this Agreement or approved by EPA prior to January 1, 2020, VWGoA may utilize the identical special test procedure/methodology as was previously used to determine the appropriate credit value for its specific vehicle(s).
- (iii) For thermal control technologies, any credit determined under the special test procedures shall be applied towards, and may not exceed, a maximum value for the sum of all applied thermal control technologies of 3.0 grams per mile for passenger cars and 4.3 grams per mile for light trucks.

(E) For MY2021 through MY2026 credits related to air conditioning system efficiency improvements:

- (i) If VWGoA uses predefined values or 5-cycle testing to demonstrate the credit value of the applicable technology, the maximum credits available are 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck and shall apply on a per vehicle basis (e.g., no individual car or truck shall receive credits in excess of the cap).
- (ii) In general, the maximum credit limits of 5.0 grams per mile for a passenger car and 7.2 grams per mile for a light truck also apply to and include technologies where VWGoA uses special testing approved by CARB to demonstrate the credit value of the applicable technology. However, if VWGoA performs such special testing on a vehicle or system that has already met the credit limit by utilization of other technologies and demonstrates that the added technology still provides additional measurable GHG reductions, credits beyond the limit commensurate with the benefits will be granted by CARB.

(F) Additional provisions for MY2021 through MY2026 vehicles:

- (i) To support the development of streamlined application processes for MY2027 and later vehicles:
 - (1) Applications to determine the preliminary credit value for eligible off-cycle technologies on MY2021 through MY2026 vehicles may be submitted by automotive suppliers. However, only applications accompanied by a letter of endorsement from VWGoA or another manufacturer subject to a similar agreement will be considered for approval by CARB.
 - (2) Applications by suppliers may be based on the 5-cycle testing method or the special testing method to determine the appropriate credit value. Depending on the technology, the preliminary credit value may be an absolute value or a scaled value based on a parameter determined to be correlated to its benefit.
 - (3) For technologies assigned a preliminary credit value from an approved supplier application, VWGoA shall request CARB approval of the use of the technology. CARB shall approve the use of the credit value upon VWGoA providing sufficient information to confirm the implementation of the technology is consistent with the supplier's application.
 - (4) CARB may approve such applications on a limited basis by model year and vehicle application and/or require testing or other data collection from the supplier or VWGoA to verify the appropriateness of the credit value.
- (ii) To support the development of appropriate credit values and testing methodologies for future model year vehicles:
 - (1) In order for MY2022 through MY2026 BEVs and/or FCEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), VWGoA shall submit a plan for CARB review and approval on how it will gather activity data and/or test data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of data specific to the technology and its relative benefits on a Zero Emission Technology vehicle across a variety of vehicles

and/or in-use operation, as appropriate (*e.g.*, by demonstrating the improvement in vehicle efficiency (Watt-hour per mile) and using a value for electricity generation in grams CO₂ per Watt-hour to calculate an appropriate gram per mile value, by collecting representative data on in-use vehicles to refine future assumptions related to usage of the technology, etc.).

- (2) In order for MY2022 through MY2026 PHEVs to utilize the full value of A/C or off-cycle predefined credits (other than A/C leakage or solar panel credits), VWGoA shall be required to submit a plan for CARB review and approval on how it will submit PHEV activity data to support the future establishment of MY2027 and later Zero Emission Technology specific credit values. Such data shall be limited to data that VWGoA will be collecting for other purposes and/or otherwise have available for PHEVs for which VWGoA is requesting the credit and need only include the data most relevant to informing the usage or operation of the applicable off-cycle technology in PHEVs across a variety of vehicles and/or in-use operation, as appropriate (*e.g.*, data on the fraction of vehicle miles traveled using electric propulsion versus gasoline powered propulsion, data on the fraction of trips that have an engine start, etc.). CARB may not require VWGoA to conduct special testing or implement additional parameters or data collection methods, however, VWGoA may voluntarily propose to use test data or a combination of test data and activity data as part of its plan to satisfy this requirement. CARB shall approve the requested credit and plan upon determining the proposal uses good engineering judgment to provide a reasonable amount of the available data (and/or test data as described above) specific to the applicable PHEV(s).
- (3) Off-cycle credits may be approved on a limited model year basis for technologies where the GHG benefits depend on the behavior of the driver (*e.g.*, driver coaching, haptic pedals) only when:
 - (a) It is possible, on the basis of reasonable evidence, to make assumptions about average driver behavior to calculate the likely impact and associated credit value; and
 - (b) VWGoA agrees to perform additional data collection and testing to allow for verification of the behavior on actual vehicles utilizing the technology and to be used in establishment of more appropriate credit values and testing methodologies for subsequent model year vehicles.

(iii) Ineligible technologies

- (1) Off-cycle credits may not be approved for technologies that are integral or inherent to the basic vehicle design, such as engine, transmission, mass reduction, passive aerodynamic design, and tire technologies. Technologies installed for non-off-cycle emission-related reasons or that otherwise would have been installed for purposes of reducing emissions (directly or indirectly) over the test cycles for compliance with the GHG standards are also not eligible as they would be considered part of the baseline vehicle design. Off-cycle credits may not be approved for crash-avoidance technologies, safety critical systems or systems affecting safety-critical functions, or technologies designed for the purpose of reducing the frequency of vehicle crashes. Off-cycle credits may not be earned for

technologies installed on a motor vehicle to attain compliance with any vehicle safety standard.

- (2) Waste heat, as used for active warm-up off-cycle credits, refers to heat that cannot be recovered by any other component or system on the vehicle and does not include systems that preferentially or necessarily first use heat to warm the engine oil or interior cabin before utilization to warm up the engine or transmission.
 - (3) With the exception of A/C-related technologies for cooling the cabin or occupants, technologies that have predefined credit values, and technologies for Zero Emission Technology vehicles, off-cycle credits may not be granted for non-powertrain or non-propulsion technologies including technologies inherent to the design of occupant comfort and entertainment features such as passenger or cabin heating, interior displays or components, infotainment components, etc. For purposes of this paragraph, technologies that are designed to recapture energy created by the powertrain that otherwise would be lost (*e.g.*, through heat or mechanical friction during deceleration or braking events) will be considered powertrain technologies.
 - (4) For Zero Emission Technology vehicles, ineligible technologies will include displays, infotainment systems, and other items not directly related to propulsion or battery conditioning.
32. Certification. Prior to certification, VWGoA agrees to provide CARB with all emission data necessary to calculate CREE levels for each emission data vehicle representing a test group submitted to CARB for certification to CARB's criteria pollutant emission standards (title 13, CCR § 1961.2).
33. Compliance.

(A) Unless it is otherwise specified in this Agreement that provisions of the 2018 Federal Program apply, EPA changes during the term of this Agreement in the Federal Program regulations, including but not limited to test procedures and calculation methodologies, will automatically apply for purposes of this Agreement unless either Party notifies the other Party of its belief that such changes will have a material impact on the stringency of the GHG commitments. Following such notification, VWGoA and CARB shall in good faith confer in accordance with Paragraph 35 to reach a mutually acceptable resolution. The Party seeking a departure from changes to the Federal Program shall 1) explain the basis for its position that the changes made by EPA will have a material impact on the stringency of the GHG commitments, and 2) propose a technical modification in accordance with Paragraph 35. It is the intent of the Parties that any resolution to address a material impact on stringency due to changes EPA makes in the Federal Program regulations will minimize disruption or burdens on VWGoA's implementation of testing and related administrative requirements. Except where the 2018 Federal Program is specified in this Agreement and for changes to the Federal Program for which a Party provides notification under this paragraph, the Parties intend that VWGoA will be able to utilize the same test procedures and calculation methodologies to generate the required data for compliance with this Agreement and the Federal Program, including but not limited to any revisions related to the phase-in of the use of E10 test fuel resulting from EPA's Vehicle Test Procedures Adjustments for Tier 3 Certification Test Fuel rulemaking, proposed at 85 Fed. Reg. 28,564 (May 13, 2020).

- (B) Compliance under this Agreement is determined by first calculating compliance based on CREE performance relative to the standard without the use of any Zero Emission Technology multipliers. Air conditioning-related, off-cycle, full-size pickup, and Zero Emission Technology vehicle credits as well as applicable debits for N₂O and/or CH₄ emissions are then separately calculated and added to the calculated CREE performance credits or debits. Zero Emission Technology vehicle credits shall be calculated for each model year as specified in Paragraph 30(A)(iv)(3)(b) of this Agreement.
- (C) No later than May 15 following the model year, VWGoA shall provide CARB with all data and technical documentation to support a calculation of compliance for the applicable model year including:
- (i) Sales and footprint data to calculate VWGoA's target CREE fleet value.
 - (ii) Sales, vehicle performance data, and supporting information for all credits requested for the model year to calculate VWGoA's achieved fleet CREE performance.
 - (iii) Sales data and fleet footprint and performance data to calculate VWGoA's Zero Emission Technology 1 percent cumulative cap and the number of credits earned towards the cap for the current and previous model years. If the cumulative credits claimed as earned by VWGoA exceed the 1 percent cap as calculated solely for the current and previous model years, the submitted data must also include an estimate of the cumulative portion of the cap projected to be earned in future model years by VWGoA.
 - (iv) The "Agreement ABT Calculator" that was developed jointly by the Parties, as may be updated from time to time upon written agreement of the Parties, populated with data for the applicable model year to support VWGoA's calculation of compliance and tracking of credits and deficits.

34. Banking of Credits and Deficits.

(A) Agreement Balance.

- (i) Starting Balance: VWGoA will enter the Agreement with a value of credits (or deficits) in megagrams of CO₂ for its Agreement credit balance equal to its 2018 Federal Program credit balance as calculated at the conclusion of MY2020 (for MY2011 through MY2020) with the following adjustments:
 - (1) Subject to the limits of the "1 percent cap" per Paragraph 30(A)(iv), the advanced technology vehicle multiplier for MY2020 BEVs and FCEVs will be 2.0 and 1.6 for MY2020 PHEVs in lieu of 1.75 and 1.45, respectively; and
 - (2) The cap for off-cycle credits based on predefined (menu) values will be 15 g/mi for MY2020 such that if VWGoA had exceeded the 10 g/mi cap in MY2020 and not been awarded full benefit of the applied technologies, an adjustment would be made to its credit balance to reflect the higher cap.
- (ii) Calculation of Agreement Balance. For MY2021 through MY2026, VWGoA's Agreement credit balance shall be calculated per the requirements of this Agreement.

- (1) As specified in Paragraph 33(A) above, compliance is calculated first based on actual performance and then all earned credits (*e.g.*, A/C, off-cycle) per this Agreement for the specific model year for which VWGoA is subject to GHG fleet commitments under this Agreement.
- (2) If VWGoA has a surplus (credits earned beyond its obligation) after the model year compliance calculation, those credits shall be added to the Agreement Balance in accordance with the averaging, banking, and trading (“ABT”) provisions of the 2018 Federal Program.
- (3) If VWGoA has a deficit after the model year compliance calculation, then those deficits shall be added to the Agreement Balance in accordance with the ABT provisions of the 2018 Federal Program.
- (4) If VWGoA participated in any Agreement credit transactions (*e.g.*, sale, purchase) or used Agreement credits to satisfy Agreement Balance deficits, then those transactions and usage shall be recorded in the Agreement Balance in accordance with ABT rules. Except as specified in Paragraph 34(D)(iv)(3) for Federal Program credits acquired from ZEV-only manufacturers, Federal Program credit transactions for model years subject to standards specified in this Agreement may not be recorded in the Agreement Balance. Regarding Federal Program credits earned from model years after the expiration or early termination of this Agreement and used to resolve VWGoA’s Agreement Balance deficits carried forward into model years after the expiration or early termination of this Agreement in accordance with Paragraph 34(C)(iv), such Federal Program credits shall be recorded in the Agreement Balance.

(B) Emissions Benefit Balance.

- (i) Purpose: To ensure the integrity of the emission benefits of this Agreement, VWGoA shall be required to achieve a net zero or positive credit balance and resolve any incurred deficits through MY2031 (based on the resolution of VWGoA’s obligations in accordance with Paragraph 34(B)(vi)), and possibly through as late as MY2034 (based on VWGoA’s carry-forward of deficits in accordance with Paragraphs 34(C)(iii), and 34(C)(iv)), in a separate Emissions Benefit Balance that VWGoA tracks and reports to CARB.
- (ii) Starting Balance: The starting balance for the Emissions Benefit Balance shall be equal to VWGoA’s starting Agreement Balance.
- (iii) Calculation of Emissions Benefit Balance through MY2026. For MY2021 through MY2026, VWGoA’s Emissions Benefit Balance will be calculated as follows:
 - (1) Add in, per ABT rules, credits (or deficits) determined from the Agreement model year compliance calculation for MY2021.
 - (2) Add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2021.
 - (3) Add in, per ABT rules except as noted below in Paragraph 34(B)(iii)(4), applicable Federal Program credit transactions that occurred between end of the previous model year and end of MY2021. For this requirement, applicable transactions only include purchase and sale transactions of Federal Program credits. Federal Program credits for model years subject to standards specified in this Agreement earned by

VWGoA or used by VWGoA to resolve Federal Program deficits have no impact on the Emissions Benefit Balance.

- (4) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by VWGoA and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to resolve MY2024, MY2025, and/or MY2026 Emissions Benefit Balance deficits carried forward in accordance with Paragraph 34(C)(iii).
 - (5) Repeat “Calculation of Emissions Benefit Balance through MY2026” above at the end of each successive model year for MY2022 through MY2026, substituting the applicable model year for MY2021.
- (iv) Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination. Subject to the resolution of VWGoA’s Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi), for MY2027 and subsequent model years (or substituting earlier model years in this paragraph as appropriate in the case of early termination of this Agreement pursuant to Paragraph 35), VWGoA’s Emissions Benefit Balance will be calculated as follows:
- (1) At the end of MY2027, add in, per ABT rules, Agreement credit transactions that occurred between end of the previous model year and end of MY2027 only for transactions involving MY2022 through (including) MY2026 vintage Agreement credits.
 - (2) At the end of MY2027, add in, per ABT rules, Federal Program credit transactions and Federal Program credits that were used by VWGoA to satisfy any Federal Program deficits that occurred between end of the previous model year and end of MY2027 only for transactions or usage involving MY2022 through (including) MY2026 vintage Federal Program credits.
 - (3) At the end of MY2027, if any MY2027 Federal Program credits were used by VWGoA to resolve VWGoA’s Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv), add in, per ABT rules, credits (or deficits) determined from the Federal Program compliance for MY2027.
 - (4) At the end of MY2027, add in, per ABT rules except as noted in Paragraph 34(B)(iv)(5), Federal Program credit transactions and Federal Program credits that were used by VWGoA to satisfy any Federal Program deficits of VWGoA that occurred between end of the previous model year and end of MY2027 only for transactions involving the same model year vintage credits as those used to resolve an Agreement Balance deficit carried forward from MY2024, MY2025, and/or MY2026 in accordance with Paragraph 34(C)(iv) (e.g., include MY2027 and MY2028 vintage credit transactions and usage if both MY2027 and MY2028 Federal Program credits were used to resolve VWGoA’s Agreement Balance deficits).
 - (5) Except for Federal Program credits acquired from ZEV-only manufacturers in accordance with Paragraph 34(D)(iv)(3), MY2021 through MY2026 Federal Program credits acquired by VWGoA and recorded as an applicable transaction in the Emissions Benefit Balance per Paragraph 34(B)(iii)(3) may not be utilized to

resolve MY2027 or subsequent Emissions Benefit Balance deficits incurred due to Federal Program compliance, credit transactions, or usage recorded in accordance with Paragraphs 34(B)(iv)(3) and 34(B)(iv)(4).

- (6) Repeat “Calculation of Emissions Benefit Balance post MY2026 or Earlier Termination” at the end of each successive model year for latest applicable year (possibly as late as MY2034), substituting the applicable model year for MY2027.
- (v) Federal Program credits that VWGoA may permanently retire or otherwise remove without being used from its Federal Program credit balance may be used towards satisfying VWGoA’s Emissions Benefit Balance obligations in lieu of tracking such credits in the Emissions Benefit Balance through to their expiration. VWGoA and CARB may agree that Emissions Benefit Balance obligations satisfied in this manner will terminate VWGoA’s corresponding Emissions Benefit Balance reporting requirements.
- (vi) Recognizing the uncertainty of regulatory requirements applicable following the model years covered in the Agreement, VWGoA and CARB desire to maintain the integrity of the environmental benefits of this Agreement while not disadvantaging VWGoA with regard to future regulatory compliance obligations. Therefore, prior to the expiration or upon early termination of this Agreement, VWGoA and CARB shall in good faith confer to reach mutually acceptable agreement with respect to VWGoA’s Emissions Benefit Balance obligations. In seeking to reach such an agreement, VWGoA and CARB shall consider all relevant and equitable circumstances, including but not limited to the following:
 - (1) the important environmental benefits of this Agreement, as described in Paragraph 25 above, which the Parties agree were a primary basis for CARB’s decision to enter into the Agreement;
 - (2) the regulatory requirements known or likely to apply to VWGoA in the model years following the model years covered by this Agreement; and
 - (3) the extent to which VWGoA would be harmed, relative to other manufacturers who chose not to enter into a similar agreement, if VWGoA is restricted, in whole or in part, by its Emissions Benefit Balance obligations.

VWGoA and CARB shall seek to reach an agreement that reflects an appropriate balancing of the relevant and equitable considerations. If VWGoA and CARB are unable to reach a mutually acceptable understanding regarding VWGoA’s Emissions Benefit Balance obligations, the issue shall be the subject of Dispute Resolution under this Agreement. Both VWGoA and CARB agree that the factors set forth in this subparagraph shall be the basis upon which Dispute Resolution shall be conducted.

(C) Tracking of Credits within Credit Balances.

- (i) Within the Agreement Balance and the Emissions Benefit Balance, credits (and debits) shall be tracked based on the model year in which they were earned, per ABT rules.
- (ii) Credits shall be subject to a five-year carry forward and three-year carry back provision. Credits may be used by VWGoA to satisfy deficits incurred in the prior

three model years or used or traded by VWGoA for use in the subsequent five model years. Credits not used within five model years shall expire.

- (iii) If VWGoA has a deficit after the model year compliance calculation, then unexpired credits earned in prior model years or acquired through trade may be utilized to satisfy its obligation. Except as noted below, if VWGoA still has a deficit after utilizing all prior model year credits and acquired credits, then it may carry forward the credit deficit up to and including the third model year after the model year in which the deficit was incurred. To facilitate alignment between the Agreement Balance and the Emissions Benefit Balance, if VWGoA has an Agreement Balance deficit being carried forward from MY2024, MY2025, and/or MY2026, VWGoA shall also carry forward an equivalent MY2024, MY2025, and/or MY2026 deficit in the Emissions Benefit Balance (or likewise, as appropriate, for earlier model years in the case of early termination of this Agreement), in lieu of utilizing all prior model year credits and acquired credits in the Emissions Benefit Balance to resolve some or all of the deficits before carrying forward the remaining deficits.
- (iv) Agreement Balance and/or Emissions Benefit Balance deficits carried into model years after expiration or early termination of this Agreement may be resolved by applying Federal Program credits generated in accordance with the ABT provisions of the 2018 Federal Program for those model years after expiration or early termination of this Agreement. Such Federal Program credits shall be recorded as a credit transaction (credits acquired) in VWGoA's Agreement Balance and Emissions Benefit Balance per ABT rules and tracked accordingly.
- (v) Deficits not satisfied within the three model year carry forward period shall constitute noncompliance with this Agreement.

(D) Credit Trading.

- (i) Credits in VWGoA's Agreement Balance may be traded (or deficits resolved) in accordance with the trading provisions of the 2018 Federal Program and the additional credit trading restrictions described in this Agreement.
- (ii) Credits in the Emissions Benefit Balance may not be directly traded by VWGoA and credits may only be added or removed in accordance with Paragraph 34(B) above.
- (iii) Trading within Agreement. Except as noted in Paragraph 34(D)(iv)(3) below for Federal Program credits acquired from ZEV-only manufacturers, VWGoA may only trade credits earned under this Agreement for its Agreement Balance from/to other manufacturers who have executed an agreement similar to this Agreement. CARB's Executive Officer will determine if any such agreements exist and provide in writing a determination to all parties to any such agreements as to which manufacturers may trade credits under this Agreement or similar agreements.
- (iv) Transferring Credits into Agreement.
 - (1) Earned or purchased MY2020 or earlier Federal Program credits may be used to meet VWGoA's commitments in this Agreement.
 - (2) Except as noted below for ZEV-only manufacturers and as specified in Paragraph 34(C)(iv) for Federal Program credits used to resolve any outstanding deficits after the expiration or early termination of this Agreement, MY2021 and subsequent credits earned under the Federal Program by VWGoA or any other manufacturer

may not be used to meet VWGoA’s commitments in this Agreement for its Agreement Balance.

(3) MY2021 through MY2026 Federal Program credits earned by a ZEV-only manufacturer and acquired by VWGoA through a Federal Program credit transaction may be used to meet VWGoA’s commitments in this Agreement subject to the following:

(a) Only Federal Program credits directly earned by the ZEV-only manufacturer are eligible. For purposes of this requirement, ZEV-only manufacturer means a vehicle manufacturer that exclusively offers BEVs and/or FCEVs for sale in the United States.

(b) Adjustment of Federal Program Credits transferred into program.

(i) MY2020 and earlier credits earned by a ZEV-only manufacturer and acquired by VWGoA shall be recorded as a credit transaction (credits acquired) in VWGoA’s Agreement Balance and Emissions Benefit Balance per ABT rules without adjustment.

(ii) For model years subject to standards specified in this Agreement, credits earned under the SAFE Rule Part Two by a ZEV-only manufacturer and acquired by VWGoA shall be adjusted before being recorded as a credit transaction (credits acquired) in VWGoA’s Agreement Balance and Emissions Benefit Balance per ABT rules. To adjust credits acquired, the credits shall be reduced by the following formula before being added to VWGoA’s Agreement Balance and Emissions Benefit Balance:

$$Credits_{adj}[Mg] = Credits_{acq}[Mg] \times Adjust_Factor_{MY}$$

Where:

Credits_{adj} = Credit amount, in megagrams, after adjustment.

Credits_{acq} = Acquired credit amount, in megagrams, before adjustment.

Adjust_Factor_{MY} = Adjustment factor specific to the model year of the acquired credits from the following table:

	MY2021	MY2022	MY2023	MY2024	MY2025	MY2026
<i>Adjustment</i>	0.96	0.95	0.94	0.93	0.92	0.91

(iii) If the Federal Program is further amended after the SAFE Rule Part Two, Federal Program credits earned by a ZEV-only manufacturer for model years subject to standards specified in this Agreement and acquired by VWGoA shall be adjusted to reflect the relative difference in effective stringency between the Agreement and the Federal Program before being recorded as a credit transaction (credits acquired) in VWGoA’s Agreement Balance and Emissions Benefit Balance per ABT rules. VWGoA and CARB, in accordance with Paragraph 35, shall in good faith confer to determine the appropriate adjustment. In determining such an adjustment,

the Parties acknowledge that the adjustment factor specified in this Agreement was derived from the difference in credits earned by a ZEV under the Agreement (in g/mi) versus credits earned under the Federal Program. Assumptions include a fleet with an equal share of passenger cars and light trucks, and industry sales-weighted average passenger car and light truck footprints of 46.2 and 53.8 square feet, respectively.

(4) Credits earned under a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s) may not be used to meet VWGoA's commitments in this Agreement for its Agreement Balance.

(v) Transferring Credits out of Agreement. Credits earned by VWGoA per this Agreement for its Agreement Balance may not be used by or traded by VWGoA to meet its or any other vehicle manufacturer's obligation under the Federal Program, or a CA and/or Section 177 State program based solely on sales in CA and/or the Section 177 State(s).

35. Modification and Termination. The Parties acknowledge that modifications to or termination of this Agreement may be necessary or appropriate in response to various events or circumstances.

(A) If VWGoA or CARB, with any input from the Section 177 States, believes that modifications to or termination of the Agreement may be warranted, it will provide written notice to the other Party identifying the events or circumstances at issue and explaining why modification to or termination of the Agreement may be necessary or appropriate. VWGoA and CARB, with input from the Section 177 States, shall engage in good faith discussions to determine whether modification or termination of this Agreement is necessary or appropriate.

(B) Nothing in this paragraph obligates VWGoA or CARB, with any input from the Section 177 States, to accept a proposed modification or termination, except as follows:

(i) If CARB, with any input from the Section 177 States, enters into an agreement with another light-duty automobile manufacturer containing GHG obligations materially different from and more favorable to VWGoA or that light-duty automobile manufacturer than this Agreement, VWGoA has the option to either (a) comply with this Agreement; (b) comply with the provision(s) of the agreement with the other light-duty automotive manufacturer that is materially different from and more favorable than this Agreement or (c) terminate this Agreement.

(ii) If any Section 177 State rescinds its Enforcement Discretion Letter affiliated with this Agreement or seeks to enforce the CA Standards against VWGoA, or if any other state becomes a Section 177 State without promptly issuing an Enforcement Discretion Letter, then VWGoA has the option to terminate this Agreement.

(iii) If EPA imposes, or an action of a court results in imposition of, national GHG emission standards equal to or more stringent than the commitments specified in this Agreement, VWGoA and CARB agree that this Agreement terminates upon the date the more stringent regulations begin to apply.

(C) In all instances except those described in Paragraph 35(B) above, any modification to this Agreement is only valid and enforceable if it is in writing and signed by both Parties to this

Agreement. If the Parties cannot agree, the Parties' rights and obligations under this Agreement survive.

(D) If this Agreement terminates in accordance with Paragraph 35, VWGoA shall thereafter:

- (i) be subject to applicable law upon and after termination; and
- (ii) unless otherwise agreed by CARB in consultation with the Section 177 States, remain subject to remedies applicable under this Agreement for GHG-related breaches occurring prior to termination of this Agreement.

36. Reporting of Agreement Compliance to Section 177 States and Additional Commitments Regarding Section 177 States. CARB may communicate the compliance status of VWGoA with the terms of this Agreement to Section 177 States annually. VWGoA agrees, at CARB's request, to provide to Section 177 States certain submissions under this Agreement containing VWGoA's Confidential Business Information where the recipient Section 177 State(s) has the legal ability to protect such information against release to the public.

37. Advancement of Electrification. The Parties recognize that the practical availability and marketing of electrified vehicles to the public promotes the interests of both California and VWGoA in furthering electrification technology development and deployment, including via public acceptance of such technology, reduced costs, and charging infrastructure expansion. CARB has an interest in making electrified vehicles more available and affordable, reducing climate change impacts experienced by Californians, and supporting the GHG reductions and technology development goals of the CA Standards and CARB's statutory requirements for further GHG reductions for later model years. In light of the above, VWGoA and CARB agree that VWGoA's performance as specified in Paragraphs 37(A) and 37(B) are an important consideration for this Agreement, and are integral to CARB's decision to enter into it:

(A) VWGoA will undertake electrification commitments described in Appendix B: Electrification Commitments to this Agreement.

(B) VWGoA shall report annually to CARB on the status of its electrification commitments described in Appendix B: Electrification Commitments. The Parties acknowledge that VWGoA has also made electrification commitments relating to the Section 177 States as described in Appendix B: Electrification Commitments. VWGoA's annual report to CARB under Paragraph 33(C) will include a description of the status of those commitments. At CARB's request, VWGoA agrees to transmit the report to the Section 177 States in accordance with Paragraph 36.

(C) In order to promote the environmental benefits of this Agreement, CARB commits to continue its use of best efforts to complete expeditious review of applications for certification of Zero Emission Technology vehicles.

38. Enforcement in General. If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination that VWGoA has failed to comply with any term of this Settlement Agreement, the Executive Officer will notify VWGoA, in writing, of the reasons supporting the determination and provide VWGoA with information upon which the determination was based. Except as provided below with regard to a GHG Credit Shortfall Breach, breaches of this Settlement Agreement shall be enforced in accordance with applicable contract law, including the availability of injunctive relief.

39. Enforcement of Breach of GHG Fleet Commitments; Mitigation Plans. A breach of GHG fleet commitments in Paragraphs 29-34 of this Settlement Agreement resulting in a GHG credit shortfall required for a particular compliance period, after accounting for the GHG credit averaging, trading and banking provisions of this Agreement (a “GHG Credit Shortfall Breach”), is subject to enforcement by CARB exclusively in accordance with the terms of this paragraph.
- (A) If the Executive Officer, with any appropriate input from the Section 177 States, makes a determination and notifies VWGoA under this Agreement that VWGoA has committed a GHG Credit Shortfall Breach, VWGoA may, within 60 Days of receipt of the determination by the Executive Officer, propose a mitigation plan for approval by the Executive Officer.
 - (B) A mitigation plan shall fully mitigate the emissions consequences of the Credit Shortfall Breach. It shall also prescribe VWGoA’s compliance for the GHG emissions commitments in the Agreement going forward. If VWGoA’s return to compliance is impracticable because there is inadequate time remaining in the Agreement, the mitigation plan shall identify the means by which VWGoA will fully mitigate the consequences of any anticipated Credit Shortfall Breach.
 - (C) To address the emissions consequences of the Credit Shortfall Breach, VWGoA may propose, subject to the approval of the Executive Officer as set out below, a mitigation plan including any combination of commitments to take remedial actions, to implement special projects, or to make payments into the Trust Account to be used to promote electrification and reduce GHG emissions. Payments into the Trust Account corresponding to the amount of the Credit Shortfall Breach as determined under this subparagraph shall be deemed fully to mitigate the emissions consequences of a Credit Shortfall Breach. In determining the amount of tons of GHGs to be addressed in a mitigation plan, VWGoA shall propose and CARB shall confirm and specify the credit shortfall.
 - (D) Payment amounts under a mitigation plan shall generally be consistent with prices for GHG credits in California’s cap-and-trade program, the Regional Greenhouse Gas Initiative, or other similar GHG market programs, taking into account such other equitable factors as may be appropriate under all of the circumstances, and considering the social cost of carbon, using the Central 3 Percent Average Values as expressed in Appendix A, Table A-1 of the Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, Interagency Working Group on Social Cost of Greenhouse Gases, United States Government (August 2016).
 - (E) Mitigation plans may be enforced in court consistent with the venue provisions of this Agreement.
 - (F) The Executive Officer shall review a mitigation plan for consistency with the terms of this Agreement and, on behalf of CARB, with any appropriate input from the Section 177 States, either approve or reject within 30 Days, with an explanation of any objections. This 30-Day period may be extended if VWGoA agrees to an extension for further evaluation. If the Executive Officer rejects a mitigation plan, in whole or in part, VWGoA will have 30 Days to amend the plan to address any objections by the Executive Officer. If the Executive Officer approves a mitigation plan, VWGoA shall implement the mitigation plan according to its terms.
 - (G) If VWGoA fails timely to submit a mitigation plan or an amended plan, or if the Executive Officer rejects an amended plan, the Executive Officer may adopt a mitigation plan for

VWGoA. Any mitigation plans that include actions in addition to, or in lieu of, payments into the Trust Account shall be limited to remedial actions or implementation of special projects that VWGoA accepts as reasonable and whose cost does not exceed, for the tons in question, the amount of payments into the Trust Account determined in accordance with Paragraph 39(D) of this Agreement.

- (H) VWGoA shall have 60 Days after receipt of approval or adoption by the Executive Officer to begin to implement a mitigation plan.
- (I) All payments required under a mitigation plan shall be deposited into a Trust Account as directed by CARB. Trust Account funds shall be used to administer the Trust Account. All funds deposited into this Trust Account shall be used to promote vehicle electrification or otherwise to reduce vehicle GHG emissions, in accordance with trust agreements to be developed in accordance with this Agreement as necessary. CARB will notify VWGoA of the activities funded in each Section 177 State by any such payments, including the number of electric vehicle and fuel cell vehicle station installations, if applicable.

40. Dispute Resolution. The Parties agree that the procedures contained in this paragraph are the sole and exclusive procedures for resolving disputes under this Settlement Agreement.

- (A) If VWGoA disagrees with the Executive Officer's determination of breach under this Settlement Agreement, or identifies other grounds for dispute under this Settlement Agreement including but not limited to the Executive Officer's rejection of a mitigation plan or adoption of its own mitigation plan, VWGoA will provide a written Notice of Dispute and Statement of Position to the Executive Officer within 30 Days of the Executive Officer's notification of breach or other action that is the subject of dispute. VWGoA's Notice of Dispute and Statement of Position shall include any factual data, analysis, or opinion supporting VWGoA's position and any supporting documentation relied upon by VWGoA. CARB, with any appropriate input from the Section 177 States, will serve its Statement of Position within 45 Days of receipt of VWGoA's Notice of Dispute and Statement of Position, unless that period is modified by written agreement. CARB's Statement of Position shall include any factual data, analysis, or opinion supporting CARB's position and any supporting documentation relied upon by CARB.
- (B) The period of informal negotiations shall not exceed 60 Days from the date of VWGoA's receipt of CARB's Statement of Position, unless that period is extended by written agreement signed by CARB and VWGoA.
- (C) If CARB, with any input from the Section 177 States, and VWGoA are unable to resolve a dispute before the expiration of the 60-Day period for informal negotiations, either Party may file an action for breach in accordance with the venue provision of this Settlement Agreement, after providing ten Days written notice to the other Party. In any such action, the Parties shall be prohibited from raising issues that were not previously raised during dispute resolution, except for issues which could not practicably be raised previously during the dispute resolution.
- (D) The time period for VWGoA to respond to CARB under any provision of this Agreement, including the time periods to submit, amend or implement a mitigation plan, shall not begin

to run until the completion of dispute resolution either by agreement between the Parties or by the final resolution of a court proceeding.

41. Force Majeure.

- (A) “Force Majeure” means, for purposes of this Agreement, an event arising from causes beyond the control of VWGoA, which delays or prevents the performance of any obligation under this Agreement, despite [OEM’s} best efforts to fulfill the obligation, such as war, fires, floods, hurricanes, tornadoes, earthquakes, volcanic eruptions, labor strikes (but not lock-outs), acts of terrorism, pandemics, and other events resulting in unavoidable supply chain disruption. This does not include negligent acts or [OEM’s] financial inability to perform unrelated to the event as described in this paragraph.
- (B) If any event VWGoA considers to be a force majeure event occurs or has occurred, VWGoA shall provide written notice to CARB within 10 Days of when VWGoA first knew that the event might cause a delay, impossibility or impracticability. Within 14 Days thereafter, VWGoA shall provide in writing to CARB an explanation and description of the reasons for the delay, impossibility, or impracticability; the anticipated duration of any delay; all actions taken or to be taken to prevent or minimize any delay, impossibility, or impracticability; a schedule for implementation of any measures to be taken to prevent or mitigate a delay or the effects of any delay, impossibility, or impracticability; and VWGoA’s rationale for attributing such delay, impossibility, or impracticability to a force majeure event if it intends to assert such a claim. VWGoA shall include with any notice all available documentation supporting the claim that the delay, impossibility, or impracticability was attributable to a force majeure event.
- (C) If CARB, with any input from the Section 177 States, agrees that the delay, anticipated delay, impossibility, or impracticability is attributable to a force majeure event, CARB shall modify VWGoA’s obligations under this Settlement Agreement as necessary and appropriate to account for the delay, impossibility, or impracticability resulting from the force majeure event. CARB will notify VWGoA in writing of the modifications approved by CARB.
- (D) If CARB, with any input from the Section 177 States, disagrees that a delay, anticipated delay, impossibility, or impracticability has been or will be caused by a force majeure event, CARB will notify VWGoA in writing of the decision.
- (E) VWGoA may elect to invoke dispute resolution in accordance with this Agreement based upon CARB’s determinations and decisions pursuant to Paragraphs 41(C) and 41(D) above.

42. Records. VWGoA agrees that CARB, on behalf of itself or the Section 177 State that has issued an Enforcement Discretion Letter, may request, and shall receive, records regarding compliance with this Agreement by filing a request in writing; records will be provided by VWGoA within 21 Days of a request. VWGoA may assert a claim of business confidentiality as appropriate for any such records pursuant to California law and the corresponding law of any Section 177 States that might seek to receive such records. VWGoA will retain all relevant records for the term of this Agreement plus five years.

Additional Provisions

43. Term and Expiration. VWGoA and CARB agree that, unless terminated or extended by modification in accordance with Paragraph 35, the Settlement Agreement covers MY2021 through MY2026. Except as otherwise specified in this paragraph, this Settlement Agreement shall expire and be of no further force and effect following VWGoA's submission of data and technical information supporting its calculation of compliance for MY2026 in accordance with Paragraph 33(C) which includes, subject to the resolution of VWGoA's Emissions Benefit Balance obligations in accordance with Paragraph 34(B)(vi) and three-year deficit carry-forward in accordance with Paragraph 34(C)(iii), verification of VWGoA's Emissions Benefit Balance to determine whether MY2026 credits and/or deficits were fully resolved to achieve compliance through MY2026. If the Executive Officer has made a determination and notified VWGoA of a GHG Credit Shortfall Breach within 60 Days after VWGoA's submission of data and technical information with respect to Model Year 2026, the enforcement of breach of GHG fleet commitments/mitigation plan requirements and the dispute resolution provisions shall survive for the sole purpose of resolving a determination of a GHG Credit Shortfall Breach, in accordance with Paragraph 39.
44. Entirety. This Agreement constitutes the entire agreement and understanding among the Parties concerning the matter described herein, and supersedes and replaces any and all prior negotiations and agreements of any kind, whether written or oral, among the Parties concerning the matter described herein. This Agreement consists of 30 pages plus appendices and 57 numbered paragraphs.
45. Binding Effect. This Agreement binds VWGoA and any principals, officers, receivers, trustees, successors and assignees, subsidiary and parent corporations and upon CARB, and any successor agencies that may have responsibility for and jurisdiction over the subject matter of this Agreement.
46. Effective Date. This Settlement Agreement is binding and effective as of the date that it is fully executed by VWGoA and CARB.
47. Agreement Not Severable. In the event that any provision of this Settlement Agreement is held by a court to be illegal, invalid, or unenforceable in any jurisdiction, the Parties shall enter into good faith negotiation regarding modification in accordance with Paragraph 35 above with the intent to achieve the objectives and benefits of this Settlement Agreement to the greatest extent possible. Following such negotiations, either VWGoA or CARB, with any appropriate input from the Section 177 States, may provide written notice to the other Party terminating this Settlement Agreement if the Agreement is not capable of modification in the view of either Party.
48. Choice of Law. This Agreement shall be interpreted and enforced in accordance with the laws of the State of California, without regard to California's choice-of-law rules.
49. Rule of Construction. Any rule of construction to the effect that ambiguities are to be resolved against the drafting Party shall not be applied in interpreting this Settlement Agreement, including in any dispute resolution process.

50. Non-Waiver. The failure to enforce any provision of this Agreement shall not be construed as a waiver of any such provision, nor shall it prevent such Party thereafter from enforcing such provision or any other provision of this Agreement. The rights and remedies granted all Parties herein are cumulative and the election of one right or remedy by a Party shall not constitute a waiver of such Party's right to assert all other legal remedies available under this Agreement or otherwise provided by law.
51. Intent to be Bound. The Parties represent that they have participated fully in the review and drafting of this Agreement; understand and accept all terms; that they enter into this Agreement freely and voluntarily; have had an opportunity to consult with legal counsel; that they are fully informed of the terms and effect of this Agreement; that they enter into this Agreement after independent investigation and through no fraud, duress, or undue influence; and that they knowingly and voluntarily intend to be legally bound by this Agreement.
52. Venue. The Superior Court of California, located in the County of Sacramento, shall hear any dispute between the Parties arising from this Agreement.
53. Counterparts. This Agreement may be executed in counterparts. Facsimile or photocopied signatures (including PDF copies), shall be considered as valid signatures as of the date hereof, although the original signature pages shall thereafter be appended to this Agreement.
54. Release and Covenant Not to Sue. In consideration of VWGoA's voluntary commitments in this Agreement, CARB releases VWGoA and its principals, officers, receivers, trustees, successors and assignees, subsidiaries, affiliates and parent corporations from any claims, and covenant not to sue or otherwise pursue such entities or individuals, for violations of the CA Standards for MY2021-MY2026. However, CARB retains authority to enforce this Settlement Agreement on the terms provided herein.
55. Authority. The undersigned represents that he or she has full authority to enter into this Agreement.
56. Assignment. This Settlement Agreement and the rights, duties, and obligations under it may not be assigned or delegated by CARB or VWGoA without the prior written consent of the other Party. Any assignment or delegation made without prior written consent shall be void.

Notices

57. Notices. All notices, demands, requests, consents, approvals, or other communications (collectively "Notices") required or permitted to be given pursuant to this Settlement Agreement shall be in writing and shall be transmitted via United States mail and electronic mail to the Parties set out below. Notice shall be deemed given on the date of receipt.

To CARB	To VWGoA
Executive Officer California Air Resources Board 1001 I St Sacramento, CA, 95814 Richard.Corey@arb.ca.gov	General Counsel Volkswagen Group of America, Inc. 2200 Ferdinand Porsche Drive Herndon, VA 20171 David.Detweiler@vw.com

As agreed,

For the California Air Resources Board:



Richard W. Corey
Executive Officer
California Air Resources Board

Date: 8/17/2020

For Volkswagen Group of America, Inc.:



Scott Keogh
President and CEO
Volkswagen Group of America, Inc.

Date: 8/4/20

Appendix A: Curve Coefficients

Passenger Car and Light Truck Curve Coefficients representing 1 percent less year over year stringency to be used in calculation of 1 percent cap for Zero Emission Technology vehicles multiplier.

Passenger Car Curve Coefficients (1 Percent Less)				
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	Maximum Footprint $\geq 56.0 \text{ ft}^2$
2021	157.0	3.84	-0.4	215.0
2022	153.0	3.74	-0.4	209.0
2023	149.0	3.64	-0.4	203.0
2024	145.0	3.54	-0.4	198.0
2025	141.0	3.44	-0.4	192.0
2026	137.0	3.35	-0.3	187.0

Light Truck Curve Coefficients (1 Percent Less)					
Model year	Minimum Footprint $\leq 41.0 \text{ ft}^2$	(a)	(b)	Maximum Footprint	
				Greater than or equal to: (ft ²)	Value
2021	195.0	4.28	19.8	73.5	335.0
2022	190.0	4.16	19.3	74.0	327.0
2023	185.0	4.05	18.7	74.0	318.0
2024	180.0	3.94	18.2	74.0	310.0
2025	175.0	3.84	17.7	74.0	302.0
2026	170.0	3.73	17.3	74.0	293.0

Appendix B: Electrification Commitments

-- CONTAINS CONFIDENTIAL BUSINESS INFORMATION