

Submitted Electronically

June 21, 2022

Elena Guilfoil
Department of Ecology
Air Quality Program
P.O. Box 47600
Olympia, WA 98504-7600

RE: Clean Vehicles Program – Chapter 173-423 WAC, Tesla comments on April 2022, Revised ZEV Credit Options for Advanced Clean Cars II and Early Action Credits in Washington's Current Program

Dear Ms. Guilfoil:

I. Introduction

Tesla appreciates the opportunity to comment on the April 2022 Revised Credit Options for Advanced Clean Cars II and Early Action Credits in Washington. Tesla's mission is to accelerate the world's transition to sustainable energy. Moreover, Tesla believes the world will not be able to solve the climate change crisis without directly reducing air pollutant emissions—including carbon dioxide (CO₂) and other GHGs—from the transportation and power sectors.

To accomplish its mission, Tesla designs, develops, manufactures, and sells high-performance fully electric vehicles and energy generation and storage systems, installs, and maintains such systems, and sells solar electricity. Tesla currently produces and sells four fully electric, zero emissions vehicles (ZEVs): The Model S sedan, the Model X sport utility vehicle (SUV), the Model 3 sedan, and the Model Y mid-sized SUV. The Environmental Protection Agency (EPA), recognized Tesla in its 2021 Automotive Trends Report as having the vehicle lowest carbon dioxide emissions (0 g/mi) and highest fuel economy (119 miles per gallon

equivalent) of all large manufacturers in MY 2020.¹ Tesla is by far the largest producer of zero emission vehicles (ZEVs) registered in Washington.² Further, Tesla has deployed 333 superchargers across 36 sites in Washington to encourage adoption of battery electric vehicles (BEVs), providing consumer confidence in long-distance charging availability. This is in addition to the 6 sales, service and delivery centers throughout Washington.³

Tesla is also deeply committed to ensuring the United States (U.S.) remains a leader in advanced manufacturing. All Tesla vehicles sold in North America are manufactured in the U.S. Recently, the Tesla Model Y ranked as the most American made car in 2022, based on overall contributions to the U.S. economy, and the Model 3 ranked just below as the second most American made car on the market.⁴ NHTSA similarly confirms that 100% of the vehicle, engine, and transmission assembly in each Tesla vehicle sold in the U.S. occurs in the U.S.⁵ In addition, Tesla's U.S. supply chain continues to expand and spans across more than 40 states.⁶

Currently, Tesla has more than 65,000 employees in the U.S. and has infused billions of dollars in economic activity and created thousands of direct and indirect jobs. Tesla is a leader in creating a diverse and inclusive workplace and is a majority-minority company with a large representation of employees from communities that have long struggled to break through the historic roadblocks to equal opportunity in the U.S.⁷ As of December 31, 2020, 34% of our

¹ EPA, [The 2021 EPA Automotive Trends Report, Greenhouse Gas Emissions, Fuel Economy, and Technology Since 1975](#) at 13 (Nov. 2021) (preliminary MY 2021 at 125.7 miles per gallon),; See also, Tesla, [Impact Report 2021](#) at 55-63 (discussing Tesla vehicle emission performance),

² (June 2022) Transportation data, Washington state, [EV Registrations by Model](#).

³ Tesla, [Find Us, Washington State](#).

⁴ Cars.com, [2022 Cars.com American-Made Index®: Which Cars Are the Most American?](#) (Finding in 2022, each of Tesla's vehicles - the Model S, 3, X and Y - ranked in the top 10 and Tesla was the only manufacturers to have representation from its entire portfolio in the top 10.)

⁵ NHTSA, [Technical Support Document: Proposed Rulemaking for Model Years 2024-2026 Light Duty Vehicle Corporate Average Fuel Economy Standards](#) (Aug. 2021) at 96, Table 2-6.

⁶ See e.g., AutoNews, [Suppliers Starting to Set Stage for Tesla in Texas](#) (Sept. 6, 2021).

⁷ Tesla, [Impact Report 2021](#) at 36-38 (providing extensive workforce statistics); See also, Tesla, [Impact Report 2020](#) at 71-72 (describing Tesla's workforce). See also, Tesla, [Diversity, Equity and Inclusion Impact Report 2020 \(U.S.\)](#) (Dec. 4, 2020).

directors and vice presidents are people of color.⁸ Tesla also provides highly competitive wages that meet or exceed that of comparable manufacturing roles, even before company equity potential and benefits are factored in.⁹

II. Position Summary

With Governor Inslee's supporting execution of SB 5974, Washington now targets that Electric Vehicles (EVs) make up all publicly and privately owned passenger and light duty vehicle sales or registrations by 2030.¹⁰ As a founding member of Zero Emissions Transportation Association (ZETA), an industry-backed coalition advocating that 100% vehicles sold by 2030 be EVs, Tesla supports Washington's ambition.¹¹

For Washington to achieve its established target of 100% sales and registrations of EV's by 2030, EV availability will be a critical factor. Tesla appreciates the care with which Washington's Department of Ecology (ECY) appears to be considering compliance flexibilities and the roll those flexibilities will play in creating consumer ZEV availability under Advanced Clean Cars (ACCI) and the pending transition to Advanced Clean Cars II (ACCII). However while flexibilities will influence ZEV deliveries for Washington consumers to choose from, compliance flexibilities are not created equal, and can result in double counting.

As a consequence, Tesla supports ECY utilizing Option 3 first and foremost, or a modified Option 4 (Tesla "4a") which is described further below.

⁸ Tesla, [Impact Report 2021](#) at 35-41 (providing details and statistics describing Tesla's workforce), submitted as an attachment to these comments; See also, Tesla, [Diversity, Equity and Inclusion Impact Report 2020 \(U.S.\)](#) (Dec. 4, 2020).

⁹ Tesla, [Impact Report 2021](#) at 28-31 (describing Tesla's wages, benefits, and compensation).

¹⁰ See [SB 5974, Section 415, \(1\)](#).

¹¹ Link: <https://www.zeta2030.org/>

III. Washington Choosing Environmental Health

As ECY confirms in its 2018 GHG Inventory, transportation accounted for 44.9% of Washington’s statewide GHG emissions.¹² Indeed, there are compelling and extraordinary air pollution, climate change, and public health and welfare impacts to the state that result from these emissions, and they necessitate the rapid and complete electrification of the state’s transportation system.

The U.S. Environmental Protection Agency (EPA) has long considered battery electric vehicles (BEVs) to be the most effective mobile source pollution mitigating technology, stating over a decade ago, “From a vehicle tailpipe perspective, EVs are a game-changing technology.”¹³ Recently, in a detailed study, the National Academies of Sciences deemed BEVs the greatest opportunity to improve the energy efficiency of light-duty vehicles — i.e., passenger vehicles and light trucks — over the period of 2025-2035, as well as to reduce greenhouse gas pollutants from this sector.¹⁴ Additionally, study after study shows BEVs are a superior technology for reducing air pollution and GHG emissions on their lifetime.¹⁵ On well to wheels analysis including upstream emissions, the U.S. Department of Energy (DOE) has repeatedly found BEVs to be far superior in emission performance than internal combustion engine (ICE)

¹² Link: [ECY 2018 Greenhouse Gas Inventory](#)

¹³ 77 Fed. Reg.62624, 62815.

¹⁴ National Academies of Sciences, [Zero Emission Vehicles Represent the Future of Energy Efficiency, Petroleum and Emissions Reductions in 2025-2035](#), New Report Says (Mar. 31, 2021); See also, 42 U.S.C. §7521(c) (recognizing NAS’ role in informing standards under Section 202).

¹⁵ See e.g., ICCT, [A global comparison of the life-cycle greenhouse gas emissions of combustion engine and electric passenger cars](#) (July 20, 2021); National Academies of Science, [Accelerating Decarbonization of the U.S. Energy System](#) (Feb.2, 2021) at 97 (“Further, light-duty trucks and buses should be electrified, particularly in urban areas. Over the next decade, the United States needs to ensure that electric vehicles become the predominant share of new purchases.”); Environment International, [Assessing the health impacts of electric vehicles through air pollution in the United States](#) (Nov. 2020).

technology.¹⁶ Moreover, as the carbon intensity of domestic electricity generation continues to decline, BEV emission performance becomes better and better over time.¹⁷

Tesla believes that the transition to a fully electrified light duty vehicle sector can and will happen even quicker than CARB and ECY anticipate. As demonstrated by the Model 3 being the world's best-selling premium sedan and the Model Y becoming one of the top selling SUVs in the country, consumers continue to embrace electric vehicles. As a leading automotive trade group recently touted, "consumer interest is growing because these vehicles are reliable, efficient, safe, and particularly fun to drive."¹⁸ Indeed, there is widespread public support for policies that support the transition to ZEVs and consistently growing consumer interest in EV purchases. A recent survey found that almost 56% of consumers already are likely to buy a hybrid or electric vehicle for their next car purchase and over 40% think green-conscious cars will outnumber gas-powered cars in the U.S. by 2030.¹⁹ Tesla believes that more stringent standards can appropriately set the pathway to encourage widespread deployment of ZEVs and set the stage for a fleet-wide light-duty vehicle standard of 0 g/mi CO₂ starting in MY 2030 (i.e., 100% EV sales by 2030). There should be no hesitation that ECY place environmental health over other guiding principles.

IV. Under CARB's Revised ACCII Regulations, Additional Washington ZEV flexibilities are Not Needed for Industry to Maintain Compliance through MY 2030

¹⁶ See Department of Energy, Alternative Fuels Data Center, [Emissions from Hybrid and Plug-In Electric Vehicles](#).

¹⁷ See U.S. [EIA, Annual Energy Outlook 2021](#) (Feb. 2021) at 16.

¹⁸ Alliance for Automotive Innovation, [Accelerating the Transition to Electric: EV infrastructure and Consumer Acceptance](#) (Sept. 7, 2021).

¹⁹ CarMax, [Green-Conscious: Exploring Americans' Views on Hybrid and Electric Vehicles](#) (Aug. 23, 2021).

A. Proportional credits double count deliveries and moreover are unnecessary. Option 1, Option 2, Option 5 and Option 5 sub-options should be avoided.

ECY Options 1, 2, and any version of 5 should be avoided. As mentioned in Tesla August 9, 2021 comments on Chapter 173-423 WAC,²⁰ under ACC I, not all compliance flexibilities are created equal. Proportional credit banking would further incentivize automakers to deliver vehicles into California rather than into Washington. This is because proportional credit generation provides automakers with the ability to double count vehicles delivered in California as if they were delivered into other section 177 states when proportional crediting is adopted in regulations whether fully, as Nevada and Virginia adopted, or partially as Minnesota and Colorado adopted (MN providing each automaker with enough proportional credits to fulfil their initial compliance year).²¹

While ECY appears to recognize that in state deliveries are superior to those out of state, placing a finer point on how proportional crediting results in double counting seems appropriate. Proportional credits by definition copy or duplicate individual automaker credit banks simultaneously at one particular point in time. Using a formula to essentially equate credits for delivering vehicles into California proportionally to what would have been expected to be generated in Washington, credits are awarded to each automaker. Without argument, proportional credits double count a credit for delivery in California for one that is assumed would have been delivered in WA. Yet no actual delivery has taken place in Washington. Thus credits are duplicated.

²⁰ See [August 9, 2021 2:32 PM comment from Tesla \(Thad Kurowski\)](#).

²¹ See [MN ALJ Report, Page 65, Section 249](#).

For automakers, where a vehicle is delivered is a business calculation. If given the option to deliver vehicles into a single state, California, and count those towards compliance in multiple states, the calculus is relatively straightforward. Most automakers will deliver to where they receive multiple credits to fulfil regulatory compliance in more than one state for delivering a single vehicle in just one state. Consequently, fewer ZEVs reach Washington.

Options 1, 2 and 5 and its sub-options each contain a level of proportional crediting, double counting ZEV deliveries, and diminishing Washington's potential adoption levels. As our following analysis indicates, proportional crediting is demonstrably unnecessary and not in the interest of environmental and public health. As Washington is ahead of industry ZEV compliance, should ECY see a need for additional flexibility, Tesla agrees with ECY that early action would suffice.

B. Option 3, no additional flexibilities, should be ECY's Most-Desired Regulatory Pathway

When ECY completed the ACCI to ACCII analysis, it did so prior to additional flexibilities being introduced by CARB Staff on June 9, 2022. Because of the Washington and California regulatory overlap, based heavily on WA's modelling results from the April 2022 ECY stakeholder presentation, Tesla offers the following analysis inclusive of CARB's latest ZEV regulatory compliance changes, concluding that the latest ACC2 proposal provides sufficient compliance flexibilities such that WA does not need to adopt any additional flexibilities under ACCI to ensure that a positive credit balance is achieved through 2030. See figure 1.

As a basis for the analysis, Tesla used historic ZEV deliveries for MY2019-2021, ECY's 22% MY 2025 compliance target and conservatively ramped MY 2022-MY2024 to reach the 22% by MY 2025.

You'll notice that the topline assumptions are taken directly from ECY's April 2022 stakeholder presentation with a yearly over compliance of 140,073 credits. However when converting the ACCI credit bank to ACCII credits, CARB staff have altered two things. First, they have revised the denominator when converting credits to 2.1 credits per vehicle. Secondly, as CARB has introduced an additional compliance flexibility that allows automakers to capture early compliance value for vehicles delivered under ACCII if Washington is over the 20% threshold in MY 2025 which we believe it will be, ECY should assume that automakers are incentivized to manage their MY 2025 overcompliance, thus the converted ACCI credit bank should be expected to be reduced by ~2%, leaving a 57,910 converted credit running total with the remainder of the MY 2025 overcompliance (the 2 % over the 20% threshold) being redirected to the ACCII Early Compliance Value credits (6,034 from MY 2025). This results in an expected ACCII credit bank for use in MY 2026 and beyond of 63,944. The reason only ACCII early compliance credits are considered for a single year is because WA will not likely exceed the 20% industrywide threshold by MY 2024. Further, when considering the 15% historic credit use under ACCII, only the 57,910 credits would be applicable. Adding the two compliance flexibilities, historic or converted ACCI credits (57,910) to the Washington's MY 25 early compliance values (6,034) to total 63,944, and then looking at MY 2026-2030 ECY projections shows that under ECY's expected and relatively conservative compliance ramp, automakers will maintain a positive credit balance every year through MY 2030, as shown in Fig 1's "running total" column. The introduction of these two changes to ACCII regulations, effectively removes the potential for under compliance as originally determined by ECY beginning in MY 2028.

Model Year	WA LDV sales	% EVs	EV sales	Credits Earned	ZEV Mandate (%)	Credits Needed	Yearly Over/Under Compliance	Running Total
2025	289,406	22.0	63,669	203,742	22.0	63,669	140,073	140,073
ACC1 Converted Credits (MY25)								57,910
ACC2 Early Compliance value (MY25)								6,034
Expected ACC2 Credit Bank								63,944
2026	303,877	28.6	86,909	86,909	35.0	106,357	-19,448	44,496
2027	319,070	37.2	118,694	118,694	43.0	137,200	-18,506	25,990
2028	335,024	46.5	155,786	155,786	51.0	170,862	-15,076	10,914
2029	351,775	58.1	204,381	204,381	59.0	207,547	-3,166	7,748
2030	369,364	69.7	257,447	257,447	68.0	251,168	6,279	14,027

Figure 1. Tesla Update to ECY Analysis based Upon June 9 CARB Staff Proposed Regulations.²²

C. Option 4a, Additional Early Action Option

While Tesla does not believe early action crediting, option 4, is necessary based upon the updated analysis above, if ECY is compelled to add another compliance flexibility, MY 2023 early action crediting under ACCI would be the only option that Tesla would recommend considering (Tesla Option 4a). Only if ECY is compelled, Tesla suggests limiting Option 4 to MY 2023 alone to diminish the risk of straying from identity under ACCII's early compliance value provision or double counting. While Tesla Option 4a would create a larger risk of credit oversupply and thus potentially diminish industry delivery ambitions, it could further incentivize actual ZEV deliveries earlier if ECY so chose.

V. Washington should be confident in a decision favoring actual deliveries.

As Washington consumers and leaders have demonstrated a propensity towards electrification, ECY should be confident that automakers will reach compliance through ACCII MY 2030 ambitions and hopefully beyond those. Tesla supports Washington's pursuit of 100%

²² See [CARB ALTERNATE FORMAT, Draft Updates: Proposed Regulation Order for Section 1962.4 Zero-Emission Vehicle Standards for 2026 Model Year Light-Duty Zero Emission Vehicles and Plug-in Hybrid Electric Vehicles.](#)



1333 H Street, NW, Floor 11 West
Washington, DC 20005

EV sales and registrations by 2030. Adopting Option 3, no additional ACCI compliance flexibilities would best ensure delivery ramps are incentivized.

Respectfully Submitted June 21, 2022,

Thad Kurowski

Tesla, Inc.
1333 H Street NW, Floor 11 West
Washington, DC 20005
Telephone: (720) 660-0235
E-mail: tkurowski@tesla.com