

Submitted via email to yvwsettlement@ecy.wa.gov

December 18, 2017

Brett Rude and Mike Boyer
Air Quality Program
Department of Ecology
State of Washington
P.O. Box 47600
Olympia, WA 98504-7600

Re: BYD Response to Washington's Proposed Beneficiary Mitigation Plan

Dear Mr. Rude and Mr. Boyer:

BYD America ("BYD") appreciates the opportunity to comment on Washington's Proposed Volkswagen Beneficiary Mitigation Plan. We commend the state on its proposed plan to accelerate adoption of electric vehicles and to promote electrification technologies. Further, we reiterate our support of that state's proactive *Results Washington* effort to achieve sustainable and clean transportation via the deployment of zero-emission vehicles.

Such deployments will reduce mobile source emissions and, in particular, provide both near- and long-term nitrogen oxide (NOx) and diesel particulate matter emissions reductions in those areas that bear a disproportionate share of the state's air pollution burden. Further, because Washington's electric grid is among the cleanest in the U.S., all-electric vehicles in the state will outperform, on a well-to-wheels emissions basis, any conventional or other alternative fuel vehicles.

As we noted in our March 13, 2017, comment letter, BYD has deployed a series of innovative all-electric vehicle projects in Washington in recent years, including demonstration of all-electric buses with transit agencies throughout the state¹ as well as with Sea-Tac for their airport shuttle service. Additionally, Wenatchee's Link Transit has put five of BYD's all-electric transit buses in service and has plans to purchase five additional buses in 2018. BYD is also currently manufacturing four buses for Walla Walla Valley Transit for delivery in the first half of 2018. We are thus encouraged by Washington's proposed plan to prioritize the electrification of public transit fleets.

BYD also worked with Washington's Department of Transportation to submit a proposal to the Federal Transit Administration in order to deploy all-electric transit buses in four smaller transit agencies – Mason Transit, Valley Transit, Clallam Transit, and Jefferson Transit. BYD also submitted a separate proposal to the FTA in partnership with C-Tran in

¹ Transit agency partners include King County Metro, Sound Transit, Spokane Transit, Kitsap Transit, Pierce Transit, Ben Franklin Transit, C-Tran, Link Transit, Whatcom Transportation Authority, Twin Transit, Yakima Transit, Valley Transit, and Mason Transit.

Vancouver, WA. Both proposals were not selected but they demonstrate the strong interest in transit bus electrification in Washington and the need for funding to make that happen.

In response to the state's Proposed Beneficiary Mitigation Plan, we offer the following recommendations:

- For the proposed $\leq 45\%$ allocation to on-road heavy-duty vehicles, Washington could better capture air quality and economic benefits in densely populated areas by diversifying the prioritization of projects to include freight and delivery trucks
- For the proposed $\leq 45\%$ allocation to marine vessels, Washington should reframe this approach to focus more generally on ports and waterways
- To implement the program in the most efficient way possible, Washington should utilize ready-made programs that have worked elsewhere

We provide further detail on each recommendation below.

Diversify the Prioritization of On-Road Vehicles

While we recognize the benefits of Washington's prioritization of public transit fleets (and its obvious benefits for BYD's transit bus manufacturing business), we encourage the state to diversify its focus to also include freight and delivery trucks.

Electrified on-road trucks, such as BYD's various Class 5, 6, and 8 models, create additional benefits for the environment and operators alike, as shown in Table 1 below. Each of these models presents customers with a basic chassis readily available for customization. BYD works with top outfitters and upfitters to meet customer specifications; thus, each of our chassis can be outfitted into a dry box, flatbed, stake bed, refrigerated unit, refuse body, and bucket truck version. Both the Class 5 & 6 BYD trucks are currently listed on the Washington State Department of Enterprise Services Motor Vehicles contract. BYD has been engaged with several prominent companies interested in electrifying their delivery truck fleets in Washington if the right incentives are available.

Table 1: What Sets BYD On-Road Trucks Apart

Vehicle Type	Models ²	Battery Performance	CO2 Reduced per Truck (tonnes)	Annual Fuel Savings	Annual Maintenance Savings
<u>Class 5 Medium-Duty Truck</u>	5D, 5F	155 mile range	340	\$ 6,000	\$ 4,000
<u>Class 6 Medium-Duty Truck</u>	6B, 6D, 6F, 6R	124 mile range	450	\$ 8,200	\$ 4,600

² "B" stands for "Bucket." "D" stands for "Delivery." "F" stands for "Forward / Cab Forward." "R" stands for "Refuse." "TS" stands for "Tractor Single." "TT" stands for "Tractor Tandem."

Vehicle Type	Models ²	Battery Performance	CO2 Reduced per Truck (tonnes)	Annual Fuel Savings	Annual Maintenance Savings
<u>Class 8 Heavy-Duty Truck</u>	8TT, 8R, 8TS, and 8TT	92+ mile range	636	\$ 9,600	\$ 4,500

Reframe the Non-Road Equipment and Vessel Focus

While we appreciate Washington’s proposed focus on marine vessels because of their contribution to the emissions inventory, we believe that allocating funds to port trucks will better address non-road diesel equipment emissions. These pieces of equipment operate entirely within ports, rail yards, depots, and terminals – areas that Washington has consistently addressed due to environmental justice concerns stemming from disproportionate air pollution impacts.

Thus, focusing funds on terminal tractors (also referred to as yard tractors, yard hostlers, or yard trucks) presents Washington with a viable solution to addressing non-road diesel emissions. Terminal tractors move freight quickly and efficiently through Washington’s largest ports of Seattle, Tacoma, and Bremerton; however, this efficiency is at the cost of clean air because these vehicles typically use older, high-emitting diesel engines. Washington can therefore make an immediate and lasting impact on local air quality in these disproportionately burdened areas by electrifying terminal tractors.

BYD’s model 8Y terminal tractor is a 100% battery-electric class 8 truck that is capable of 15+ hours of continuous operation between charges with minimal battery degradation. Each terminal tractor eliminates 1,590 metric tons of CO2 over its deployment lifetime. Related to the vehicle’s hugely beneficial total cost of ownership, the 8Y saves operators \$19,100 in fuel costs and \$8,800 in maintenance costs per truck each year – lower downtime, fewer moving parts, less wear and tear, and improved environmental efficiency are the hallmarks of BYD’s 8Y terminal tractor. Further, they are able to be deployed immediately as they are compliant with Federal Motor Vehicle Safety Standards (FMVSS).³ BYD has strong interest in this product from at least one operator in Washington and will bring a demo vehicle to the Ports of Seattle and Tacoma in January 2018.

Implement Ready-Made Incentive Programs to Reduce the State’s Administrative Burden and Efficiently Deploy Zero-Emission Vehicles

To implement innovative ideas, it is sometimes necessary to look to market leaders. In this case, several states have implemented incentive programs that have resulted in tremendous deployments of electric vehicles. Namely, California’s Hybrid and Zero-Emission Truck

³ The 8Y is also compliant with Canadian Motor Vehicle Safety Standards (CMVSS).

and Bus Voucher Incentive Project (HVIP), Illinois' Drive Clean Truck Program, and the New York Truck – Voucher Incentive Program have successfully allocated millions of dollars in incentives to deploy zero-emission vehicles.

Washington can help quickly deploy electric vehicles by using these programs as a structure for its funds. In other words, by using these existing rebate programs as a template, Washington will improve the likelihood of meeting its *Results Washington*'s goal of 50,000 plug-in electric vehicles deployed by 2020.

Further, we urge the state to structure the per vehicle funding levels on a tiered basis. In the early years of Washington's settlement-funded programs, the state could provide fleets with the maximum allowable per vehicle, according to the Volkswagen settlement, and then, over time, gradually lower the per vehicle limits as the market grows. By structuring the funds in this market-responsive fashion, Washington will allow fleets to quickly deploy zero-emission vehicles while also improving the cost-effectiveness of such projects over time.

Closing Remarks

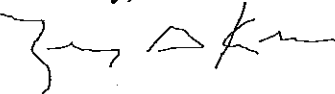
The economic, air quality, and energy-specific benefits of electrified equipment are clear – all-electric trucks, buses, and equipment generate no tailpipe emissions while, over the lifetime of the vehicles, deliver a lower total cost of ownership than conventional petroleum fuels and natural gas. In a state with an electric grid as clean as Washington's, these benefits are even further magnified.

We commend Washington on its recognition of these benefits and its prioritization of all-electric vehicle projects. To support just such projects, BYD has committed to and successfully delivered substantial price reductions from our first generation of products. We hope to continue this progress in Washington and support the state in addressing a broad spectrum of environmental issues, resiliency and sustainability chief among them.

BYD thanks the State of Washington and the Department of Ecology for the opportunity to submit these comments. We would like to work with you and your team to ensure an efficient and effective rollout of the state's mitigation plan.

Towards that end, we request an in-person meeting to discuss our recommendations further. We look forward to future collaboration that will help Washington meet its environmental, fiscal, and social justice goals.

Sincerely,



Zachary S. Kahn
Director of Government Relations
BYD America