Members of the board,

As regulators and manufacturers face budget shortfalls with an unwavering resolve to combat climate change, adjusting funding programs becomes trickier than ever. I am writing with the perspective of a class 2b cargo van electrification company that is leading the charge towards electrification with vans on the road since 2019. The proposal to eliminate 2b funding, while continuing to scale based on vehicle weight class in 3+, will promote larger, heavier vehicles and undermine HVIP's goals.

The board notes that it hasn't seen a lot of activity in 2b to date. This is partially because of regulations; FMVSS is much less stringent on vehicles class 3 and above. More pertinently, it's because of a voucher structure that pays more for heavier vehicles. If a class 2b gets $25k, but a class 3 gets $50k, the manufacturer will make more money where they can sell a class 3 into a 2b vocation.

Since many OEMs have 2b platforms with 6-wheeled class 3 variants, electrifying a class 3 from a shared platform often carries over to the larger, 2b market. Historically, HVIP's funded manufacturers have only offered the class 3 version, or in some cases, re-classified a 2b into 3 to qualify for more funding. Just look at vocation, where a gas-powered 2b van is often replaced with an electric 3, 4 or 5. Without a performance metric on range or payload, manufacturers lack incentive to advance engineering towards lighter, more efficient platforms.

Maxwell's ePro is a 2b van that is pushing the envelope towards performance and efficiency. Our electric vans have more range and payload than competing vehicles in heavier classes. We have delivered to commercial fleets in CA already. Despite being less expensive than other similar offerings, the proposed funding scheme of $45k for a 3, with nothing for 2b, would create a financial incentive for the heavier, less capable and much less efficient class 3.

In alignment with HVIP's goal of advancing clean vehicle technologies, I hope that the Board will recognize the problem that eliminating funding for 2b poses. California is ahead of the curve, and we are leaving it up to you, the experts and regulators, to shape the space and foster growth in the coming funding cycles.

Thankyou for your time,
Max Pfeiffer
Founder & CEO
Maxwell Vehicles

So the incentive becomes to put the biggest, heaviest vehicle possible in a vocation that's seeking to electrify.

Particularly in the van space, other manufacturers have taken advantage of up-rating their vehicles to a heavier weight class just to get a bigger voucher.

More importantly, with a voucher that pays more for heavier rated vehicles,

A space which the board hasn't seen much activity to-date.

If a manufacturer designs an electric drivetrain that is compatible with both 2b and 3, but is offered $15-25k more, and doesn't have to deal with safety considerations, they will pursue the class 3 platform.

Similarly, for EV manufacturers, it is more difficult to design a vehicle that is lighter, and uses less energy. It's less difficult to design a system that's heavier and inefficient, simply adding more battery to compensate. But this does not evolve the technology. By offering more funding for heavier-class vehicles, regardless of payload, HVIP is encouraging poor design.

The metrics that should be evaluated are cost, range and payload in a given class, since these are the metrics *that drive commercial purchasing*. Fleet owners and operators generally want the lightest, smallest, and most efficient vehicle possible for the vocation.

If HVIP awards funding based solely on class, manufacturers will sell bigger, heavier vehicles than necessary into lighter vehicle classes to get more money.

Example 1) Amazon's Lighting 350HD vans. These are the only class 3 vans in an otherwise class 2b fleet of thousands of vehicles.

Example 2) Green Power; their class 4 14-passenger shuttle is being sold to fleet operators who otherwise traditionally use class 2 or 3 vehicles.

Example 3) Adomani/EVT Cargo Van. This is a class 3 or 4 vehicle that is the same size/payload as class 2b.

Manufacturers will increase the weight rating of their vehicles, or sell heavier vehicles in she adjacent, smaller market, to get more incentive money.

If HVIP makes funding available for class 3 at $45k, but nothing in class 2b, this will automatically discourage development and adoption in the class 2 space.

Maxwell is able to take existing technology and deploy it on class 2b vehicles with longer range, higher payload, and lower cost than the class 3 competition.

If HVIP does not extend to class 2b for very obviously commercial vocations, e.g. owned by commercial entities, then a class 3 with a $45k voucher, versus a class 2b without a voucher, becomes an obvious choice. Despite the class 3 being bigger, heavier, and less efficient than the vocation demands.

Many fleet operators need specialty class 2b vehicles which will benefit from voucher eligibility to promote.

Manufacturers have stayed out of the class 2b space because of safety considerations--like 305 for electric vehicles--under FMVSS that are not applicable for class 3.