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14-5-4

XL HYBRIDS

XL Hybrids, Inc.
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ARB Mobile Sources Staff and Board
1001 I Street, P.O. Box 2815
Sacramento CA 95812

RE: Comments on 2014-2015 AQIP Funding Plan; specifically HVIP

Dear Board Members and ARB Mobile Sources Team,

At XL Hybrids we are very appreciative of the efforts of the ARB team in developing an AQIP funding plan for 2014-2015 and agree with the basic principles and structures that have been proposed.

The concept of a funding level and timeline that declines as technologies become more mature makes complete sense to us; however, we believe such a plan needs to be a comprehensive and weighted portfolio in meeting the goals set forth for the funding sources.

On April 15th XL Hybrids provided feedback to broaden the HVIP portion to include Class 2b HEVs at a properly weighted lower voucher level. The program currently supports Class 3 HEVs, but only PHEVs and EVs in Class 2b. Class 2b is the only Class in the program that does not support HEVs.

ARB Staff responded in their final plan document (May 23rd, 2014) as follows: "Agency Response: Zero-emission and zero-emission range extended vehicles in the 2a and 2b classes are currently HVIP-eligible due to their ability to achieve zero- emission miles. However, non-plug-in hybrids are not HVIP-eligible. As mentioned in this document, HVIP is intended to facilitate deployment of the cleanest technologies, particularly in the larger vehicle classes that pose the greatest technical challenges."

That staff response does not explain why, by contrast, Class 3 HEVs are included in the program. Why is a 10,001 lb HEV more challenging than a 9,999 lb HEV? Why is a 10,001 lb HEV more clean than a 9,999 lb HEV? Are there no cleaner technologies available in Class 3 than an HEV? Does a Class 3 HEV produce zero-emission miles? The answer to all of these is clearly no. The implication may be that Class 2b HEVs are already mainstream, but it is well-known that the major OEMs pulled out of the Class 2b HEV space and therefore that is not true.

XL Hybrids recognizes that the long term 2050 goal is to achieve to significant reductions in emissions that most generally agree will include a major portion of vehicles with emissions only at the upstream energy supply, and that the only two technologies envisioned that do that are full EVs and fuel cell vehicles. But we think most agree that we cannot predict the exact path that will get us there which is why a sunsetting portfolio approach is implemented. XL Hybrids

believes, though, that there are some key principles that should be part of the path; primarily that much lower cost batteries are needed and a financially sustainable industry to deliver the batteries and vehicles is needed. But we would submit that it is much less certain whether it is more valuable that batteries developed in the earlier stage of that path are placed in 1000 vehicles or 100 vehicles with 10x more cells, and which companies will survive financially to provide the needed ZEVs of the future once battery production volume and technology have advanced to drive costs down.

We hope that ARB will look at this stepping back to view the big picture from Class 1 to 8 and recognize the hole created in support for just 1 of 27 categories of xEVs, and reconsider closing this hole in pursuit of a comprehensive, weighted balance, portfolio of programs.

Edited Version of XL Hybrids Comments from April 15th, 2014:

The first fact is that Class 2b vehicles are a significant contributor to mobile emissions in CA just like other commercial vehicle classes. In 2011 CALSTART conducted a study and report showing the distribution of emissions, VMT, and vehicle population by commercial vehicle class. The results clearly show that there is a significant contribution to emissions from every vehicle class starting with Class 2b. Furthermore, it shows that the highest population vehicle classes are 2b, 3, and 8.

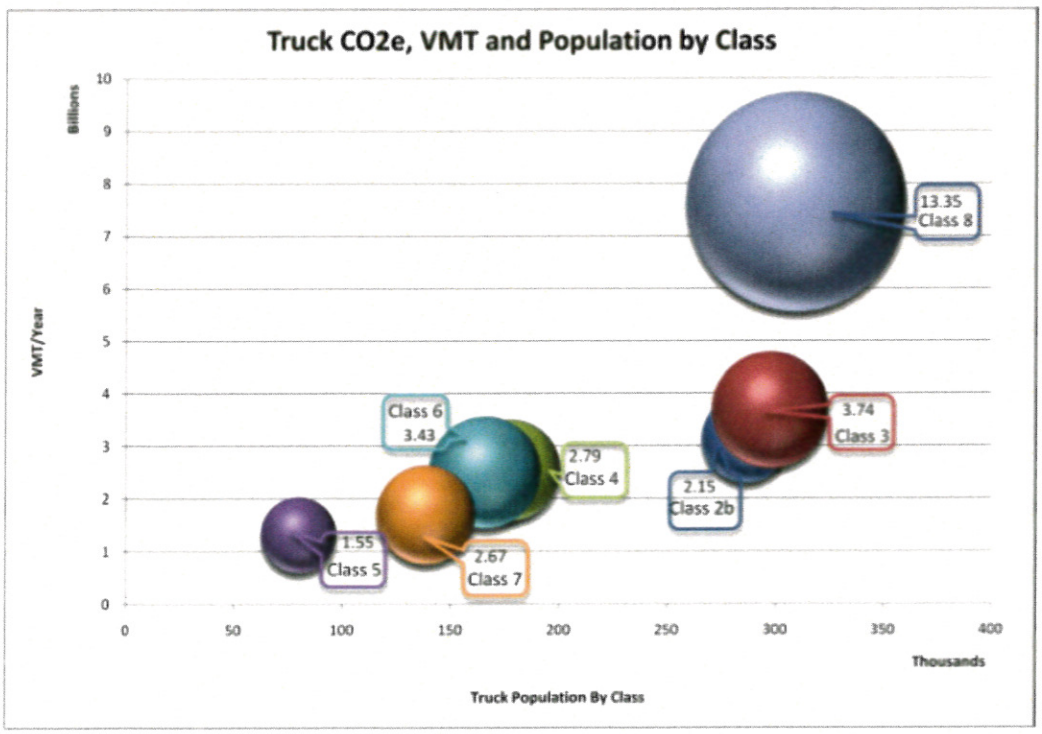

Figure 10 - Truck VMT, Population and CO2e GHG in MMT, by truck class.

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[1] G. Jennings and T. Brotherton, "Vehicle and Technologies Characterization and Baseline", CALSTART, 1/31/2011.

The second fact is that the ONLY class for which there are no incentives is Class 2 as summarized by the following chart. The major OEMs sell vehicles to consumers in Class 1 (and some Class 2a pickups and SUVs), and the AQIP CVPR program supports clean alternatives in these classes. The HVIP program supports Class 3-8 HEVs, PHEVs, and EVs but in Class 2 only supports PHEVs and EVs. Class 2 HEVs, those without a plug, do not qualify, though Class 3 HEVs do qualify.

	Class 1	Class 2a	Class 2b	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8
HEV	Major OEM	Major OEMs	None	HVIP	HVIP	HVIP	HVIP	HVIP	HVIP
PHEV	CVRP	CVRP /HVIP	HVIP	HVIP	HVIP	HVIP	HVIP	HVIP	HVIP
ZEV	CVRP	CVRP /HVIP	HVIP	HVIP	HVIP	HVIP	HVIP	HVIP	HVIP

In the interest of a weighted and comprehensive portfolio, XL Hybrids requests that Class 2b HEVs are allowed to qualify for HVIP. Because Class 2b vehicles have on average the slightly lower emissions per vehicle as Class 3 vehicles (see CalHEAT chart dividing class net emissions by vehicle population) and the fact that an HEV should save fewer emissions than a PHEV (by the mileage range of the charge depleting operation), it makes sense that the HVIP vouchers for Class 2b HEVs should be lower ($5,000 or less per vehicle). As a market example, XL Hybrids successfully sells an HEV product for the two largest population Class 2b commercial vehicles: the Chevy Express and the Ford E-Series vans. If there is concern about cost-effectiveness of managing small vouchers, ARB could require that they be bundled in no less than 5 vehicles per order.

Sincerely,

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