From: Alexander Oki
To: Fideldy, Ariel@ARB
Subject: Feedback on Revised Draft 2020 Mobile Source Strategy
Date: Tuesday, May 11, 2021 11:06:03 AM

Ariel,

I commend the proposed recreational boating emissions reductions in the revised 2020 Mobile Source Strategy, and suggest that the Air Resources Board expand the scope of the type of outboard motors subject to the proposed controls.

Technological innovation in marine propulsion -- specifically the development of electric outboard motors (such as the Pure Outboard) -- will for the first time enable viable electric alternatives to recreational boaters that do not compromise on performance or total cost of ownership. Until now, only low-powered (i.e. sub 19kW / 25HP) electric outboard motors were truly viable replacements as higher-powered electric outboards were too heavy, thereby failing to meet the top speed, range, and other performance requirements.

A new generation of higher-horsepower marine products will be available this year, which meet the performance and ownership cost needs of recreational boaters, and -- critically -- do so without polluting emissions. Pure Watercraft will begin launching a suite of marine propulsion products this year (starting with a 50HP-equivalent electric outboard motor). If Tesla's success is any indication, consumer adoption should be strong over the next five years.

To that end, we hope you will consider accelerating the phase-in period and expanding the scope for the 2020 MSS recreational marine vessel controls as follows:

- Shift the start of the seven-year phase-in period from 2029 to 2022
- Increase the power level for small outboard engines that must shift to electric from 19kW to 40kW

These changes would create a strong, immediate incentive to reduce emissions of carbon monoxide, hydrocarbons, and oxides of nitrogen, as well as PM2.5 and other fine particulates. To help quantify the benefit, switching from a gas to an electric outboard has the same non-CO_2 emissions reduction benefit as removing ~125 modern cars from our roads (source).

I would welcome the opportunity to connect or provide more information about the

exciting market developments in off-highway electrification.

Warm regards,
Alexander Oki

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