

November 29, 2021

Via e-electronic submission: www.arb.ca.gov

RE: OPEI Comments to the California Air Resources Board's *Proposed Amendments to the Small Off-Road Engine Regulations: Transition to Zero Emissions – SUPPLEMENT TO COMMENT 8*

The Outdoor Power Equipment Institute (OPEI) respectfully submits the following supplement to previously submitted COMMENT 8 regarding the California Air Resources Board (CARBs) *Proposed Amendments to the Small Off-Road Engine (SORE) Regulations: Transition to Zero Emissions* (“the Proposed Rule”).

SUPPLEMENT TO COMMENT 8 – The Proposed Rule fails to accurately address the upfront and ongoing cost of ZEE equipment. As a result, the Proposed Rule overestimates the cost benefits of the rule.

OPEI is also concerned about the selection method of units for comparison in the ISoR and SRIA. The SRIA compares what appears to be a very low-end cost “professional” ZEE walk-behind mower with a cost of \$499 to a very high-end cost commercial gas-powered walk-behind mower with a cost \$1299. These are not “apples to apples” comparisons. A quick Google search shows there are several “professional” or “commercial” ZEE walk-behind lawn mowers available in the U.S. with costs ranging from \$499 to \$1,199.95. Similarly, there are “professional” or “commercial” 21” walk-behind lawn mowers starting below \$800.

Regarding the cost comparison units in the SRIA, the durability of the products compared are not equal. The gas-powered mower has been developed and evolved over decades. The gas-powered mower has been tested by and meets the performance requirements of the most demanding professional landscapers. It is true the ZEE lawnmower offers a longer warranty. The Proposed Rule suggest the longer warranty

period for ZEE provide equal or superior lifetime than SORE-powered equipment¹, however, that is not true. The gas-powered mower offers several more robust components and features that are critical to professional users. The gas-powered mower handle design is 14 gauge (1.9mm) steel with a support while the ZEE walk-behind mower is 16 gauge (1.6mm) 2-piece handle with no support. The gas-powered mower has a weld-reinforced deck. The gas-powered mower has PC-PBT structure wheels with steel hubs, double bearings and a rubber tire. The ZEE mower has plastic hub, no bearing and a plastic tire. The ZEE mower tire failed one manufacturer's durability test at 20% of product life. The gas-powered mower has durable hydrostatic transmission that has evolved over decades to meet the most rugged commercial user needs. The ZEE mower is electric motor driven. The ZEE mower transmission motor failed one manufacturer's durability test at 12% of product life. Similar ZEE mower electric motor transmissions failed testing at less than 200 hours, experiencing failures related to brush-motor wear and worn dog clutch teeth – contrary to information presented in the ISoR. The ZEE mower is IPX4 rated, meaning electrical components have limited protection against rain and weather elements. The gas-powered mower can be used in any weather conditions. The ISoR limits quality comparison of the units to warranty period, and vaguely compares the deck size (21"), propulsion method (self-propelled and speed ranges), and a single blade feature (mulching). The ISoR is an incomplete and inappropriate comparison for rulemaking purposes.

OPEI is unaware of any similar product testing or study conducted for the Proposed Rule. With these concerns in mind, in addition to the concerns outlined in Comments 7 and 9, CARB must conduct a regulatory-appropriate technology feasibility study to understand the performance characteristics and limitations, and technology feasibility of ZEE products versus their gas-powered counter-parts – including accurate battery life and maintenance costs. Following testing and additional product research, the SRIA and ISoR must be updated with more appropriate product, and in-turn accurate cost and benefit comparisons. In the absence of a technology feasibility study

¹ CARB Public Hearing to Consider Proposed Amendments to the SORE Regulations: Transition to Zero Emissions – Staff Report: Initial Statement of Reason (ISoR), October 21, 2021, pg 19

and with significantly incomplete comparison analysis, the rulemaking arbitrary and capricious or without reasonable or rational basis.