National Marine Manufacturers Association

November 29, 2021

Clerk of the Board
California Air Resources Board
1001 Street
Sacramento, California 95814

RE: Public Availability of Additional Documents and Information for the Proposed Amendments to the Small Off-Road Engine Regulations: Transition to Zero Emissions

Dear Chair Liane Randolph and Members of the California Air Resources Board:

The National Marine Manufacturers Association (NMMA) appreciates the opportunity to comment on the California Air Resource Board's (CARB's) Proposed Amendments to the *Off-Road Engine Regulations: Transition to Zero Emissions.*

NMMA is the trade association for the U.S. recreational boating industry, representing nearly 1,300 marine businesses, including recreational boat, marine engine, and accessory manufacturers. Our members are often U.S.-based small businesses, many of which are family owned. NMMA members collectively manufacture more than 85 percent of the marine products sold in the U.S. Furthermore, the recreational boating industry has a $170 billion impact on the nation's economy and in communities across the country, with nearly 700,000 American jobs across 35,000 U.S.-based marine businesses. In addition to the NMMA comments, NMMA supports the comments submitted by Westerbeke Corporation a US based manufacturer of gasoline marine generators.

NMMA has worked closely with the staff at the Air Resources Board for close to 30 years to deliver clean recreational marine technology for California boaters. Everything from evaporative emissions to new technology outboard, sterndrive and inboard and personal watercraft engines that are cleaner, quieter and more fuel efficient, NMMA is proud of what we have accomplished working closely with ARB staff. NMMA members have always been able to achieve stringent clean air standards while continuing to supply California boaters with safe and affordable products.

Unfortunately, the staff proposal before your board to eliminate gasoline powered marine generators is not achievable and more time is needed to determine if a feasible solution will ever exist. Marine generators are critical components in recreational boats that provide the energy necessary to keep the batteries charged to support bilge pumps, carbon monoxide and smoke alarms, ship to shore radio, sea keepers that provide

stabilization, electric bow thrusters and other marine equipment necessary to insure the safe operation of a vessel. NMMA has discussed these safety and operational concerns with ARB staff and technical data has been provided supporting the need for more time to determine if a feasible solution can be developed. Directing staff to achieve a zero-emission goal for political reasons and ignoring feasibility is irresponsible. As detailed in the NMMA comments to follow, the board has both the opportunity and responsibility to consider the facts and decide on a sensible path forward that achieves the governor's goals while protecting California boaters.

The technology simply does not exist to replace a Gasoline Marine Generator with any currently available Zero Emissions Equipment (ZEE).

Executive Order (EO N-79-20), section 1 states, "It shall be further a goal of the State to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 *where feasible*." Section 2 states "In implementing this Paragraph, the State Air Resources Board shall act consistently with technological feasibility and cost-effectiveness." The EO clearly and specifically accommodates off-road equipment like generators that do not have a technologically feasible replacement and allows sufficient time for the potential development of technology that does not yet exist within the framework of the EO's stated goals and 2035 timeline. There are no suitable replacements available, or even realistically projected to be available in the next 10 years that would be a feasible and cost-effective ZEE replacement for a Gasoline Generator. In the event of a power outage (whether unplanned power outage or PSPS) it is essential to have access to electrical power. Operating lifesaving home medical equipment and having heat and/or air conditioning are not mere conveniences, they are lifesaving necessities to vulnerable populations. Having the ability to refrigerate food, cook food, have running water, have lights for safety are all necessities, not luxuries. This is even more true in the case of Gasoline Marine Generators. When a boat is underway at sea, or at anchor, there is no access to shore power, often for extended periods of time.

The extremely high-power density requirements make even the best ZEE option currently available completely useless for replacing a Gasoline Marine Generator, or really any Gasoline Generator. Consider the case of replacing even the smallest Gasoline Marine Generator currently on the market with a ZEE battery-inverter system. Even the tiny output of 3.5 kW operating for just 2 days with a battery powered inverter would require almost 8 tons worth of batteries alone at a cost of almost $100,000. What happens when replacing a much bigger 7.5 kW, 10 kW or even a 15 kW generator, all of which fall under SORE regulations. The data that NMMA has reviewed estimates the cost at $428,000 requiring 32-tons worth of batteries. No reasonable person would consider that either technologically feasible or cost-effective, nor would the boat float. Furthermore, all these batteries would only cover the boats energy requirements for two days. The general idea of replacing power from the grid by using a device that relies on the grid to recharge is fundamentally flawed logic. Using solar panels to recharge batteries during a storm or outage is highly unreliable and even in the best conditions is much too slow to keep up with the demand. There is no ZEE option available to replace gasoline marine generators, either now or in the foreseeable future. Until such time as a

technically feasible, cost-effective solution is commercially available, NMMA strongly urges that for the period of 2024-2027 and beyond, SORE Gasoline Marine Generators be separated from other SORE engines and SORE generators and be allowed to continue with the current emissions standards and durability periods.

Conclusion

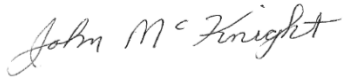
Gasoline Generators should be allowed to continue to be available in the marketplace. Failure to allow remote alternative power that can be used when direct power is not available, such as on water or in remote locations will jeopardize the benefits of the entire SORE rule.

For generators as a whole, and marine generators specifically, there are currently no technologically feasible and cost-effective alternatives. Banning marine generators without any suitable alternatives would be irresponsible governance. In the case of land-based generators, it would be putting the citizens of California at substantial risk of harm during California's frequent power outages. In the even more specialized case of Gasoline Marine generators, it would render the boats requiring anything more than minimum levels of electrical power essentially unusable. Nowhere in this proposal has ARB staff considered replacement marine generators. If a marine generator fails on a recreational boat and the generator cannot be replaced the entire vessel becomes unusable. For example, the marine generator on a two year old open bow fishing boat throws a piston rod through the wall of the engine block and the vessel becomes unusable.

NMMA strongly urges the board to allow Gasoline Marine Generators be exempted from ZEE transition regulations and be allowed to continue to be sold in California at the emission levels and durability period as currently regulated by the EPA. We further request that Gasoline Marine Generators should be allowed to be sold in California until such a time as a practical ZEE solution to replace a Gasoline Marine Generator is readily available in the marketplace. NMMA supports ARB's efforts to reduce the state's carbon footprint and we want to work with board and staff to achieve these goals. What we fear is the banning of energy sources that are critical to maintaining power on water and in remote locations.

NMMA appreciates the opportunity to provide comment regarding this important issue. If you have any questions or comments, please do not hesitate to contact me at jmcknight@nmma.org or 202-257-3754.

Sincerely,



John McKnight, Senior Vice President
Environmental & Safety Compliance