29 November 2021

CARB,

I am greatly concerned the State of California has taken measures for attaining Zero Emissions by the elimination of Small Off-Road Engines will likely have a negligible effect in the quality of air and at a great expense and detriment to California business and public entities.

California HAS NOT demonstrated its ability to provide reliable electrical power. Currently blackouts and brownouts are a common occurrence throughout the state. Currently the source of electricity for California is dependent on 60% non-renewable energy. Logically, any increase in electrical demand from battery powered equipment would mostly be derived from non-renewable energy sources such as coal and LPG. Clearly, the employment of battery powered equipment is NOT creating a state of having Zero Emissions.

A fully detailed environmental impact for battery powered equipment has not been published to my awareness. A published report documenting the environmental impact and cost of Lithium battery production from cradle to grave would make sense if we are to fully mandate their employment. How much non-renewable fossil fuel is required for the production, recycle and disposal of the Zero-Emission battery?

The Battery Powered Industry for outdoor powered equipment is in its early phase. The cost of Battery Powered Equipment is generally three times that of a gas powered equivalent and with only a fraction amount of efficiency. For example, a common commercial backpack blower which costs $500 with a blowing force of 32 Newtons can at best be replaced with a Battery Powered Blower for $1600 having only 17 Newtons of blowing force.

The current available Battery Powered Equipment is best suited for the residential user. Only for a limited number of applications does a battery powered tool make sense for commercial applications. For example, a tree arborist will employ the small battery powered chainsaw whilst high in a tree for safety reasons. The largest battery powered chainsaw can power a small 18” bar whereas the forestry and fire response requires bars twice the size in length. In terms of equivalent chainsaw power, the largest battery powered chainsaw is roughly equivalent to a 30cc gas powered chainsaw. A gas powered chainsaw designed for a 36” bar requires at least an 80cc gas powered engine. Hence there is no suitable battery powered equipment for forestry or fire fighting gas powered equipment, and the list goes on for most all commercial applications.

From my perspective, California should not be banning gas powered outdoor equipment 1) until it has demonstrated the ability to provide reliable and affordable electricity derived from Zero-Emission renewable energy; 2) until a fully documented environmental impact report documents the employment of batteries for powered equipment, from cradle to grave, will ultimately consume less non-renewable CO2 emitting energy; 3) at most, without demonstrated compliance with 1 & 2, the current ban should only apply to the residential consumer.

My Sincere Regards,

Darryl Braaksma