

TO

Liane Randolph, Chair
California Air Resources Board
1001 I Street
Sacramento, California 95814
Via Electronic submittal
Evan.Kersnar@arb.ca.gov

DATE

August 13, 2021

RE: CARB's Commercial Harbor Craft Rule

Dear Chair Randolph,

We urge CARB to require 100% zero-emissions deadline for all vessel segments of the Commercial Harbor Craft Rule.

Since 2009, Corvus Energy has been leading the way in deploying battery technology on board maritime vessels to reduce emissions. Our custom-developed mechanical and electrical design combined with state-of-the-art battery management systems and digital services provides Corvus Energy's customers with not only lower maintenance costs but also reduced fuel consumption and emissions.

The electrification of marine vessels is now considered as a proven technology contributing to a decarbonized sustainable maritime sector. We are witnessing a fast-evolving climate friendly global technological shift that requires more integrated approaches entailing alternative fuels, wind and solar energy, renewable hydrogen, fuel-cell technologies, zero emission dockyards, autonomous vessels and many more to overcome the evidence based expected ecological catastrophe.

Corvus Energy is a pioneer in maritime energy storage systems (ESSs), and **it can be used for almost every vessel type breaking the ground for future development.** We powered the world's first electric commercial fishing vessel "Karoline" in 2015 and the world's first all-electric ferry, the Norled Ampere. The ZeeTug30 designed and built by Navtek Naval Technologies has Corvus Energy ESS onboard. In addition, Corvus Energy supplies batteries for various types of workboats, ranging from small harbour vessels to larger workboats of various kinds, enabling energy optimization and zero-emissions operations.

We also power hybrid tugs and workboats. Depending on battery size and operational profile, you can typically reduce fuel consumption and emissions by 30-60%, in addition to reducing maintenance costs and increased safety.

We appreciate the hard work that CARB staff have done on the proposal. However, the draft rule as written is short-sighted. The rule does not reduce greenhouse gas emissions and risks creating a

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stranded asset scenario for harbor craft owners who may pay to retrofit to Tier 3 and 4 engines only to be forced to make a full zero-emission transition in quickly proceeding years later.

We have extensive experience with installing and servicing ESS in marine vessels globally. **For the marine sector, a strong but achievable standard would be that all harbor craft operating in the state must be zero emission by 2035.** We would encourage you to increase funding for pilot demonstrations and zero emission marine vessels programs.

We would be happy to discuss our technology further with you.

Best Regards,

Sean Puchalski

Sean Puchalski
Executive Vice President
Strategy and Business Planning
Corvus Energy

cc:
CARB Board members
Secretary Jared Blumenfeld, CalEPA

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