

Blue Gas Marine

Mitigation plan goals and overarching principles

- DofE should prioritize project selection based as follows:

- 1) What projects will reduce the most emissions for the money. This “Bang for the Buck” approach should ensure that the projects that can most efficiently achieve the goals of the settlement will get funded.

- 2) Projects that have the potential to benefit the tax payers of WA. State wide projects that will reduce operating costs for the state will benefit all tax payers and not just those receiving funds.

- 3) Projects in non-attainment areas as a way of addressing the most pressing emissions issues.

- Due to the fact that marine vessels account for a disproportionately large percentage of emissions, DofE should ensure that marine applications are as broadly eligible as possible for VW Settlement:

- o Marine vessel can burn more than 10x the amount of fuel per mile as even large trucks;

- o Marine vessels, especially commercial diesels, emit much larger quantities of pollutants per gallon burned than on road, due to reduced emissions mitigation requirements, the burning of dirty diesel and gasoline fuel blends and the average age of marine engines (especially diesel) vs. on-road.

- DofE should allow infrastructure to be eligible to receive funding.

- o The availability of Compressed Natural Gas and electricity, will be critical to adoption of natural gas as an on-water fuel and electric vehicles (EV).

- o As with EV charging stations, available on-water natural gas stations will increase awareness and demand for natural gas fueling systems, creating a “snowball” effect that will help to further reduce emissions because of the cost savings of natural gas vs. liquid fuels

- o It will grow the overall availability of natural gas, benefiting local natural gas providers, as well as all industries seeking access to natural gas refueling, including other state and locally owned vessels.

- DofE needs to ensure that retro-fitting of existing engines, as well as new build or repowers, is eligible for funding. This is the most economical way of installing natural gas fueling and it would not make sense for it to be deemed ineligible due merely to wording in the drafting of the legislation.

- DofE should require that the new technologies only improve the emissions, vs. bring them up to Tier 4 status.

- o Marine engines have a long operating life. If they had to be brought up to Tier 4 status, fewer would be up-fitted to improve emissions and thus these long-lived assets will remain in operations as higher polluting engines.

- o If DofE focuses on the cost efficiency of emissions reduction when evaluating the proposals, this should not be an issue.

- The requirement of EPA certification should be prior to distribution of funds and not prior to just the award.

- o Marine engines are far more varied than on road engines, and thus, seeking out EPA certification for engine modification technologies generally only happens once an order is received, and the engine type has been identified. To require this to prior to just the award being made, vs. prior to actual distribution of funds, would place a significant burden on the makers of add-on engine technologies.

- ? As an example, to perform EPA certification testing will require not only the cost of the testing, but the acquisition of an engine. All in this could be upwards of \$250,000 before even knowing if the buyer was going to be able to purchase it. Considering some operators can have 4-5 or more different types of engines in their fleet, in order to propose a project to up-fit the engines on an

entire fleet, the add-on equipment manufacturer could incur over \$1 million in costs.

o If the technology had to be EPA approved prior to awarding of the funds, it would likely result in the only option being the installation of new engines that are EPA approved. Engine manufacturers don't have the same issue, due to the fact they only need to go through EPA approval one time and they know they will have to do this before any sales are made. This would be at a huge additional cost vs the add-on technologies. As an example, a new dedicated natural gas engine for a large tug would be over \$1 million.

Priorities

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Mitigation fund allocations

Priorities should be based on what can achieve the most emissions reduction for the \$. due to their disproportionately high consumption of fuel, marine vessels should be eligible for an allocation as high as 75%