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**Re: AB 118 Sustainability criteria**

Sustainability criteria must include full cycle evaluation of the technology/project proposed. Cradle to grave evaluation of the Carbon and Energy footprint of proposals, while not precise, can give a general idea as to the overall impact of a project's technology widespread adoption.

The Governor's push to decrease carbon output, through the Alternative and Renewable Fuel and Vehicle Technology grant program is a unique opportunity for the citizens of California to reap a near term benefit in terms of cleaner air, and a decrease in carbon output.

Emphasis must be placed on projects and technologies that take existing in-use assets, be they water pumps, generators, Port Container haulers, and make them run on currently available cleaner burning fuels.

Very inexpensive technology exists today to convert these existing engines to run on Natural Gas and Bio-Gas. ***By converting existing in-use engines, we avoid the entire production cycle carbon and energy costs of creating new engines and vehicles.***

Heavy Duty Diesel engines are the backbone of industrial power due to their very long life cycle. Conversion of these assets to run on Natural gas or Bio Gas now, and eventually Hydrogen is absolutely within our grasp, no new technology needs to be developed. The savings on capitol outlay also increases technology adoption rates.

The primary barriers to widespread conversion, especially in non-attainment areas like the San Joaquin Valley and the Port of LA, is the high cost of doing longevity testing and EPA/Carb certifications, as converted motors are treated as NEW Large Spark Ignition motors. This testing must be done for each type, size, and year of an engine. These testing costs are too high to be economically feasible for any provider of this technology. Natural Gas conversion technology needs to be treated in the same fashion as current exhaust after treatment for Diesel emissions.