ALASKA ENERGY AUTHORITY

June 17, 2019

Jennifer Keller, Director
Legacy Fleet and Assessment Center
Office of Transportation and Air Quality
U.S. Environmental Protection Agency
1200 Pennsylvania Ave., NW
Washington, DC 20460

Re: State of Alaska DERA Implementation Plan, Waiver Request

Dear Ms. Keller,

The Alaska Energy Authority (AEA) requests the Environmental Protection Agency's (EPA) Diesel Emission Reduction Act (DERA) Program provide waivers for the following items:

1. Reduced mandatory cost-share using 2018 Tribal DERA cost-share requirements for projects benefiting rural Alaska Tribes
2. Replace stationary prime power Nonroad Engines and Equipment with certified Tier 2 & Tier 3 marine engines
3. Replace larger stationary prime power Nonroad Engines and Equipment (generally larger than 550 HP) with Tier 0, Tier 1 and Tier 2 low PM emitting engines.
4. Exceed administrative cost cap due to Alaska's unique logistic and technical support requirements

These requests and Alaska's FY 2019 State DERA work plan comply with 40 CFR 60 Subpart IIII, New Source Performance Standards (NSPS) for non-emergency stationary diesel engines located in remote areas of Alaska. Our 2019 work plan is similar to the plan approved by EPA for the FFY17 and 18 State Clean Diesel program.

Subject to funding levels, AEA will replace up to six diesel engines in power plants in rural Alaska communities not connected to the electrical grid, and support up to fifteen engine replacements funded under the tribal Volkswagen Settlement. Unlike the continental US, diesel power plants provide prime power in remote areas of Alaska and many rely on older, higher emitting diesel engines. These programmatic waivers will benefit small, rural Alaska tribal communities.

Reduced mandatory cost-share using 2018 Tribal DERA 80/20 cost-share requirements for projects benefiting remote areas of Alaska, which are mostly Tribal

EPA has previously approved using the Tribal DERA cost-share requirements under the 2016, 2017, and 2018 Alaska Workplans. AEA requests EPA apply the 2018 Tribal DERA 80/20 cost-share requirement for engine and engine-generator replacement under the FY 2019 State Clean Diesel Grant program for prime power plant applications in remote Alaska communities.

Replace stationary prime power Nonroad Engines and Equipment with certified Tier 2 & Tier 3 marine engines

Rural Alaska communities rely on diesel engines for 24-hour, 365-day per year prime power. After regulatory compliance, reliability is the highest priority in selecting an engine. The diesel engine-generators (gensets) must provide reliable and consistent power to ensure residents health and welfare. Certified Tier 2 & Tier 3 marine engines are reliable, cleaner and provide a significant improvement in fuel economy and reduction in PM emissions compared to older Nonroad engines.

AEA requests EPA approve the following DERA engine replacements:

- Cleaner Tier 2 marine engines will replace non-certified, Tier 1 & Tier 2 Nonroad engines.
- Cleaner Tier 3 marine engines will replace non-certified, Tier 1, Tier 2 & Tier 3 Nonroad engines, and Tier 2 marine engines.

Replace larger stationary prime power Nonroad Engines and Equipment (generally larger than 550 HP) with Tier 0, Tier 1 and Tier 2 low PM emitting engines

AEA requests EPA approve engine replacements using Nonroad engines that meet or exceed the Tier 3 PM emissions standard. These Nonroad engines will be selected based on emissions reductions calculated by comparing the replacement engine manufacturer's published emissions data to either the existing engine emissions standard, or when available, the existing engine manufacturer's published data. A replacement engine will always result in lower PM emissions than the existing engine.

Included with this letter are graphs for Detroit Diesel Series 60 and Caterpillar 3456 and 3500-series engines showing actual engine PM emissions compared to EPA Tier 0 and Tier 3 emissions standards. Also included are fuel economy graphs. These Tier 0 and Tier 1 engines, 550 HP and larger, provide superior fuel economy and are documented to emit lower PM emissions than the nonroad Tier 3 emissions standard.

The State DERA program has previously authorized, by Waiver, the use of marine Tier 2 & 3 engines in remote areas of Alaska - because:

1. the EPA NSPS rule (Alaska Alternative Implementation Plan) authorizes their use in remote areas of Alaska,
2. the PM emissions of these engines meets or exceeds the nonroad Tier 3 PM emissions standard,
3. they are reliable and fuel efficient,
4. and DPFs are not required on the Tier 2 and Tier 3 engines that are being installed under the State DERA program.

There are 564 prime power diesel genset engines in remote areas of Alaska, of which 252 are greater than 550 horsepower. Although John Deere and Caterpillar account for 70% of all engines, there are only 6 John Deere engines in use greater than 550 horsepower. In remote areas of Alaska, engines greater than 550 horse power are primarily Detroit Diesel Series 60 and Caterpillar engines.

In June 2019, EPA is scheduled to publish a rule to remove the DPF requirement for new Tier 3 engines in remote areas of Alaska. This will provide much needed relief and allow new marine Tier 3 engines to be installed, the majority of which are expected to be John Deere engines. However, the 6135HFM85, rated 559 horsepower, is the largest John Deere marine Tier 3 engine available in a prime power application.

Even with the No DPF rule, larger marine engines will continue to be subject to Tier 4 emissions standards, and require exhaust emissions equipment. Small, remote Alaskan utilities are unwilling to install engines with exhaust emissions equipment due to cost, complexity, and poor reliability - and because there are prior model year, low PM emitting engines with appreciably better fuel economy, that comply with NSPS requirements.

Authorizing the Alaska State DERA program to install these low PM emitting engines will expand the reach of the DERA program, particularly to communities with 500 residents or more. Many of these remote Alaskan communities are served by Alaska Village Electric Cooperative (AVEC) an enthusiastic partner with AEA in this program.

Utilities will continue to use and install the Series 60 and Caterpillar engines, because they are reliable, fuel efficient and comply with the Alaska Alternative Implementation plan and NSPS requirements. However, without this waiver, utilities will not be authorized to use either State or VW DERA funding to replace existing larger, old, dirtier engines with these low PM emitting engines.

Exceed administrative cost cap due to Alaska's unique logistic and technical support requirements.

EPA has previously recognized Personnel, Fringe Benefits and Travel costs in Alaska are higher than in the contiguous United States. Alaska DERA project sites are rural and accessible only by air or sometimes chartered boat. Staff travel consists of multiple air carriers to get to the project site. One carrier from Anchorage to a smaller hub community, then a much smaller single engine or twin engine commuter carrier to the project community. Once in the community local lodging and transportation are noncompetitive and subject to availability and rates set within the community. Due to these reasons, AEA again requests EPA approve Personnel, Fringe Benefits and Travel costs that exceed the 15% cap.

Implementing our State DERA FFY19 work plan will result in significant emissions reductions and assist financially struggling tribal communities to ensure safe, reliable and cleaner power.

We thank you for your time and consideration.

Sincerely,

Curtis Thayer
AEA Executive Director

Enclosure as stated

cc: Jason Wilcox, EPA HQ, DERA State Program Lead
Faye Swift, EPA HQ, DERA National Grant Program Coordinator
Lucita Valiere, EPA Region 10, Project Officer