



April 14, 2017

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) is requesting the Environmental Protection Agency's (EPA) Diesel Emission Reduction Act (DERA) Program consideration on the following items:

1. Replacement (repower) of non-road engines with certified Tier 2 & Tier 3 marine engines for stationary power generation in conformance with EPA's New Source Performance Standards for Alaska [40 CFR 60.4201 (f)(1)].
2. Horsepower increases greater than 25% with prior approval from EPA.
3. Use of reduced mandatory cost-share requirement from the 40%-EPA, 60%-State, to 75%-EPA, 25%-State, for projects benefiting rural Alaska Tribal people.
4. Use of certified marine engines prior to 2017 for replacement of non-certified or Tier 0 non-road engines.
5. Exceed administrative cost cap because of Alaska's unique logistics.

These requests and Alaska's FY 2017 State DERA work plan are in compliance with 40 CFR 60.4200, New Source Performance Standards (NSPS) for non-emergency stationary diesel engines located in areas of Alaska not accessible by the Federal Aid Highway System.

Our 2017 work plan is similar to the plan approved by EPA for last years' FY 2016 State Clean Diesel program.

AEA, as the lead granting authority for Alaska to administer funds from the DERA program for fiscal year 2017, submits our FY 2017 State of Alaska Clean Diesel DERA workplan in conformance with the FY 2017 State Clean Diesel Grant program Information Guide. AEA will administer the State DERA program and utilize the funds the State is entitled to receive under Title VII, Subtitle G, Section 793 of the Diesel Emissions Reduction Program (DERA) in the Energy Policy Act of 2005 (codified at 42 U.S.C. 16133).

Subject to funding levels, AEA will replace four diesel engines in power plants in rural Alaska. Rural communities in Alaska are not connected to the electrical grid and must generate their own electricity. Small diesel power plants are used for this purpose and many of the power plants in these communities currently rely on old technology, high emitting, non-certified diesel engines.

**1. Replacement of non-road engines with certified Tier 2 & Tier 3 marine engines for stationary power generation in conformance with EPA's New Source Performance Standards for remote areas of Alaska [40 CFR 60.4201 (f)(1)].**

The EPA State DERA funds allocated to Alaska will be used to fund replacement of up to four non-certified engines with Tier 2 and Tier 3 marine engines. Each engine selection is based on the existing application and availability of suitable replacement engines, and complies with NSPS IIII, 40 CFR 60.4200.

Rural Alaska communities rely on diesel engines for 24-hour, 365-day prime power. Reliability is the first priority in selecting an engine. The diesel engine generator sets (gensets) must provide reliable and consistent power to ensure residents health and welfare. Certified Tier 2 & Tier 3 marine engines have proven reliability and performance, and provide a significant improvement in fuel economy and reduction in PM emissions compared to non-certified engines. Installation of certified marine engines with DERA funds will be in accordance with DERA and NSPS requirements.

Following is a proposed narrative for the State of Alaska work plan to address the FY 2017 State Clean Diesel Grant Information Guide on *Page 12, VIII. Scope of Work, section C., 6.*

AEA will use DERA funds to repower existing non-certified diesel engines with newer, cleaner engines. The engine repowers will replace antiquated mechanically governed prime power diesel genset engines with newer, more fuel efficient Tier 2 and Tier 3 marine engines. Tier 2 and Tier 3 marine engines are equipped with electronically controlled governors and high pressure common rail fuel systems, which improves performance and reduces emissions. In accordance with DERA cost-share requirements, DERA funds will be used to purchase engines and associated equipment. Equipment includes freight, labor engineering and materials needed to install the cleaner engines and implement required upgrades to interface the engines with the existing power plants cooling, fuel, switchgear and exhaust systems. Where remanufactured or rebuilt

engines are used they will be “certified Tier compliant” by conformance with 40 CFR 1068.120 as explained in the EPA-420-F-12-052 document.

**2. Horsepower increases greater than 25% with prior approval from EPA**

Following is a proposed narrative for the State of Alaska work plan to address the FY 2017 State Clean Diesel Grant Information Guide on *Page 19, IX. Use of Funds Restrictions, I. Fleet Expansion, 1. and 2.*

AEA requests EPA allow greater than 25% horsepower increase. The repowered gensets will continue to perform the same function as the existing non-certified engines. Due to manufacturer technological improvements such as electronically controlled governors, high pressure fuel system, variable valve timing, higher compression ratios, and multiple valves per cylinder, Tier 2 and Tier 3 marine engines have more horsepower than non-certified engines of similar displacement. The repower engines selected provide the optimum reliability and fuel economy for the prime power application.

**3. Use of reduced mandatory cost-share requirement from the 40%-EPA, 60%-State, to 75%-EPA, 25%-State, for projects benefiting rural Alaska Tribal people.**

Following is a proposed narrative for the State of Alaska work plan to address the FY 2017 State Clean Diesel Grant Information Guide on *Page 12 & 13, VIII. Scope of Work, section C., 6 & 7.*

The AEA work plan requests to use a reduced mandatory cost-share requirement from the 40%-EPA, 60%-State (for engine repowers), and 25%-EPA, 75%-State (genset replacement) to 75%-EPA, 25%-State, for projects benefiting rural Alaska Tribal people. The FY 2017 State Clean Diesel Grant Information Guide on Pages 12 & 13, VIII. Scope of Work, section C., 6 & 7. specifies a mandatory cost-share requirement of 60 percent for engine repower projects and 75% for genset replacement projects. However, there is precedent of EPA covering more of the cost for tribal projects under the Clean Diesel Tribal Grants Program and last year’s FY2016 state allocation to Alaska. AEA is using the state DERA funds to assist with engine repowers and genset replacements in rural communities in Alaska that are federally recognized Alaskan Native Tribes, AEA requests to use the more appropriate tribal cost cost-share requirement of the previous Tribal RFP (EPA-OAR-OTAQ-16-06) rather than share specified in the FY 2017 State Clean Diesel Grant Information Guide.

**4. Use of Certified marine engines prior to model year 2017 for replacement of non-certified and Tier 0 engines.**

Table 2 on page 21 of the FY 2017 State Clean Diesel Grant Information Guide provides a matrix of current engine horsepower, model year & Tier, and identifies the replacement engine Tier requirement for 2017 engine model year (EMY) and newer engines.

EPA has previously accepted and authorized under the 2015 & 2016 DERA State programs use of Tier 2 and Tier 3 marine engines that comply with EPA's NSPS rule for remote areas of Alaska. Continued use of these engines is critical to sustainable and reliable power in rural Alaska.

Following is a proposed narrative for the State of Alaska work plan to address the FY 2017 State Clean Diesel Grant Information Guide on Page 21, IX. Use of Funds Restrictions, O. Nonroad Model Year and Tier.

The AEA work plan proposes to use pre-model year 2017 Tier 2 and Tier 3 certified marine engines to replace non-certified and Tier 0 engines in rural Alaska communities. For current engines between 0 and 300 horsepower, eligible engines will be model year 1995 and newer. For current engines 301+ horsepower, eligible engines will be model year 1985 and newer.

**5. Exceed administrative cost cap because of Alaska's unique logistics and technical support.**

Following is a proposed narrative for the State of Alaska work plan to address the FY 2017 State Clean Diesel Grant Information Guide on Page 17, IX. Use of Funds Restrictions, B. Administrative Cost Cap.

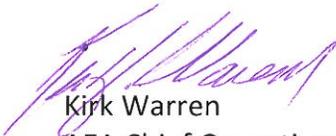
Personnel, Fringe Benefits and Travel exceed the 15% cap by a small margin. Travel and logistics within the Alaska are unlike other States. The project sites are rural and accessible only by air or sometimes chartered boat. Staff travel consists of multiple air carriers to get to the project site. One 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.

As demonstrated in Alaska's previous projects, this repower program results in significant emission reductions. The AEA considers these repower projects to be a priority for the State DERA funding. Power generation in rural Alaska depends on diesel engines, often operating in the center of a village, close to homes, workplaces, and the school. The proximity of power plants to these buildings may pose a health risk to the health of the community and replacing the engines in these facilities with ones that meet more stringent emission requirements will reduce emissions. In addition, improved efficiency will require less fuel, again reducing emissions, and with the added benefit of lowered costs. Use of Tier 2 and Tier 3 marine engines will increase available recovered heat and reduce community space heating fuel consumption and associated emissions. In rural communities, diesel fuel can retail for up to \$10 a gallon. Any savings on fuel is a significant cost savings.

AEA believes carrying out the State of Alaska DERA implementation 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,



Kirk Warren  
AEA Chief Operations Officer

Cc: Jason Wilcox, EPA HQ, DERA State Program Lead  
Faye Swift, EPA HQ, DERA National Grant Program Coordinator  
Debbie Kline, EPA Region 10, Project Officer