

2021 Diesel Emissions Reduction Act (DERA) State Grants Work Plan and Budget Narrative Template

INSTRUCTIONS: States and territories applying for 2021 DERA State Grants should use this template to prepare their Work Plan and Budget Narrative.

Please refer to the 2021 DERA State Grants Program Guide full program details, eligibility criteria and funding restrictions, and application instructions.

SUMMARY PAGE

Project Title: Alaska Clean Diesel Project FFY21

Project Manager and Contact Information

Organization Name: Alaska Energy Authority

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Project Budget Overview:

	2021
EPA Base Allocation	\$337,786
EPA Match Bonus (if applicable)	\$168,893
Voluntary Matching Funds (if applicable)	\$337,786
Mandatory Cost-Share	\$168,893
TOTAL Project Cost	\$1,013,358

Project Period

October 1, 2021 – September 30, 2023

Summary Statement

Alaska Energy Authority (AEA) will issue up to five sub-award grants to replace up to ten prime power diesel engines in rural Alaska communities. A prioritized list of potential communities is attached to this work plan.

AEA will consult with the Alaska Department of Environmental Conservation (ADEC) Division of Air Quality and will comply with all applicable emissions regulations.

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. These plants have at least one diesel engine running continuously. Rural Alaska communities rely on these engines for their prime power; however, many of these power plants use older technology, high emitting engines.

This grant will partially fund replacement up to ten non-certified and lower tier diesel engines with Tier 2 and 3 marine engines, and low PM emitting nonroad engines. These engines will be installed because of their proven reliability, fuel economy, and they are as clean or cleaner than non-road Tier 3 engines.

Past DERA State Clean Diesel Program projects can be found at:

<http://www.akenergyauthority.org/What-We-Do/Rural-Energy-Assistance/Diesel-Emission-Reduction-Act-DERA-Program>

This work plan includes EPA's concurrence with AEA's State of Alaska DERA Implementation Plan, Waiver Request submitted via email April 13, 2021 and supported by the EPA in a letter dated May 5, 2021. This waiver request is summarized below:

1. Reduced mandatory cost-share using 2020 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

SCOPE OF WORK

AEA will use DERA funds to complete up to ten diesel engine repower and/or replacements. The repowers/replacements will replace antiquated mechanically governed and lower tier prime power diesel genset engines with newer, more fuel efficient Tier 2 and Tier 3 marine and low PM emitting nonroad engines. These engines are equipped with electronically controlled governors, which improves performance and reduces emissions. With the acceptance of AEA's waiver request, DERA funds will be used to purchase engine/generators 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.

The repowered and replacement gensets will continue to perform the same function as the existing non-certified engine. Engines for generator repower and replacement will be selected to provide the optimum reliability and fuel economy for the available engine horsepower.

The Alaska Energy Authority (AEA) has developed a community priority list of potentially eligible engines for DERA replacement. Should a selected community drop out, an engine not meet DERA requirements, or an appropriate replacement engine cannot be procured, AEA will select another community from the priority list. When a new community is identified, a community-specific emission table and budget will be submitted to the EPA Project Officer for approval. AEA is matching the 2021 EPA grant with Volkswagen, state, local, and other funding as available¹.

For engines temporarily out of service, the utility's intent to return the engine to service will be documented, in addition to the FFY21 eligibility requirements. The replaced engine blocks will be rendered permanently disabled and disposed of in the local landfill.

In rural Alaska, communities are not connected to an electric grid and must generate power in their local community. Small diesel power plants are used across the state for this purpose. These plants have at least one diesel engine running continuously. The engines and generators must be absolutely reliable to provide consistent power to the residents to ensure health and welfare.

Although the air quality in rural Alaska is typically quite good, power plants are often located in the center of these communities, exposing residents to pollution from them. This grant will assist AEA in taking action to meet the goal of reducing exposure to criteria pollutants, hazardous air pollutants, and reducing greenhouse gas emissions, while maintaining the economic vitality of the state.

AEA will consult with the Alaska Department of Environmental Conservation (ADEC) Division of Air Quality to ensure compliance with applicable emissions regulations. ADEC requested

¹ Other contributions may come from the Denali Commission and local utilities.

AEA take over as the lead granting authority to administer Alaska's State Clean Diesel Program per the letter from State Commissioner Larry Hartig to Gina McCarthy dated April 15, 2016. EPA approved this request by letter dated May 11, 2016.

AEA's Circuit Rider/Technical Assistance group works with local organizations that operate their own electric utilities. These organizations are very small, often serving as few as one hundred customers, sometimes fewer. Being so small, the organizations often experience technical and administrative challenges due to the lack of economies of scale or specialized skills.

AEA maintains a database of the electric utilities it supports through its Rural Power System Upgrade (RPSU) program. The database was created in 2001, updated in 2012 and 2020 AEA embarked on an updated assessment that was completed on 6/30/21. The updated data provides enough information to select sites for the DERA projects.

Most rural communities in Alaska are federally recognized Alaskan Native Tribes. This work plan is based on the waiver request accepted by the EPA that includes the use of 100% of EPA funds, as allowed for in the Tribal Clean Diesel program. However, AEA does intend to match this project with state funds as described in the budget below.

AEA will issue sub-award grants using a combination of funding from DERA, voluntary match (VW), State funds, and other contributions. Using these grant funds, AEA on behalf of the community, or the community, will hire an engineering firm with expertise in remote Alaska power generation and experience with DERA programmatic requirements to prepare specifications, assist with materials and engine/generator procurement, and integrate the electronically controlled engines into the existing power plant switchgear. Rebecca Garrett, AEA Program Manager, and Dan Johnston, AEA Project Manager will oversee the grant to ensure the communities comply with all Clean Diesel Program requirements.

Throughout the project, AEA will provide administrative project management and in the case of a managed sub-award grant, AEA procurement staff will prepare the request for proposals or invitation to bid. AEA will also manage the EPA Clean Diesel grant to ensure all grant requirements are met.

TIMELINE AND MILESTONES:

PROJECT END DATES:													
				21	2022			2023			24		
	Days	Start	Finish	O	J	A	J	O	J	A	J	O	J
	730	10/1/2021	9/30/2023										
T1	90	10/1/2021	12/30/2021										
T2	135	10/15/2021	3/30/2022										
T3	90	4/1/2022	7/1/2022										
T4	180	7/1/2022	12/30/2022										
T5	270	1/1/2023	9/30/2023										
T6		10/1/2023	12/30/2023										

This project will take place in six steps:

- Task 1: Confirm each rural community has a DERA eligible engine and submit emission tables and updated budget to Project Officer.
- Task 2: Design and identify specifications – Procure contractual assistance for design of the engine/generator installations and development of specifications specific to each installation.

- Task 3: Construction procurement – Issue Invitation to Bid (ITB) to select a contractor that will provide engines, generators and associated equipment, including any required assembly and testing and install.
- Task 4: Submittals – Contractor delivers submittals for AEA review and approval.
- Task 5: Installation and commissioning – Install generator repowers / replacements, and obtain assistance to integrate the electronically controlled engines with the existing switchgear, fuel, exhaust and cooling systems. If requested, AEA staff will offer technical assistance during startup and commissioning of the engines.
- Task 6: Final close out of award with EPA.

EPA DERA Programmatic Priorities

All of the projects proposed in this work plan will take place in rural Alaska native communities. The reason for this selection is outlined below using previous DERA program priorities:

1. Maximize public health benefits

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 an increased health risk. Replacing older engines in these facilities with new engines that meet more stringent emission requirements, will reduce emissions production, resulting in achieving the EPA goal of a “Cleaner Healthier Environment” In addition, improved efficiency will require less fuel, resulting in reduced emissions and lower cost. In rural communities, diesel fuel can cost up to \$10 a gallon. Any savings on fuel is a significant cost savings.

2. Most Cost Effective

It is in the best interest for Alaska to support projects that are cost effective and meet the most urgent need. The engines selected for replacement are non-certified, mechanically governed and lower tier diesel engines that are dirty and inefficient compared to the newer DERA replacement engines.

3. Population density

Setting priorities based on overall population in Alaska is difficult. Seventy percent of the population lives in larger populated areas facing air quality challenges similar to other areas in the country. The other thirty percent of the Alaska population lives in small remote communities, rural villages, with some having serious air quality problems. These smaller areas are often at a disadvantage due to technological and funding shortfalls, despite having air quality concerns.

As mentioned above, although the communities benefiting from this grant are not densely populated areas by typical urban standards, the proximity of the diesel power plant to residences, schools and other community buildings mean that residents may be more exposed to exhaust from the power plant than they would be in an urban city.

The AEA program targets communities with engines that fit within the DERA criteria and where they fall on the project ranking list. In addition to replacing equipment, upgrading the systems provides emission improvements.

4. Disproportionate quantity of air pollution from diesel

Alaska is unique in its diesel use. Power in rural villages is typically generated from

diesel in small systems, thus using a disproportionately large quantity of diesel.

5. Include certified engine configuration or verified technology that has a long expected useful life

Power generation in rural communities is expensive compared to more urban areas. To help contain costs, engines in the power plants must use technology that will last. All engines used under the DERA grant use configurations that have been proven to be reliable and long-lived.

6. Maximize the useful life of any certified engine configuration or verified technology used or funded by the eligible entity

Record drawings will be prepared for each grantee documenting the completed work. Operations and Maintenance (O&M) manuals will be updated and incorporate manufacturer's recommended maintenance and service intervals for all generation equipment. AEA will continue to provide technical support (as requested) through its Circuit Rider Maintenance program to assist communities in maximizing the useful life of the installed generation equipment.

7. Conserve diesel fuel

Installing new certified more efficient engines will reduce the emissions per quantity of fuel combusted, and produce electricity more efficiently, reducing emissions, and saving money. In most rural communities, diesel cost anywhere from four to ten dollars a gallon. In some rural communities the cost of diesel is significantly higher. Occasionally, a community may experience a fuel shortage if fuel transport is delayed. Again, increased fuel efficiency can make existing stored supplies last longer, reducing the chances of shortages.

EPA's Strategic Plan Linkage and Anticipated Outcomes/Outputs & Performance Measures

1. Linkage to EPA Strategic Plan

The fuel efficiency and emission reduction resulting from this project support EPA's primary objective of improving air quality and ensuring areas meet high air quality standards. The project will improve tribal air quality by replacing engines in native Alaska villages. Greenhouse gas emission reductions will result from improved fuel efficiency of the engines.

2. Outputs

The expected outputs from this project include:

1. Decommission up to ten non-certified and lower tier engines and replace them with certified marine Tier 2 and Tier 3, and low PM emitting nonroad engines,
2. Reduce air pollutants, and
3. Improve fuel efficiency.

The following table shows the proposed replacement engines for each community.

Community	Existing Engine	Replacement Engine
Grayling	Cummins LTA 10 (Uncontrolled) 168 kW Prime	Detroit Diesel S60 (Nonroad Tier 1) 200 kW Prime

Akiachak	CAT 3456 (Uncontrolled)	Detroit Diesel Series 60 (Nonroad Tier 1 [low PM])
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In Grayling, the State DERA program will replace one mechanically governed, uncontrolled engine with a Detroit Series 60 Nonroad Tier 1 engine. Grayling uses approximately 50,000 gallons of diesel fuel to generate about 664,000 kWh annually. Estimated emissions reductions in Grayling are shown in the tables below.

GRAYLING

Annual Results (short tons)	NOx	PM2.5	HC	CO	CO2
Baseline Engines	8.44	1.54	0.61	2.97	561
Replacement Engines	N/A	N/A	N/A	N/A	N/A
Percent Reduced	N/A	N/A	N/A	N/A	N/A

over a 10-year lifespan would have the following savings.

Annual Results (short tons)	NOx	PM2.5	HC	CO	CO2
Baseline Engine	84.4	15.4	6.1	29.7	5612
Replacement Engine	N/A	N/A	N/A	N/A	N/A
Percent Reduced	N/A	N/A	N/A	N/A	N/A

Note: The DEQ Emissions Quantifier does not calculate Replacement Engine Emissions correctly due to changes in engine runtimes as a result of engine replacement – refer to attached email correspondence with DEQ Helpline.

In Akiachak, the 2021 DERA State Clean Diesel Program will replace two uncontrolled engines (GEN1&2) and AEA will replace two uncontrolled engines (GEN3&4) with Low PM emitting engines. Two gensets will periodically run in parallel to meet Akiachak's peak electric loads. Akiachak uses approximately 138,000 gallons of diesel fuel to generate about 1,931,000 kWh annually. Resulting emission reductions are shown in the tables below.

Akiachak

Annual Results (short tons)	NOx	PM2.5	HC	CO	CO2
Baseline Engines	23.62	1.25	1.83	8.20	1554
Replacement Engines	18.08	0.09	.046	4.42	1448
Percent Reduced	23%	93%	75%	46%	7%

over a 10-year lifespan would have the following savings.

Annual Results (short tons)	NO _x	PM _{2.5}	HC	CO	CO ₂
Baseline Engine	236.16	12.55	18.28	82.01	15539
Replacement Engine	180.82	0.87	4.63	44.24	14482
Percent Reduced	23%	93%	75%	46%	7%

Note: The DEQ Emissions Quantifier does not calculate Replacement Engine Emissions correctly due to changes in engine runtimes as a result of engine replacement – refer to attached email correspondence with DEQ Helpline.

3. Outcomes

Expected outcomes will be submitted to the EPA project officer once sites have been confirmed and replacement engines selected. This will include emission calculations using the EPA web-based DEQ tool, and include estimated lifetime total project cost and cost effectiveness. The installation of more efficient and lower emission gensets will benefit the selected communities by improving health and the environment. More efficiency equipment results in lower fuel cost to the residents of the community, resulting in boosting the local economy. Less pollutants in the air lowers health risk for the community members.

Short-term outcomes – Up to ten existing prime power, non-certified and lower tier diesel engines will be taken out of service, and replaced with cleaner, more fuel efficient certified marine Tier 2 and Tier 3, and low PM emitting nonroad engines. Engine replacements will lead to an immediate reduction in diesel fuel use and lower emissions.

- **Medium-term outcomes** – The new electronically controlled certified marine engines and low PM emitting nonroad engines will save diesel fuel along with associated reductions in exhaust emissions.
- **Long-term outcomes** – AEA anticipates that diesel engines will continue to be used for many years, in rural Alaska, for prime power generation. The estimated useful life of a DERA engine in a prime power application is 60,000-hours, over a 10-year period. Replacing older technology engines with newer, cleaner and more efficient engines will provide fuel savings, emission reductions and health benefits for many years.

4. Performance Measures

AEA is in the unique position of administering the Power Cost Equalization (PCE) program. 194 rural Alaskan utilities participate in the program providing monthly reporting of production and financial statistics. This allows AEA to monitor the performance and efficiency of engines replaced under the DERA program.

Project Partners

AEA will continue to consult with the Alaska Department of Environmental Conservation (ADEC) Division of Air Quality to ensure compliance with all applicable emissions regulations. AEA will continue to partner with the Denali Commission to support and expand the reach of the DERA program statewide.

Sustainability of State Program

In Alaska, the cost of fuel and energy are the highest in the nation. Through on-going programs, AEA works with rural communities to assist them in maintaining reliable power supplies while reducing costs. AEA maintains updates on the DERA program on our website at

<http://www.akenergyauthority.org/What-We-Do/Rural-Energy-Assistance/Diesel-Emission-Reduction-Act-Program>

AEA will keep this website updated with details on this new DERA funding within 60 days of the receipt of the grant. The posting will include the amount of the grant and a description of the technology being funded.

BUDGET NARRATIVE

Project Budget

AEA's current DERA work plan includes the 2021 waiver approved by the EPA on May 3, 2021. AEA appreciates that EPA understands the uniqueness of diesel generated prime power in remote areas of Alaska, and has approved the use of certified marine Tier 2 and Tier 3 and low PM emitting non-road engines for replacement of non-certified and lower tier engines, reduced mandatory cost-share requirement for projects benefiting rural Alaska Tribal people, and increased administrative cost cap due to AEA's greater level of technical support. AEA is using the state DERA and other available funds to assist with engine repowers and genset replacements in rural communities in Alaska that are mostly tribal. Following is the proposed project budget:

2021 Itemized Project Budget					
		Voluntary Match			
Budget Category	EPA Allocation	VW Mitigation Trust Funds	Other (RPSU)	Mandatory Match (RPSU)	TOTAL
1. Personnel	\$ 49,034	\$ 13,553	\$ 18,829	\$ 16,673	\$ 98,089
2. Fringe Benefits					\$ -
3. Travel	\$ 12,250	\$ 3,381	\$ 4,704	\$ 4,165	\$ 24,500
4. Equipment					\$ -
5. Supplies					\$ -
6. Contractual					\$ -
7. Other: Subaward Grants	\$ 429,267	\$ 123,066	\$ 174,253	\$ 148,055	\$874,641
8. Total Direct Charges	\$ 490,551	\$ 140,000	\$ 197,786	\$ 168,893	\$ 997,230
9. Indirect Charges	\$ 16,128				\$ 16,128
10. TOTAL (Indirect + Direct Charges)	\$ 506,679	\$ 140,000	\$ 197,786	\$ 168,893	\$ 1,013,358
11. Program Income					
12. Other Leveraged Funds**					

Explanation of Budget Framework

1. Personnel

AEA personnel costs cover the staff time needed to manage the grant, including technical assistance, preparing and submitting regular reports to EPA, preparing and submitting a final report to the EPA at the conclusion of the project, providing project and grant oversight, and completing site visits to document project completion. Included are an AEA program manager, project manager, rural electric utility worker, and circuit rider staff time to help the sub-award grantees, if requested, with start-up and commissioning and connection of the engines/generators. The hourly billable wage totals for each staff position are shown in this table. Fringe benefits are included.

	Federal Fiscal Year 2021 Personnel				
		Voluntary Cost Share			
Category	EPA	VW Settlement	RPSU	Mandatory Cost Share (RPSU)	Total
Rural Program Manager 200 hrs, \$98.91 /hr wage FTE: 10%	\$ 9,891	\$ 2,730	\$ 3,798	\$ 3,363	\$ 19,782
Project Manager 500 hrs, \$75.15/hr wage, FTE: 25%	\$ 18,788	\$ 5,185	\$ 7,214	\$ 6,388	\$ 37,575
Rural Assistance Manager 100 hrs, \$83.10 /hr wage FTE: 10%	\$ 4,155	\$ 1,167	\$ 1,596	\$ 1,413	\$ 8,331
Rural Electric Utility Worker 250hrs, \$74.20 hr wage FTE: 13%	\$ 9,275	\$ 2,560	\$ 3,562	\$ 3,154	\$ 18,551
Circuit Rider @ 200 hrs, \$69.25 hr wage FTE: 10%	\$ 6,925	\$ 1,911	\$ 2,659	\$ 2,355	\$ 13,850
Total	\$ 49,034	\$ 13,553	\$ 18,829	\$ 16,673	\$ 98,089
Total hours = 68% FTE . 1250 total hours, 1950 hours/year					

2. Fringe Benefits

Benefits include: Health Insurance (10%), Public Employees Retirement System (22%), Supplemental Benefit System (6.13%), Medicare (1.45%), Workers Compensation (1.01%), and Unemployment (0.40%). The benefits vary by position type and tier under which the staff person was hired. Fringe benefits are included in the stacked hourly wage included on the “Personnel” table above.

3. Travel

This budget includes two trips for one person to each of the up to eight communities² to perform site visits and help the sub-award grantees and their contractor with any technical assistance needed. Travel is budgeted based on experience within the region. With these presumptions, costs are broken down as follows: Round trip airfare \$1000: ground transportation per visit \$500: per diem \$60/day: lodging \$90/night. Presumed each trip is for two days with an overnight stay (two days of per diem) a total of sixteen trips by AEA staff to the communities will be needed. The AEA staff that will travel to the sites include: the technical Rural Electric Utility Worker (REUW) and Circuit Rider, who may assist in commissioning the projects; the AEA Program Manager, who may troubleshoot installation issues that could arise; and the AEA Project Manager for final

² This is budgeted with flexibility depending on subawardees and allowing for a federal site monitor.

inspection to ensure all the requirements of the funding have been met. The REUW or Program Manager would also have the expertise to perform a final inspection.

	Federal Fiscal Year 2021 Travel				
		Voluntary Cost Share			
Category	EPA	VW Settlement	RPSU	Mandatory Cost Share	Total
Airfare for 2 persons, 2 trips per village, 4 villages from Anchorage, 16 roundtrip tickets	8,000.00	2,208.00	3,072.00	2,720.00	16,000.00
Lodging for 2 persons, 2 trips per village, 4 villages, 2 nights per trip, \$90 per night, 16 nights	1,350.00	373.00	518.00	459.00	2,700.00
Per diem for 2 persons, 2 trips per village, 4 villages, 2 days per trip, \$60 day, 30 days	900.00	248.00	346.00	306.00	1,800.00
Surface transportation, 2 trips per village, 4 villages, 8 rentals includes car/four wheeler, gas, parking, etc \$500 per rental	2,000.00	552.00	768.00	680.00	4,000.00
Total	12,250.00	3,381.00	4,704.00	4,165.00	24,500.00

4. Equipment

There are no Equipment costs associated directly to AEA with this project. DERA funding will be provided to the sub-award grantees via a grant agreement and therefore reported to EPA through the “Other” line. Please see line 8. “Other” section below for further breakout.

5. Supplies

There are no Supply costs associated directly to AEA with this project. DERA funding will be provided to the sub-award grantees via a grant agreement and therefore reported

to EPA through the “Other” line. Please see line 8. “Other” section below for further breakout.

6. Contractual

There are no Contractual costs associated directly to AEA with this project. DERA funding will be provided to the sub-award grantees via a grant agreement and therefore reported to EPA through the “Other” line. Please see line 7. “Other” section below for further breakout.

7. Other (Sub-award)

AEA will issue sub-award grant agreements to up to five rural communities to cover the cost of labor, freight, contractual, material, engineering, and installation as part of the equipment costs associated with this grant³. These expenses will be reported to EPA through the “Other” line. Below is a breakout of the budget for these funds AEA will subaward grant funds to each eligible rural community per the priority list of potential sites. Cost efficiencies occur when multiple engines are purchased for one community or one utility.

The Mandatory Cost Share funds will be in the form of cash (State capital) contributions.

Up to 80% of EPA grant funds and voluntary State match will go towards the engineering, freight, design modifications, purchase and installation of DERA qualified equipment.

	Federal Fiscal Year 2021 Subaward				
		Voluntary Match			
Category	EPA	VW Settlement	RPSU	Mandatory Match (RPSU)	Total
Labor	\$ -	\$ -	\$ -	\$ -	\$ -
Freight	\$ 25,756	\$ 7,384	\$ 10,455	\$ 8,883	\$ 52,478
Contractual	\$ 171,707	\$ 49,226	\$ 69,701	\$ 59,222	\$ 349,856
Material and Engines	\$ 231,804	\$ 66,456	\$ 94,097	\$ 79,950	\$ 472,307
Combined Totals	\$ 429,267	\$ 123,066	\$ 174,253	\$ 148,055	\$ 874,641

	Federal Fiscal Year 2021 Subaward Akiachak				
Category	EPA	VW Settlement	Voluntary Match (VW)	Mandatory Match (RPSU)	Total
Labor	\$ -		\$ -	\$ -	\$ -
Freight	18,364.44	5,247	7,495	6,371	37,478
Contractual	122,429	34,980	49,971	42,476	349,856
Material and Engines	165,280	47,223	67,461	57,342	337,306
Combined Totals	\$ 306,074	\$ 87,450	\$ 124,928	\$ 106,189	\$ 624,641

	Federal Fiscal Year 2020 Subaward Grayling				
Category	EPA	VW Settlement	RPSU	Mandatory Match (RPSU)	Total
Labor	\$ -		\$ -	\$ -	\$ -
Freight	7,350	2,100	3,000	2,550	15,000
Contractual	49,000	14,000	20,000	17,000	100,000
Material and Engines	66,150	18,900	27,000	22,950	135,000
Combined Totals	\$ 122,500	\$ 35,000	\$ 50,000	\$ 42,500	\$ 250,000

8. Direct Charges

Total direct charges for the project come to \$997,230. This includes funds from EPA DERA, Volkswagen Settlement funds, and Mandatory Cost Share (State capital funds). Estimated \$874,641 will be in sub-award grants to rural Alaskan communities. \$122,589 will be spent on AEA staff project management, technical assistance, and travel costs.

9. Indirect Charges

AEA currently utilizes the 10% de Minimis rate afforded to us under 2CFR 200.414(f) and further detailed in Appendix VII for indirect costs. AEA met internally, with the Denali

³ The budget estimates are based on number of engines to be repower/replaced, the location of the community and what is known about the power system prior to design.

Commission, our cognizant agency and determined this method best fits AEA's needs instead of developing and proposing a federally negotiated indirect cost rate. AEA's indirect charge is estimate at \$16,128 for this award – the calculation is as follows: 10% federal staff and travel (\$6,128). Assume four grants/contracts greater than \$25,000/each = \$10,000. \$16,128 estimated total.

10. Total Program Funds

The State of Alaska has chosen to make the full voluntary match to the Federal FY 2021 Clean Diesel grant, totaling \$337,786. The matching funds will be used towards eligible Clean Diesel project costs. In addition, the state is providing \$168,893 of Mandatory Cost Share. AEA plans to use the Volkswagen settlement funds for the voluntary match (\$140,000) and the rest (\$197,786) from AEA's Rural Power System Upgrade Program (RPSU). State funds are available until the Volkswagen funds are received. The Mandatory Cost Share (\$168,893) will also come from RPSU, and/or local community match. The RPSU funds are State monies allocated by the state legislature. The matching funds will be available during the state fiscal years 2022 and 2023. At least 80% of EPA funds and State Match will go towards the repower and replacement equipment, which includes engineering, labor, material, engines and freight.

11. Program Income

The project being conducted under this grant will not generate income.

Administrative Costs Expense Cap

AEA's current DERA work plan includes the 2021 waiver request that was approved by the EPA on May 3, 2021. This request included exceeding the 15% administrative cost cap.

Matching Funds and Cost-Share Funds

The State of Alaska agrees to make the full voluntary match to the Federal FY 2021 Clean Diesel grant, totaling \$337,786. The matching funds will be used towards eligible Clean Diesel project costs. In addition, the state is providing \$168,893 of Mandatory Cost Share. AEA plans to use the Volkswagen settlement funds for the voluntary match (\$140,000) and the rest (\$197,786) from AEA's Rural Power System Upgrade Program (RPSU). State funds are available until the Volkswagen funds are received. The Mandatory Cost Share (\$168,893) will also come from RPSU, and/or local community match. The RPSU funds are State monies allocated by the state legislature. The match funds will be available during the state fiscal years 2022 and 2023. At least 80% of EPA funds and State Match will go towards the repower and replacement equipment, which includes engineering, labor, material, engines and freight.